

Honeywell

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HONEYWELL SOLUTIONS AT HEART OF MAJOR BOMBARDIER GLOBAL UPGRADE

Latest cockpit, cabin and connectivity technologies meet air navigation mandates and passenger expectations

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Martin Lener, chief executive officer, Tyrolean Jet Services





Overview

Austria's earliest established executive air operator, Tyrolean Jet Services, wanted to modernize its Bombardier Global. It turned to Honeywell for a full range of avionics, cabin and high-speed connectivity upgrades. All were completed at the same time, minimizing aircraft ground time. The aircraft is now prepared for all forthcoming air navigation mandates and has a state-of-the-art cabin that meets the demands of air charter customers.

Quick Facts

Honeywell Solutions

- Ovation Select
- JetWave
- GoDirect Services
- Primus Elite

Customer Results

- Upgrades completed at the same time, minimizing aircraft ground time
- Pilots say Primus Elite functions improve situational awareness
- Avionics meet ADS-B, FANS and CPDLC mandates
- Passengers find connectivity to be high speed and reliable

Why Tyrolean Jet Services chose Honeywell

- Need to update avionics to meet latest air navigation mandates
- Passengers demanding state-of-the-art cabin and connectivity
- Forty-year relationship with Honeywell
- Single source, commercially and technically

Customer

- Name: Tyrolean Jet Services
- Location: Innsbruck, Austria; Malta and San Marino
- Industry: Private jet charter and aircraft management
- Website: www.tjs.at

Background:

Tyrolean Jet Services (TJS) was founded in 1978 as Austria's first executive air operator. Today, the company offers a full range of customized aircraft management services including business and VVIP charter flights, aircraft maintenance and sales as well as concierge services.

The company's fleet comprises executive aircraft from Airbus, Beechcraft, Bombardier, Dassault, and Gulfstream. This means it can offer its customers aircraft that can seat between seven and 19 passengers and that have a flight range of between 1,415 and 7,500 nautical miles.

Within this fleet, the company manages a Bombardier Global on behalf of the senior principal of Daniel Swarovski Corp.

"We conduct a lot of charter flights every year in order to support the annual business of the aircraft," said TJS's chief executive officer, Martin Lener.

"We have customers from governments, worldwide corporations and from the entertainment business.

"To attract charter clients it is very important that we offer state-of-the-art equipment, not only in the cockpit but also in terms of communication and entertainment in the cabin."

With many air navigation mandates coming into effect around the world, TJS decided the time was right to not only upgrade the aircraft's cockpit technologies but to also invest in modernizing the Bombardier Global's cabin management system and connectivity.

"We wanted to improve the whole aircraft and took the chance to upgrade the aircraft all at once," said Erwin Haas, project lead engineer, TJS. "This gave us the opportunity to optimize the aircraft for our future needs while minimizing downtime."

Solution:

Honeywell Aerospace, which has had a successful 40-year relationship with TJS, was selected to provide a full range of cockpit, cabin and connectivity upgrades.

To meet the forthcoming air navigation mandates, TJS upgraded the Bombardier Global with ADS-B, CPDLC and the FMS 6.1 software upgrade that provides Future Air Navigation (FANS) capability and that prepares the aircraft for LPV approaches.

The flight deck was also upgraded with Honeywell Primus Elite DU-875 liquid crystal displays. These replaced the original cathode ray tube displays (CRT), reducing the weight and offering improved reliability.

Primus Elite also displays valuable flight information including electronic charts and approach plates and moving maps.

"We selected these solutions because of existing and future regulatory requirements," added Haas. "The Primus Elite upgrade is the best for the Bombardier Global because Honeywell and Bombardier support it without additional certification requirements."

Alongside the cockpit upgrades, TJS selected Honeywell Ovation Select as its new cabin management system, combining this with the Honeywell JetWave tail-mounted satellite communications (satcom) system and Honeywell GoDirect Services connectivity.

The Ka-band based GoDirect Services package, operating over the Inmarsat Global Xpress network, provides the fastest broadband service in the sky in its class for business aviation.

It's the first worldwide Ka-band network available for aircraft operators, offering guaranteed as well as rapid rates, with the most extensive coverage of flight routes on the market.

The service enables passengers to watch live television or make video conference calls, transfer large files, surf the web or stream videos.



It links to the Honeywell Ovation Select cabin management system, enabling passengers to continue working while in the air, providing them with the ability to receive and respond to emails, access the Internet, host video conferences and make telephone calls.

Files can be transferred directly from office systems and Ovation Select seamlessly integrates with the latest consumer electronic devices.

By using the Honeywell cabin control application, passengers can use their mobile devices to control the environment, including lighting, seats, temperature, galley and window shades.

For entertainment, Blu-ray films, gaming, and music are all delivered with high definition 1080p video and clear surround sound audio throughout the entire cabin. Both wired and wireless Ethernet connectivity options are available.

"Before we had the Honeywell JetWave satcom solution with GoDirect Services, we had an older system that was not as reliable as we needed and it was very low speed," added Haas.

"The main benefit is that all of the system – Ovation Select, JetWave and GoDirect Services – are coming from one single source and we will be supported by Honeywell both technically and commercially."

Benefits:

TJS says that this significant aircraft upgrade was undertaken with good support from Honeywell and that passengers have welcomed the new cabin and connectivity systems.

Julia Sponring is a cabin crew member on the Bombardier Global.

"Our guests demand gate-to-gate Internet connectivity," she said. "And they are enjoying the modern cabin system we have on board."

"Passengers are using the on-board Internet to send and receive emails, to get in touch with family and friends via WhatsApp and for watching videos."

"Honeywell GoDirect is very fast and is very stable," Sponring added.

"Our guests are really satisfied with the connectivity, and they appreciate the functions and ease of use of the Honeywell Ovation Select cabin."

The cockpit upgrades have been equally well received, according to TJS's fleet manager and captain for the Bombardier Global, Karl Koidl.

"Having Honeywell Primus Elite avionics on board our aircraft introduces the possibility to display graphical content such as approach and airport charts right in front of us on our multifunctional displays," he said.

"This largely increases situational awareness."

"CPDLC, together with FANS, are becoming mandatory and so for an aircraft operated globally, these capabilities are becoming more and more critical."

"In the past, I have had many challenges communicating with air traffic control via HF radio. CPDLC, in my opinion, will put an end to these difficulties, replacing distorted, garbled and weak HF radio transmissions with unambiguous text messages."

"If we hadn't had these upgrades we would be facing a lot of operational restrictions. We would be unable to access certain areas of the world, such as the upper level airspace in Australia, and we would not be able to fly state-of-the-art LPV approaches."

Martin Lener attributes the success of the project to the 40-year relationship with Honeywell. "Long-term relationships are very, very important in our company," he said.

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