

A Proven Partner



Bombardier Transportation in Poland

BOMBARDIER

◁ Bombardier

Investments, Products, and Skills for Poland ▷

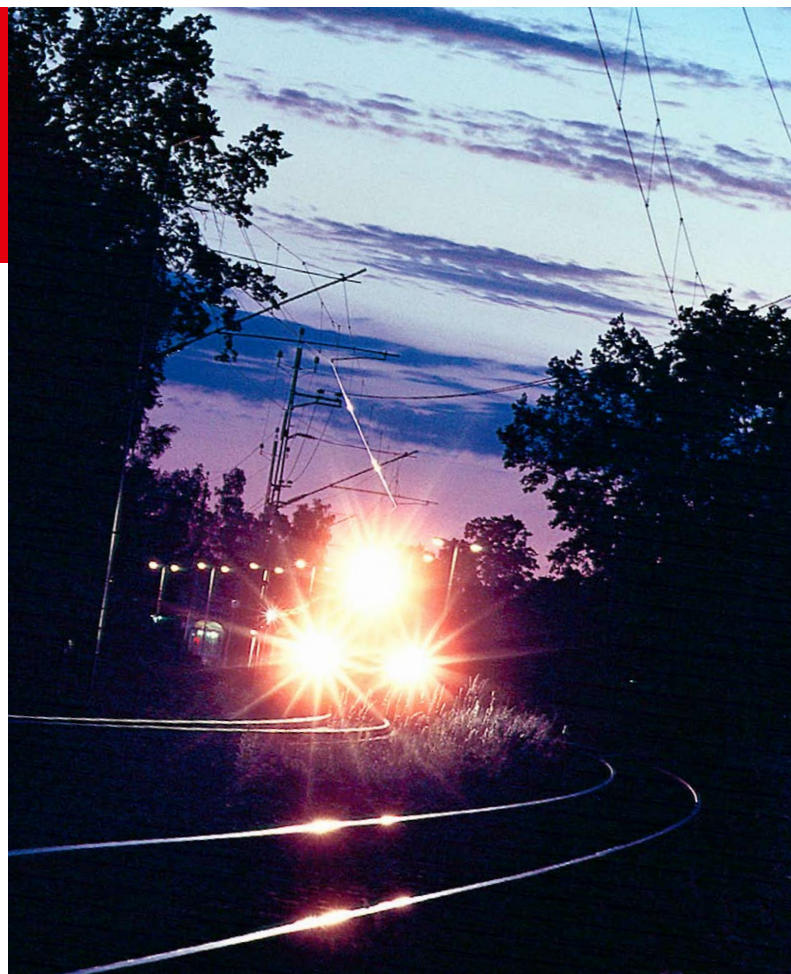
Bombardier is the principal foreign investor in the railway market in Poland. Our four sites in Poland, with more than 1,400 employees located in Wrocław, Katowice, Łódź, and Warsaw, have a strong history of participation in the evolution of one of Europe's largest and oldest railway systems.

Comfort and Safety for Passengers Reliability and Economy for Operators

Bombardier offers an extensive range of products for the Polish market, encompassing rolling stock production, modernisation and maintenance as well as the development of rail traffic control systems.

Our comprehensive skill base includes the manufacturing of locomotive bodies both for the Polish market and for export, in addition to bogie frames for high speed trains, regional multiple units, trams and metro cars, electrical equipment and signalling systems.

The high reliability and quality of our products – from low-floor *BOMBARDIER* FLEXITY** trams to metro cars, *BOMBARDIER* TRAXX** locomotives, *BOMBARDIER* TALENT** regional trains and double-deck cars, to rail signalling equipment – are gaining the recognition and trust of public and private operators and passengers throughout Poland.





Janusz Kucmin, CCR, Poland



Low-floor tram, Krakow

Interview with Janusz Kucmin, Chief Country Representative (CCR), Poland

To what do you attribute Bombardier's growing success in Poland?

Bombardier Transportation's philosophy encourages a close and long-term relationship between the companies and markets in which we operate. We have been present in Poland for many years, investing in the development of our locations. Technology and a nurtured, motivated workforce are our priorities. Taking care of our own resources also means continuous product development, with our clients as their satisfaction is our goal. This approach to the market has resulted in our enduring success in the Polish market.

How are Bombardier's products making a difference in Poland?

A large number of railway lines in Poland are equipped with rail traffic control systems designed and manufactured by our colleagues in Katowice and Warsaw, thus assuring high levels of safety. Our plant in Wroclaw manufactures carbodies for almost all of the *TRAXX* locomotives delivered to our clients in Europe and the United States. In Poland, our low-floor trams transport passengers in the cities of Cracow, Gdansk and Lodz on a daily basis. In addition, the Polish railway system is already using new multisystem *TRAXX* locomotives and, starting in 2008, new "push-pull" cars for Koleje Mazowieckie will support the Mazovian railway fleet. Many new and modernised rail vehicles are equipped with subcomponents from our plant in Lodz, and Bombardier Transportation systems are installed on railway lines and stations throughout Poland.

What are your strategic goals in Poland?

One of our strategic goals is to share our knowledge and experience in favour of the modernisation and development of the railway in Poland. We want all Polish passengers to be able to travel in modern, comfortable trains and other means of public transport. In addition, Poland's links with other parts of Europe can be enhanced by the introduction of modern and efficient rolling stock as well as the latest infrastructure solutions to guaranteeing the safety of passengers and goods.

What does the Polish market mean for Bombardier?

We have a strong tradition in the Polish rail market. Bombardier's Wroclaw plant has been involved in the production of rolling stock for 160 years and our Katowice site has been providing signalling solutions for more than 80 years. Our past and potential future roles in the Polish market mean that Poland is very important to Bombardier. Railway transport development plans in Poland allow us to look to the future with optimism and confidence in our ongoing commitment and success in the market.

Committed to Poland

Bombardier in Wroclaw and Lodz

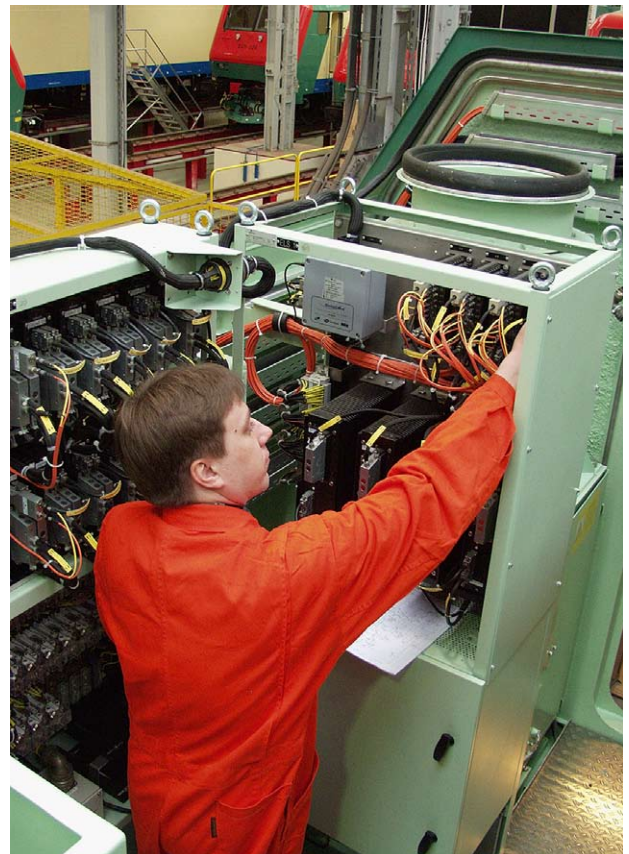
In December 2007, with the merger of two Bombardier Transportation sites in Lodz and Wroclaw, Bombardier Transportation Polska Sp. z o.o. was formed. With its headquarters in Wroclaw, this enterprise covers the entire range of railway equipment and services. Dating back to the 1830s, the Bombardier Transportation Polska Sp. z o.o. site in Wroclaw is one of the oldest rolling stock producers in Europe.

Producing equipment for use throughout the world

Bombardier Transportation is a global market leader in the manufacturing of electric locomotives. In Poland, Bombardier supports these activities with carbodies for the *TRAXX* family of locomotives produced in Wroclaw. Within the framework of internal cooperation, subcomponents for Bombardier's rolling stock are also produced, including parts for the renewal of vehicles for the London Underground in the United Kingdom – a major international project for Bombardier.

Bombardier Transportation in Poland – Highlights:

- 2,300 electric locomotives produced
- 50 complete new generation electric locomotives provided for Italian Railways
- In 2007, first electric multisystem *TRAXX* locomotive appears in Poland



Bombardier Transportation
site in Wroclaw



Carbody shell locomotives in Wrocław

Specialists in components and electrical equipment

The Bombardier Transportation Polska subsidiary in Łódź specialises in subcomponent manufacturing of new and modernised rail vehicles, as well as rolling stock maintenance. The company has been strongly involved in the electrification of Polish railways for forty years, and has participated in urban rail transport development. Moreover, the site delivers complete electric equipment for rail vehicles in Poland, such as electric and diesel-electric locomotives, electric multiple units, trams and trolley buses.

At present, the company's portfolio encompasses:

- Energo-electronic devices for rail and tramway traction
- Mechanical traction equipment for rail vehicles powered by 24V to 3000V direct current, trams and trolley buses,
- Starting and stopping resistors,
- Design and technical (engineering) services.

Quality, Safety and the Environment

- All systems and devices offered by Bombardier Transportation Polska:
 - Meet all European CENELEC Standards.
 - Are manufactured in compliance with integrated quality and environmental management systems: PN-EN ISO 9001:2001 and PN-EN 14001:2005
- First Polish rolling stock manufacturer registered in the Eco Management and Audit Scheme
- Winner of the "Employee Friendly Employer Certificate" under the patronage of the President of Poland in recognition of the high standard of employer-employee relations
- Award for promoting Safety at Work in competition organised by the National Labour Inspectorate
- "Project Company 2006" award from The Chamber of Construction Designing
- "Quality 2007" award in the category of services by the Polish Centre for Testing and Certification

◁ A Trusted Partner

Bombardier in Katowice and Warsaw ▷

Bombardier Transportation (ZWUS) Polska Sp. z o.o. has supplied complete rail control solutions to the Polish and foreign market since 1926.

The latest technology, top quality products and services, highly qualified managers and specialists, as well as close and long-term cooperation with our customers, are all assets that make Bombardier Transportation (ZWUS) a proven, trustworthy and reliable partner.

Systems and devices designed and manufactured by Bombardier Transportation (ZWUS) are used by many railway, industrial stations, metro and tram transportation companies. The portfolio includes rail traffic management, control and supervision centres (ICRs), ERTMS/ETCS train control systems, level crossing systems, wayside systems and equipment.

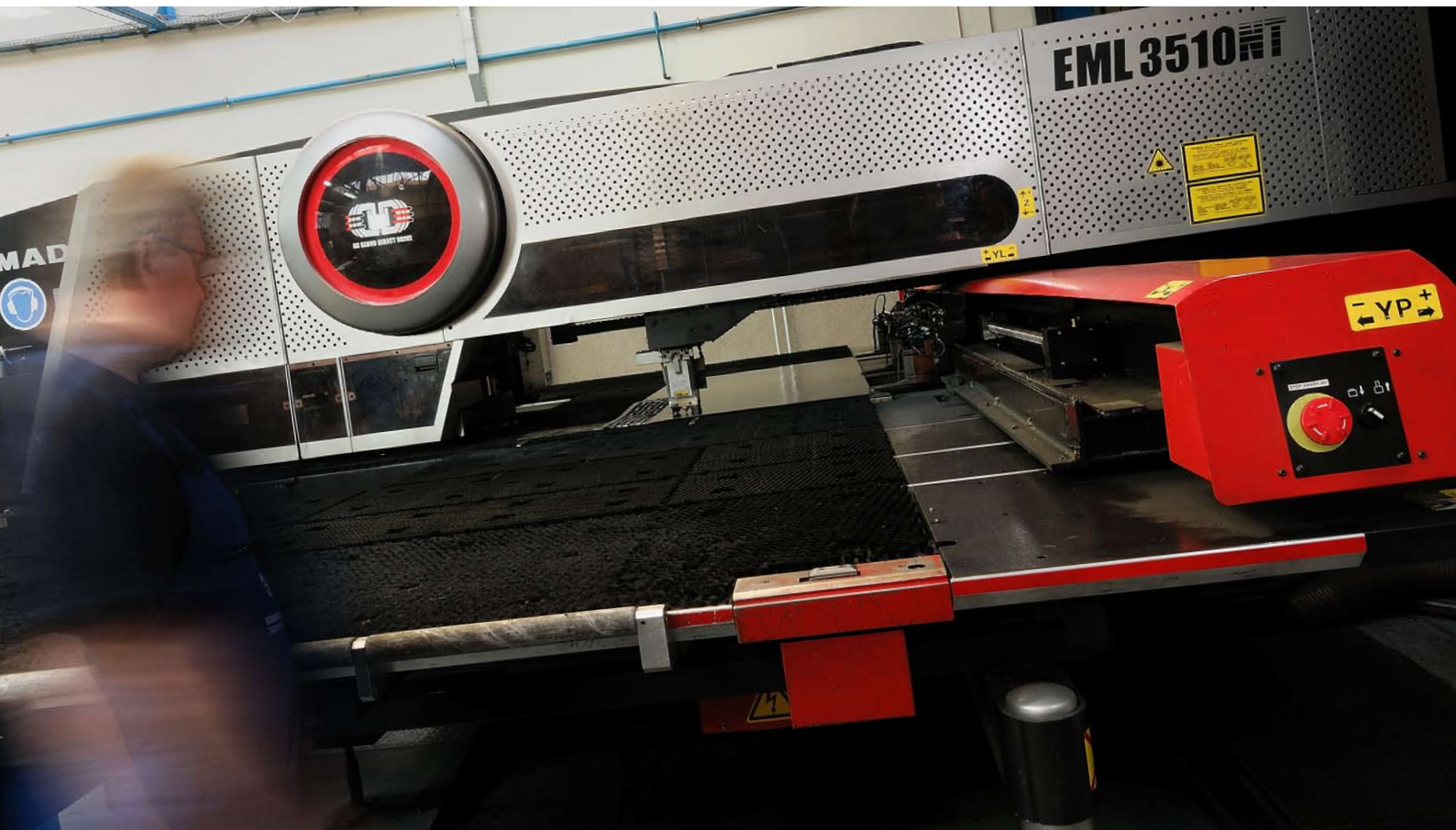
Systems and devices offered by Bombardier Transportation (ZWUS) meet all the European CENELEC Standards and are manufactured in compliance with the quality management system ISO 9001, 14001 and 18001.

Highlights:

- Over 2,000 level crossings both in Poland and abroad
- Over 50 stations equipped with our computer-based interlocking systems
- Over 80 years tradition and experience in design, manufacturing and installation of rail transportation systems and equipment in Poland and abroad



Bombardier Transportation site
in Katowice



Engineering excellence

Our specialised project consulting office in Warsaw recruits the most highly skilled engineers, making us a leader in the Polish market in the field of designing and engineering automatic and modern rail traffic control systems including:

- Feasibility and conceptual studies, as well as transport systems analysis
- Complex technical documentation in the scope of rail traffic automatics systems
- Implementation of new solutions and market adaptations
- Implementation of the latest solutions for interoperability and integration with the European Rail Traffic Management System (ERTMS/ETCS systems)
- Project management
- Complex engineering services accompanying investments and new implementations
- Research and development studies related to railway engineering
- Analysis of rail traffic control systems and devices for reliability and safety

◁ Bombardier Transportation in Poland Latest Milestones ▷



FLEXY Outlook, Lodz

June 2007 – contract signed with Polish Railways (PKP PLK) for the delivery of the newest rail traffic control system *BOMBARDIER* INTERFLO* 200* on the Koluszki to Lodz Widzew section of the main line between Warsaw and Lodz. This solution includes the *BOMBARDIER* EBI** Screen control room, *EBI Lock* computer-based interlocking system, *EBI Track* train detection and *EBI Gate* level crossings.

July 2007 – contract awarded by the Board of Mazowieckie Voivodship for the delivery of 37 new generation double-deck cars. The worldwide acclaimed “push-pull” units will operate on Mazovian suburban railroad tracks operated by Koleje Mazowieckie.

September 2007 – order placed for 60 *TRAXX AC*, *DC* and *MS* locomotives by the pan-European leasing company, Angel Trains.

November 2007 – lease agreement with Angel trains signed for six *TRAXX* electric multisystem locomotives. *TRAXX F140 MS* locomotives are produced by Bombardier Transportation in the German city of Kassel with a significant share of their production taking place in the Wroclaw plant.

February 2008 – *INTERFLO 200* solution provided for the line between Warszawa and Gdynia

April 2008 – *TRAXX* locomotives used by PKP CARGO S.A. between Poland, Germany and Austria.

May 2008 – introduction of *TRAXX* locomotives by ITL Polska.

May 2008 – 50th *FLEXY* low-floor tram delivered to Miejskie Przedsiębiorstwo Komunikacyjne S.A. in Krakow.



TRAXX by PKP Cargo

Modern Regional Railways

The rapid development of regions and cities depend on efficient and reliable rail transport. Modern rolling stock for regional railways must meet numerous special requirements.

As the global market leader in the field of regional and suburban railways, Bombardier Transportation is ideally positioned to deliver reliable and modern vehicles for use by passengers and railway companies in Poland.

In 2008, a new generation of rolling stock for regional rail will commence operation on the national railways. The Marshal Office of Mazowieckie Voivodship has purchased Bombardier's latest double-deck coaches that will service regional lines characterised by a high passenger flow. These "push-pull" units will be used by Koleje Mazowieckie, enabling Polish passengers to enjoy regional trains meeting the highest global standards.



Bombardier double-deck coaches for Poland



With the experience of a worldwide leader in rail technology, Bombardier Transportation also produces a range of motive power units for regional railway operators in Europe, including: *TALENT*, *AGC*, *BOMBARDIER* ITINO** and *BOMBARDIER* SPACIUM**. Depending on the requirements of the operator and on the type of the units, the vehicles produced are either electric (single or multisystem), diesel or hybrid.

"Push-pull" vehicles are the most modern generation of double-deck cars delivered by Bombardier Transportation for European railway companies. Often used in combination with *TRAXX* locomotives, the coaches are air-conditioned and quiet in operation. Pneumatic suspension ensures high comfort levels.

Particular attention has been paid to the design of a coach specifically addressing the needs of passengers with mobility difficulties. An automatic pull-out platform, corridor seats for a dozen wheel chairs and easy access to larger rest rooms provide considerably higher travel comfort for disabled persons. The steering coach, with 1st and 2nd class compartments, has been designed for a total of 85 seats while the 2nd class middle coach can seat 133 people.

Urban Transport Solutions

Safe, Reliable, Environmentally Friendly

With 900 km of tramway tracks and almost 3,660 railcars in operation, Poland has the second biggest tramway network system in the European Union.



The modernisation of the current fleet constitutes one of the most important investment targets set by the operators of national tramway networks. The challenge is enormous, not only for the rolling stock producers, but also for railcar suppliers.

Bombardier Transportation offers a wide range of solutions for urban transportation. These include the *FLEXITY* family of proven and reliable tram and light rail solutions. At present, a total of 68 *FLEXITY* low-floor trams are successfully being in use in Poland.

The greatest number of low-floor trams in Poland is in operation for Miejskie Przedsiębiorstwo Komunikacyjne S.A. in Krakow. The fleet includes 50 *FLEXITY* Classic vehicles. *FLEXITY* low-floor trams also carry passengers in Gdansk and in Lodz.

Bombardier's *FLEXITY* Classic trams are equipped with double doors installed in the low-floor area, which enable passengers to quickly board and disembark the vehicle. A low-step entrance to the car (installed at the level of only 290 mm) and a multifunctional area for prams, bicycles and wheel chairs guarantee high travel comfort for all passengers. Wide windows and a spacious vehicle interior provide travellers with the possibility to admire the landscape and enjoy a relaxing journey. All trams are characterised by a dynamic design and vivid colours.

Bombardier's urban transport solutions are complemented by our highly successful *BOMBARDIER* MOVIA** subway trains, which can be seen in many cities around the world, with certain components manufactured in Bombardier's site in Wroclaw.





◁ Economical Passenger and Cargo Transport ▷

The Bombardier *TRAXX* locomotive family is produced with considerable participation of the Polish rolling stock industry. All *TRAXX* locomotive bodies are manufactured at the site of Bombardier Transportation Polska located in Wrocław.

TRAXX locomotives are produced in four versions – as single or multisystem electric vehicles or as diesel-electric vehicles. Depending on the version, they are designed to pull cargo and passenger trains into operation on national or cross-border routes or to service intercity or regional trains.

The *TRAXX* locomotive platform includes standard products which make it possible to configure a locomotive depending on the needs and requirements of a particular railway operator. *TRAXX* locomotives may be used:

- On lines powered by alternating current – *TRAXX* AC
- On lines powered by direct current – *TRAXX* DC
- On both AC and DC powered lines – *TRAXX* MS (multi system locomotive)
- On non-electrified lines – *TRAXX* DE (diesel-electric locomotive)

TRAXX locomotives offer operators the possibility to achieve increased efficiency at lower aggregated costs, thereby improving operators' competitiveness in a liberal railway transportation market.

Additionally, as with other Bombardier vehicles, *TRAXX* locomotives can be provided to the customer together with a maintenance package.

Multisystem *TRAXX* locomotives are now in use for cross-border transport within Poland. The locomotives have a power of 5.6 MW at their disposal and are equipped with various propulsion and railway control systems, which enable PKP CARGO S.A. to ensure a continual flow of cargo trains between Poland and Germany without needing to change locomotives while crossing the border.

Speed and Safety



In the same way that the majority of high-tech solutions experience change, railway traffic control equipment undergoes frequent technological evolution.

With significant global experience in Rail Control Solutions and as a company at the forefront of European signalling developments, such as ERTMS, Bombardier is ideally placed to apply its modular, proven solutions to the upgrading of Poland's rail systems.

Bombardier Transportation has developed a comprehensive offer for railway traffic control using *EBI* Screen control rooms, *EBI* Lock computer-based interlocking systems, *EBI* Gate level crossings and *EBI* Track train detection systems.

In addition, we have a comprehensive offer incorporating integral systems, which can be easily upgraded and combined thanks to one common product line to guarantee high quality in fully equipping the lines and stations with the rail traffic control systems and Local Control Centre.

Bombardier's success within this area includes the recently commissioned Local Control Centre in Opole, as well as the contract awarded in 2005 for the provision of a control and maintenance and diagnostic centre in Minsk Mazowiecki.



EBI Lock computer-based interlocking system



Environmental Sustainability

Bombardier places the environment at the heart of its working ethos, with the objective of supporting the mobility of people and goods through sustainable development.

To this end, Bombardier aims to continuously increase the pro-environmental effectiveness of all its activities from the design phase to final implementation and maintenance.

The recyclability of TRAXX F140 MS locomotives is already up to 93%

Bombardier Transportation uses an integrated product design program, the Design for Environment, which includes a long-term perspective of the whole product life cycle. This program takes into consideration recyclability, damaging substances content, energy efficiency and noise level.

Bombardier was the first company in the railway sector to create an Environmental Product Declaration (EPD), describing the processes and materials used specifically in vehicle manufacturing, the influence on the environment and the improvement potential of the product operation cycle.



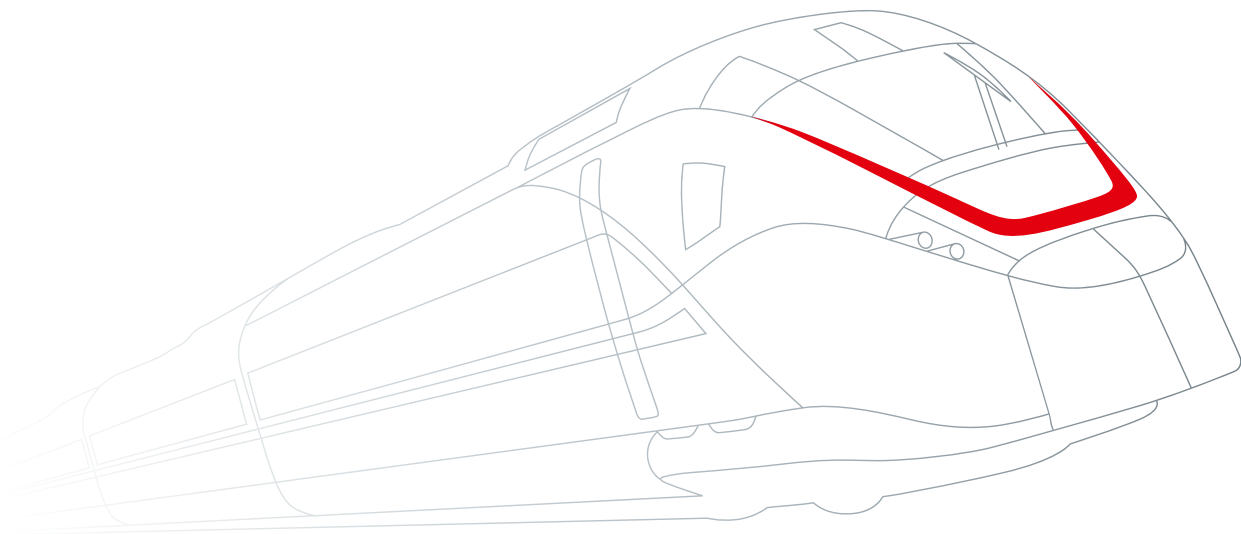
As with the majority of Bombardier sites worldwide, the ISO 14001 and a European Eco-Management and Audit Scheme have been implemented at the Polish manufacturing plants in Katowice and Wrocław. Both systems are based on continuous improvement of environmental standards relating to energy and material productivity, as well limiting waste emission and decreasing the risk of undesired environmental events.

Our environmentally-friendly paintshop for car bodies in Wrocław adapts pro-ecological solutions, minimising the amount of harmful substances emitted during varnishing.

Moreover, Bombardier Transportation has listed forbidden and restricted damaging substances which cannot be used during any phase of the production process. This list is constantly updated and all suppliers are requested to observe it.

Poland's investments in rail, in which Bombardier Transportation plays a vital role, promote safety, comfort and environmentally-friendly ways of travelling by modern trains. Bombardier's push-pull trains in Mazovia improve the comfort of travelling – reducing regional road traffic to the benefit of rail, thereby limiting air pollution.

◁ Bombardier Transportation The Climate is Right for Trains ▷



Bombardier is dedicated to developing, manufacturing and servicing advanced transportation solutions for today's and tomorrow's railways.

As the global leader in rail technology, Bombardier places environmental sustainability firmly at the top of the agenda. Our products and services combine energy conserving technology with optimal safety, reliability and cost efficiency. They are designed for sustainable mobility throughout their lifecycle.

Our portfolio of rolling stock and services encompasses passenger vehicles for urban and mainline operations, locomotives, bogies, rail control solutions, propulsion and complete transportation systems, as well as vehicle modernization and maintenance.

Over 100,000 vehicles in operation worldwide attest our unique strengths in project management and innovation, design and technology. For decades we have enabled millions of people everyday to reach their destinations in comfort and style.

Bombardier is a truly international business, which provides local support. Present in more than 60 countries and with 30,000 employees worldwide, we strive to be the partner of choice for all the world's rail operators.

Headquartered in Berlin, Germany, Bombardier Transportation is part of Canada based Bombardier Inc. It generates annual revenues in excess of US\$ 7 billion.

**Bombardier Transportation
in Poland Sp. z o.o.**

Chief Country Representative
ul. Mysia 5
00-496 Warszawa, Poland

Tel +48 22 596 51 20
Fax +48 22 596 51 29

**Bombardier Transportation
Polska Sp. z o.o.**

ul. Fabryczna 12
53-609 Wrocław, Poland

Tel +48 71 356 23 17
Fax +48 71 355 57 31

**Bombardier Transportation (ZWUS)
Polska Sp. z o.o.**

ul. Modelarska 12
40-142 Katowice, Poland

Tel +48 32 730 50 00
Fax +48 32 710 69 70

**Bombardier Transportation
Polska Sp. z o.o.**

ul. Fabryczna 12
53-609 Wrocław, Poland

Tel +48 71 356 23 17
Fax +48 71 355 57 31

Site Lodz

ul. Aleksandrowska 67/93
91-205 Łódź, Poland

Tel +48 42 613 26 66
Fax +48 42 613 26 99

This brochure has been printed on paper with cellulose on the basis from certified sustainable forest management in accordance with the PEFC system. Bombardier Transportation has an active set of environmental print guidelines, for further details click onto:
www.transportation.bombardier.com

Learn more about our commitment to sustainable mobility on:
www.theclimateisrightfortrains.com

If you no longer require this brochure please recycle it responsibly.

**Bombardier Transportation
(Rail Engineering) Polska Sp. z o.o.**

ul. Ogrodowa 58
00-876 Warszawa, Poland

Tel +48 22 520 21 22
Fax +48 22 520 21 20

www.bombardier.com

*Trademark(s) of Bombardier Inc. or its subsidiaries.



BOMBARDIER