Bombardier Transportation is the world’s largest manufacturer of rail and aerospace technology. Three of its key players tell Niki Waldegrave how it’s driving growth and sustainable change across Australia’s rail ecosystem.

Written by Niki Waldegrave
Bombardier is transforming the way people move around the world. Looking far into the future whilst delivering today, the team at Bombardier continue to push the boundaries and evolve mobility worldwide by answering the call for more efficient, sustainable, and enjoyable rail transportation across the globe.

As the world’s leading manufacturer of both planes and trains, Bombardier has built an extensive and diverse portfolio of winning mobility solutions. Everywhere people travel by land and in the air, a Bombardier product is ready to transport them. From category-defining business jets and commercial aircraft designed for the challenges of today, to sleek high speed trains and public transit that’s smarter than ever.

In Australia, Bombardier Transportation covers the full spectrum of rail solutions, ranging from trains to sub-systems, maintenance services, and system integration and signaling, which provide integrated solutions and benefits for customers, operators and passengers alike.

Bombardier’s Growth Strategy across Australia
The Australian arm of the multinational transport giant is committed to growing their 1,000+ strong workforce and 60+ year-long footprint to support the local rail manufacturing industry, increase opportunities for skilled employment and, ultimately, transform public transport across Australia.

With a fresh outlook and determined leadership team by his side Bombardier Australia’s Managing Director, Andrew Dudgeon, explains Bombardier’s growth strategy and contributions to Australia’s growing rail and manufacturing industry.

“Bombardier in Australia has a very bright and exciting future ahead,” he says. “We have wonderful partnerships across industry, and have rail contracts in Victoria, South Australia, West Australia and Queensland – and we’re very excited about the emerging opportunities in New South Wales.”

As part of its expansion strategy, Bombardier has engaged with industry in New South Wales (NSW) on various future light and heavy rail projects across the state, and are looking at opportunities to provide best practice, local solutions and expertise in the areas of advanced manufacturing and digital rail technology.

“Globally, we’re seeing a significant behavioral shift in the way people use public transport, and what they’ve come to expect,” adds Dudgeon. “The next generation of technology-driven millennials want – demand, in fact - a more available, efficient and connected transport experience. They need to move fluidly and comfortably through traffic and get to work, home, to see family and friends.”

With the Victorian government investing heavily in new rail infrastructure with high capacity metro and regional trains, the state has become the envy of others with the implementation of the 10 Year Victorian Rollingstock Trams, Trains, Jobs Strategy. Dudgeon says Bombardier is keen to continue working with all state governments.

“BOMBARDIER IN AUSTRALIA HAS A VERY BRIGHT AND EXCITING FUTURE AHEAD”
– Andrew Dudgeon, Managing Director for Bombardier Australia
and industry to look at long-term, sustainable pipelines of rail projects that incorporate increased capacity, digital connectivity, advanced manufacturing, automated signaling and maintenance systems.

On the rail control front, Bombardier recently reached an important milestone under its frame agreement with global resources company BHP to deliver the next generation control system for its rail network in Western Australia. In its first mine-to-port project, Bombardier will start the implementation of the highly-efficient INTERFLO 150 rail control solution to optimise the movement of iron ore from six mines to Port Hedland in the remote Pilbara region; which currently comprises 1,000km of track.

“We take the asset from cradle to grave – that means right from the concept to design, engineering, manufacturing, maintenance and asset management for 30-plus years,” he adds. “We maintain our own, and some other rail supplier fleets, at our depots across Australia. It’s a major advantage when we’re maintaining the fleet because if something goes wrong, like a collision or fault in a train, we can bring it in and fix it right away. The faster we do that, the quicker the trains are back out onto the network moving passengers. We couldn’t do that if we didn’t have a local presence and operations. We have the ability to provide our customer

Sustainability

From mainline to metro, light rail to locomotives, Bombardier’s strategy is one of continuous development that provides the most effective and cost-efficient rail solutions for rail vehicles; providing sustainable mobility throughout their lifecycle.

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Once you understand your customers’ requirements and expectations, it’s important to look at what your capabilities are and understand the true strengths of your workforce,” explains Collomb. “In Australia, we have a highly skilled workforce with a strong baseline in trades like –welders, boilermakers, electrical and mechanical technicians and fitters. This is a strength because we’re a one-stop solution provider. We have the right people and expertise, and the right partnerships, to provide best in class products and solutions.”

The second point is to manage the entire value chain. This is the key to delivering operational excellence and allows you to define your business strategy and position yourself as a local, sustainable partner with efficient solutions and keep things on track – excuse the pun!”

Before entering civilian life, Dudgeon had an esteemed career in the military and comes from a long line of patriarchal officers. Dudgeon says the biggest skill he has transferred from the army to his career with Bombardier is open communication.

“The last thing my dad said to me as I got on the train to join the army was, ‘look after your men and women. Without them, you have nothing. Listen to them, care for them’ – and that’s followed me throughout my career: ‘listen to your people’.”

As such, Dudgeon stresses that the most important success factor of the Bombardier business in Australia is its employees. With skills and talent development initiatives such as the Apprentice & Graduate Program, Accredited Welder Training Centre and High Potential Development Program, the Bombardier team remain dedicated to fulfilling the organisations vision for more efficient, sustainable and innovative rail mobility ecosystem across Australia.

Operational and Manufacturing Excellence is at the heart of Bombardier.

Some of Bombardier Australia’s most high profile projects have been produced from their 41-acre Dandenong manufacturing facility in South East Melbourne, which includes the Regional Victoria VLocity diesel trains, Melbourne FLEXITY E-Class trams, and the Adelaide A-City electric trains for South Australia. As the rail and infrastructure requirements differ from state to state across Australia, it is important to understand and adapt unique and flexible rail solutions to ensure they are fit for purpose. Head of Operations and Site General Manager, David Collomb, explains some of the key differentiators of Bombardier’s Dandenong manufacturing headquarters, and the two key approaches he takes to the manufacturing operation at Bombardier in Australia.
“WHAT YOU DON’T MEASURE YOU CAN’T IMPROVE”
– David Collomb, Head of Operations for Bombardier Australia

of choice to your customers.”
As the only train and tram manufacturer left in Australia, Bombardier understands that Australia places high value on local content, employment and opportunity. Boasting a local supply chain of over 1500 across Australia, Bombardier is committed to long-term partnerships and supporting local expertise across the industry.

When asked about the secret to continuously achieving excellence in the operational and manufacturing space, Collomb says it comes down to three key things: (1) measuring performance, “what you don’t measure, you can’t improve”; (2) understanding and developing your people’s competencies; and (3) having highly engaged people. “With our employees we look for excellence and engagement. Highly skilled employees who don’t care about your business doesn’t provide real value.”

Collomb, who previously held senior management positions in global aeronautics leader Airbus, explains that the two primary differences between Bombardier’s rail and aerospace division is the turnaround time for projects – approximately five years for aerospace and two years for rail transportation, meaning the demands for rail execution are higher. “This was the biggest adjustment for me when moving from Airbus to Bombardier; the pace of project execution. I’m enjoying the challenge.”

The second difference he notes is the customers. “In the aeronautic world, it’s generally a private environment with private investors, but in rail we’re accountable to the public sector, to Governments who have a duty to deliver to the taxpaying community. So it doesn’t just come down to being more efficient, but to demonstrating overall, and quantifiable, value to the community.”

Delivering high quality solutions that add value to the rail ecosystem in Australia is the heartbeat of Bombardier’s operational excellence in Australia. Bombardier’s center of engineering and manufacturing excellence is headquartered in Melbourne, Victoria, with established maintenance facilities across Melbourne, Perth, Brisbane, Gold Coast and Adelaide servicing current projects and ready to expand into the next phase of the businesses growth strategy.

Life asset management excellence – a thriving services business
It certainly doesn’t stop after the trains are built. Asset Management and Vehicle Lifecycle Maintenance is core business at Bombardier, accounting for 25 per cent of Bombardier’s total revenue stream in Australia. With long-term maintenance contracts of anywhere between 10-30+ years
attached to almost every Bombardier rail project, Bombardier dominates the rail services market across Australia with current contracts in Victoria, Queensland, Perth and Adelaide.

Garry Bulgarelli, Head of Service Execution for Australia and Asia Pacific, says Bombardier’s long-term approach over the next 20 plus years is to grow the services business to represent 50 per cent turnover.

“To achieve this here in Australia we need to become a major player in New South Wales too,” he reveals. “We’re ensuring every proposal we put forward to our customers has a comprehensive services platform — a complete proposal for maintenance, technical support and/or a spare parts agreement. These long-term commitments allow us to maintain strong connections with our customers. Like a marriage really!”

Bulgarelli stresses that it all comes back to the ‘cradle to grave’ ethos, “We want to be a partner across our customer’s project journey, not just another contractor.”

Bulgarelli claims incumbency is the biggest challenge, so it’s imperative to keep in touch, and anticipate where possible, your customer’s needs.

“It’s not good enough for us as a maintainer to have great key performance indicators, but unable to support our customer with their day to day operational or performance challenges. You don’t simply put your tools down when your part of the job is done, you check in with your customer and see if you can support them in other ways. That’s what a good partner does.”

To future-proof Bombardier’s products and services across incoming trends over the next 30+ years, Bulgarelli says digitisation is the main focus for all rail assets moving forward. “Big Data is the key to improving asset performance, reliability and aiding predictive maintenance regimes.” Bulgarelli says it’s about how digital technology is used to extract, record and analyze data from the trains to monitor trends and vehicle performance during service. “From the data we can understand how things like the doors and cooling/heating modules are behaving during service, then we can adjust them accordingly during maintenance if required. Things like this impact the passengers travel experience, so having this data is crucial and informs our maintenance program for each vehicle.”

When it comes to the name you can trust, the proof is in the pudding as Bombardier was the first to achieve ISO 55001 Asset Management accreditation of their rail maintenance operation in Adelaide,
South Australia. This certification recognizes the robust processes and procedures Bombardier has in place to provide excellence in rail vehicle asset maintenance.

Comprising part of Bombardier’s asset management process is the Automatic Vehicle Inspection Technology (AVIS) system, where trains undergo a fully automatic inspection of key elements as they pass a fixed inspection point. Before the train reaches the depot, Bulgarelli’s team have a full diagnostic report in hand and can begin working on the vehicles immediately.

“For instance, the system may send us an alert saying the train is damaged, or the brake pads have worn to a certain level, so my team knows exactly what needs to be done and they can schedule the vehicle in for an examination.”

All this data is analysed and managed by Bombardier’s ORBITA system to provide alerts and optimize maintenance so that assets are not brought in for maintenance unnecessarily, which both reduces costs and maximizes availability to its customers.

Bombardier is also participating in a global digital start-up program called “ON:TRACK” with innovative tech companies and hubs to identify digital solutions across all elements of the transportation ecosystems, and is working with entrepreneurs to develop how they can be rolled out.

“We need to be able to provide solutions that give the end user, the passenger and the operator, valuable information,” he adds, “The passenger entering a station needs to know if the train is on time. Or the CCTV on the train might alert them that it’s crowded, so they’re better off waiting for the next one.

“This is something we’re working with our customers on and hope to be able to package into an integrated digital solution moving forward. There’s a lot of data we can tap into to continuously improve the experience on our vehicles.”

BIG DATA IS THE KEY TO IMPROVING ASSET PERFORMANCE, RELIABILITY, AND AIDING PREDICTIVE MAINTENANCE REGIMES

– Garry Bulgarelli, Head of Service Execution, Asia Pacific & Australia

www.bombardier.com/australia
We speak to some of Bombardier’s female executives about their experiences and advice for fellow women seeking a career in the industry.
THE RAIL AND manufacturing sector often faces an uphill battle when it comes to diversity in the workplace. However Bombardier’s workforce has grown in recent years to boast a well-represented proportion of highly skilled, ambitious and determined women.

Some of the top spots in Bombardier’s Australian leadership team are now filled by the industry’s foremost innovative and intelligent women in the areas of finance, legal, communications, engineering and signalling, and the executive team are proud to say that this occurred organically.

“This is not something we all sat down one day and decided to achieve for the industry or our business to increase diversity,” says Head of Communications, Loulou Hammad.

“We hire on ‘best fit for the job’, and we are proud that many of those top spots have been filled by inspiring women who, despite tradition and perceptions of the industry, are taking a seat at the table and making a real difference.”
Meet BOMBARDIER’S female leaders

“Remain authentic – find your own leadership style, but be adaptive in different situations and in accordance with the maturity of your team.”

**ANNE KOOPMANN - Head of Quality and Lean Manufacturing, Australia**

The skills of Bombardier’s female leaders are also being celebrated across the entire manufacturing industry. Bombardier Australia’s Head of Quality and Lean Manufacturing, Anne Koopmann, was recognised for her exemplary work in rail manufacturing at the Victorian Manufacturing Hall of Fame Awards held in May 2017. Anne won the Young Manufacturer of the Year Award for her exceptional work in the fields of Quality Assurance and Continuous Improvement in planning and production.

“I’m extremely honoured to have been selected as the 2017 Victorian Young Manufacturer of the Year. It’s a very humbling achievement for me and I thank the Victorian Government and the manufacturing industry for recognising my contribution. Bombardier has given me the opportunity to grow personally and professionally. I am grateful to work with amazing people who continue to challenge and encourage me to think bigger and bolder, every day.”

**REXINE JONES – Head of Finance, Australia**

Rexine Jones has newly joined Bombardier as Head of Finance after an extensive career in some of the top global aerospace businesses including QANTAS and BOC/Linde Group. Rexine’s objective at BTA is to support and develop a company that can support the public through reliable transport options and for continued local employment.

Advice for women in leadership:

“You have a right to be at the table because your opinion counts, however don’t lose track of your femininity. This way you can build your own signature as trusted, reasonable & humble because you are true to yourself.”

**SANDRA COLLOMB – Head of Engineering, Australia**

Sandra is the Head of Engineering for Bombardier Transportation Australia, having joined Bombardier in 2014 with a distinguished career in the aerospace industry with Airbus. Her extensive experience coupled with sound business savviness and an incredible drive for results places Sandra at the helm of an incredibly high performance engineering team.

Advice:

“Remain authentic – find your own leadership style, but be adaptive in different situations and in accordance with the maturity of your team.”
CLAIRE HEUGHAN – Senior Legal Counsel, Australia
Claire has been working with the legal and contracts team at Bombardier for over three years, having had an extensive background in legal particularly in the infrastructure sector. Claire manages the contracts for Bombardier’s projects across the Asia Pacific region, from the tender stage through to operation.

Advice:
“Don’t be afraid to back yourself and give it a try.”

KATIE SINGLETON – Head of Rail Control Solutions, Australia
Katie has been with Bombardier Transportation for 15 years, starting in the BT graduate scheme and working her way up through to Project Management to her current role, where she is an integral part of the Australian leadership team as the Head of Rail Control Solutions.

Advice:
“If you have a passion to be in a Leadership role, let it be known. Talk to your boss, a mentor if you have one, and even your family/friends support network, agree on a plan and make it happen.”

LOULOU HAMMAD – Head of Communications, Australia
At 28, Loulou is the youngest person on the BTA leadership team. Responsible for the Bombardier brand and supporting the strategic direction of the business, Loulou ensures the team continues to challenge the status quo, evolve itself and look beyond the needs of today.

Advice:
“Be bold. You won’t get anywhere sitting on the sidelines.”