

## Case Study

# BOMBARDIER



Customer: Bombardier Transportation



Website: [www.rail.bombardier.com](http://www.rail.bombardier.com)



Employees: over 30,000



Founded in 1974

## New implementation of two ScreeneX Dual-Side Glass-Embedded Partitions Passenger Information System in Bombardier– LNVG Dosto coach.

### Overview

Bombardier Transportation is the rail equipment division of the Canadian firm Bombardier Inc. Bombardier Transportation is one of the world's largest companies in the rail vehicle and equipment manufacturing and servicing industry.

In August 2018, Bombardier undertook an on-board ScreeneX proof of concept on LNVG Dosto coach. This pilot project is part of the refurbishment project of +200 cars for Bombardier BT Service for LNVG (Hannover). The installation has been done in BT facility in Uelzen.



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### The Challenge

The challenge of this project was to replace an existing partition glazing into a smart passenger information system to provide passengers an on-board information system, as a priority. In many cases the internal architecture and design of railway vehicles often leaves only a limited amount of space and area for digital displays.

ScreeneX is an innovative passenger screen system offering many design and functional advantages. In this case the client wanted to maximize the exposure to the passenger information screen by passengers in parallel of minimizing the robustness of the solution and the interference with cabin space. The ScreeneX solution meets both of these objectives: the system used in this project is a dual-screen solution based on a fully embedded screen inside the partition glass unit.

The System is designed as two independent modules: Window-screen ("WS") which is a double-glazed glass unit (IGU) which includes embedded LCD panels, and the electronic control unit ("ECU") which hosts all electronic elements and external logic interfaces.

*the partitions  
before the  
ScreeneX  
installation*



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### The Solution

**Design and planning:** The joint engineering work between OSG and BT began in December 2017. The parties defined together the scope and requirements for the pilot. The next steps were the design of the ScreeneX system to fit the dedicated locations by OSG and the joint design of mechanical integration and passenger information to be presented on the systems. This stage was done together with the professionals from both companies.



*Full IGU configuration*

*Partial IGU configuration*

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### The Project

**The ScreeneX Systems:** ScreeneX has been asked by BT to implant two partition systems, type TRN 21-2 Dual Side in one coach, instead of two existing glazing partitions in a Bombardier Dosto Coach. All systems were based on ScreeneX TRN 21-2 Dual- Side system, which features a fully embedded 21.5" (16:9) FHD LCD panel in portrait mode.

TRN 21-2 has been offered in two configurations: a full IGU and a Partial IGU. For both configurations, the WS is integrated into the existing mechanical interfaces (frame, brackets) in the same method of integration as the original glass.

#### **ScreeneX TRN 21-2 Dual-Side Partition with Full IGU:**

In this configuration, the entire partition unit is comprised by a full-size Insulated Glass Unit which includes the embedded screens. The entire unit is insulated and has a homogenous look and thickness throughout the unit.



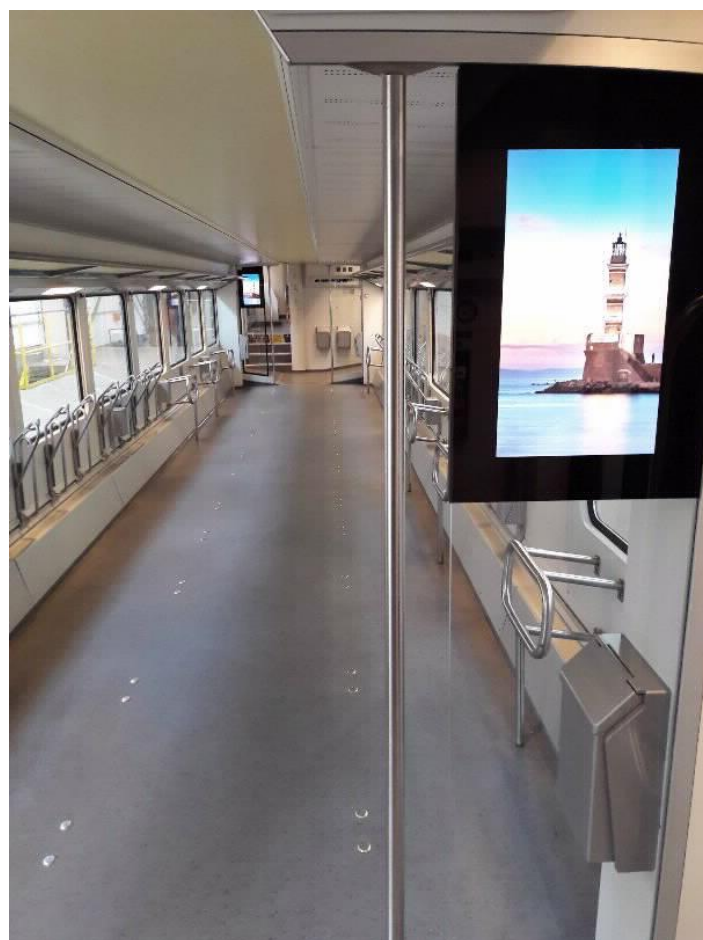
*ScreeneX TRN 21-2 in Full IGU configuration;  
the surrounding silk-print is designed to conceal the sealing element of the IGU*



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## ScreeneX TRN 21-2 Dual-Side Partition with a Partial IGU:

The partition structure will be comprised such that there are two thicknesses to the product: the lower glass is a standard single-pane glass (6-8mm tempered); the upper part is an IGU with the embedded screens. This option allows to reduce the weight of the solution.



*ScreeneX TRN 21-2 in Partial IGU configuration;  
the lower part does not require silk-print as it is a monolithic tempered glass*

**Integration:** another critical part of the design of each project is the design of the integration of the HW and cables. In this case, we work with the car builder to define the minor changes that are required for the integration. In this case the HW is located in the cabins above the partition and in dedicated appropriate areas behind the wall panel.

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## The outcome

The system transformed the existing glass partitions of the LNVG Dosto bike-car into real-time on-board digital information dual-side displays, without changing significantly the partition's thickness or general look and without using any external mounting elements.

The solution provides a comfortable feeling of a well-designed cabin without changing the clean design of the interior with sleek integration of screens for better passenger information.

The pilot trail period: The PoC project is intended to run for passenger review for about 4 months. ScreeneX is confident that it will be able to meet LNVG's high demands on reliability and performance with these innovative display units and is looking forward to further successful cooperation with BT.



For more information on ScreeneX, visit: [www.screenex-tech.com](http://www.screenex-tech.com)

To receive the latest ScreeneX news and updates, subscribe here: <https://screenex-tech.com/contact/>

**OSG Inc**  
49 Industrial Parkway P.O. Box 126  
Emporia, VA 23847, USA  
Chris Grilliot – Sales Manager USA  
[cgrilliot@osg-armor.com](mailto:cgrilliot@osg-armor.com)  
Tel. 302-354-4363/Fax 302-338-8057

**OSG HQ**  
Kibbutz Palmach Zova,  
M.P Harei Yehuda 9087000, Israel  
Elad Shtief, ScreeneX Product Manager, Israel  
[elads@osg.co.il](mailto:elads@osg.co.il)  
Phone: +972-2-5706100 / Mobile: +972-54-5637792

**Notre représentant en Europe**  
Sophie-Scholl-Strasse 7, D – 68782 Brühl, Germany  
Helfried Kloiber – Sales Manager Europe  
E-mail: [hkloiber@osg.co.il](mailto:hkloiber@osg.co.il)  
Tel: +49-620 4098 843 / Mob: +49-174 9544 142



Kibbutz Palmach Tzuba | M.P. Harei Yehuda 9087000 | Tel: +972 2 5706100

Fax: +972 2 5706101 | [screenex@osg.co.il](mailto:screenex@osg.co.il) | [www.osg.co.il](http://www.osg.co.il) | [www.screenex-tech.com](http://www.screenex-tech.com)