



Shaping the Future of Mobility

Bombardier Transportation
Sustainability Report 2008

BOMBARDIER

Report Scope

Bombardier Transportation is pleased to issue its 2008 Sustainability Report. The report provides a transparent account of the Group's corporate social responsibility (CSR) strategy, management approach, operational goals, and discusses overall performance, challenges, and achievements. Some information contained within this report is also described in the Corporate Responsibility Report of Bombardier Inc. which was published in December 2008 [1](#).

We identified topics of importance and relevance to include in this report through a materiality analysis. It considered both external stakeholder viewpoints as well as internal strategic perspectives on corporate responsibility and sustainable development. The report accordingly focuses on aspects of product responsibility, environmental protection, employee recruitment and retention, and community investment. See page 13 for details.

Regular sustainability reporting is understood to be part of our commitment as a signatory to the International Association of Public Transport (UITP) Charter on Sustainable Development [2](#). We published our first report (for 2005/2006) in 2006 and issued an abbreviated report with updated health, safety, and environmental data in 2007. The data that appears in this report generally reflects the time period between January 1, 2007 and December 31, 2008. However, where consistency with the structure of Bombardier Inc.'s fiscal years 2008 and 2009 (1 February to 31 January of the following year) is required, we refer to fiscal years (indicated by "FY"). Due to the limited time span between the end of 2008 and the editorial deadline (April 2009) for this report, in some areas, data relating to fiscal year 2009 show slight deficits. In addition, some variation is expected with regard to data on energy consumption and greenhouse gas emissions – Bombardier Transportation is currently conducting a study in this field which goes beyond the scope and detail of our present data gathering.

We will publish our next full sustainability report in 2011. 2009 data will be made available in the Bombardier Inc. Corporate Social Responsibility Report to be released in 2010.

Bombardier Transportation used the Global Reporting Initiative Sustainability Reporting Guidelines (GRI G3) in preparing this report. The GRI Index and Application Level can be found on page 52 onwards.

Report Boundaries

This report primarily covers 44 large production and large service locations that have 150 or more employees and are owned or leased by Bombardier Transportation. These sites can be seen on the world map on the inside of the front cover. One site in Savli, India will become operational during 2009; data from this site are consequently not included in this report.

Our smaller sites, most of which are part of our Services and Systems Divisions, are predominately located on customer premises. These sites are included in the Bombardier Transportation health and safety management system, but follow customer-specified environmental procedures. We also own several office locations that do not engage in manufacturing activities and exceed 150 employees in only a few cases. We report on health and safety statistics from both our smaller sites and our office locations. For environmental data reporting, only the larger office locations are included.

[1](#) www.bombardier.com → 2008 Corporate Responsibility Report

[2](#) www.uitp.org

¹ Bombardier Transportation and Bombardier Aerospace are divisions of Bombardier Inc., a global corporation headquartered in Montréal, Canada.

Bombardier Transportation around

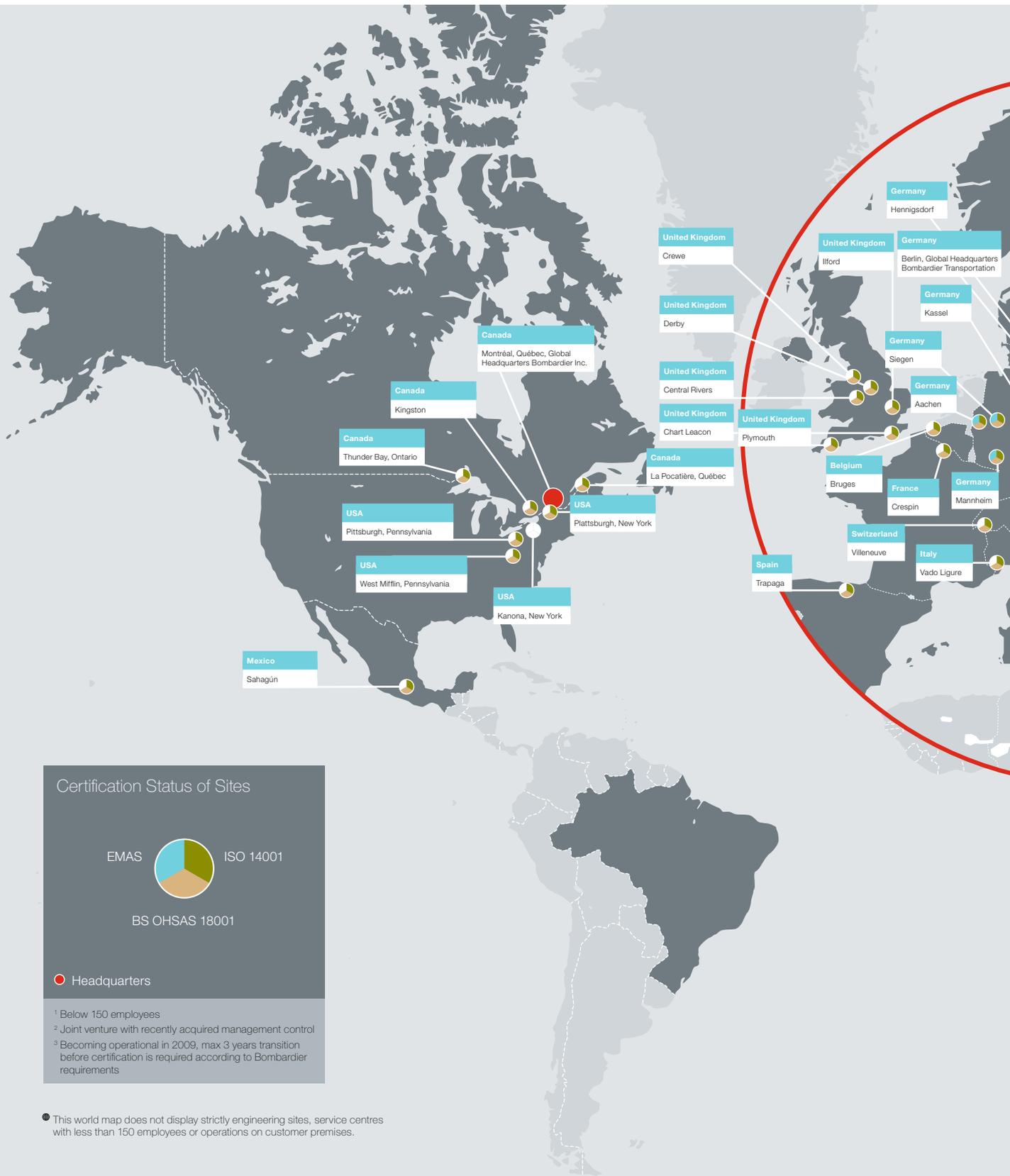






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< Foreword >

Dear Reader,

We are pleased to issue our second Sustainability Report, which gives a comprehensive overview of our ongoing commitment to achieving excellent standards in corporate social responsibility.

The world faces some of the greatest challenges of its time with global warming, increasing urbanization, pollution and resource scarcity. Working within the rail sector, we are aware of the special role we play with regard to mitigating climate change and increased demand for energy.

Here, at Bombardier Transportation, we view such challenges as opportunities to develop solutions for more sustainable mobility. You will see that four focus areas have been defined through a rigorous materiality analysis that are integral to our strategy and corporate culture. These include: Product Responsibility, Operational Environmental Management, Employees, and Responsible Citizenship. Within this report, we describe in detail how we, as the world leader in rail solutions, offer advanced technologies and concrete answers to these interconnected challenges.

This transparent and meaningful report forms part of our commitment, direction and objectives regarding corporate social responsibility in compliance with the Global Reporting Initiative guidelines. It also serves as an extension to our input published in the Corporate Responsibility Report of our parent company, Bombardier Inc.

While presenting our achievements and progress made since our last report, we also touch on areas in need of

improvement. We intend to better our data management processes, for example, by introducing a data management software tool in 2009 to optimize reporting.

Even though rail is considered to be one of the most ecologically sound means of motorized transit for people and goods, we are continually making every effort to minimize our environmental footprint and optimize the performance of our vehicles. Our *ECO4** portfolio of energy-saving products is just one tangible example of this, which enables rail operators to increase energy efficiency by up to 50 percent.

With the ongoing aim of improving our level of corporate social responsibility, we have set targets grouped into the areas of: management systems, operational environmental protection, product responsibility, and health and safety. This report outlines our short-, mid- and long-term goals. This ranges from targets set to achieve close to 100 percent product recyclability in future years to reducing inputs (such as energy, water and materials) and unwanted outputs (such as greenhouse gases and waste) significantly. Additionally, we aim to eliminate entirely the amount of production-related waste we send to landfills.

As a responsible global citizen, and in keeping with the United Nations Global Compact, signed by our parent company, Bombardier Inc. in 2007, we take strong measures with regard to anti-bribery, anti-corruption and human rights for example.

We also strive to be a good member of the communities, cultures and countries in which we operate. We take pride in reporting on some of the activities and partnerships around the world that reinforce our pledge to social responsibility.

As we move forward, we will focus on improving our environmental performance, protecting the wellness of our employees and applying a total life cycle view in the design of our products to achieve the greatest positive impact.

We hope you enjoy reading this report and, as always, welcome your comments and feedback by email at: csr@transport.bombardier.com.



André Navarri
President and Chief Operating Officer
Bombardier Transportation



Company Profile

Europe is the largest rail market in the world, representing 73 percent of our global rail revenues in fiscal year 2009.

As the global leader in rail technology, Bombardier Transportation offers products and innovative solutions that set new standards in profitable sustainable mobility for customers. With its headquarters in Berlin, Germany and a presence in over 60 countries, its installed base exceeds 100,000 vehicles worldwide.

Products

Bombardier Transportation offers the full range of railway solutions from complete trains to subsystems, maintenance services, complete rail transit systems and signaling.

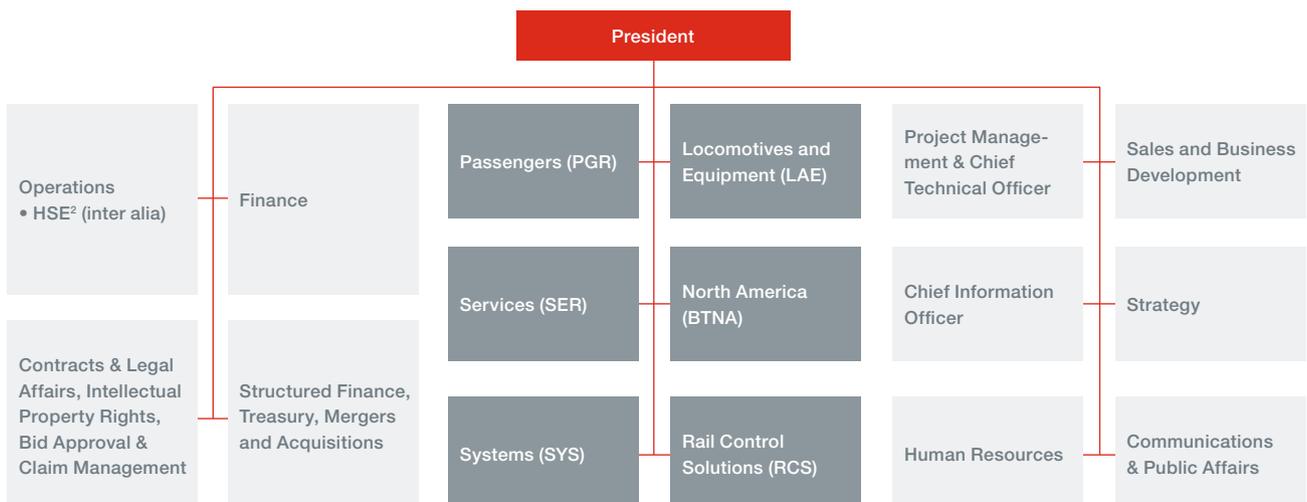
Our comprehensive product portfolio includes:

- Metros
- Regional and commuter trains

- Trams and light rail vehicles
- Electric and diesel single- and double-deck multiple unit trains
- Passenger coaches
- (Freight) Locomotives and high speed trains
- Bogies (the frame and wheel structures that undergird train carriages, wagons, and locomotives)
- Transportation systems
- Propulsion and control systems
- Rail control solutions

Bombardier Transportation also provides fleet services, including full train and fleet maintenance; materials and logistics programs; refurbishment, re-engineering and overhauling of vehicles and components; and predictive asset management and maintenance. Rolling stock represents the core of Bombardier Transportation's business and accounts for 68 percent of the organization's revenues.

Divisions and Group Functions at Bombardier Transportation¹



¹ This structure was introduced in July 2008.

² HSE: Health, Safety and Environment

Production Sites

Bombardier Transportation maintains 38 production sites and 21 service centers (15 of these have less than 150 employees) in 21 countries (one of the manufacturing sites was still under construction as at 31 December 2008). Several of these sites encompass more than one production and/or service facility, operated under separate management. The production site figure mentioned above includes four joint-venture plants in China. We have recently increased our stake in our Chinese plants to 50 percent and are thus able to exert the necessary influence over their operations. In addition to our major facilities, we operate at approximately 50 smaller sites – predominantly at customer premises – that typically employ fewer than 100 employees each. The majority of these sites house our Services and Systems Divisions, others represent administrative offices.

Employees

As of January 31, 2009, Bombardier Transportation employed 34,220 people – a nine percent increase in our workforce since fiscal year 2008, or 16 percent since 2007. The vast majority of our total employees work full-time while 591 are employed part-time. In fiscal year 2009, Bombardier Transportation employed 4,754 contract workers and 441 apprentices. The majority of our employees (76 percent) are located in Europe.

Headcount

	FY 2007 ¹	FY 2008 ¹	FY 2009 ¹
Total Workforce	29,505	31,485	34,220
Full Time	25,459	26,824	28,434
Part-time	727	661	591
Apprentices	420	432	441
Contract workers	2,899	3,568	4,754

¹ Data refer to fiscal year. The fiscal year of Bombardier Inc. lasts from February 1 of the previous year to January 31 of the current year, e.g. fiscal year 2009 lasted from February 1, 2008 to January 31, 2009.

Markets Served

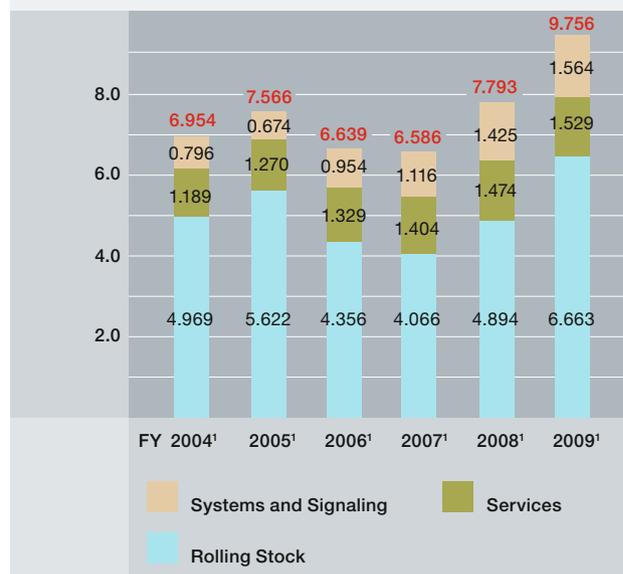
Bombardier Transportation entered the mass transit market more than thirty years ago, signing a contract in 1974 to develop the Montréal metro system in Québec, Canada. Since then, Bombardier Transportation has expanded internationally, mostly in Europe and North America. Bombardier Transportation holds the number one market share position in nine of the 11 markets in which the Group operates (all positions, apart from signaling and services, are based on order intake and not on revenue). Regional and national public-sector entities constitute the majority of the Group's customer base.

Financial Performance 2008

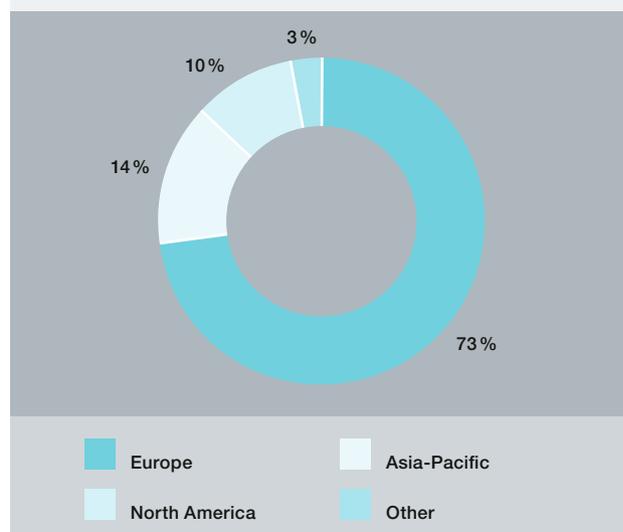
In fiscal year 2009, Bombardier Transportation's revenues were US \$9.8 billion, a 25 percent increase compared to the previous fiscal year. EBIT before special items was US \$515 million (5.3 percent of revenues), compared to US \$177 million, or 2.3 percent (EBIT before special items of US \$339 million, or 4.4 percent) in the previous fiscal year.

Revenues

Revenues per fiscal year
in billion US Dollar



Segmented Revenues by Regions FY 2009¹



Highlights in 2008

Launch of ECO4

In September 2008, we launched *ECO4*, our portfolio of innovative technologies, products, and services to maximize energy-efficient operation and total train performance for rail operators. Our *ECO4* technologies underscore our commitment to our belief that *The Climate is Right for Trains** [→](#) and provide tangible solutions ready for implementation.

Gröna Tåget

In September 2008, Gröna Tåget (“Green Train”), a *BOMBARDIER* REGINA** train equipped with our newest energy saving engine technology, set a new Swedish speed record of 303 kilometers/hour. The speed test was carried out as part of the “Green Train” Swedish rail sector development project, which aims to promote the attractiveness of environmentally sound rail transportation. The speed record demonstrated that environmentally friendly trains can reliably achieve high speeds and further reinforced Bombardier Transportation’s capabilities in the very high speed sector.

NAT-Project

In October 2008, the first of a new generation of commuter trains for the Île-de-France region emerged from the assembly line in Crespin, France. The trains then began a rigorous testing program under the NAT (Nouvelle

Automotrice Transilien) project framework. Bombardier Transportation was selected to supply SNCF, the French National Railway, with up to 372 of these custom-made *BOMBARDIER* SPACIUM* 3.06* trains, designed to meet strict security and environmental specifications.

TALENT 2 for Deutsche Bahn

In September 2008, we presented the new commuter/regional train *BOMBARDIER* TALENT* 2* which will be the future base model for the Deutsche Bahn (German Railways). With its modular structure, the *TALENT 2* train allows for a wide variety of configurations. For example, it can be changed from a commuter to a regional train; the interior design and the number of doors can be altered easily; and flexible train lengths from two to six coaches are also possible.

In February 2007, Deutsche Bahn AG and Bombardier Transportation completed a framework agreement for the delivery of up to 321 trains. The first trains will be delivered by the end of 2009.

Please read more about our *ECO4* portfolio and the NAT project in the “Product Responsibility” chapter on pages 20-23.

[→ www.theclimateisrightfortrains.com](http://www.theclimateisrightfortrains.com)

The Bombardier Company

Bombardier is a global leader in the manufacture of innovative transportation solutions. The company is headquartered in Montréal, Canada and operates in two manufacturing segments. Bombardier Aerospace produces regional and business aircraft, and Bombardier Transportation provides rail transportation systems and solutions. The company is listed on the Toronto Stock exchange (BBD), with total revenues of US \$19.7 billion in fiscal year 2009 and over 66,000 employees worldwide (as of January 31, 2009). The Bombardier family is the majority shareholder.

Bombardier was first listed on the Dow Jones Sustainability World Index (DJSI) in September 2007 and reconfirmed in 2008. Bombardier has also been a contributor to the Carbon Disclosure Project for several years.



Bombardier Inc.’s headquarters are located in Montréal, Canada.

[→ FY 2009 Annual Report](#)

[→ FY 2008 Annual Report](#)

[→ 2008 Bombardier Inc. CR Report](#)

[→ www.bombardier.com](http://www.bombardier.com)

[→ www.sustainability-index.com](http://www.sustainability-index.com) (DJSI)

[→ www.cdproject.net](http://www.cdproject.net) (Carbon Disclosure Project)



BOMBARDIER* BiLevel* commuter train, designed in collaboration with GO Transit (Greater Toronto Transit Authority) in Toronto, Canada.

Awards

Bombardier Transportation is proud to have received several awards in 2007/2008:

Name of Award	Description	Year
Overall		
Frost & Sullivan Global Rail Company of the Year Award	Bombardier Transportation was named the Frost & Sullivan 2008 Company of the Year in the Global Rail Market. The award honored Bombardier Transportation for demonstrating unparalleled excellence within the industry as measured by outstanding achievement and superior performance in areas such as leadership, technological innovation, customer service, and strategic product development.	2008
Environment		
European Mobility Exhibition Award	The HYBRID AGC won an award in the “Energy/Environment” category at the European Mobility Exhibition in Paris, France in June 2008.	2008
Hydro-Québec Ecoelectric Network	In 2007, Bombardier Transportation North America was accepted into the prestigious Hydro-Québec Ecoelectric Network → , in recognition of significant reductions in electricity consumption at its “La Pocatière” plant. The plant saved two million kWh of electricity in 2007, totalling 12 percent of its yearly consumption, by installing energy-efficient air compressors.	2007
Technology		
WorldMediaFestival 2008-Hamburg Award	“ <i>The Climate is Right for Trains</i> ” film received an intermedia-globe Silver Award at the 2008 WorldMediaFestival in the “Public Relations” category and was short-listed in the “Corporate Films and Advertising” category. The film was shown at Cinerail in Paris, France.	2008
Security Innovation of the Year Award	The BOMBARDIER* SEKURFLO* transit security solution – a product portfolio designed to suit the specialized security needs of rail transport – won the prestigious “Security Innovation of the Year” award at the 2008 Railway Interiors Innovation and Excellence Awards ceremony in The Netherlands. The award recognizes the rapidly increasing sophistication of railcar interior design, equipment, technology and furnishings.	2008
Manufacturing		
Special Recognition Award for BOS	The Bombardier Operations System (BOS) (page 10) won accolades for excellence in manufacturing at the October 2008 European Strategic Management Manufacturing Awards.	2008
Commerce		
2007 International Bridge Award for Commerce (Pittsburgh, USA)	The 2007 International Bridge Award for Commerce (US \$100 million to US \$1 billion category) recognized Bombardier Transportation’s successful efforts to build bridges between the Pittsburgh, Pennsylvania (US) region and other parts of the world.	2007

www.hydroquebec.com

◁ My impression is that sustainability is an integral part of Bombardier Transportation's business approach. Bombardier Transportation "lives" corporate social responsibility authentically throughout the company and aims for long-term achievements. ▷

Sven Bergström, Member of Parliament, Transport and Communication Committee, Sweden



Regional train Hybrid AGC (Autorail Grande Capacité), combining certain operating features due to dual-mode (electrical and diesel) and dual-voltage (1,500 and 25,000 V) technology.

Our CSR Management Approach

Corporate social responsibility is an integral part of our business strategy, as reflected in our mission to develop solutions for sustainable mobility.

Sustainable Mobility: Challenge and Opportunity

Around the globe, we are faced with significant challenges including global warming, resource scarcity, and high energy costs. Cities continue to exhibit explosive growth, leading to the pressing need for more effective transportation systems. In many places, mobility has become very costly – for the environment and for passengers alike. Limited transportation options, traffic congestion, and pollution all negatively affect quality of life.

Bombardier Transportation finds itself at the confluence of these environmental and social challenges. Yet we see them as opportunities. As the leading international designer and manufacturer of rail transportation systems, our mission is to develop solutions for sustainable mobility.

We are ambitious but realistic in our quest. It is clear that we cannot stop climate change alone. We can, however, mitigate our environmental impacts and promote the benefits of rail travel. In reaching this goal, we are helping demonstrate the attractiveness of rail travel as an environmentally sound method of transportation. We are also improving our products' overall environmental performance as demonstrated by our *ECO4* technologies (see page 20).

Our CSR Objectives

Corporate Social Responsibility (CSR) is an integral part of Bombardier Transportation's strategy and corporate culture. We have defined four focus areas through a rigorous materiality analysis:

• Product Responsibility

We apply a life cycle approach to product development to enhance energy efficiency and improve the overall environmental profile of our products (emissions, noise, recyclability, etc.).

• Operational Environmental Management

We strive to use inputs efficiently (e.g., energy, materials) and eliminate or minimize unwanted outputs (e.g., effluents, air pollutants).

• Employees

We provide a safe and healthy work environment, offer training and education, promote diversity, and work to maintain excellent employee relations.

• Responsible Citizenship

We engage and partner with our communities and external stakeholders to identify and meet future challenges.

These focus areas align with the three pillars of Bombardier Inc.'s CSR approach and the Bombardier Corporate Responsibility Roadmap [1](#), issued in 2007. Bombardier Inc. is currently developing a comprehensive corporate social responsibility strategy, to be completed by the end of 2009. Bombardier Transportation will align with the new corporate strategy to ensure consistency in its CSR approach and its implementation across the entire company.

Policies and Guidelines

Bombardier Transportation's CSR approach reflects that of its parent company, Bombardier Inc. We have adopted a number of policies and guidelines that govern our day-to-day working practices, including:

- The Bombardier Inc. Mission Statement
- The four corporate core values of: Integrity, Commitment to Excellence, Customer Orientation, and Shareholder Focus
- The Bombardier Inc. Health, Safety, and Environment (HSE) Policy
- Strong corporate governance practices (see box on page 11)
- The Bombardier Inc. Code of Ethics and Business Conduct
- The Bombardier Inc. Supplier Code of Conduct
- The ten principles of the United Nations Global Compact (Bombardier Inc. became a signatory in May 2007)
- The UITP (International Association of Public Transport) Sustainability Charter (Bombardier Transportation became a signatory in 2003) [2](#)

[1](#) Bombardier Inc. CR Roadmap 2007

[2](#) www.uitp.org

Managing Sustainability

Bombardier Transportation has established an integrated business management system that encompasses the Group's sustainability activities. We adhere to internationally approved management system standards, and on a local basis these systems are certified by third-party auditors, including:

- ISO 9001:2000 (Quality Management)
- ISO 14001:2004 (Environmental Management)
- BS OHSAS 18001:2007 (Occupational Health and Safety Management)
- EMAS (European Eco-Management and Audit Scheme; at several European sites)

For full details on management systems, site certifications, and auditing, please see Chapters 3, 4 and 5 (pages 14-47).

Bombardier Operations System (BOS)

In 2006, Bombardier Transportation launched an integrated approach to align our operations with industry world-class standards and to formalize the sharing of best practices among all Bombardier Transportation Divisions and sites. BOS builds on elements from previous initiatives and

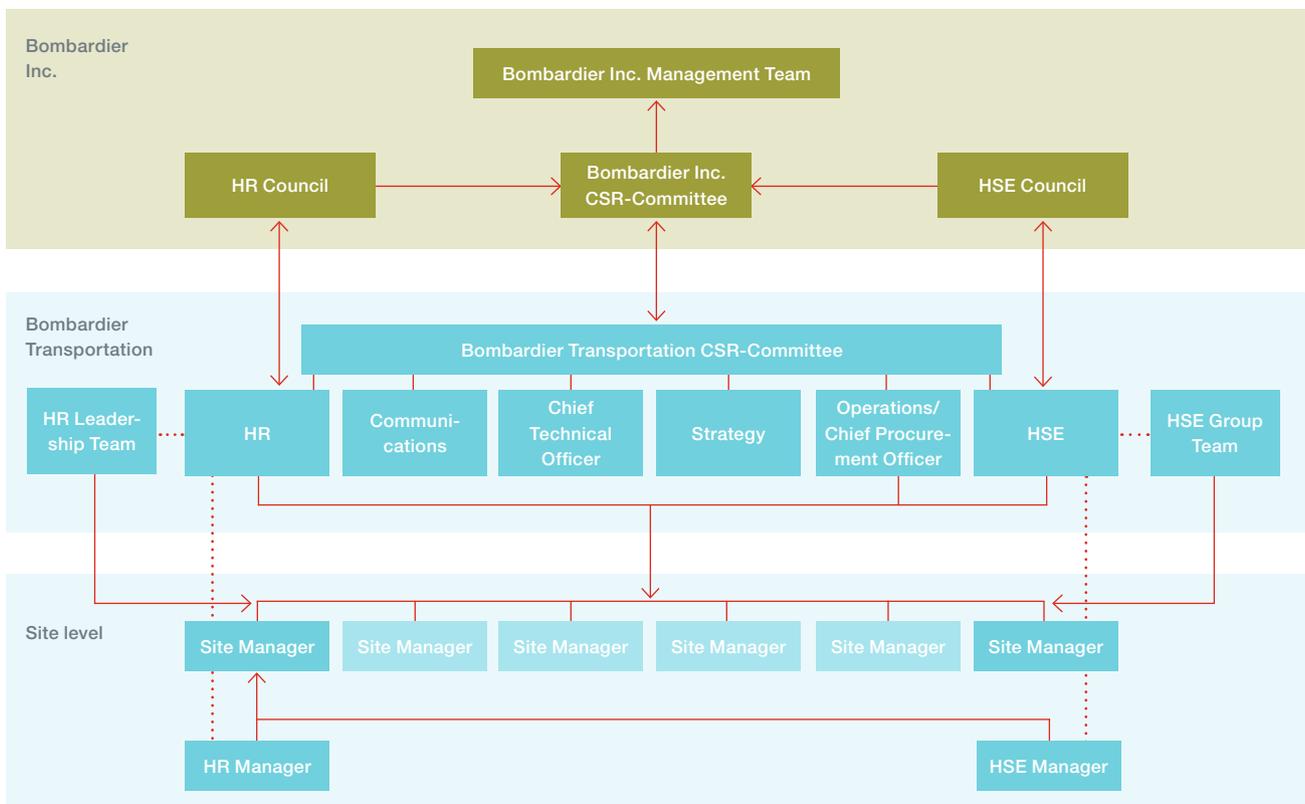
applies well-established practices and tools such as Six Sigma, LEAN, and World Class Manufacturing (WCM) in one operations system.

We are using BOS to help us achieve world-class operational and sustainable performance, through the application of five guiding principles: built-in quality, short lead time, people involvement, standardization, and continuous improvement. More than 390 people across all our sites have been involved in the development of BOS and its implementation to date.

In 2007, we carried out our first baseline BOS assessments in 12 countries and across all Divisions. Over the course of 2008, all site General Managers throughout Bombardier Transportation committed to implementing best practices at their sites as part of their business improvement plans.

In the course of the European Strategic Manufacturing Awards 2008, held by the European manufacturing community to reward best practices and celebrate manufacturing excellence, the Bombardier Operations System received a special recognition award issued by a panel of independent world-class judges.

CSR-Organization at Bombardier



HR: Human Resources, HSE: Health, Safety and Environment

Supply Chain Management

We work with our suppliers to ensure that their actions (and the actions of sub-suppliers) are consistent with our understanding of environmentally sound and socially sustainable operation (i.e., fair labour). The Bombardier Supplier Code of Conduct obligates suppliers to agree to and implement sustainable practices at their production sites. See pages 26/27 for more details.

Organizational Structure

In 2007, Bombardier Transportation established a Group Corporate Social Responsibility (CSR) Committee. The committee supports and oversees the implementation of Bombardier Inc.'s CSR commitments. Five task forces are charged with managing the following issues: energy efficiency of Bombardier Transportation sites and products; CSR along the supply chain; human resources and stakeholder engagement; sustainability reporting; and CSR impacts related to our activities in India.

The organizational chart (see page 10) presents further details on the integration of sustainability within Bombardier Transportation as well as the link to Bombardier Inc.'s sustainability structure.

Future Targets

Both Bombardier Inc. and Bombardier Transportation have set targets with regard to improving Corporate and Group level CSR management and performance. These targets are supplemented by site-specific targets and actions, as defined within the context of each site's continuous improvement program. Targets are grouped in three areas: management systems, the environment (both operational and with regard to product performance), and health and safety issues. Descriptions of specific targets are presented in the relevant sections of this report.

One of our major goals is to certify our sites with less than 150 employees to the ISO 9001, ISO 14001, and OHSAS 18001 standards. We will also be asking Divisions that operate on customer premises to demonstrate that they have concrete corporate social responsibility management programs in place to safeguard employees and maintain environmental excellence. Bombardier Transportation intends to move from ISO 14001 to EMAS certification for all sites if the EMAS standard becomes globally applicable. EMAS is more stringent than ISO 14001, requiring companies not only to set clear improvement targets but to report externally on progress made towards these targets every year.

We are continuously improving our current management systems. More specifically:

- In 2002, we set in motion independent legal compliance surveys to ensure our adherence to all applicable regulatory and legal requirements. By the end of calendar year 2008, we completed our second three-year cycle.
- We are intensifying target-setting, performance measurement, and reporting efforts at our sites. Since 2003, each facility has been obliged to internally report on its HSE program on an annual basis, including performance data on both the current and the previous year.

Corporate Governance

We believe that sound corporate governance ensures the proper management of our business, leading to sustained profitability and increased shareholder value. We maintain strict compliance with all governance-related reporting and regulatory requirements and demand that all executives and employees adhere to the highest ethical standards.

Governance Structure

As President and Chief Executive Officer, Mr. Pierre Beaudoin is responsible for the management and execution of Bombardier's strategic and operational plans. His responsibilities include e.g. executing the Board's resolutions and policies; or providing long-term strategic orientation in the form of a strategic and business plan. The corporate objectives which Mr. Pierre Beaudoin is responsible for meeting are determined pursuant to the business plan and budget approved each year by the Board of Directors.

Bombardier's Board of Directors consists of 13 directors, of which eight are independent, including the Lead Director (a position created in 2003). All Board committees are composed entirely of independent directors. Two board committees, namely the Human Resources and Compensation Committee (HRCC) and the Finance and Risk Management Committee (FRMC), oversee performance in the fields of sustainability. The HRCC regularly follows Health & Safety and employee matters, while the FRMC does the same for environmental issues. Due to the committee members' external responsibilities, it is assumed that they have the relevant skills to deal with sustainability issues. Please see Bombardier Inc.'s Annual Report for further details [↗](#).

[↗](#) **Bombardier Inc. Annual Report FY 2009**



Bombardier Transportation President André Navarri at the International Transport Forum (ITF) conference held by the OECD (left); interacting with stakeholders at the International Union of Railways' (UIC) 6th World Congress on high speed rail in Amsterdam (middle); and at the 4th International Conference on Future Urban Transport in Gothenburg, Sweden (right).

Stakeholder Involvement

Our Approach to Stakeholder Involvement

We believe that achieving sustainable mobility and overall sustainable development relies on the integrated efforts of all involved parties and their willingness to work together and communicate directly and openly.

As a global corporate citizen, we are committed to stakeholder involvement. We communicate regularly about environmental and social issues with local and international stakeholders. We respond to information requests, and, more importantly, pro-actively seek out opportunities to establish true dialogue.

By listening to our stakeholders, we can gain new knowledge about risks and opportunities, areas needing improvement, and ways to approach future challenges. Stakeholder involvement motivates both our company and our stakeholders to work harder in our constant efforts to make our processes, systems, and products more sustainable. Our key stakeholders include:

- Customers
- Shareholders
- Employees
- Suppliers
- Local communities
- The scientific community
- Politicians and governmental representatives
- Environmental certifiers
- Non-governmental organizations (NGOs)

Stakeholder Survey 2008

In order to further improve our sustainability approach, we conducted our first international stakeholder survey in mid-2008. The goals of the survey were to obtain feedback on our existing CSR activities; identify trends, risks and opportunities in the railway industry, especially around sustainable mobility; identify material issues with regard to reporting; and allow stakeholders to air their concerns and suggest ideas for improvement.

Memberships

We are members of numerous associations and are partners with these organizations on joint projects. For example, we are a member of:

- **Union of Public Transport (UITP)** ¹, an association devoted to mass transport, with members including operators and manufacturers. In 2003, UITP members approved a Sustainability Charter, which Bombardier Transportation then subscribed to as the first rail vehicle manufacturer.
- **Union of the European Railway Industries (UNIFE)** ² The industry association represents the majority of rail vehicle, systems and components manufacturers on a European level. Bombardier Transportation leads the Environment and Transport group for UNIFE. In addition to its coordination role, it also acts as a forum for exchanging knowledge and for cooperating with political organizations. Collaboration with customers' environmental experts happens via close links to the operators' organization International Union of Railways (UIC)³.
- **International Network for Environmental Management (INEM)** ⁴. INEM is a non-profit federation for environmental management and sustainable development that aims to help companies improve their environmental and economic performance. In Germany, INEM is represented by B.A.U.M. e.V., the German Environmental Management Organization ⁵. We are an active member of B.A.U.M. e.V. and subscribe to the B.A.U.M. e.V. ethical code of practice.
- **Allianz pro Schiene (Alliance for Rail)** ⁶. Allianz pro Schiene educates the public on the environmentally sound nature of railway transport. Klaus Baur, Executive Board Chairman of Bombardier Transportation Germany, is a member of the board of Allianz pro Schiene.

Methodology

We hired an independent consultant to conduct interviews with 20 stakeholders from 10 countries including Canada, Denmark, Germany, India, Sweden, the United Kingdom, and the United States. Stakeholders represented various groups, including customers, employees, local communities, and NGOs, among others.

Results

A majority of stakeholders (69 percent) believed that Bombardier Transportation’s CSR activities were “good” or “very good”. More than half perceived Bombardier Transportation as a CSR role model in the rail industry.

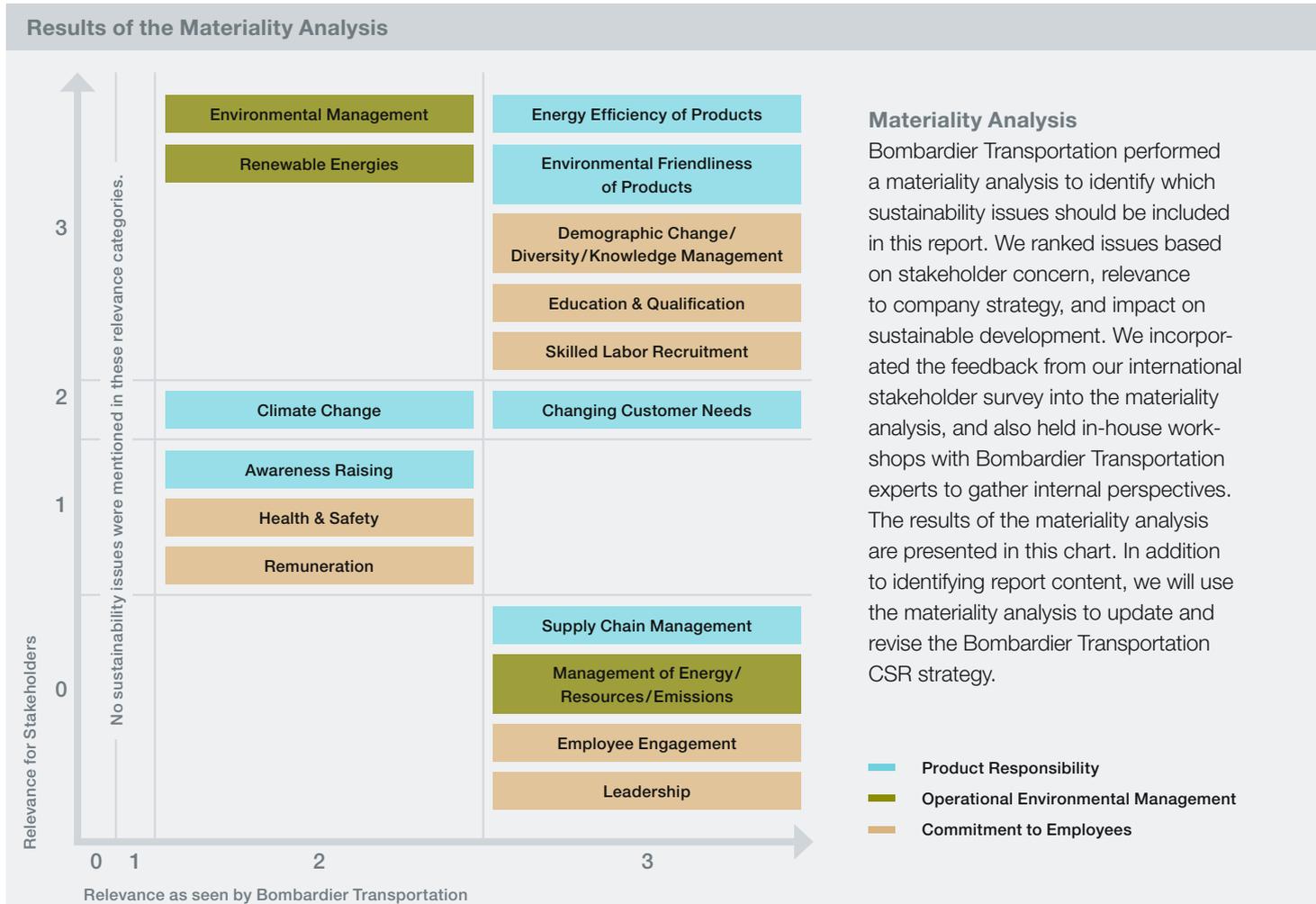
Stakeholders identified climate change; rising resource costs and scarcity; and demographic changes, that could result in shortages of skilled labor, as risks to Bombardier Transportation. At the same time, they emphasized that these risks could also be viewed as opportunities, a perspective that is shared by the Group.

With regard to materiality and reporting, stakeholders were interested in seeing Bombardier Transportation present its approach to energy efficiency and environmentally sound products; operational environmental performance; and recruitment and workforce development.

Outlook

Bombardier Transportation intends to expand stakeholder involvement by conducting regular surveys, reporting frequently, and presenting up-to-date sustainability information on the company website to support dialogue [7](#).

- [1 www.uitp.org](http://www.uitp.org)
- [2 www.unife.org](http://www.unife.org)
- [3 www.uic.org](http://www.uic.org)
- [4 www.inem.org](http://www.inem.org)
- [5 www.baumev.de](http://www.baumev.de)
- [6 www.allianz-pro-schiene.de](http://www.allianz-pro-schiene.de)
- [7 www.transportation.bombardier.com](http://www.transportation.bombardier.com)





Electric Multiple Unit "Gröna Tåget" (Green Train) REGINA in Sweden.



◁ With its wide range of technologies that improve energy efficiency, Bombardier Transportation shows a proactive approach to economic sustainability. ▷

**Peter Buchwald, Head of Innovative Development,
Danish State Railway (DSB) Engineering, Denmark**

◁ Our Product Responsibility Strategy ▷

In the design phase of each new product, we always consider its entire life cycle – from production to use to end-of-life treatment.

The Challenge of Sustainable Transportation

Our modern-day realities – a fast-growing world population, technological advancements, and globalization – bring with them urgent global challenges. We are faced with climate change, resource scarcity, rising fossil-fuel and raw-material costs, and the rapid urbanization of our societies. These challenges create a growing tension between the increasing need for mobility and the impact of the world's transportation systems on the environment, competitiveness, and quality of life. As the world leader in rail solutions, Bombardier Transportation offers advanced technologies and concrete answers to the interconnected challenges of sustainable mobility and climate change. In short, our products contribute to the environmentally sound transportation of people and goods.

Our Product Responsibility Strategy

To address global challenges and promote sustainable mobility, Bombardier Transportation places emphasis on product design with minimal environmental impact as its guiding principle. Together with safety-oriented design, our Design for Environment (DfE) approach is central to our product responsibility strategy, and it focuses on:

- Increasing energy-efficiency
- Reducing carbon dioxide and other detrimental air emissions
- Increasing resource efficiency and recyclability, and reducing waste
- Reducing the use of hazardous substances
- Reducing non-renewable resource use
- Reducing noise emissions

However, product responsibility at Bombardier Transportation encompasses not only environmental but also social considerations. We design our products to provide comfort, space, reliability, style and security for end-users and promote convenient and safe accessibility for all passengers. This includes catering to the mobility needs of the elderly and people with disabilities. Our Supplier Code of Conduct requires suppliers to adhere to the UN Global Compact  (which includes environmental requirements) as well as to our own definition of and standards for sustainable production.

Management Approach

Our DfE approach enables our designers and engineers to develop products that contribute to sustainable mobility by minimizing the environmental impact of our products throughout their entire life cycle, while also addressing the needs of customers and end-users. In addition, DfE enables us to design products that comply with current legal requirements while anticipating future and potentially stricter environmental laws and regulations.

Our DfE approach comprises four main elements:

• Life Cycle View

Our designers and engineers consider the environmental impact at each stage in the entire life cycle of a product: production, use, and disposal at the end of the product's useful life (see page 19).

• Technologies

Bombardier Transportation invests significantly in the development of technologies that enable us to produce vehicles that have less detrimental impact on the environment regarding e.g. air emissions, resource consumption, or the generation of waste. However, the most important factor is developing technologies to improve energy efficiency, which also results in immediate profits for customers (see pages 20-23).

 www.globalcompact.org



Together with safety and comfort, environmental friendliness demonstrates our understanding of product responsibility.

• **Materials**

The materials used in vehicle production determine, among other things, product recyclability – a primary focus of our responsibility efforts. We endeavor to reduce the use of hazardous substances during production, the use of non-blended materials where feasible, and ensure appropriate labeling of polymer parts and items requiring special end-of-life treatment, such as batteries for example. We prepare Environmental Product Declarations (EPD) for our products in order to better manage their environmental impact and keep stakeholders, among other environmental counterparts, informed of the materials we use (see pages 24/25).

• **Supplier Involvement**

DfE requires us to take a holistic approach to product design that encompasses not only our own activities but also the activities of our supply chain. We work with the suppliers of systems and components to ensure that they comply with our environmental, social and quality standards (see pages 26/27).

To advance DfE principles, Bombardier Transportation has ensured that product design and development is part of its business management system. These processes comply with international quality and environmental management system standards, as follows:

- We hold a consolidated, multi-site certification to the ISO 9001:2000 quality standard and all relevant sites are certified according to the ISO 14001:2004 environmental standard
- Ten of our European facilities (at eight locations) comply with the European Eco-Management and Audit Scheme (EMAS)
- Our component manufacturing sites comply with the International Railway Industry Standard (IRIS), in addition to being certified to the ISO 9001 quality standard

Measuring Environmental Performance

Bombardier Transportation Center of Competence for DfE (see pages 17/18) initiated a project in 2005 to identify and define key Environmental Performance Indicators (EPIs) to be used during the design of new products. The project was initiated when the “Environmental Guidelines for the Procurement of New Rolling Stock” (PROSPER) by the International Railways Union (UIC) were released. By using these EPIs, we aim to manage more effectively our product responsibility activities and improve the overall environmental performance of our products.

We classify EPIs into the following three categories:

- Material EPIs, including EPIs related to restricted substances, renewable materials, recyclability, and hazardous waste
- Process EPIs, including EPIs related to DfE training and DfE publications, such as the number of produced Life Cycle Assessments (LCAs) and EPDs
- Energy EPIs, including EPIs associated with on-board and traction-related energy consumption and energy recovery

Through the use of EPIs, product designers can gain reliable parameters from the early design stage, to monitor and evaluate their products’ environmental characteristics. This knowledge enables them to make design modifications and improve environmental performance.

Bombardier Transportation already uses selected EPIs in a few projects. Our ultimate goal is to integrate the use of EPIs into all future projects.

Applying Design for Environment

Over the past 15 years, Bombardier Transportation has worked consistently to improve its products' environmental performance through the application of DfE principles, a cornerstone of its approach to product responsibility. This process of continuous improvement allows us to maintain our competitive edge while at the same time ensure that all legal and customer environmental requirements are met.

Developing Products with DfE

DfE takes an overall approach towards developing vehicles that contribute to sustainable mobility. The potential environmental impacts of a product are considered at the very beginning of the concept phase in the design process. Our designers are guided by a set of proprietary DfE Guidelines that provides "quick and easy" support on how to move towards more environmentally sustainable products. Designers are informed about these guidelines during training sessions in which they are asked to create their own action plan. This plan details how issues such as energy efficiency, expected lifespan, and the use of hazardous substances are addressed for each specific system or component.

The DfE Guidelines facilitate the development of sustainable products that:

- are more energy and resource efficient
- use sustainable materials that meet international standards and voluntary restrictions on hazardous substances
- release less emissions during use
- enhance re-use of materials and promote environmental upgrades, and
- can be easily recycled.

Bombardier Transportation's Center of Competence for DfE

In 2001, Bombardier Transportation acquired the Center of Competence (CoC) for DfE. It had already been established two years prior to this and today continues its important work as a fully integrated part of Bombardier Transportation's organizational structure. It is located in Västerås, Sweden, Derby, UK and Hennigsdorf, Germany. The purpose of the CoC is to ensure that DfE is utilized across all Divisions, engineering offices and production sites. It also helps to connect and support the DfE expert core team, which today consists of approximately of 20 DfE experts who are spread globally throughout the Group.

The CoC DfE is one of ten Engineering Centers of Competence. The other Centers of Competence provide expert resources in technical disciplines such as crash safety, software engineering, acoustics and vibration, aerodynamics and thermodynamics for example.



DfE expert core team members are specially trained in the comprehensive implementation of DfE. They act as internal consultants to improve the performance of products.

Role of DfE CoC Experts

The DfE expert core team serving in Bombardier Transportation's DfE CoC and core network fulfills a variety of functions to help the Group achieve its goal of creating vehicles that contribute to sustainable mobility. Specifically, it:

- Provides lead DfE engineers for product development and for ordered projects
- Interprets and responds to customer and legal environmental requirements by providing the necessary support
- Identifies resource and energy-efficient design solutions
- Assists in selecting sustainable materials
- Conducts Life Cycle Assessments
- Develops competitive environmental profiles with detailed information on the products' environmental performance
- Analyzes Environmental Performance Indicators (EPIs) during the design and development of products
- Conducts DfE training sessions
- Provides input to the development of relevant environmental legislation
- Produces environmental communications materials such as Environmental Product Declarations (EPDs)



Design for Environment training for engineers from various Divisions.



Participants of DfE training doing group work on Design for Environment Guidelines.

Training Employees in DfE

To ensure that the DfE principles are well known and applied across Bombardier Transportation, the key to success is to carry out DfE training. There are many training modules available and the ultimate goals are to:

- Create greater awareness and understanding of DfE among relevant Bombardier Transportation engineers and management
- Increase Bombardier Transportation's engineering environmental competence to ensure that the Group can efficiently and effectively respond to new standards, as well as current and upcoming legal and customer environmental requirements

Bombardier Transportation has developed various DfE training modules for employees serving in management, engineering, and procurement Functions. Since DfE training was launched in 2001, more than 760 employees within engineering and procurement Functions, for example, have benefited from these courses.

DfE Goals and Future Targets

We aim to integrate DfE into all new orders as well as product development projects.

In response to the growing need for DfE, the DfE training will be launched on a broader scale for all of our employees. We will track the number of training sessions as one of our Environmental Performance Indicators (EPIs).

Bombardier Transportation's Contribution to Climate Change Mitigation

Climate change poses a serious threat to both the environment and society. Warmer global temperatures that result from the release of gases such as carbon dioxide into the atmosphere can lead to global sea level rise, increased storm severity, and changes in rainfall patterns – all affecting the health of ecosystems as well as where and how people can live.

Bombardier Transportation is working on several fronts to help mitigate the impacts of climate change. We strive to eliminate or reduce the amount of greenhouse gas (GHG) emissions from our operations. We also know through our product Life Cycle Assessments (page 19) that the GHGs emitted by our operations are much less than those generated during the use of our vehicles. Accordingly, we are focusing on the development of new technologies that make our products more environmentally responsible (as discussed in this chapter).

As part of these efforts, we are:

- Increasing the energy efficiency of our vehicles
- Designing software tools to help vehicle drivers optimize energy use
- Offering comfortable and flexible products that are an attractive mode of transportation for passengers and freight

Life Cycle Assessment

Our Life Cycle Approach: From Cradle to Grave

Since 1995, a key characteristic of Bombardier Transportation's DfE process has been its life cycle approach. We strive to minimize the environmental impacts associated with all stages of our vehicles' lifespan, from conceptual design to production, use, and final end-of-life treatment. We use the results of Life Cycle Assessments (LCAs) to generate Environmental Product Declarations (EPDs).

Impacts associated with Product Use

A significant portion of the environmental impacts associated with our products occurs during their use phase. LCAs have shown that, for example, 99 percent of primary energy consumption occurs during the use phase. CO₂ and other emissions from the generation of electricity also contribute significantly. The exact percentage can, however, change based on the energy source selected by the operator (and thus falls outside of Bombardier Transportation's influence). Finally, the product use phase accounts for around 20 percent of total materials used over the life cycle, representing materials used when maintaining the products.

Our LCA Process

We apply the ISO 14040 series of standards in conducting LCAs. Through these assessments, we can compare the environmental impacts of different products or design options and use this information to further improve on environmental performance. The LCA incorporates thorough material inventory and energy-consumption calculations. The system boundaries typically exclude certain elements, like environmental impacts associated with: supplier manufacturing processes, raw material waste from manufacturing, accidents, and energy used during maintenance. Depending on the intended use, LCAs are verified by a third party when serving as a basis for EPDs (in accordance with ISO 14025). See page 25.

We use different software tools to gather material information, track environmental performance and perform LCAs:

- **Bombardier Certification & Environmental Materials Database (CE-Mat).** This central web-based database is used to gather, store, track, and report on the environmental performance of Bombardier Transportation products. It is used in projects for which a material inventory has been requested. In the future, we plan to use this database to directly engage our suppliers in order to cut down the time needed to gather environmental information from suppliers.

- **Material Inventory Tool.** We use a spreadsheet-based tool to gather information on materials from all suppliers and sub-contractors. Once our suppliers and sub-contractors have prepared their input, we verify and approve the information prior to moving it to the CE-Mat database.
- **GaBi 4.** This powerful, fully-featured software supports the collection, organization, analysis and monitoring of the environmental performance of products and processes. Additional sustainability-related criteria such as costs and social impacts can also be integrated .

Product Life Cycle Stages

Stage	Environmental Aspects	Involved Parties
Extraction of Raw Materials	Land use Emissions to air, land and water Energy use Water use	Suppliers
Production of Construction Materials	Energy use Materials use Water use Transportation-related impacts	Suppliers
Production of Parts and Components	Energy use Materials use Water use Emissions to air, land and water <i>(Our most significant direct impacts during manufacturing result from painting, gluing, and welding processes)</i>	Bombardier Transportation sites
Final Assembly	Energy use Materials use Water use Emissions Transportation-related impacts	Bombardier Transportation, Suppliers / Subcontractors / Consortium Partners
Product Use	Energy use Emissions related to energy use Materials used for vehicle maintenance	Operators, Bombardier Transportation Service Organization
Refurbishment End of Life	Air emissions and energy associated with disposal, with recycling of metal and polymers or with incineration of non-recyclable materials for energy recovery	Operators, Bombardier Transportation Service Organization, Specialized disposal companies

 www.gabi-software.com

ECO4 Technologies

The Energy Challenge

Energy use is directly coupled with greenhouse gas emissions if the energy is produced from non-renewable sources. We are working to help our customers improve both the environmental and economic performance of their fleets by investing significant resources in mobility technology that can reduce energy requirements, cut emissions, and reduce noise, while maintaining excellent safety characteristics.

Energy Efficiency: Our Number One Priority

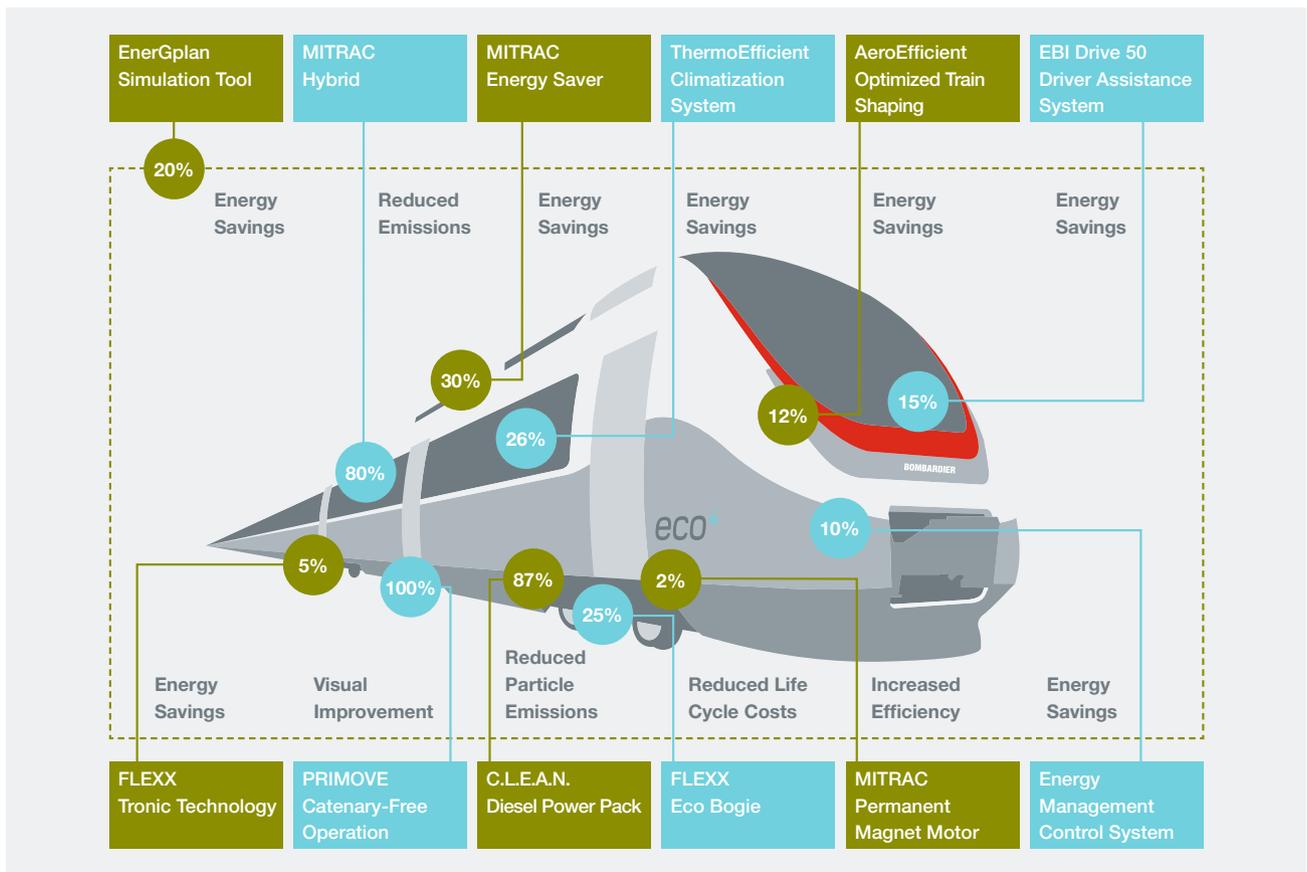
We have established energy efficiency as our highest priority with regard to technological innovation. Saving energy is a highly effective way to conserve ecological resources and to address climate change via a reduction in energy-related greenhouse gas emissions. It also improves fleet economics by cutting operators' energy costs.

Two major factors influence the energy consumption of our vehicles. The first is design, and the second is how vehicles are operated. Bombardier Transportation devotes most of

its attention to vehicle design and construction so as to increase energy efficiency. It does this through weight reduction, decreased aerodynamic drag, recaptured energy from braking and indirectly through dual-system electric and diesel technology as well as ultimately by decreased energy loss across all components. Bombardier Transportation does not exert direct control over vehicle operation, however, we have developed tools such as the *BOMBARDIER* EBI* Drive 50 System* (see page 22) to help drivers maximize energy efficiency during vehicle operation.

Leading the Industry through ECO4: Energy, Efficiency, Economy, and Ecology

Our efforts to address rail transit operator's most pressing concerns – rising energy costs, operating efficiency, and global climate change – come together under our *ECO4* portfolio of products, services, and technologies. *ECO4* balances energy, efficiency, economy, and ecology through solutions that range from new aerodynamically enhanced train designs to optimization of energy efficiency in new transportation systems and existing fleets. The implementation of *ECO4* technologies can yield overall energy savings of up to 50 percent.



Bombardier Transportation's new ECO4 technologies create the potential for remarkable energy savings.



The C.L.E.A.N. Diesel Power Pack will be used in Bombardier's ITINO* trains, set to be rolled out to German and Swedish customers in 2009.

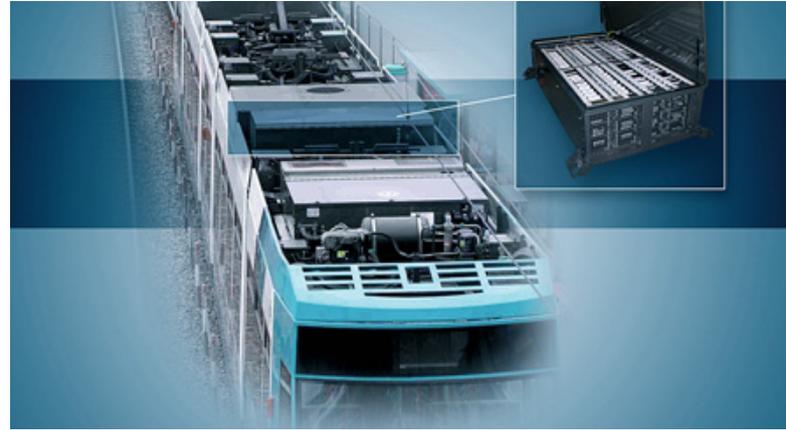
ECO4 Technologies – Four Industry-leading Examples

C.L.E.A.N. Diesel Power Pack

As part of the C.L.E.A.N. (Catalyst-based Low Emission Application) Research project – partially funded by the State of Brandenburg and the European Regional Development Fund – Bombardier Transportation partnered with IVECO, a leading heavy vehicle and diesel engine manufacturer, to develop the lowest-emission propulsion system available for diesel multiple units (DMUs). This C.L.E.A.N. Diesel Power Pack consists of a 560 kW, eight-cylinder diesel engine connected to a power shift transmission. A special catalyst with Selective Catalyst Reduction technology reduces the system's energy requirements compared to other solutions. The cooling system on the power pack requires low-maintenance effort and reduces emissions, particularly nitric oxides. The technology is production-ready and already conforms to the EU emissions directive, Stage IIIB that will come into effect in 2012.

Overall, benefits include:

- Optimized weight and configuration
- Reduced fuel consumption compared to similar engines
- Minimized maintenance
- Improved efficiency
- Potential to reduce particle emissions by up to 87 percent



MITRAC Energy Saver on board a light rail vehicle train of the Rhein-Neckar-Verkehr GmbH (RNV) in Mannheim/Germany.

MITRAC Energy Saver

The BOMBARDIER* MITRAC* Energy Saver is a system that stores energy released each time a vehicle brakes and reuses that energy for normal operation. The technology also boosts performance by adding extra power during acceleration.

The MITRAC Energy Saver relies on "ultracapacitors", a type of storage device that retains electrical energy from braking. As opposed to conventional flywheel-based mechanical energy storage devices, the MITRAC Energy Saver operates on a purely electrical basis. Each ultracapacitor includes several hundred serially connected storage cells that can retain energy with minimal losses. These long-lasting devices are ten times more efficient than conventional batteries.

Through years of testing, the MITRAC Energy Saver has consistently shown energy reductions of up to 30 percent when used in light rail vehicles such as trams. The practical testing of the MITRAC Energy Saver storage system on board a light rail vehicle train was conducted in cooperation with Rhein-Neckar-Verkehr GmbH (RNV) in Mannheim/Germany, and began in September 2003. After proving to be a reliable, energy-efficient technology, the Bombardier MITRAC Energy Saver will be used as the technological basis for the next generation of energy-efficient light rail vehicles (LRV), which RNV ordered from Bombardier Transportation at the beginning of 2008. Application is however not limited to LRVs. We expect that DMUs could also achieve up to a 35 percent energy use reduction through this technology. Ultimately, lower energy needs will help reduce emissions and cut operating costs.



Conductors using Bombardier Transportation's *EBI Drive 50* Driver Assistance System can save up to 15 percent energy.

EBI Drive 50 Driver Assistance System

Bombardier Transportation's *EBI Drive 50* Driver Assistance System is a smart software tool that helps train drivers optimize operating speed and acceleration/deceleration rates. Drivers using the system can lower the energy needed for operation by up to 15 percent while also reducing wear and tear on wheel sets, engines, brakes, and tracks.

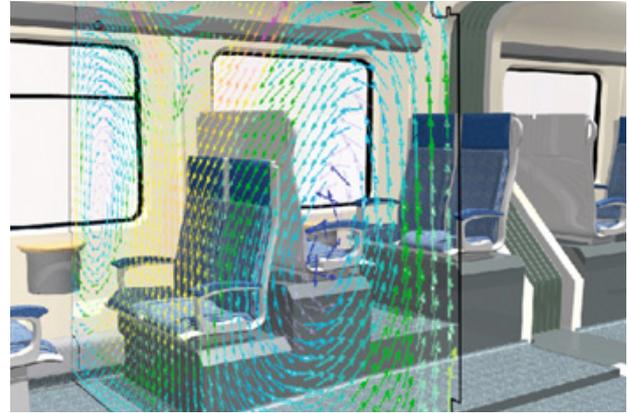
The *EBI Drive 50* assistance software operates onboard the train. It constantly calculates speed and traction force profiles to determine optimal velocity and presents this information to the driver. The data is displayed in the driver's cab, where the driver can react accordingly and adjust his or her overall driving style over time.

EBI Drive 50 assistance systems can be installed in electrical locomotives, diesel engines, any form of hybrid traction trains, and even multi-traction systems. The software can accommodate different distributions of locomotives within a train. It is suitable for new trains and can be retro-fitted to existing vehicles.

ThermoEfficient Climatisation System

People will choose trains as their preferred mode of transportation more frequently if they can expect the same level of comfort as in a private vehicle. The ThermoEfficient Climatisation System ensures that passengers enjoy a comfortable, climate-controlled environment. At the same time, ThermoEfficient minimizes the amount of energy needed for train heating or cooling.

Trains that operate in extreme temperatures (such as metros) can use up to 30 percent of their overall power consumption for climate control. The ThermoEfficient



The ThermoEfficient Climatisation System uses state-of-the-art simulation techniques to ensure thermal comfort even in extreme conditions.

Climatisation System uses two mechanisms to lower these energy needs. First, a sophisticated set of sensors determines actual occupancy and regulates cabin temperatures accordingly. A second mechanism uses installed heat-exchangers to pre-heat or pre-cool incoming air with clean exhaust air, conserving up to 80 percent of the energy contained in the exhaust air.

This intelligent, low-energy approach helps to improve comfort levels for passengers while saving energy. By using the ThermoEfficient mechanisms described above, energy consumption can be reduced by 24 and 26 percent, respectively.

Generic Technology and Innovation Goals and Future Targets

Bombardier Transportation's key challenge in product development is to remain competitive and improve environmental performance. This has to be achieved while balancing passenger demands for high speed and climate-controlled comfort with operator needs for energy-efficient solutions.

We have established several goals to meet these challenges, including:

- Initiating new, and intensifying existing R&D on alternative fuels and energy efficient technologies
- Improving the integration of energy performance indicators into design processes while monitoring product environmental performance
- Supporting our customers with eco-maintenance and eco-operation guidelines

➔ For more information on **ECO4**, please visit: www.transportation.bombardier.com

Best Practice: Bombardier Transportation's Development of the Future Île-de-France Commuter Train

The **future Île-de-France commuter train** (the first train was delivered by Bombardier Transportation at the start of 2009) demonstrates how we apply DfE principles when developing a new vehicle concept while meeting all customer and passenger requirements. The new train (a *SPACIUM 3.06*) has been designed for maximum comfort, safety, and security. It also provides a high level of reliability by incorporating proven Bombardier Transportation technology that is already in commercial service.

SNCF, the French National Railways, as the ordering customer, established stringent environmental design specifications for this vehicle. The customer asked for the minimum use of hazardous substances, to avoid formaldehyde emissions; decreased brake pad emissions; optimized recyclability; and increased energy efficiency. In order to demonstrate these objectives, Bombardier Transportation will deliver a detailed environmental performance evaluation based on an LCA. Bombardier Transportation will also provide a recycling manual for future maintenance and end-of-life-activities, as well as an EPD that conforms to relevant ISO standards.



Bombardier Transportation is currently gathering all information available on materials for the LCA and also engaging suppliers in developing alternatives for restricted substances. For example, we have been able to eliminate the use of hexavalent chromium (chrome VI), a restricted substance, in many parts used in our line of NAT (Nouvelle Automotrice Transilien) vehicles. Due to research conducted in the automotive sector, alternative solutions that do not rely on chrome VI are available for many applications (such as new chrome VI-free surface treatments to ensure that floor coverings stick to the floor).



The SPACIUM 3.06 represents a new generation of colorfully extroverted commuter trains that are designed for maximum comfort, safety and security. The train is based on Bombardier's proven technology already in commercial service, providing a high level of reliability.

Material Use and Recycling

Environmentally Preferable Materials

Bombardier Transportation carefully selects the materials and substances to be used in the production of its vehicles to minimize environmental impacts throughout the entire life cycle. Materials play an important role in the overall environmental impact during manufacturing and assembly, and, to a large extent, also determine the end-of-life properties such as recyclability and amount of hazardous waste.

At present, we are especially concerned with two issues: the first, recyclability, refers to the ability to disassemble and recycle our products at the end of their useful life; the second issue revolves around the safe and correct use and handling of hazardous substances as identified by international law and our list of prohibited and restricted substances.

Recyclability and Recycled Material Content

We work to maximize the recyclability of our vehicles but also strive to increase the amount of recycled content used. A typical rail vehicle is composed of metals, organics, plastics, rubbers, chemicals, and other materials. By improving recyclability at a high level, we contribute to increasing the percentage of recycled material used in our vehicles.

From the early stages of design, we take steps to facilitate efficient, end-of-life dismantling and material recycling. It is our goal to increase the recyclability of Bombardier Transportation products. We apply several tools to realize this goal:

- **DfE Guidelines (section on recycling)** that provides “quick and easy” guidance on designing products that are easier to dismantle so that the components can be re-used and the recycling of materials is made possible
- Our **CE-Mat** (Certification & Environmental Materials Database) and **Life Cycle Assessments**, which help us track the recyclability figures on a continuous basis.
- Our **List of Prohibited and Restricted Substances** which is used throughout the Group to ensure that hazardous substances are eliminated from our products
- **ISO standards** that provide guidance on the labeling of polymers so as to facilitate their recycling at end-of-life

Recycling manuals are prepared in order to document materials content, recyclability, and special handling considerations.

Minimizing our Use of Hazardous Chemicals

The List of Prohibited and Restricted Substances identifies those substances that are either completely banned from use or which are only allowed to be used in certain applications. Restricted substances require specific approval and are only permitted when it is absolutely necessary, e.g. for safety reasons. We update the list on a continuous basis in order to reflect new and upcoming legal demands. All major European rail manufacturers have decided to commence harmonization of their lists of forbidden or restricted substances to reduce efforts on the part of sub-suppliers.

As part of our compliance with regulation, including the new European Union REACH¹ standard, we have implemented a systematic approach to measure, track, and manage chemical risks throughout our supply chain. We have established a central group to assist each of our operating units to interpret our obligations under REACH and implement any necessary changes and actions. We will continue to work with our suppliers to build our knowledge of chemical risks and identify alternatives to hazardous substances.

Product Recyclability Goals and Future Targets

Our vision is to ultimately achieve 100 percent product recyclability and 100 percent use of renewable and recycled materials in product construction and manufacture.

In the mid-term, we are working towards the following goals:

- 95 percent recoverability of all our vehicles, in accordance with the European End-of-life Vehicles Directive 2000/53/EC. This directive applies to automobiles and not to rail vehicles. Bombardier Transportation, however, has adopted the same targets for its vehicles. For example, by 2015, we aim to achieve an 85 percent materials recycling rate and a recoverability ratio of at least 95 percent

¹ REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) is a European Union Regulation (EC/2006/1907) that addresses the production and use of chemical substances and their potential impacts on human health and the environment. REACH came into force in June 2007 and will be phased-in over the next decade.

Environmental Product Declarations

Bombardier Transportation develops Environmental Product Declarations (EPDs) to provide customers, operators, and other stakeholders with relevant, reliable, and objective environmental information. EPDs include a summary of product life cycle environmental impacts and background information on the product manufacturer's environmental management system.

EPDs allow Bombardier Transportation to:

- Meet growing customer requirements
- Provide a reliable overview of Bombardier Transportation's product environmental performance, as they are based on the ISO 14021 or 14025 standards
- Set a baseline for further product environmental improvements
- Establish a basis for comparability between Bombardier Transportation and other companies' products for similar product types and product categories

EPD Development Process

Bombardier Transportation follows a well-established process to develop EPDs. We first identify the environmental specifications for the EPD and communicate these parameters to all internal and external suppliers. We then gather environmental information from our suppliers,

including life cycle data, and import all materials information into Bombardier Transportation's Certification & Environmental Materials Database (CE-Mat).

Using this data, we calculate the product's environmental performance based on factors such as the energy needed to build the vehicle or component; impacts associated with the transport of subsystems to assembly plants; energy consumption during use; and materials used in product maintenance. We also perform an LCA of the product's overall environmental performance (see page 19) and secure third-party verification of the LCA if needed.

Finally, we prepare an EPD brochure, and verify and register it through EMAS or the International EPD system for those products where this is viable.

Results in 2007/2008

In 2008, the main achievement was issuing EPDs for a high power converter and a drive system. The EPD for the converter was validated according to EMAS. In 2007, we developed and issued five EPDs for signaling products. These are listed below.

Future Targets

- Our overall goal is to develop an EPD for each new product platform
- We will issue four additional EPDs in 2009, two of which will undergo EMAS validation

General Material Content in a Rail Vehicle



In our EPDs, we provide information on material content of our products.

Examples of Currently Available EPDs

Signaling Products

- *EBI* Lock 950 (Interlocking System)
- *EBI* Switch 2000 (Point Machine)
- *EBI* Link 2000 (Eurobalise)
- *EBI* Light 2000 (LED-based signals)
- *EBI* Cab 2000 (Automatic train control system)

Propulsion Products

- *MITRAC* TC 3300 MS V04 (IGBT traction converter)

Vehicles

- *TRAXX** F140 MS (Locomotive)
- *TRAXX* P1600 DE (Locomotive)
- BR 185 (Locomotive)
- *REGINA* (Regional Vehicle)
- Tram of Milan (LRV)
- Stockholm Metro

Supply Chain Management

Building a Sustainable Supply Chain

An important part of our product responsibility strategy is ensuring that our suppliers share our understanding of corporate social responsibility. We seek to identify and partner with those suppliers that are committed to high standards of corporate social responsibility, including environmental issues, health and safety aspects, labour rights, integrity and legal compliance.

Bombardier Transportation's supply chain is composed of a network of more than 3,000 direct suppliers in over 30 countries. These independent companies manufacture a significant portion of the components in our products. These include wheels and axles, electric motors, transformers, cables, plugs, and many electrical and electronic components and parts as used in power converters and control systems. In order to ensure that our products meet the Group's high standards for safety and environmental performance, all components must be manufactured according to Bombardier Transportation quality, environmental, technical and social standards. We carefully screen our suppliers for their ability to manage environmental and social issues prior to awarding contracts.

Our Approach to Supply Chain Management

Bombardier Transportation strives to establish long-term, co-operative relationships with its suppliers. We see our suppliers as partners with whom we share performance and growth targets as well as a common vision for sustainable development. In support of this vision, we require suppliers to comply with rigorous quality, environmental, and labor standards. We also ask that suppliers apply international labeling standards to facilitate product recyclability. Finally, we expect our suppliers to regularly provide documentation on all the materials they use to manufacture delivered products, for use in our Life Cycle Assessments as well as environmental product declarations (see page 25).

In 2008, the Bombardier Supplier Code of Conduct and an associated implementation roadmap was launched to define our overall approach to supply chain responsibility. Although the code of conduct only applies to Bombardier Transportation's direct suppliers, we ask suppliers to invite their vendors to also adhere to the code.

Bombardier Supplier Code of Conduct

The Bombardier Supplier Code of Conduct aligns with the ten principles of the United Nations Global Compact (UNGC) [↗](#)¹. It defines supplier requirements related to legal compliance, human rights, labor, health and safety, environment, and anti-corruption. For example, suppliers must meet the requirements of the UNGC and International Labour Organization (ILO) [↗](#)² standards with regard to child labor, forced labor, discrimination, and collective bargaining.

Furthermore, we encourage our suppliers to:

- Implement quality and environmental management systems according to international standards ISO 9001, ISO 14001, EMAS or equivalent
- Maintain or apply for occupational health and safety certification that conforms to accepted standards such as BS OHSAS 18001 or equivalent
- Participate in a CSR network such as the European Alliance for CSR [↗](#)³, CSR Asia [↗](#)⁴
- Efficiently use energy and resources and reduce emissions throughout all life cycle stages
- Restrict use of hazardous or critical substances, e.g., chrome VI or organic solvents



Bombardier Transportation regularly hosts symposiums and forums with key suppliers to discuss production challenges and strategies as well as emerging technologies.

Supplier Code of Conduct Implementation

At the same time that Bombardier Inc. launched the Supplier Code of Conduct in 2008, Bombardier Transportation also rolled out an implementation plan. In 2008, about 120 key suppliers signed the Supplier Code or confirmed compliance with their own CSR system. By the end of 2009, all 400 key suppliers are expected to have signed. The Supplier Evaluation and Approval Process (SEAP) has been enhanced to cover CSR and Supplier Code issues

and will be released, in its revised format, during 2009. The suppliers' commitment to the principles of the United Nations Global Compact, as well as the suppliers' achievements in terms of having an environmental management system and occupational health and safety system, play a dedicated role in this effort.

Supplier compliance with the Code of Conduct will be monitored through SEAP audits, supplier sustainability reports, and spot-checks conducted during the course of normal business interactions. Bombardier Transportation will resolve any issues or violations via processes outlined in the Bombardier Code of Ethics and Business Conduct.

Supplier Evaluation and Approval Process

When purchasing materials, supplies, or services, Bombardier Transportation Procurement selects suppliers based on their overall qualifications, including their ability to adhere to Bombardier Transportation's Supplier Code of Conduct. Each potential supplier must pass the stringent SEAP, which progresses in three stages.

First, the supplier must meet general strategic criteria such as overall capacity and the ability to serve target markets. Second, the supplier is "pre-selected" based on commercial performance, the presence of environmental management systems, and adherence to social standards. Finally, these "pre-selected" suppliers undergo an intensive risk assessment (SEAP).

The SEAP assessment can take various forms, ranging from a "desk assessment" (questionnaire only) to a full assessment including a multi-day site visit. All top suppliers undergo a full SEAP assessment. At the end of an assessment, Bombardier Transportation submits a Corrective Action Request (CAR) regarding aspects of supplier performance that do not fully meet company requirements. Improvements specified under the CAR must be completed by the pre-selected supplier within a given time period. Upon passing the SEAP assessment and meeting any CAR requirements, a supplier is named an "approved supplier" and becomes part of the Bombardier Transportation supplier network.

The SEAP Assessment in Depth

The SEAP takes into account the supplier's strategic management approach, process management systems (including certifications to ISO 14001 and OHSAS 18001), operational performance, and financial stability. The supplier is asked to respond to questions and provide

data on Key Performance Indicators. The new supplier questionnaire specifically includes a focus on CSR, and requires documentation of:

- CSR- and ethics-related policies and reporting
- CSR and ethics awareness training for employees
- Control mechanisms to ensure compliance with environmental and social standards
- Interactions with sub-suppliers around corporate responsibility issues
- Commitment to Bombardier Transportation's Suppliers Code of Conduct

In recent years, CSR-related issues have gained much higher prominence within the SEAP questionnaire, which is continuously updated to reflect changes in legislation, customer requirements, and internal Bombardier policies.

Achieving Continuous Improvement in our Supply Chain

Seeing our suppliers as long-term partners, we emphasize continuous improvement in supplier performance and conduct compliance audits and performance assessments to identify areas for performance enhancement.

For example, we conduct:

- Project assessments (detailed risk assessments related to individual projects)
- Performance measurement related to criteria such as quality and on-time delivery
- Quarterly business reviews
- Yearly approvability checks

Bombardier Transportation conducts an SEAP re-assessment every three years for top suppliers. The re-assessment evaluates general performance and improvements relative to the initial or previous SEAP assessment.

We maintain the integrity of our supply chain by requiring that any supplier that fails to meet our standards must develop and complete a CAR. We continue our relationships with those suppliers that fulfill CAR requirements and return to a good standard. Suppliers that do not comply with Bombardier Transportation quality, environmental, or social standards, including CAR requirements, are removed from our list of approved suppliers.

 ¹ www.unglobalcompact.org

 ² www.ilo.org

 ³ www.csreurope.org

 ⁴ www.csr-asia.com

◁ By assuming full responsibility for the environmental impact of its operations, Bombardier Transportation strictly follows its targets addressing both the short-term and the long-term view. ▷



Jürgen Schmallenbach, Environmental Verifier, INUTEC Engineering & Management GmbH, Ulm, Germany



Production hall in Kassel with TRAXX locomotives being assembled.

◁ Our Approach to Environmental Stewardship ▷

Environmental stewardship is a crucial part of our sustainability activities. This section discusses our progress in reducing our environmental footprint.

Our Strategic Objectives

Bombardier Transportation strives to reduce its overall environmental impact, whether this is associated with the use of the Group's products or related to its production processes.

We have identified and are vigorously pursuing two core opportunities to reduce the environmental footprint of our global production. These are:

- Reducing the consumption of **input resources** such as energy, water, and materials
- Reducing, and, where possible, eliminating **unwanted outputs**, including greenhouse gas (GHG) emissions; emissions of volatile organic compounds (VOCs); releases of wastewater; and the generation of general, hazardous, and recyclable waste materials

Our ability to reduce consumption of input resources and eliminate harmful outputs not only decreases our environmental footprint, but also offers significant opportunities to save money. We have established performance targets to keep us on track and ensure that we maximize these opportunities.

Performance Targets

In alignment with Bombardier Inc.'s performance targets, our objective has been to annually reduce inputs (energy, water, and materials) by 3 percent per 200,000 work hours, for a total reduction of 15 percent over the time period that started in 2003 and went to 2008. In the same fashion, we established an annual 3 percent per 200,000 work hour

reduction target for waste and greenhouse gas emissions. Regarding the hazardous waste indicator, we aimed for an annual 5 percent reduction per 200,000 work hours.

Summary of 2007/2008 Performance (based on relative data)

- ⊕ Achieved at least a 3 percent reduction in water and energy consumption (2006 to 2007), and in water, waste, and hazardous waste (2007 to 2008)
- ⊖ Did not attain a 3 percent reduction in GHG emissions, general waste, or hazardous waste generation (2006 to 2007), or in energy and GHG (2007 to 2008)

Overall: Despite missing some of our annual reduction targets, we achieved our overall objective of a cumulative 15 percent reduction from 2003 to 2008 (except for waste and GHG emissions). In energy consumption, we achieved a 14 percent reduction, in water consumption 25 percent, and in hazardous waste 40 percent. We did not achieve the overall objective with respect to GHG emissions (10 percent instead of 15 percent target) and total waste (0 percent).

Management Approach

We have implemented Environmental Management Systems (EMSs) at our manufacturing sites worldwide that conform to ISO 14001 standards. Bombardier Transportation adheres to Bombardier Inc. requirements with regard to the certification of EMSs. As such, we have achieved third-party ISO 14001 EMS certification at all our manufacturing and service sites that have more than 150 employees. A number of our European sites are also certified to EMAS (Eco-Management and Audit Scheme) . In addition to the sites certified according to ISO 14001 in fulfillment of Bombardier Inc. requirements, several additional facilities also hold ISO 14001 certificates.

 www.ec.europa.eu/environment/emas

Environmental Management Systems (EMSs)

Bombardier Transportation has a comprehensive Business Management System in place throughout its manufacturing and service sites. As it is aligned and based on continuous improvement, we believe this management system to be critical in helping us increase resource and energy efficiency, reduce waste, and prevent environmental incidents. Our compliance record in 2007 and 2008 – no significant fines or penalties – speaks to the effectiveness of our management approach. We have achieved multi-site certification under both the ISO 14001:2004 standard and the European Eco-Management and Audit Scheme (EMAS). Regardless of the system, we follow the practice that each site must be certified individually prior to its inclusion in “matrix” certification. Sites that have not yet achieved certification are, however, in conformance with our integrated business system that is aligned with ISO 14001 requirements, which is checked by independent internal auditors.

Certifications and Registrations

ISO 14001	EMAS
44 out of 49 manufacturing and bigger service entities required to be certified according to Bombardier Inc. directives are certified. The remaining five sites do not yet have to be certified because they are (a) joint ventures where Bombardier Transportation only obtained management control in 2008 (two sites), or (b) new sites that are not fully operational or recently acquired (three sites).	31 percent of eligible sites registered
86 percent of all employees are covered by ISO 14001 certification. The figure rises to 98 percent, when offices and activities at customer premises are excluded.	40 percent of European employees covered
The six remaining sites (Savli, India, newly acquired production facilities in Derby, UK and Suzhou, China, as well as two joint ventures in China where Bombardier has had a 50 percent share since 2008) are expected to be certified between 2009 and 2012.	Seven German sites (one housing three legally independent entities) and one Polish site are registered according to EMAS ¹

¹ German sites: Aachen, Bautzen, Görlitz, Hennigsdorf (three entities), Kassel, Mannheim, and Siegen; Polish site: Wroclaw. Please see world map on the inside of the front cover.

Auditing

In addition to EMS auditing, the Group has a corporate Health, Safety, and Environment (HSE) compliance audit program. This program verifies facilities' compliance with applicable HSE laws and regulations, and with the principles, commitments, and objectives of Bombardier Inc.'s HSE Policy. Compliance audits are carried out by duly qualified external auditors every three years.

Employee Training

Employees are key contributors to the success of our environmental initiatives. We provide our employees with awareness-raising principles and skills training so that they are well-equipped to reduce impacts and can help to create innovative solutions to our environmental challenges. Employee training covers issues such as the handling of hazardous substances and Design for Environment (see pages 16/17). We intend to introduce a new training program on energy-efficiency awareness in 2009. We will also transition to presenting consolidated HSE training hours in future reports, as it is difficult to strictly categorize and differentiate between environmental and health and safety topics.

Environmental Training (hours/employee/year)

2003	2004	2005	2006	2007	2008
0.4	0.3	0.2	0.3	1.1	1.3

Future EMS Targets

- Maintain certification of all manufacturing and service facilities with more than 150 employees to ISO 14001, including newly acquired sites by, at the latest, three years after their acquisition
- Up until 2012, we will include smaller sites in ISO 14001 certification processes and require that off-site locations demonstrate that they have environmental (and health and safety) management systems in place for internal audits



Reduction of Input Resources

The reduction of input resources is a key aspect of our environmental stewardship effort. We are working to reduce the amount of water and energy used in our production processes, to minimize raw-material use, and to ultimately eliminate hazardous materials. Please note that until 2007, the Bombardier fiscal year was the base for performance data evaluation, and since then, the calendar year has been used. In the graphs below, this distinction is not made apparent and only calendar years are indicated.

Energy Use

The consumption of energy carries with it not only environmental consequences but also considerable operational costs. Bombardier Transportation continually seeks ways to reduce energy use, despite the significant demands imposed by the Group's production processes. The Group aspires to become a leader in energy efficiency and is also exploring the potential of working towards carbon-neutrality. For example, our sites in Canada (Québec), Norway, Denmark and Switzerland are leaders with respect to the use of electricity from renewable sources.

More immediately, we have focused on reducing our absolute and relative energy consumption by 3 percent annually, and by 15 percent over the period of 2003 to 2008 (referenced to 200,000 work hours).

Bombardier Transportation's operations use energy which is sourced in different ways: directly from fossil fuels, from district heating, and in the form of electricity. We use a major portion of our energy budget to heat and light workspaces. Certain aspects of our production processes, such as electric welding, are energy intensive.

Results in 2007/2008

Bombardier Transportation achieved a 7 percent decrease in relative energy consumption in 2007, with no further reduction in 2008. In fact, a slight increase of 1 percent was observed. We exceeded our cumulative reduction objective by reducing specific energy use by 15 percent from 2003 to 2007, and achieved 14 percent by the end of 2008 (instead of the 15 percent target).

Actions Taken in 2007/2008

• Energy Efficiency at our Facilities

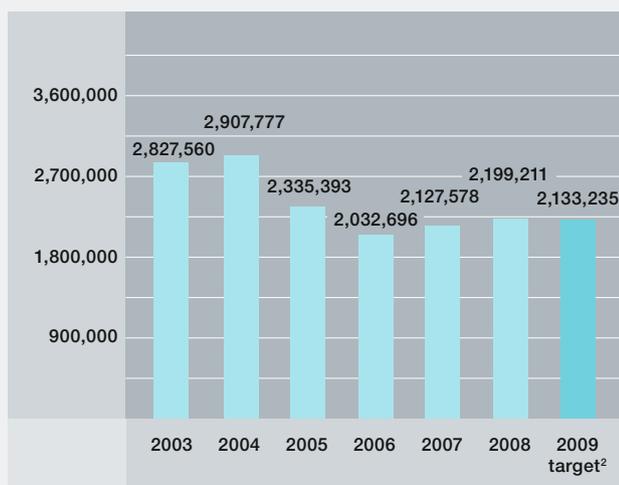
In 2007, we launched the "Energy Efficiency at our Facilities" (ENEFA) project in order to accelerate energy conservation efforts. This initiative, jointly managed by HSE and procurement, supports our sites and Divisions in meeting and exceeding our energy reduction target, and was ongoing throughout 2008.

Under ENEFA, each of our production and bigger service sites assesses its energy-efficiency performance against internal benchmarks identified for the relevant site type (assembly-only, assembly and pre-manufacturing, and production of electronics systems and sub-assembly).

Energy Consumption¹

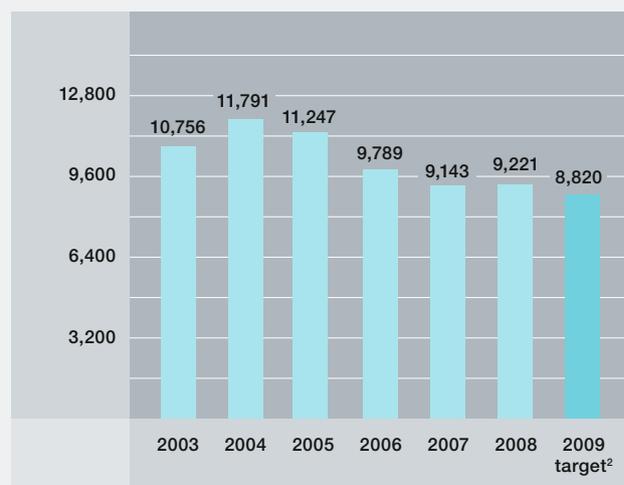
in absolute figures²

in Gigajoules



per 200,000 work hours²

in Gigajoules



¹ Due to an error in the calculation for the Ceska Lipa site, the energy consumption in 2006 (total) was 2,032,696 GJ instead of 2,289,092 GJ, as in previous reports. Consequently, GHG equivalents were 164,485 tons, instead of 189,652 (page 34).

² See box on page 32. Please note also, that all relative figures on this and the next pages differ slightly from the ones in previous reports due to minor corrections of work hours.



Even though the Görlitz site now uses less energy (left), the lighting is even brighter than before (right).

We have identified “champion” sites that already meet the benchmarks and we require that sites falling short develop action plans for improvement. We have also engaged an outside consultant to evaluate the potential for the sourcing of renewable energy at each site. These site assessments will allow us to develop more effectively a greenhouse gas strategy in 2009, based on validated efficiency improvements and the use of regenerative energy.

• **Site-specific Initiatives**

Bombardier Transportation performed site-specific programs in 2007 and 2008 to cut energy use, including building renovations, heating system upgrades, and optimization of energy sources and lighting systems. These measures were partly identified in cooperation with external partners, such as the Carbon Trust for UK sites [↗](#).

The Group also adjusted heating and cooling systems to automatically maintain pre-set heating levels and lower night-time temperatures in office buildings, workshops, and at production sites.

Future Targets

We have established a number of future energy targets:

- Achieve a cumulative 18 percent total (relating to 2003) and 3 percent annual relative reduction (per 200,000 work hours) by end of 2009. Targets to be defined for the following years will reflect a detailed study of site-specific energy reduction potential, as opposed to a general company-wide objective. We will seek the expertise of external energy specialists to maximize both our energy and our cost savings (up to 30 percent of current costs).
- Replace fossil fuel-based energy with renewable energy to the extent possible. Once we have completed the feasibility study at all Bombardier sites in mid 2009, we will set a specific target for renewable energy sourcing.
- Investigate possibilities to regenerate braking energy from vehicle testing. We are already looking into ways of adopting this approach in conjunction with the installation of a new test ring for trams at the Light Rail Vehicle hub site in Bautzen, Germany.
- Develop and implement green building guidelines for new construction and retrofits.

Water Consumption

Our production process is not water-intensive, and we recycle much of the water we use. Water is typically consumed during painting, cleaning, and vehicle-testing for water-tightness, as well as in site sanitary facilities. We source 80 to 90 percent of our water from public water supply systems. Our target has been to reduce our relative water consumption by 3 percent annually, corresponding to 15 percent over the period of 2003 to 2008 (per 200,000 work hours).

Results in 2007/2008

Bombardier Transportation achieved a 9 percent decrease in relative water consumption in 2007, exceeding its 3 percent per 200,000 work hours annual target, but just 3 percent in 2008. With this accomplishment, we also further surpassed our cumulative reduction objective by decreasing relative water consumption by 25 percent (vs. a target of 15 percent) from 2003 to 2008.

Actions Taken in 2007/2008

We focused on avoiding water consumption in vehicle water-tightness testing and cleaning by increasing rates of water recycling.

Absolute and Relative Figures

Bombardier Transportation has experienced many organizational changes in the past few years. Consequently, presenting our environmental performance exclusively in absolute figures could be misleading. We therefore introduced an indicator which relates all environmental performance data to work hours (“per 200,000 work hours”). While being well aware that this may not always be the best reference, we feel that referring to work hours presents a more honest picture than only providing absolute figures. Additionally, we report on absolute figures for all our input and output indicators, although these fluctuate from year to year due to different numbers of active facilities over time, as well as varying loading of our factories.

Targets 2009

The target values for year 2009 reflect either the short-term yearly 3 percent reduction goal (in comparison to 2008) or the long-term cumulative goal of an 18 percent reduction (from 2003 to 2009), depending on the most stringent value.

Future Targets

With regard to water consumption, we aim to:

- In the short-term, achieve an additional 3 percent reduction per 200,000 work hours annually in 2009 and a cumulative 18 percent relative reduction by 2009; and in the long-term (in order to improve the definition of future targets), we aim to:
- Better understand the sources of the water we use at smaller sites
- Improve water-use data collection methods and overall data quality
- Comprehend the driver processes regarding water use

Use of Materials

We use a significant amount of materials such as metals, plastics, wood, glass, paints, insulation, fabric, and adhesives to build our rail vehicles. For example, a typical 84-ton locomotive produced at our Kassel assembly site requires 72 tons of steel, 13 tons of other metals, and 3.5 tons of plastics. Fortunately, approximately 95 percent of the materials in our products can be recycled at the end of a vehicle's useful life (see also page 24). The same percentage applies to scrap materials from manufacturing processes.

Our objective is to conserve resources and minimize the total amount of materials we use, while ensuring that the trains we build are safe and durable. More importantly, we aim to reduce and ultimately eliminate our use of environ-

mentally hazardous and potentially hazardous substances, such as heavy metals and chlorinated solvents (please refer to the List of Prohibited and Restricted Substances in the Product Responsibility chapter, page 24).

Results in 2007/2008

Bombardier Transportation deepened its understanding of the composition of its products through the increased application of life cycle analyses. These analyses were mostly related to the preparation of Environmental Product Declarations (EPDs).

Actions Taken in 2007/2008

We introduced natural fiber and sustainably harvested wood to train interiors. We have also been working on the harmonization of the "substances list" among the rail industry. It is intended that such a list will be available by late 2009. In 2008, we also initiated a project with UNIFE aimed at harmonizing EPD approaches for the rail industry.

Future Targets

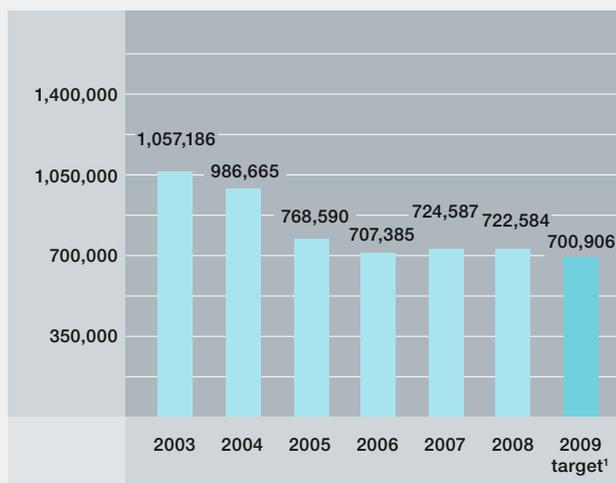
Our goal is to further restrict the use of hazardous materials in our production processes. Specifically, we aim to eliminate all use of hexavalent chromium (chrome VI) and trichloroethylene (TCE) if possible by end of 2009, but within three years at the latest.

➔ www.carbontrust.co.uk

Water Consumption

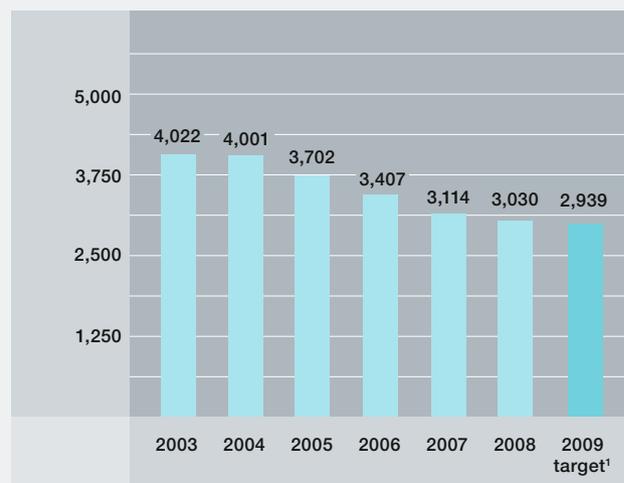
in absolute figures¹

in m³



per 200,000 work hours¹

in m³



¹ See box on page 32.

Reduction of Unwanted Outputs

We work to reduce our environmental impact not only by limiting the inputs we use, but by eliminating or reducing the emissions and waste generated as by-products of our production processes. Besides waste, these include primarily solvent emissions and carbon dioxide (CO₂) associated with energy generation.

Greenhouse Gas Emissions

At Bombardier Transportation, we track three greenhouse gas (GHG) emissions, namely: CO₂, nitrous oxides (NO_x), and sulfur dioxide (SO₂). Of these, approximately 40 percent fall under Scope 1 derived from the Kyoto protocol [\[4\]](#). Our objective has been to reduce our relative GHG emissions by 3 percent annually (per 200,000 work hours) and to achieve a cumulative 15 percent relative reduction between 2003 and 2008.

Results in 2007/2008

We did not meet our 3 percent annual relative reduction goal in 2007. Our GHG emissions decreased only by 1 percent. In 2008, our GHG emissions even rose by 4 percent. This was due to increases in production volume, and consequently, the electricity usage in countries such as Germany and the UK. These countries source electricity predominately from the burning of fossil fuels, thus incurring a higher GHG emissions burden. We were able to reduce energy consumption predominantly at sites where we purchase electricity sourced from renewable energy. This led to an overall increase in GHG emissions.

Bombardier Transportation's successful efforts to reduce emissions in 2005 and 2006 meant that the long-term cumulative goal of a 12 percent relative reduction in GHG emissions from 2003 through to 2007 was met, however, from 2003 to 2008, only a 10 percent decrease instead of 15 percent was achieved.

Actions Taken in 2007/2008

We undertook several actions to reduce our GHG emissions, including:

- Conversion to district heating instead of site-based heating. We will track emissions-reduction data for sites that join district heating systems in conjunction with the 2008/09 energy study (see energy use section, page 31)
- The purchase of electricity generated from renewable sources



Transporting people and goods is the main source of emissions of pollutants that are behind smog and greenhouse gases. Road is responsible for 84 percent of transport sector emissions. www.theclimateisrightfortrains.com.

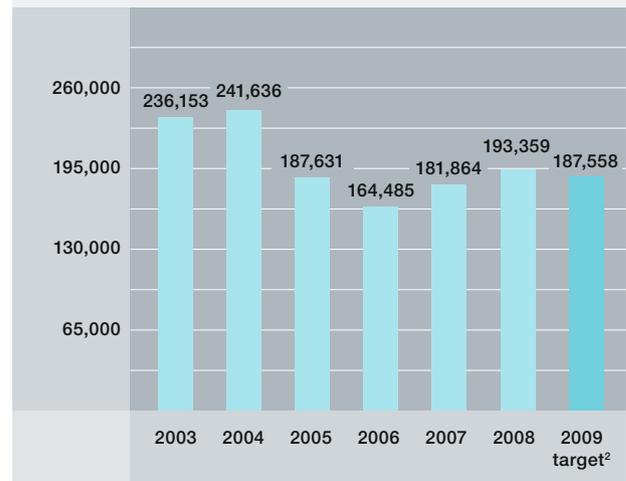
- Investigation of options to offset carbon emission through participation in programs such as the Woodland Trust in the UK. Bombardier Inc. will develop a comprehensive renewable energy and offsetting strategy in 2009 based on data generated and research completed during the beginning of the year

www.unfccc.int → Kyoto Protocol

Greenhouse Gas Emissions¹

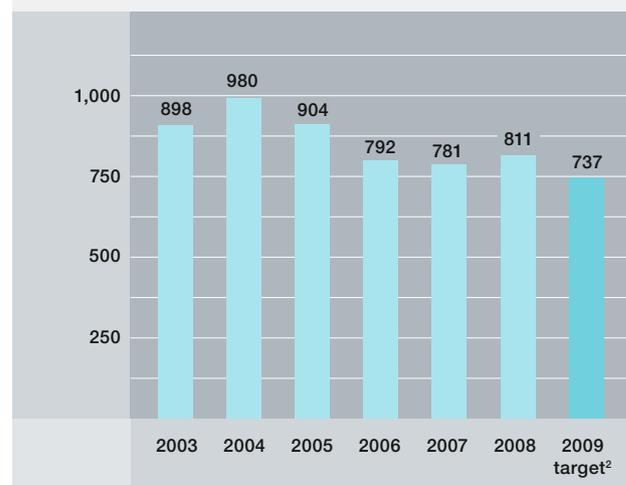
in absolute figures²

in tonnes CO₂-equivalent



per 200,000 work hours²

in tonnes CO₂-equivalent



¹ Due to an error in the calculation for the Ceska Lipa site, GHG equivalents in 2006 were 164,485 tons, instead of 189,652.

² See box on page 32.

Future Targets

We are committed to:

- Further reducing relative GHG emissions by 3 percent in 2009 compared to 2008 (per 200,00 work hours) and achieving a cumulative 18 percent reduction between 2003 and 2009
- Developing a comprehensive emissions database from which we can better relate direct and indirect CO₂ emissions to processes
- Developing a GHG strategy in 2009, based on the identification of the driver processes, and aiming at better target setting and achievement

Volatile Organic Compounds (VOCs)

VOCs are compounds that can easily evaporate into the air. They are potentially harmful to both humans and the environment, as they contribute to ground-level ozone formation. At Bombardier Transportation, sources of VOCs include the solvents in paints, adhesives, and in cleaning agents used for degreasing. We try to reduce the use of these substances to the greatest extent possible; for example, production facilities are directed to replace solvent-based paints with water-based paints in appropriate circumstances.

In 2007, we began to monitor the actual amount of VOCs released at our facilities on a global scale. This baseline will help us, in agreement with Bombardier, Inc., to establish an appropriate VOC reduction target in 2009. In both 2007 and 2008, we continued replacing solvent-based paints with water-based paints.

Waste

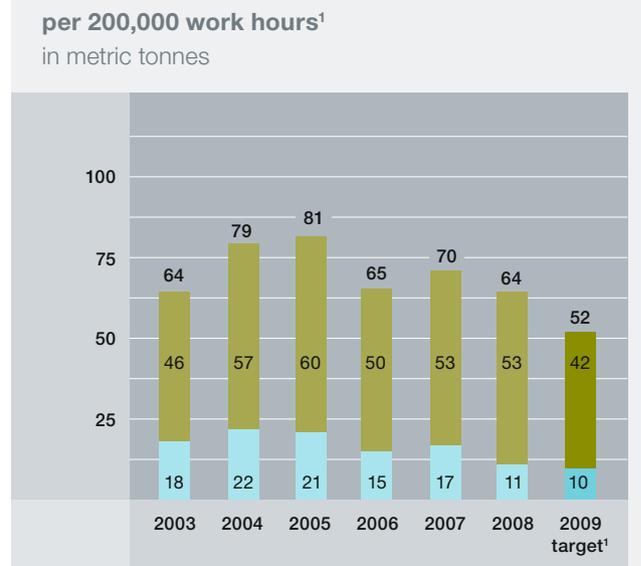
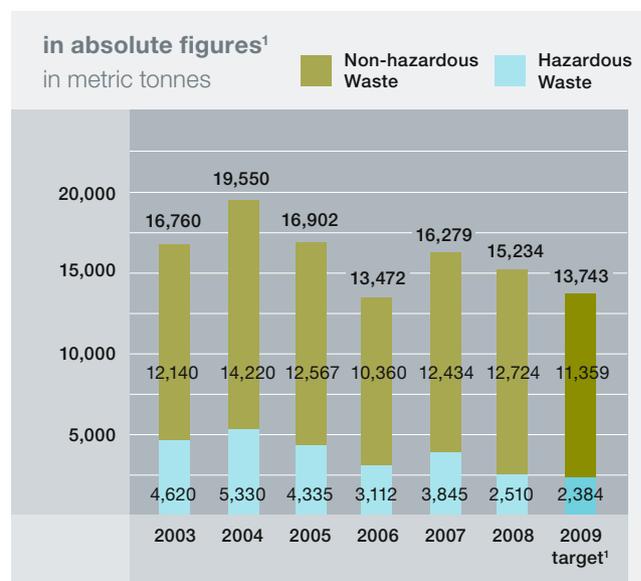
Bombardier Transportation generates both general and hazardous waste in the course of building, maintaining, repairing, and refurbishing rail vehicles or their components. We also dispose of obsolete equipment and materials as newer technologies and production processes come into being. Technical requirements and maintenance activities require the use of hazardous materials or their removal and may, as a result, increase the amount of hazardous waste over that generated in previous years. Our company policy is to carefully manage the use of hazardous substances, those which are regulated as well as those which appear on our internal list of restricted materials. The engineering departments must document and gain approval for the intended use of restricted materials. These measures contribute to reducing hazardous waste. We also intend to reduce general waste by avoiding it from the beginning or at least by increasing recycling rates.

Our ongoing objectives are to:

- Reduce general waste by 3 percent annually (per 200,000 work hours) and achieve a cumulative reduction of 18 percent from 2003 to 2009
- Reduce hazardous waste by 5 percent annually (per 200,000 work hours) and achieve a cumulative reduction of 30 percent from 2003 to 2009. Bombardier Transportation's targets with respect to hazardous waste reduction are more stringent than Bombardier Inc.'s targets of 3 percent annually and 18 percent cumulative hazardous waste reductions from 2003 to 2009

Ultimately, we aim to reduce all waste, irrespective of the treatment method.

Non-hazardous Waste/Hazardous Waste



¹ See box on page 32.



Scrapping of an old passenger wagon from the 1960s.

Results in 2007/2008

• Non-hazardous Waste

In 2007, we generated 7 percent more non-hazardous waste than in 2006 (in relative figures), however, no further increase was generated between 2007 and 2008. The overall increase is predominantly attributed to the increased share of non-EU suppliers and consequently an increased amount of packaging. However, it is also due to the increase in production and sporadically occurring construction activities Bombardier Transportation is involved in. This is the reason why, based on relative figures, an increase of 16 percent between 2003 and 2008 was observed.

• Hazardous Waste

Similar to general waste (based on relative figures), we saw a strong increase in the amount of hazardous waste between 2006 and 2007 (10 percent), but a decrease of 36 percent between 2007 and 2008. A total decrease of 40 percent was achieved between 2003 and 2008 (compared to the target set of a 25 percent reduction, in relative figures). The amount of hazardous waste is

attributable, to a large degree, to service business activities. For example, the refurbishment of an older rail vehicle can include the removal of asbestos, a hazardous substance that was previously widely used in rail equipment manufacturing. The presence of these legacy materials makes it difficult for Bombardier Transportation to control the amount of hazardous waste generated through its service operations. A large influence for the non-SER (Services) Divisions comes from building activities at some of our old sites when contaminated soil (which could otherwise be left untouched) has to be disposed. Historic soil contamination is not uncommon at many of our old sites.

Actions Taken in 2007/2008

Avoiding or reducing waste is clearly a priority for Bombardier Transportation. We are introducing a comprehensive data management system to better track our waste management processes, including waste generation and disposal statistics, and will provide more detailed reporting on waste in 2009.

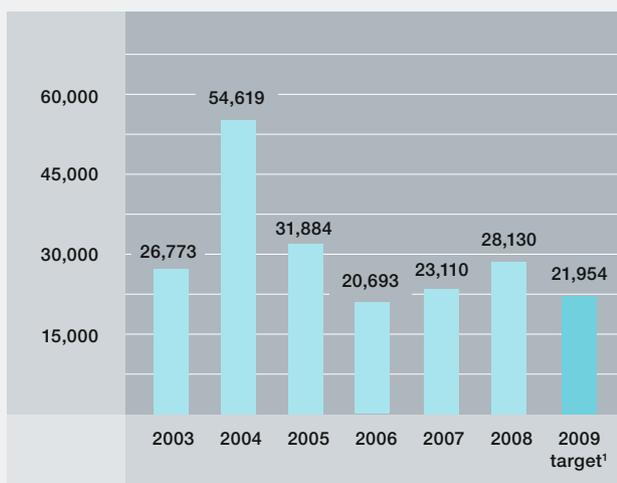
Future Targets

Our waste reduction targets remain constant for 2009, with the aim of a 3 percent annual relative reduction target for general waste, and a 5 percent annual relative reduction target for hazardous waste. Additionally, we aim to entirely eliminate the amount of production-related waste we send to landfills by 2010. We are considering the application of material flow cost accounting, to identify the most promising processes regarding waste elimination.

Recyclable Waste Materials

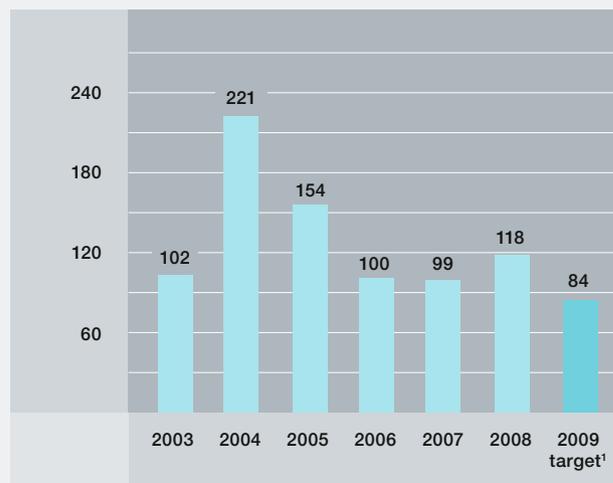
in absolute figures¹

in metric tonnes



per 200,000 hours¹

in metric tonnes



¹ See box on page 32.

Recyclable Waste Materials

Approximately 80 to 90 percent of the waste generated by Bombardier Transportation's production and service processes is recyclable; at present we achieve a rate of 65 percent. As we gain more information regarding our generation of recyclable waste through the implementation of our planned data management system, we will consider whether it is appropriate to set an annual recycling rate target.

Part of our deliberations will center on whether it is, in fact, desirable to have high recycling rates. Although recycling can have a lower environmental impact than outright disposal, in some cases the presence of materials to be recycled indicates an opportunity to reduce this waste at the source. For example, if we can have more durable packaging and re-use it, the total amount of packaging materials to be recycled will decrease, thus lowering our overall recycling rates, but still being more favorable from an ecological and economical perspective.

Results in 2003 - 2008

We recycled a comparable amount of materials in 2003 and in 2008, from the perspective of both the absolute quantity

of recycled materials. However, recycled materials per 200,000 work hours increased by 16 percent in the same period. In 2004 and 2005, we recycled a larger amount of materials (see graph on page 36). This increase coincided with significant restructuring activities, which resulted in the generation of large quantities of scrap metal from discontinued operations and production area closures.

Effluents

We began collecting both sanitary and production effluent data in 2007. As a result, it can be stated that the majority is discharged indirectly via municipal treatment plants, with less than 10 percent discharged directly using our own treatment facilities. We are working to improve effluent data quality using our new IT support system.

In 2007, our total water intake in was 466,156 m³ and our total recorded wastewater discharge was 371,038 m³.¹

Other Future Targets

It is intended that from 2009, we will begin reporting on spills, as required under a Bombardier Inc. directive, amending the provisions of our environmental reporting system.

Best Practice: Responsible Management of an Oil Spill in England

A particularly rainy day in August 2007 led to an unanticipated oil spill near the Bombardier Transportation production site in Crewe, England. Crewe is a typical old industrial site, with some of the original drainage infrastructure – dating back to the 1840 – still in use. The downpour overwhelmed Bombardier Transportation's interceptor, allowing diesel oil to spill into unsound drainage pipes of the municipality and ultimately into a nearby lake.

As soon as the pollution was discovered, Bombardier Transportation pro-actively assigned a high priority rating to help clarifying the incident. The site notified senior management, and took direct action to investigate drainage routes on- and off-site at its own expense (amounting to approximately £12,000). Upon confirming the cause of the spill, Bombardier Transportation installed alarms and safety devices around the interceptor, including closed-circuit television cameras to provide visual oversight. The Environment Agency and City Council, on their part, repaired their collapsed drain.

Bombardier Transportation's swift and comprehensive action in this environmental issue that was not necessarily theirs, was well-received by the local community, resulting in the site's nomination for a local stakeholder award for proper handling of the spill.



Contaminated brook in Queen's Park, Crewe before having been cleaned by Bombardier Transportation.

¹ Data evaluation regarding wastewater for calendar year 2008 was not finalized before the editorial deadline.

◁ Bombardier Transportation strives for all-round sustainable development including the individual development of its employees. It achieves this by conducting training on Health & Safety issues, professional qualification and work-life-balance. ▷

Taralkumar S Maheshwary, Human Resources and Corporate Social Responsibility, Bombardier Transportation India Limited, India



Employees working inside a commuter train at our plant in Crespin, France.

◁ Commitment to Employees ▷

Our efforts to create and maintain a world-class workforce will help us to ensure the long-term success of our business.

At Bombardier Transportation, we know that our position as a leading business within the rail transportation industry depends on the hard work and innovative contributions of our employees. Our workforce consists of more than 34,000 individuals representing 89 nationalities, working at facilities and offices in 35 countries around the world. We are proud of the diverse and talented nature of our employee base. We take our responsibility seriously to provide a motivating and secure work environment that is structured around the principles of fairness and respect. We know that employees who feel valued and supported are also those who are the most productive. As such, our efforts to foster and retain a world-class team begin with building a great place to work. We offer our employees training and development opportunities and reward excellence at every level of the organization.

Human Resources Challenges

Similar to many international businesses, Bombardier Transportation faces a suite of challenges related to maintaining a stable employee base with the requisite skills and talents to consistently meet and exceed customer requirements. Some of these challenges include dealing with demographic changes; maintaining successful recruiting strategies; developing and retaining the best talent; effectively sharing best practices across the organization; and ensuring compliance with policies and regulations related to our global supply chain, labour practices, and our environmental, health, and safety performance.

Demographic change is a particularly difficult issue and one that many companies are struggling to address. In many of the countries in which we operate, fertility rates have dropped, intensifying competition for qualified new entrants to the workforce. At the same time, our existing workforce is aging. As employees retire, we must take care to ensure that we do not lose institutional memory, especially in cases where the parting employees possess particularly specialized skills.

Workforce Statistics: 2007-2008

- From 2007 to 2008, the total number of employees in our workforce rose by 9 percent. This increase was mainly due to greater staffing needs for new projects and the expansion of existing projects in Europe (especially in Germany, Sweden, Switzerland, and France). We also experienced workforce increases in Asia, due to the opening of a new manufacturing site in India.
- In 2008, women comprised 15.4 percent of our total workforce.

Approaching Human Resource Challenges

We have developed a thorough understanding of the Human Resources (HR) challenges we face and have created a strategic approach to recruiting and retaining a world-class team. Our HR strategy is based on the following four pillars:

• Acquire Talent

We strive to be an attractive employer and to recruit skilled talent and high-potential individuals to fill our workforce and management positions. We therefore extend talent acquisition channels outwards while building an internal talent pool engine.

- **Develop Talent**

We continually identify and further develop talent among our existing workforce, across all fields of operation. We encourage our employees to take advantage of training and professional development opportunities.

- **Preserve Organizational Capacity**

We work to maintain institutional memory and pass on our older workers' expertise to a new generation of employees. We also offer attractive employment conditions to retain our valued employees over the long term.

- **Create a Boundary-less Organization**

We facilitate a work environment that fosters cooperation and collaboration between Divisions and business units, and a boundary-less career development.

Organizational Structure

The HR department oversees the majority of employee-related activities. The responsibilities of the department include recruitment, compensation and benefits, transfers, talent and organizational development, and global employee relations. HR is organized into three functional groups: HR Business Partners (dealing with the Divisions and Group Functions), Centers of Expertise (dealing with topics like compensation, talent, and labor relations), and Shared Services.

Bombardier Transportation's HR activities are coordinated with Bombardier Inc.'s overall HR strategy via the HR Council. The council is composed of the heads of HR from both operating groups (Bombardier Transportation and Bombardier Aerospace) and is chaired by the Senior Vice President of HR for Bombardier Inc. Employee Health and Safety is overseen by the Health, Safety, and Environment (HSE) department, which is aligned with Bombardier Inc. and Bombardier Aerospace through the Bombardier HSE Council. Relevant committees of Bombardier Inc.'s Management Board receive regular reports on the status of HR and HSE issues (see organizational chart on page 10).

Code of Ethics and Business Conduct

Code of Ethics and Business Conduct

We rigorously apply internationally approved labour practices and human rights standards across our operations. These and other business standards that guide our daily operating activities are formalized within the Bombardier Inc. Code of Ethics and Business Conduct (CEBC). The CEBC helps employees worldwide better understand their obligations with regard to issues such as health and safety in the workplace, ethical business conduct pertaining to conflicts of interest and anti-corruption, and how to maintain appropriate relationships with external suppliers, partners, and other third parties.

We believe that the CEBC is especially useful given the global scope of our operations. Bombardier Transportation is subject to the laws of many nations, states, municipalities, and international bodies. By setting forth and enforcing common guidelines for all employees, managers, and executives, we create a culture that fosters full compliance with all applicable laws and adherence to the spirit of ethical business practice. The CEBC is posted on the Bombardier website in 14 languages in order to increase its accessibility to employees in various global locations www.bombardier.com → **Code of Ethics and Business Conduct**.

The CEBC applies equally to employees and members of the company's Board of Directors, managers, and executives, without exception. Bombardier Transportation's suppliers, partners, and other third parties are expected to meet the principles of the code when dealing with or acting on behalf of the company.

Training Employees on the CEBC

In 2008, Bombardier Transportation developed and launched an online training module to further raise awareness of the CEBC among employees. The training module is currently available in English, French, German, and Spanish. Efforts are underway to translate the tool into additional languages.

Our goal is to ensure that employees in all our global locations have access to and complete the training. To date, we have rolled out the training module in the following countries: Australia, Austria, Belgium, Brazil, Canada,

China, the Czech Republic, Denmark, Finland, France, Germany, Hungary, India, Italy, Mexico, Norway, Poland, Portugal, South Africa, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

Maintaining Compliance with the CEBC

Bombardier's Corporate Compliance Officer and the Bombardier Ethics Advisory Council are responsible for maintaining compliance with the CEBC. They also manage initiatives to promote ethical business practices across the company's work environments.

The council, for example, conducts an annual certification process whereby all members of Bombardier's senior management officially confirm their commitment to and compliance with the Bombardier CEBC.

In order to facilitate full application of the CEBC, every employee, customer, supplier, or third party is encouraged to seek clarification of CEBC guidelines or report a CEBC violation to the Compliance Officer. Violations can also be reported directly to an employee's immediate supervisor, to an HR representative, or anonymously to a third-party provider at www.ethicspoint.com. All information regarding CEBC violations is treated anonymously and confidentially.

Best Practice: Responding to a CEBC Violation

In 2008, Bombardier Transportation received a report of a potential violation of the CEBC. Upon investigating the matter, Bombardier discovered that a manager had accepted personal benefits from a supplier. Bombardier Transportation immediately terminated the manager's employment with the company. Additionally, Bombardier Transportation discussed the issue with the supplier in order to prevent recurrence of similar problems in the future. Finally, employees working in the manager's Division attended a workshop on the CEBC to refresh their knowledge of the code and ensure their full compliance with its principles. This case demonstrates the Group's vigilance with regard to ethical matters. It also serves as an example of the effectiveness of the Bombardier Transportation whistle-blowing system.

Recruitment

We seek a broad spectrum of talented individuals who want to develop personally and professionally, contribute to our growth, and share in our successes.

Acquire Talent

Our Strategic Goals are:

- To be among the most attractive employers within the industry
- To recruit world-class employees quickly and efficiently by attracting qualified candidates and managing an effective recruiting process
- To seek out young talent for placement in our skilled workforce or in pre-management positions

Recruitment Approach

Bombardier Transportation engages in a variety of activities aimed at increasing its attractiveness as a potential employer. We encourage individuals, and especially young talent, to join our Group through programs such as apprenticeships, qualified internships, diploma theses work, temporary student positions, and graduate program positions. These programs offer applicants an opportunity to experience working at Bombardier Transportation early in their careers and to make the transition to full-time work if there is a good match on both sides.

In order to reach out to future generations of workers, we approach and engage students of different disciplines at universities, recruiting fairs, and other events in Germany, Europe, Asia, and North America.

Results in 2007/2008

Our work to increase our visibility and attractiveness as an employer has resulted in significant gains. This is demonstrated by results in surveys where we have been seeing positive improvements in various countries since 2003.

In 2008, Bombardier Transportation endowed a new Chair of Rail Systems Technology in the Faculty of Mechanical Engineering at the Karlsruhe Institute of Technology. The position, which will be supported for an initial period of ten years, will serve to advance practice-based research and teaching in the field of rail systems technology and related components. Our former Director of Project Management and Deputy Head of Bombardier Transportation's Mannheim site, was appointed to the Chair starting on November 1, 2008.

During 2007, we reorganized our HR recruitment Function to make our recruiting more efficient. We created a more regional Business Service Organization with shared services in Belgium and the UK for Europe, and Canada for North America that is now responsible for recruitment. Through this new, centralized structure, we have been able to cut costs while improving the effectiveness of our global recruiting. For example, we have increased our hiring capability for white-collar employees from around 5 to 40 deliverable hires per week over the last two years.

Future Goals

To further increase Bombardier Transportation's profile as an attractive employer, our goal for 2009 and beyond is to increase the partnerships with selected universities.

Promoting Diversity

As a business operating in many countries around the world, Bombardier Transportation strives to promote and protect the diversity and equal rights of each and every employee.

Our workforce comprises 89 different nationalities; 25.8 percent of our employees are from Germany, 47.4 percent from the European Union (excluding Germany), and 26.8 percent are from non-European Union countries (of which 18.7 percent are from North America (including Mexico), 3.5 percent are from Asia, and 1 percent from Australia). We see the diversity of our employee base and future recruits as a competitive advantage. Our employees' unique cultural backgrounds and experiences contribute to innovation both with regard to internal company processes as well as the development of new products that can better serve our clients.

Women currently compose approximately 15 percent of our total workforce. From January 2008 to January 2009, the percentage of women on our executive team and in management positions has increased from 23.2 percent to 25 percent. The increase in percentage of female trainees by 6.1 percentage points demonstrates our efforts to improve the overall share of women in Bombardier Transportation's workforce.

We offer equal opportunities regardless of age, gender, sexual orientation, disability, ethnicity, religion, citizenship, marital status, family situation or country of origin. We have formalized our commitment to diversity in our CEBC, and expect all employees to act with respect towards each other.

Employee Development

Our multifaceted approach to employee development enables us to nurture and retain talented leaders that, in turn, strengthen our company and provide competitive advantage.

Develop Talent

We strive to create a positive work environment that fosters growth and helps employees enhance their professional skills. We do this by providing a range of training and educational programmes, e.g. the fast track leadership program (Graduate Program) to support development and innovative thinking.

Leadership Curriculum

In addition to individual employee development plans, we have put in place formal leadership training programs. These programs ensure that our rising leaders understand the fundamental concepts of sound management. The courses also help to build a common culture of management excellence across the organization. Our leadership curriculum consists of:

- Diagnostic tools such as 360° reviews (assessing a manager's capabilities based on interviews with his/her superiors, collaborators and peers), EQ (Emotional Intelligence), leadership style and climate surveys
- Targeted programs for leaders at different levels of development.

Targeted programs are designed to increase our leaders' awareness of how they are performing and to increase their individual proficiency and management effectiveness through personal action plans. Courses include, among others, Bombardier Transportation Management Skills, Creating Great Leaders (for senior management levels), and Executing Strategy.

Bombardier Transportation instituted formal leadership training programs in 2006. Since that time, more than 800 participants have attended the trainings. Building on this success, in 2009 we will again invite more than 700 leaders from across the Group to attend a formal training program, and will offer diagnostics and leadership coaching to an additional 200 employees. We measure our progress in developing our leaders through results gathered from employee engagement surveys. We also track progress on an individual level based on the personal action plans that employees develop for themselves following their participation in a diagnostic or formal training program.

Preserve Organizational Capacity

Our efforts in recruiting talented workers and developing their skills will only benefit Bombardier Transportation if those individuals – and their specialized knowledge and expertise – choose to remain in the organization. We therefore provide attractive compensation packages and other benefits to help motivate employees to establish their careers at Bombardier Transportation.

We also need to pay close attention to the demographic structure of our workforce, so that we can plan for transitions between older and younger workers and retain valuable knowledge when older workers retire.

Demographic Considerations

Currently, 25.3 percent of our global workforce is above 50 years of age. Our younger workers (those under 30 years of age), make up only 17.2 percent of our workforce (as at January 31, 2008). As more of our workers are moving towards retirement age, we are focusing on ways in which we can close the “age gap” and effectively transmit expertise from one generation of workers to the next.

We have adopted several approaches to guarantee a continuation of institutional memory and specific job skills:

- We are strengthening our succession planning process
- We are proactively planning future workforce needs in light of demographic shifts
- We are supporting interactions between younger and older employees so that newer workers can learn directly from more experienced colleagues

Additionally, we continue to help support workers as they reach retirement age. We accommodate their needs, as best we can, by adjusting their responsibilities according to their experience and expertise. We also offer part-time work for employees who wish to gradually phase into retirement.

Establishing a Great Place to Work

In today's world, employees look to companies to provide more than just monetary compensation. We realize that benefits such as flexible work hours, opportunities for professional advancement and personal growth, appropriate work-life balance, and a safe and healthy work

Best practice: Bombardier Transportation's Asian Graduate Program in Singapore

As part of the organization's talent recruitment activities, Bombardier Transportation has targeted Singapore and its numerous universities as a promising resource for high-potential recruits in the Asian market. Our participation in the 2007 Singapore Fair is a good example of our success in attracting young talent on an international scale.

Bombardier Transportation received more than 1,700 employment applications from young Asian graduates after participating in the Singapore Fair and giving speeches at several Asian universities. We selected fifteen top-qualified graduates from 70 high-profile candidates for our Asian Graduate Program. Among these 15 high-potential individuals were 3 graduates from China, 5 from Singapore, 2 from Malaysia, and 5 from India.

The graduate program fulfills two purposes. First, we want to build a team of the best people from around the world, no matter what country they come from.

Second, we believe that employee diversity fosters our success and creates a vibrant and creative work atmosphere.



We expect that the talented Asian graduates who joined our company through the graduate program will eventually rise to management positions at our Asian (and other global) sites. With their cultural background and distinct knowledge of Bombardier Transportation culture and excellence, they will make strong leaders in our future workforce.

environment can be deciding factors in an employee's decisions to stay with a particular employer.

Accordingly, Bombardier Transportation has aligned its management approach and HR policies to extend various benefits to employees. These include flexible work hours and the possibility for qualified full-time employees to take sabbaticals.

At the same time, we must also stay competitive with regard to basic wages and compensation. We apply consistent and fair standards in setting wages, and are guided by three factors:

- Adherence, at a minimum, to the legal minimum wage
- Consideration of whether a binding salary structure that is equal to or higher than the legal minimum wage has been agreed upon with labour unions or other bodies representing employees
- Application of current market practice in different countries or locations

It is the policy of Bombardier Transportation to offer compensation that is equivalent to the market median level for the specific job; all of our employees are compensated at or above local minimum wages. Interns working at the Group also receive competitive compensation.

• **Pension Plans**

Pension plans, adapted to regional standards, are offered in several countries in order to supplement public pension schemes

• **Share Programs**

Selected members of the Group management are included in share programs; these may either include share purchasing options when a pre-defined share price has been reached, or share grants when specific performance criteria have been met over a period of three consecutive years.

Labor and Management Relations

Bombardier Transportation supports employees' rights to organize into labour unions and European Union work councils. In 2008, 64 percent of our worldwide employees were covered by collective bargaining agreements. This is clearly a higher proportion than in 2007, when only 56 percent were covered by such agreements.

Employee Engagement

We believe that highly motivated and engaged employees create successful organizations. One way that we seek feedback from our employees is through a bi-annual Employee Engagement Survey that tracks employee satisfaction. The survey is focused on determining what our employees think of our company (our strengths as well as our weaknesses) and what steps we can take to improve our performance.

In 2006/2007, 71 percent of our employees participated in the Employee Engagement Survey. The results showed that employees are very engaged with the company – they are passionate about our products and customers, and believe that, as a whole, the company is well-run and has established a strong foundation for future business success.

Employees further identified three areas for improvement, namely: leadership, collaboration and effectiveness, as well as people management and development. We have developed specific action plans to address these areas, as follows:

• **Leadership.** We will help leaders to:

- Act as a unified team and show clear direction
- Translate overall Bombardier Transportation strategy to every level of the organization
- Learn the hard and soft skills necessary to manage talent

• **Collaboration and effectiveness.** We will take steps to:

- Foster innovation and reduce bureaucracy
- Openly communicate and collaborate to break down silos
- Remove the barriers that stop people from doing their jobs

• **People management and development.** We will:

- Manage employee performance and provide ongoing feedback
- Fairly support employee development
- Demonstrate role model behaviors that inspire employee trust and confidence

To help our managers meet the above objectives, we have initiated management coaching and leadership training. We have also introduced new employee orientation programs and support tools for managers such as hiring plans and managerial checklists.

In November 2008, we conducted another Employee Engagement Survey. We saw improvement in nearly all categories of the organization's performance. The greatest positive changes were in the areas of leadership; cooperation and information sharing; and health, safety, and the environment. One area which employees ranked more poorly was workload. Although we are pleased that our order books are full, we will strive to create a more balanced pace of work.

Despite improvements, rankings in the areas of cooperation and information sharing; career and personal development; and site/location management are still not satisfactory. These, along with other lower-scoring issues, will be the focus of strategic planning. Survey results will thus help identify actions to improve employee satisfaction and overall business performance.

Future Goals

To further improve within the areas identified by our employees, we have committed to creating:

- An engagement plan for all executives e.g. by including all executives in president's quarterly call and monthly leadership briefs
- A communication plan to effectively cascade Bombardier Transportation strategies throughout the organization
- An action plan to establish and enforce proper leadership behaviors and develop the right leadership "soft skills"

Create a Boundary-less Organization

Innovation and creativity can only flourish where there is a free and efficient exchange of ideas and information. We are working on improving our processes for sharing best practices and are eliminating barriers to communication across Divisions and geographic locations.

We have:

- Created a leadership exchange program between Divisions and business units, as well as with Bombardier Aerospace
- Implemented the Bombardier Operations System (BOS, see page 10) to align organizational operating processes and facilitate the gathering and dissemination of best practices
- Established governance bodies, comprised of representatives from all business entities, to oversee the implementation of our policies
- Provided cross-functional knowledge-sharing opportunities for our employees

Occupational Health & Safety

At Bombardier Transportation, we believe that all work-related accidents and illnesses are preventable. As such, we have established a long-term goal of zero accidents and incidents.

Employee Health and Safety: A Top Priority

Employee Health and Safety (H&S) is a top priority for Bombardier Transportation and has been an area where we have been working towards making a difference for many years. In line with our goal of zero accidents, we are focusing our efforts on preventing accidents and illnesses before they occur. We are guided in this effort by the Bombardier Inc. Health, Safety and Environment (HSE) Policy [↗](#). Every employee is expected to adhere to the policy, which fosters awareness of H&S issues and helps us to evaluate H&S performance.

Managing H&S

On a corporate level, the Bombardier Inc. HSE Council is responsible for overseeing company-wide H&S issues and standards. The HSE Council develops HSE strategies, goals, and objectives, and provides updates and recommendations to the CEO, and to relevant Board Committees.

At the Bombardier Transportation Group level, we have established an HSE department that is responsible for H&S issues. The department head and the deputy are members of the Bombardier Inc. HSE Council. To ensure that H&S standards and practices are promoted throughout the organization, every site has an HSE manager who reports both to the site's General Manager and to the Bombardier Transportation HSE department.

Please see the organizational chart on page 10 for more information about the integration of H&S into company management.

Ensuring Compliance

We follow Bombardier Inc.'s requirements for third-party OHSAS 18001 certification of (H&S) management systems at all our manufacturing and sites performance that have more than 150 employees (excluding sites owned for less than three years by Bombardier Transportation and joint ventures without operational control). We believe that OHSAS 18001 certification helps us to maintain a structured approach to improving site performance.

www.bombardier.com → HSE Policy

Consequently, in 2007 we began including smaller sites in the certification process. Following on from the certification approach, 100 percent of Bombardier Transportation's employees working at sites with more than 150 employees are represented in H&S committees.

We conduct legal compliance audits, with respect to HSE, every three years at all Bombardier Transportation sites that have more than 50 employees. This process also ensures that nearly 100 percent of Bombardier Transportation's employees are represented on H&S committees (as legally required at nearly all our operating locations).

In summary, Bombardier Transportation applies two types of H&S audits: the first examines whether site management systems are fulfilling the requirements of the OHSAS 18001 standard in the H&S context. The second focuses on legal compliance and adherence to the Bombardier HSE Policy. We appoint independent external parties to conduct both types of audits.

Tracking Performance

Bombardier Inc. has established H&S targets and Key Performance Indicators (KPIs) that are applicable across the entire company, from individual facility to corporate office. We are working to meet these and our zero-accident goal by instituting safe behaviors and tracking leading rather than lagging indicators of H&S performance.

Bombardier Transportation uses two relative performance indicators to measure accident frequency and severity, as defined below:

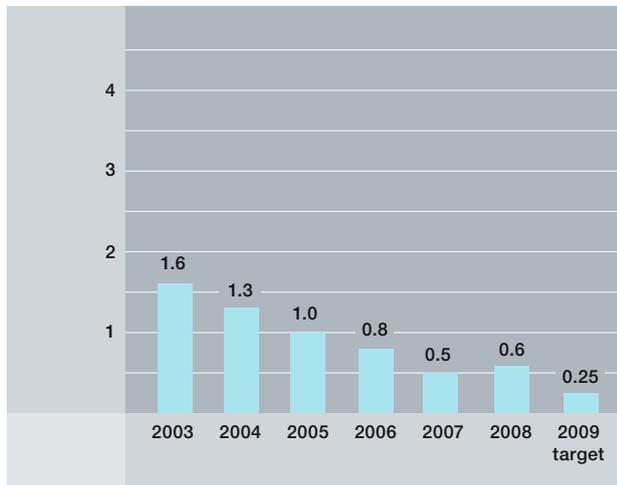
- **Loss Time Accident (L.T.A.) Frequency:** The total number of accidents that result in a worker's absence for at least one day, plus temporary assignments (i.e., employees returning back to work following an accident, but unable to perform their previous tasks).
- **Loss Time Accident (L.T.A.) Severity:** The total number of days a worker is unable to return to their job due to an accident (from the first day up to a maximum of 180 days) plus temporary assignments.

For both categories (frequency and severity), total values are multiplied by 200,000 work hours and divided by the total number of hours worked. These indicators are used throughout Bombardier Inc.'s H&S performance monitoring program, aligned with Canadian/US law.

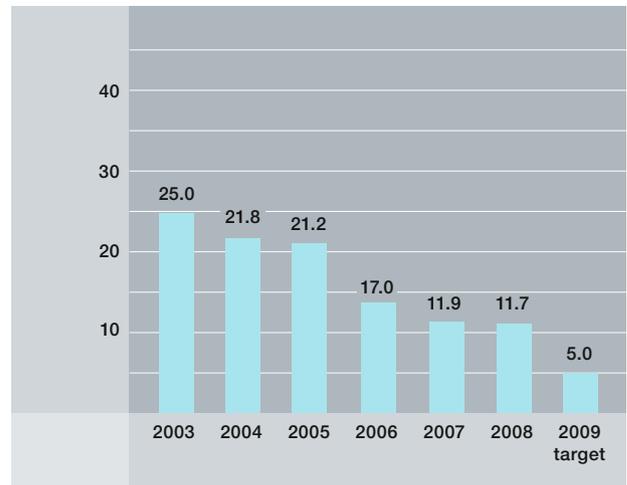
Results in 2007/2008

In 2007, Bombardier Transportation met the L.T.A. frequency target set by Bombardier Inc. ($F = 0.5$) and even exceeded the severity target ($S = 42$) by a large margin. We narrowly missed our own internal allowable deviation from targets for both indicators ($F = 0.33$; $S = 10$). In 2008, performance deteriorated slightly. Consequently, we again missed our (ambitious) targets of zero for accident frequency and severity. Regrettably, we lost three employees in a car accident in Romania in December 2008.

Accidents per 200,000 hours
frequency¹



Lost days per 200,000 hours
severity¹



¹ The F and S values, as shown in this report, deviate to some extent from ones reported previously. This refers primarily to severity data for calendar years 2004, 2005 and 2006, whereas deviation of frequency values amount to only max. +10 percent for 2004 and 2005. The reason for these deviations was identified to be the fact that data were taken from software developed by Bombardier Inc., and not from Bombardier Transportation's own information system. The Corporate tool however, had flaws. Although data for 2003 to 2006 correspond to fiscal years, the calendar years are indicated.

Future Targets

We are proud of our overall reductions in accident frequency (down nearly 70 percent) and severity (reduced by more than 50 percent) since 2003. This could only be achieved through the hard work that many sites (management and HSE staff in particular) have been investing over the last years. However, we recognize at the same time that we still are significantly away from our “zero” targets.

For 2009, we have set allowable deviation from zero targets at (F) = 0.25 and (S) = 5 to continue to drive strong H&S performance, but at the same time provide achievable targets. We are still following the ambitious mid-term goal of reducing all accidents to zero. Any Division not meeting the zero goal is required to explain its poor performance and implement a corrective action plan.

Near Miss Reporting

We believe that by detecting dangerous situations, we can prevent accidents before they occur. We therefore track and internally report on “near misses”, or incidents that could have resulted in an accident but fortunately did not, as well as dangerous behaviors and situations (which did not even result in a near miss, but had the potential to lead to an accident).

Bombardier Transportation has tracked and reported employee near miss situations since 2006. In 2007, we implemented additional reporting on dangerous situations and/or acts and first aid cases and have included these incident categories in our monthly site reporting since 2008. Presently, the sum of [near misses + dangerous situations + dangerous behaviour] serves as the only leading KPI. Data on first aid cases are not included as data quality is still in need of refinement.

The Bombardier Transportation target of near miss and unsafe situation reports is one report per employee per year at all sites. For 2008, we reached on average 0.6 reports on near misses, dangerous situations/acts per employee.

Severe Accidents

Despite our constant efforts to create a safe working environment, severe accidents still occur unfortunately. We treat each severe accident very seriously, whether it affects our own employees or those of external contractors. In addition to taking immediate action to addressing the cause of the accident, we comply with the Bombardier Inc. Accident and Incident Directive and report all significant

cases and severe accidents not only to the President of Bombardier Transportation, but also to the CEO of our parent company.

Operating with Zero Accidents¹



Site	Accident-free months	Accident-free work hours since last accident
Stockholm ² (Sweden)	59	4,847,990
Pittsburgh ² (USA)	36	3,097,429
Wroclaw Bogies (Poland)	63	2,243,780
Kassel (Germany)	20	2,243,780
Baroda (India)	91	1,694,041
Bautzen (Germany)	8	1,467,414
Wroclaw Locomotives (Poland)	15	1,438,557
Kingston ² (Canada)	48	1,331,363
Maryborough (Australia)	66	1,329,506
Bangkok ² (Thailand)	59	1,325,749
Hvidovre ² (Denmark)	95	1,252,523
Sahagun (Mexico)	5	1,200,538
Dandenong (Australia)	52	1,167,647
Los Angeles (USA)	60	1,116,848
Bruges (Belgium)	10	1,076,581
Hennigsdorf Passengers (Germany)	5	1,036,577

¹ As at 31 December 2008.

² Predominantly an office location.

Note: The number of accident-free months varies due to different numbers of employees and average work hours at each site.

Raising Awareness among Employees

We provide training and internal communications to raise employee awareness of H&S issues and help them to maintain a safe and healthy workplace. We have also put in place incentives to secure employee participation in creating an accident-free environment.

In 2007, each employee received 3.6 hours of H&S training, a 30 percent increase compared to 2006 (2.7 hours). In 2008, we raised H&S training to 4 hours per employee, which amounts to a further 11 percent increase in comparison to 2007. We expect that Bombardier Inc. will establish a combined HSE training target of six to eight hours per employee per year during 2009.



All Bombardier Transportation product users or community members may be directly impacted by our operations. By acting as a good citizen we take responsibility for our activities.

◁ Bombardier Transportation always strives to be a responsible citizen by operating production sites in line with community needs and expectations. ▷



Andreas Schulz, Mayor City of Hennigsdorf, Germany

◁ Our Commitment as a Responsible Citizen ▷

We strive to act responsibly and be a good neighbor in the communities, cultures, and countries in which we operate.

Investing in our Communities

All around the world, we support activities and organizations that help build long-term community prosperity and sustainability while simultaneously enhancing our reputation as a world-leading provider of rail transportation solutions. Our community investment activities are aligned with our Mission Statement and Core Values of Integrity, Commitment to Excellence, Customer Orientation, and Shareholder Focus.

In practice, there are two aspects to our community investment activities:

- **Business-related Investment**

Through the normal course of our business operations, we generate significant direct and indirect economic value in our local communities. We create jobs, help stimulate economic growth and development, pay taxes, share knowledge and expertise, and contribute to a vibrant civic discourse through our participation in stakeholder dialogues.

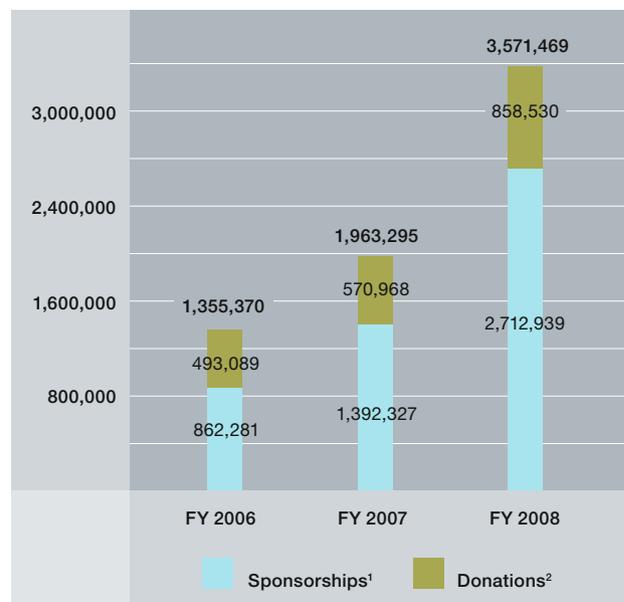
- **Direct Community Investment**

We invest in projects that yield long-term results in the areas of youth and education, local arts and culture, and the environment. We prioritize and fund specific projects based on local needs and the interests of our employees. In addition to our focus areas, we are a founding member of PlaNet Finance Deutschland e.V., a program aimed at alleviating poverty and facilitating economic growth through microfinance initiatives.

Policy, Approach, and Tracking

We have established policies and practices to guide our selection and funding of community projects. Bombardier Inc.'s Donations and Sponsorship Policy helps us determine whether proposed projects fit within our funding priorities and would have a significant, long-term impact. Our Communications Group assesses and either approves or rejects proposals based on policy guidelines. Bombardier Transportation tracks community projects and collects information on grant recipients, project history, and total funding per project. In fiscal year 2008, we spent more than US \$3,571,469 on donations and sponsorships, indicating an increase of 82 percent in comparison to our spendings in the previous fiscal year (amounting to more than US \$1,963,000).

Sponsorship and Donation Funding (US \$)



¹ The financial support of a project to obtain public recognition, corporate visibility, or other benefits.

² A contribution of funds or of in-kind goods or services made to a non-profit organization, from which the Group derives no tangible benefit.

Sponsorships and Donations in 2007 and 2008

Focus Area	Representative Sponsorship
Youth and Education	Bombardier Transportation supported the Technical University Dresden, Germany as part of a long-standing relationship with the University. We founded the “Bombardier Center of Competence for Railway Systems Engineering and Integration” as a collaborative platform for research, training, and knowledge transfer.
Local Arts and Culture	Bombardier Transportation gave assistance to the “Kammeroper Schloss Rheinsberg, Germany”, sponsoring the international opera festival, where highly talented young singers experience professional work and education through practicing opera on stage.
Environment	Bombardier Transportation supported the Sierra Club of Canada, Ontario Chapter by funding the “Car-free Day” on September 20 in Toronto to promote the use of public transit.
Community Outreach	Bombardier Transportation offered contribution to United Way of Allegheny County, which acts as the community’s fundraiser for agencies that are impacting critical community needs. Each year, thousands of individuals in hundreds of workplace campaigns find help or give help through United Way.

Future Targets

In the course of 2009, Bombardier Transportation will launch its own Donations and Sponsorship Policy aligned with the policies of Bombardier Aerospace and Bombardier, Inc. We are also looking into ways to improve our selection and validation process and better manage company-wide donations and sponsorship requests.

Our Partnership with PlaNet Finance

Bombardier Transportation became a founding member of PlaNet Finance Deutschland e.V. in December 2006. This is the German non-profit network member of PlaNet Finance. The organization seeks to address the challenges of economic development and to alleviate poverty by supporting microfinance institutions in Africa and the Middle East. These institutions help small entrepreneurs gain access to micro-credit and basic financial services so that they can grow their businesses. PlaNet Finance Deutschland has also teamed up with the Free University Berlin ¹ to foster linkages between microfinance practitioners in developing countries and German universities. Throughout the three-year partnership, Bombardier Transportation has donated a sum of €40,000 to the organization each year, from 2007 to 2009.

¹ www.fu-berlin.de

For more information, please visit:
www.planetfinancegroup.org/EN and
<http://deutschland.planetfinance.org>



Students participating in the Young Learners Boost Program using the computer center at their school.



Student from the Young Learners Skills Program doing engine maintenance work.



Students from Ithemba Institute in Soweto Township, outside Johannesburg.

Best Practice: Education and Training for a Sustainable Future

At Bombardier Transportation, we are implementing solutions for global sustainable mobility. Given our presence in politically, economically, and culturally challenging areas of the world, we are establishing new partnerships and programs that contribute to long-term community livelihood and economic development, maintain the quality of our products, and enhance our global reputation.

We are specifically focused on developing and retaining a trained professional workforce that can not only deliver on our contractual obligations, but also meet and exceed our customers' expectations. As such, we have established our Education & Training initiative to support transportation-related capacity-building. The initiative is based on public-private partnerships and leveraged funding mechanisms; Bombardier Transportation is the majority stakeholder and expects to provide approximately US \$1.2 million per year for the first three years of the program.

Bombardier Education & Training South Africa

The South African government and Bombardier Transportation have committed to the significant new rail infrastructure in the Gauteng Province, South Africa. The Gautrain Rapid Rail Link provides a unique opportunity to demonstrate the benefits of a multi-stakeholder approach to meeting educational and technological challenges within the context of South African transportation system development.

In June 2008, Bombardier Transportation sponsored a regional workshop that convened representatives of the South African government, academic institutions, and corporate infrastructure partners to discuss transportation system challenges. Participants agreed that a critical objective would be to establish a public-private partnership to create a network of excellence in the transportation sector.

The Bombardier Education & Training South Africa program, known as STARS, will consequently work to address this need while also serving as a replicable model for Bombardier Transportation projects worldwide. Through the program, we hope to support local capacity-building while advancing our corporate strategy in Africa as well as enhancing regional and global partnership opportunities.



STARS South Africa Programs

• Young Learners Boost and Skills Programs

The Boost Program provides mathematics, science, and English language tutoring for students in grades 10 to 12. Students can compete for internships and special programs offered by Bombardier Transportation and its partners.

The Skills Program targets technical students in grades 10 to 12 for specific skills training. Students will receive support in pursuing further educational opportunities and positions in the rail transportation sector in South Africa.

• Further Learning Bursary Program

The scholarship program provides merit-based financial support for college and technical track students for undergraduate or technical college study, skills training, and internships.

• Innovation Program

This program will establish a research partnership among Bombardier Transportation, the South African government, and the local academic network. The goal of the program is to provide post-graduate level research and training in areas of critical need related to creating a sustainable transportation infrastructure in South Africa.

- Indicator is fully covered
- ◐ Indicator is partially covered
- Indicator is currently not covered

- AR Bombardier Inc. Annual Report 2008/2009
- ⁱ For more information see annotations
- N/A No information available
- n.r. Not relevant

GRI G3 Standard Disclosures

Profile		Conformance	Reference
1. Sustainability Strategy and Analysis			
1.1	Statement from the CEO	●	2/3
1.2	Impacts of operational activity, key risks and opportunities	●	2, 5, 9, 15, 29, 39, 49
2. Organizational Profile			
2.1	Name of the organization	●	4
2.2	Primary brands, products, and services	●	4, 20-23, AR 94-97
2.3	Operational structure of the organization	●	4, 10, AR 93-97
2.4	Location of organization's headquarters	●	World map, 4, 6
2.5	Countries where the organization operates	●	World map, 4
2.6	Ownership structure and legal form	●	4, 11, AR 29
2.7	Markets served	●	World map, 5, AR 105-110
2.8	Scale of the organization	●	5, 6, AR 91-93
2.9	Significant changes regarding size, structure, or ownership	●	Report Scope, 11
2.10	Awards	●	7, 10, AR 17
3. Report Parameters			
Report Profile			
3.1	Reporting period	●	Report Scope
3.2	Date of most recent previous report	●	Report Scope
3.3	Reporting cycle	●	Report Scope
3.4	Contact point for questions regarding the report	●	Imprint
Report Scope and Boundary			
3.5	Process for defining report content	●	12/13
3.6	Boundary of the report	●	Report Scope
3.7	Limitations on the scope or boundary of the report	●	Report Scope
3.8	Basis for reporting on joint ventures	●	Report Scope, 5, 30
3.9	Data measurement techniques and bases of calculations	●	Report Scope, 32 ⁱ
3.10	Restatements of information	●	31, 34, 46
3.11	Changes from previous reporting periods in the scope, boundary, or measurement methods	●	Report Scope
3.12	GRI Content Index	●	52 onwards
3.13	External assurance for the report	●	ⁱ
4. Governance, Commitments, and Engagement			
Governance			
4.1	Governance structure of the organization	●	10/11, AR 20/21
4.2	Independence of the supervisory board chairperson	●	11 ⁱ
4.3	Number of independent supervisory board members	●	11, AR 20/21
4.4	Mechanisms for shareholders and employees to provide recommendations to the Board	●	11, AR 202
4.5	Linkage between executive compensation and achievement of sustainability goals	●	ⁱ
4.6	Process in place to avoid conflicts of interest	●	40/41
4.7	Qualifications and expertise of the highest governance body regarding sustainability issues	●	11, AR 201
4.8	Values, mission statements, principles, and codes of conduct of the organization relevant to sustainability	●	9, 26, 40/41
4.9	Oversight of the sustainability performance and relevant risks by the Management Board	●	11, 41
4.10	Assessment of the performance of the Management Board regarding sustainability	●	ⁱ
Commitments to External Initiatives			
4.11	Precautionary approach	●	10, 15
4.12	Support for external economic, environmental and social activities	●	9, 12, 26, 50/51
4.13	Memberships in associations	●	12, 26, 50
Stakeholder Engagement			
4.14	Stakeholder groups engaged by the organization	●	12
4.15	Identification and selection of stakeholders	●	12/13
4.16	Approaches to stakeholder engagement	●	12/13
4.17	Key stakeholder topics	●	12/13
Management Approach and Performance Indicators			
Economic			
Management Approach			
		●	4-6
Economic Performance			
EC 1	Direct economic value generated	○	5, 49, AR 91-93
EC 2	Financial implications due to climate change	●	2/3, 9, 18
EC 3	Organization's defined benefit plan obligations	●	AR 162, 187-190
EC 4	Significant financial assistance received from government	●	none

		Conformance	Reference
Market Presence			
EC 5	Range of ratios of standard entry level compared to local minimum wage	●	44
EC 6	Policy, practices, and proportion of spending on locally based suppliers	●	26/27
EC 7	Procedures for local hiring	●	41-43, 51
Indirect Economic Impacts			
EC 8	Development and impacts of infrastructure investments and services	●	50/51
EC 9	Indirect economic impacts	○	N/A
Environmental			
Management Approach		●	29/30
Materials			
EN 1	Materials used by weight or volume	●	24/25, 33
EN 2	Percentage of used materials that are recycled materials	●	33 ¹
Energy			
EN 3	Direct energy consumption	●	31
EN 4	Indirect energy consumption	●	31
EN 5	Energy savings	●	31/32
EN 6	Energy-efficient products and services	●	20-23
EN 7	Reduction of indirect energy consumption	○	N/A
Biodiversity			
EN 8	Total water withdrawal	●	32/33
EN 9	Water sources affected by water withdrawal	●	32
EN 10	Percentage and total volume of water recycled and reused	○	N/A
EN 11	Production plants in areas of high biodiversity value	●	n.r.
EN 12	Significant impacts upon biodiversity in protected areas	●	n.r.
EN 13	Habitats protected and restored	●	n.r.
EN 14	Strategies for managing impacts on biodiversity	●	n.r.
EN 15	Endangered species affected by operations of the organization	●	n.r.
Emissions, Effluents, and Waste			
EN 16	Direct and indirect greenhouse gas emissions	●	34
EN 17	Other relevant greenhouse gas emissions	●	n.r.
EN 18	Initiatives to reduce greenhouse gas emissions and reductions achieved	●	34/35
EN 19	Emissions of ozone-depleting substances	●	n.r.
EN 20	NO _x , SO _x , and other significant emissions	●	34/35
EN 21	Total water discharge	●	37
EN 22	Total weight of waste by type and disposal method	●	35-37
EN 23	Significant spills	●	37
EN 24	Cross-border transport or treatment of hazardous waste	●	n.r.
EN 25	Areas impacted by the organization's discharges of water and runoff	●	n.r.
Products and Services			
EN 26	Initiatives to mitigate harmful environmental impacts of products and services	●	15-25, 31-37
EN 27	Percentage of products sold and their packaging materials that are reclaimed by category	●	n.r.
Compliance			
EN 28	Significant fines and sanctions for non-compliance with environmental laws	●	n.r. ¹
Transport			
EN 29	Significant environmental impacts of transporting products, goods, materials, and members of the workforce	○	N/A
Overall			
EN 30	Environmental protection expenditures and investments	●	37
Labor Practices and Decent Work			
Management Approach		●	39/40
LA 1	Breakdown of workforce by employment type, contract, and region	●	5, 39
LA 2	Total number and rate of employee turnover	○	N/A ¹
LA 3	Benefits provided only to full-time employees	○	N/A
LA 4	Percentage of employees covered by collective bargaining agreements	●	44
LA 5	Minimum notice period(s) regarding significant operational changes	○	N/A
LA 6	Percentage of total workforce represented in occupational health and safety committees	●	46
LA 7	Injuries, occupational diseases, working days lost, absentee rate, and work-related fatalities	●	46/47
LA 8	Preventive healthcare, counseling, and training regarding serious diseases	●	47
LA 9	Health and safety topics covered in agreements with trade unions	○	N/A
LA 10	Average hours of training	●	18, 30, 40, 42, 44, 47
LA 11	Skills management and lifelong learning that support the continued employability of employees	●	42/43
LA 12	Employee performance and career development reviews	●	42/43
LA 13	Diversity in senior management and employee structure	●	42
LA 14	Ratio of basic salary of male and female employees	○	N/A

		Conformance	Reference
Human Rights			
Management Approach		●	9, 11, 15, 39/40
HR 1	Investment decisions that include human rights clauses or screening	○	N/A
HR 2	Percentage of suppliers that have undergone screening on human rights	●	26/27
HR 3	Employee training on human rights	●	40/41
HR 4	Incidents of discrimination and actions taken	●	41
HR 5	Operations with significant risk concerning the freedom of association and collective bargaining	●	none
HR 6	Operations with significant risk for incidents of child labor	●	none
HR 7	Operations with significant risk for incidents of forced labor	●	none
HR 8	Percentage of security personnel trained on aspects of human rights that are relevant to operations	○	N/A
HR 9	Incidents of violations involving rights of indigenous people	●	no occurrence
Society			
Management Approach		●	12, 30, 40/41, 49, AR 22/23
SO 1	Impacts of operations on local communities and regions	●	12/13, 37, 49-51
SO 2	Number of business units analyzed for corruption-related risks	●	41
SO 3	Employees trained in organization's anti-corruption policies and procedures	●	40/41
SO 4	Anti-corruption measures	●	41
SO 5	Public policy – positions, participation and lobbying	●	12
SO 6	Financial and in-kind contributions to political parties and politicians	●	none
SO 7	Number of legal actions for anti-competitive behavior	●	none
SO 8	Number of fines for non-compliance with laws	●	none
Product Responsibility			
Management Approach		●	15/16
PR 1	Life cycle stages in which health and safety impacts of products and services are assessed	●	19
PR 2	Incidents of non-compliance with regulations concerning health and safety of products and services	●	no occurrence
PR 3	Principles and measures related to product and service information and labeling	●	24/25
PR 4	Incidents of non-compliance with regulations and voluntary codes concerning product information and labeling	●	no occurrence
PR 5	Customer satisfaction	○	N/A
PR 6	Programs for compliance with laws, standards, and voluntary codes related to marketing communications and safety committees	●	n.r.
PR 7	Incidents of non-compliance with regulations and voluntary codes related to marketing communications	●	no occurrence
PR 8	Number of substantiated data protection complaints	●	none ¹
PR 9	Significant fines for non-compliance with laws and regulations concerning the provision and use of products	●	no occurrence

The indicators named in the list present only short versions of the GRI G3 indicators defined by the Global Reporting Initiative. For a detailed description of the GRI indicators, please refer to www.globalreporting.org. Indicators in grey font are additional indicators.

Annotation to GRI Indicators:

3.9	Specified explanations of calculation techniques are only given where performance indicators deviate from standard KPIs (derived from our accredited Environmental Management System).
3.13	Parts of the information disclosed in this report (this regards in particular data in chapter 4 “Operational Environmental Management” on pages 29 to 37) have been externally assured in the course of EMAS environmental declarations for the German and Polish sites (see table on page 30). At present, only all German sites’ and the Wrocław HSE information and data are validated through the EMAS verification process. Regarding the other sites, we also aim for external assessment in the future, however, have not finally decided the approach. We are considering to apply EMAS world-wide once the revised EMAS directive is in force and provisions for its global application exist.
4.2	André Navarri, President and Chief Operating Officer of Bombardier Transportation, directly reports to Pierre Beaudoin, President and Chief Executive Officer of Bombardier Inc. The Chairman of the highest governance body is Laurent Beaudoin.
4.5	Executive compensation also includes sustainability issues, primarily achievements regarding Health and Safety goals.
4.10	In our Performance Management Process (PMP), sustainability issues, in particular health and safety improvements form an integral element. The Group’s leadership team also have CSR-related objectives and targets in their performance assessments.
EN 2	As 82 percent of the weight of our products are metals, which are typically recycled, the content of recycled materials in the product will be in the same range. Better information cannot be made available as it would require tracking of each material flow from the source to our gates.
EN 28	No significant fines occurred.
LA 2	We intend to disclose data concerning employee turnover in our subsequent Sustainability Report when our new data management system will be completed.

Report Application Level:

		C	C+	B	B+	A	A+
Mandatory	Self Declared		Report Externally Assured		Report Externally Assured		Report Externally Assured
	Third Party Checked						
Optional	GRI Checked						

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www.transportation.bombardier.com

Learn more about our commitment to sustainable mobility at:

www.theclimateisrightfortrains.com

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