



Full speed ahead — railway rolling stock proves its resilience

SPOT ON | RAIL ROLLING STOCK | FEBRUARY 2023

“Consolidation continues to be a major trend in the rail industry. Driven by increased demand for intermodal transportation and logistics management, rail companies are making acquisitions within their supply chains to provide an integrated service offering.

In this active M&A environment, our entrepreneurial roots in the rail industry enable us to be strategic partners and help owners make decisions that maximize the value of their businesses.”

SÉBASTIEN NADEAU
RAIL ROLLING STOCK SPECIALIST
OAKLINS

SPOTLIGHT

Wabtec Corporation

A closer look at the corporate development strategy employed by one of the most active consolidators in the rolling stock industry.

03

MARKET TRENDS

The electrification boom

Across the globe, rail network electrification efforts are accelerating — how is this affecting the industry?

05

RECENT TRANSACTIONS

M&A strategies

We look at the different strategic rationales behind recent railway-related transactions around the world.

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Deal count & valuation multiples

M&A activity has remained high in the railway rolling stock industry in recent times. The defensive nature of railway transportation has led to resilient valuations in the face of higher interest rates.

The global rolling stock market is estimated to have grown to a value of US\$50 billion in 2022, and is expected to reach US\$65 billion by 2025, growing at a CAGR of 9%.¹

Market growth is driven by an increase in demand for both freight/passenger transportation and more energy-efficient modes of transportation.

CONSOLIDATION

Over the last decade, the five largest global OEMs have increased their market share to over 70% of rolling stock manufacturing. OEMs are continuing their growth via M&A, with smaller players facing increasing pressure as their main target.

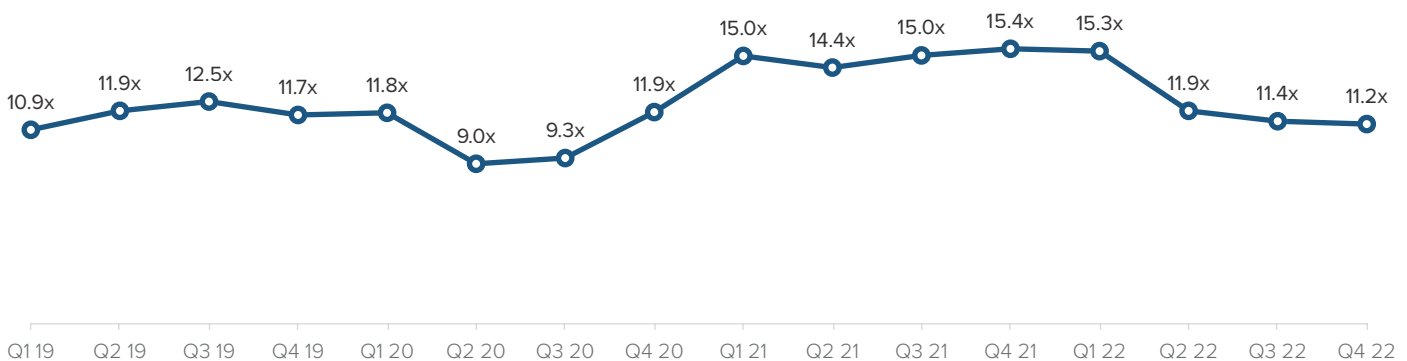
LIBERALIZATION

Global rail liberalization, particularly in Europe, will lead to strong demand for commercial rail services.

New entrants will offer competing rail services and increasingly start bidding for public service rail contracts. However, these new entrants will lack in-house maintenance operations and capabilities, leading to growth opportunities for maintenance, repair and overhaul (MRO) and aftermarket service providers.

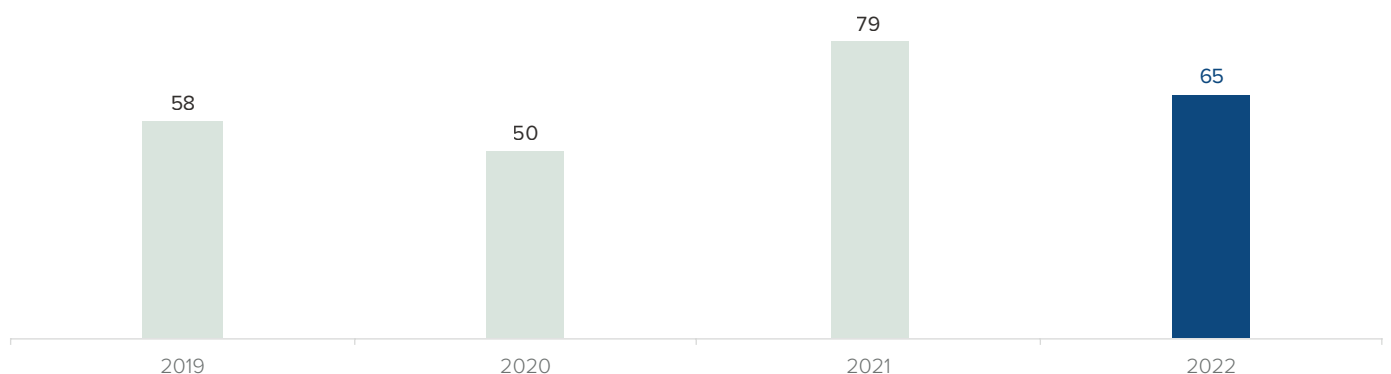
Source: ¹ DWS — 'Rolling Stock and Infrastructure Investors'

Rolling stock manufacturing public companies TEV/EBITDA (2019–2022)



Source: S&P Capital IQ

Number of rail-related M&A transactions globally (2019–2022)



Source: S&P Capital IQ



Spotlight

GROWTH THROUGH ACQUISITION

Founded in 1999 through the merger of Westinghouse Air Brake Company and MotivePower Industries, Wabtec Corporation is a manufacturer of products for locomotives, freight transportation and passenger cars.

M&A has always been key to Wabtec’s growth strategy. Since its inception, Wabtec has completed 28 acquisitions, including its transformative 2019 merger with GE Transportation, the largest producer of diesel-electric locomotives.

CLOSER LOOK

By analyzing some of its recent acquisitions, we’ve identified the key strategies behind Wabtec’s acquisition program:

- technology
- integrated product offering
- diversification
- cost synergies

TECHNOLOGY

In 2020, Wabtec added innovative technology to its acquisition criteria. With gross margins stable at 30% for over a decade, Wabtec has looked to boost them by acquiring technologydriven rail companies that are scalable with low variable costs.

Beena Vision

Wabtec has a complete asset monitoring portfolio (Track IQ), including both hardware and software. M&A has been a powerful tool to expand the offering of that business line and integrate new technologies.

ARINC

Wabtec has a growing portfolio of network optimization and automation software, for digitizing and streamlining the operations of railway operators.

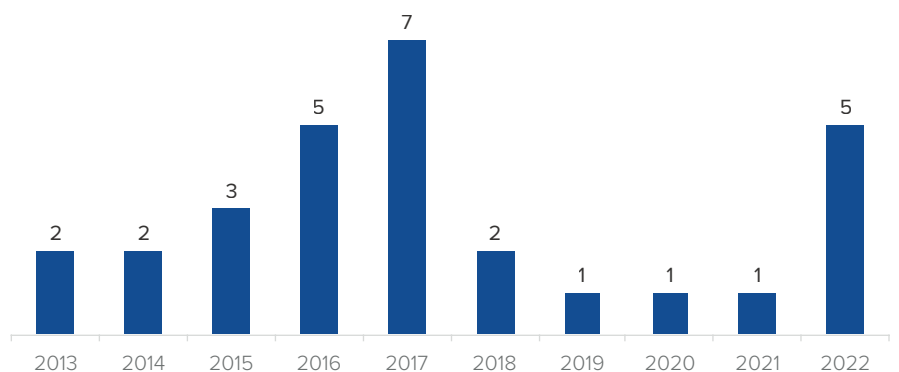
M&A has accelerated its presence in this high-growth segment. In June 2022, Wabtec announced the acquisition of ARINC Rail Solutions.

ARINC was previously Collins Aerospace’s rail segment, providing intelligence-based rail dispatch and back-office solutions.

INTEGRATED PRODUCT OFFERING

By growing its technology product portfolio via acquisition, Wabtec is able to offer a product suite that is responsive to all rail operator needs. As demand for its services increases, revenue synergies will be realized from cross-selling.

Wabtec — Number of M&A transactions closed (2013–2022)



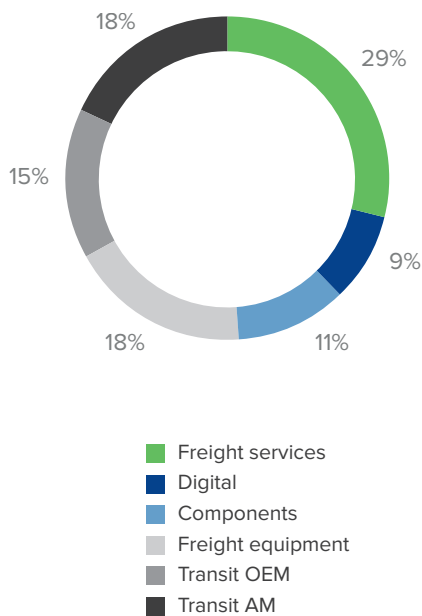
Source: International Union of Railways



DIVERSIFICATION

From mainly serving the freight market, Wabtec has expanded its product and service offering to cover all rolling stock segments. The speed with which Wabtec has been able to diversify across segments could only have been achieved through M&A.

Sales % by segment — 2022



Source: Wabtec Investor Presentation 2022

Diversification across end markets allows Wabtec to reduce revenue volatility by counterbalancing the cyclical nature of each segment.

COST SYNERGIES

M&A can be a powerful tool to reduce SG&A as a percentage of revenue. This can be achieved by realizing operational efficiencies and eliminating redundant back-office costs.

Over its long history of integrating acquisitions, Wabtec has developed a robust approach in realizing cost synergies.

For example, during the GE Transportation merger, Wabtec communicated to shareholders the potential for US\$250 million of annual synergies. Within two years, Wabtec had attained that figure (nearly a full year earlier than expected).

CONCLUSION

Wabtec has built an acquisition strategy that has delivered value for its shareholders since its inception.

Its recent focus on smaller, accretive bolt-on acquisitions like Beena Vision could be interesting to smaller to medium-sized business owners that are looking to sell and integrate into a larger platform with a global client base.

Company performance in US\$ million (Oct 2012–Oct 2022)



Source: S&P Capital IQ

“Beena Vision’s systems, coupled with Wabtec’s TrackIQ portfolio, will create a comprehensive wayside inspection offering.”

NALIN JAIN

PRESIDENT OF WABTEC’S DIGITAL ELECTRONICS DIVISION



Market trends

ELECTRIFICATION

Across the globe, governments are spending significant amounts on the electrification of rail infrastructure. This has been a successful area of investment, both improving the productivity of critical transportation infrastructure and reducing the carbon footprint of the rail industry, which is

already the most carbon-efficient mode of transportation.

Globally, electrified railways comprised 296,000 kilometers of track in 2018. If that increases by 2050 (as it's expected to) and significantly more freight travels on electrified tracks, then the equivalent carbon dioxide emissions can be reduced by 1.91–3.25 gigatonnes.









This additional electrification could cost US\$0.66–1.43 trillion.²

The segments of the rail industry that will be most affected by this increased electrification are:

- motive power
- infrastructure
- MRO

Source: ² Project Drawdown — 'Electric Trains'

Major recent electrification projects

Date	Country	Project	Investment amount (US\$bn)	Description
Sep 22		Rail Network Rebuild	330 million	Electrify the Auckland railway network
Jul 22		Integrated Rail Plan	1.2	Electrification of the railway between Stalybridge and Manchester
Apr 22		Regional Express Rail program	10	Conversion of GO Transit's rail network from diesel to electric power
Mar 22		Recovery plan	2.7	Electrification of public and private transport
Oct 19		Coalition agreement	-	Electrify 75% of the German network by 2030
Feb 18		Decarbonisation Network Strategy	-	Remove all diesel-only trains from the network by 2040
Oct 17		Electrification of Indian Railways	5.8	Electrification of rail routes to achieve net zero by 2030
Feb 17		Caltrain Electrification Project	2.44	Replace diesel-hauled trains

MOTIVE POWER

The carbon footprint of trains is mostly caused by diesel engines, and this has pushed multiple governments to look at replacing diesel-powered locomotives. For instance, in 2018, the UK government proposed the removal of all trains that run only on diesel by 2040.

In addition, there are strong incentives for rail operators to consider the shift to electric. Researchers from UC Berkeley and UCLA estimate that replacing traditional diesel locomotives with battery power could save railroad companies US\$94 billion in fuel costs over 20 years.³

Investments are already happening in this direction. In January 2022, Union Pacific placed an order for 10 Wabtec FLXdrive battery-electric locomotives. However, although Wabtec’s model is 100% electric, the FLXdrive will need to be deployed together with diesel locomotives.

Furthermore, the energy source powering the batteries will be critical to reducing carbon emissions: electricity generated from low carbon sources will obviously have a more positive environmental impact than electricity generated from gas or coal.

Hydrogen fuel-cell locomotives

Another promising zero-emission technology is hydrogen power. For rail operators, one of its most attractive selling points is that hybrid locomotives can be retrofitted, making it possible to replace diesel-powered engines with hydrogen fuel-cell technology rather than having to build new machines.

The main challenge will be fuel cost. The production of hydrogen fuel cells is currently very labor-intensive, and costs US\$1,000 per kW to produce. Still, important advances are taking place. In October 2022, Canadian Pacific (CP) put its home-built hydrogen locomotive to work on its main line. If the venture works well, CP plans on having three hydrogen locomotives in service by the end of 2023.

INFRASTRUCTURE

The transition to electric cannot be achieved without revamping the current rail infrastructure to include electric power distribution systems, substations, new adapted tracks and much more. Infrastructure systems, including signaling and track structures, will require adjustments in order to be compatible across the network.

A 2019 study estimated that electrification could cost around €1 million (approx. US\$1.06 million) per kilometer.⁴ To put this in perspective, the US has more than 225,000 kilometers of freight rail network. That means this infrastructure transformation will require massive capital investment, and this will trickle down across the rolling stock supply chain.

MAINTENANCE, REPAIR & OVERHAUL (MRO)

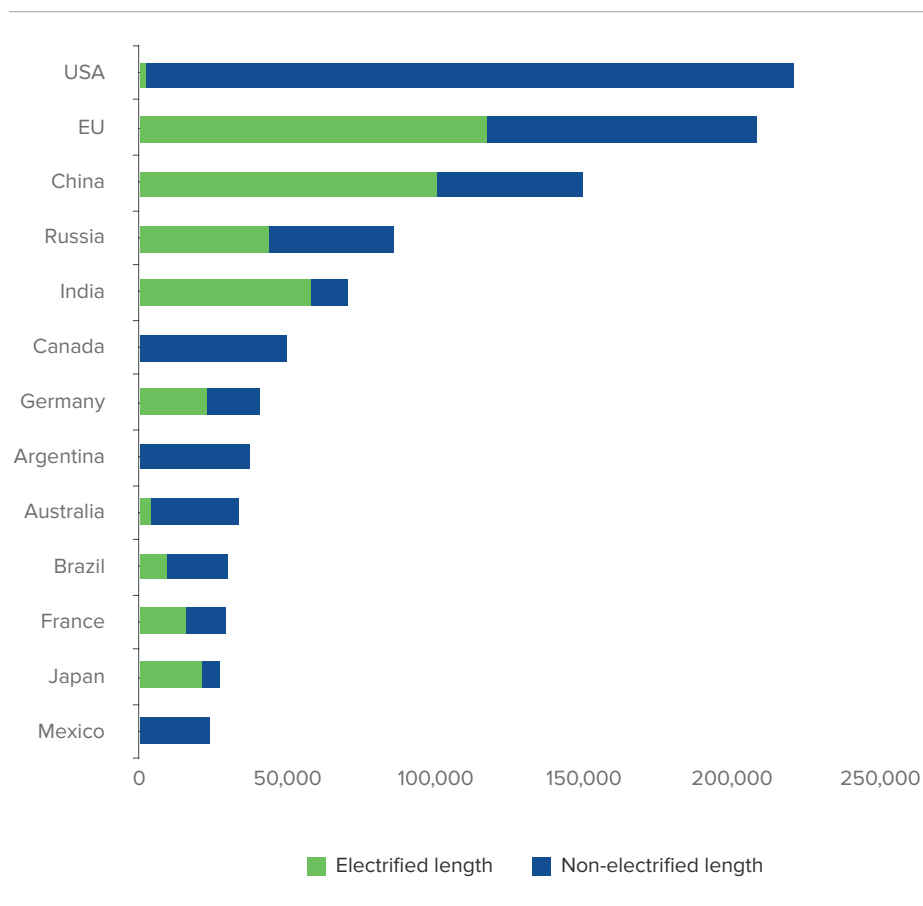
MRO companies that have expertise in complex overhaul projects are well positioned to benefit from electrification programs. These programs often require major upgrades to train control systems and are frequently combined with renovation and modernization projects.

Sources:

³ Nature Energy — ‘Economic, environmental and grid-resilience benefits of converting diesel trains to battery-electric’

⁴ EPFL Transportation and Mobility Lab — ‘Model-based economic analysis of electrification in railway’

Rail transport network size (in km)









Source: International Union of Railways

M&A strategies









Strategic rationales observed in recent M&A transactions

1. Integrated service network

Date	Target	Country	Acquiror	Country	Target Description
Oct 22	ALBERTA MIDLAND RAILWAY TERMINAL		 alpenglow rail		Alberta Midland Railway Terminal (AMRT) is a rail logistics center. AMRT provides rail car storage and switching rail car services and repair, and rail truck transloading
Jan 22	Orange Rail		 alpenglow rail		Orange Rail is a newly constructed rail terminal located in the petrochemical district of Orange, Texas

Following these acquisitions, Alpenglow is now the only rail terminal business serving three major petrochemical centers: the Alberta heartland, the US Gulf Coast, and southwestern Ontario. Companies operating in these regions will now be able to execute a single agreement to handle their rail transportation and service needs across an extended rail network.

2. Expand product portfolio

Date	Target	Country	Acquiror	Country	Target Description
Jun 22	 Ferrabyrne Design • Develop • Manufacture • Service		 DELLNER GROUP		Ferrabyrne is a specialist molding company producing rubber-to-metal bonded components and suspension systems for the rail industry
Dec 21	 FRIMATRAIL® frimatrail		 DELLNER GROUP		Frimatrail produces friction materials for rail vehicles, providing composite low- and high-friction brake blocks and disc brake linings

Dellner Group is growing its rail product portfolio via acquisition to gain access to new markets. Post-acquisition, Dellner will tap into the existing customer base of the acquired company to generate cross-selling opportunities. Dellner is also looking to benefit from cost synergies by improving R&D performance and cost optimization. The Frimatrail acquisition led to Dellner entering the rail brake market, while the acquisition of Ferrabyrne strengthened Dellner's presence in the high-end rail segment.

3. Expand service offering

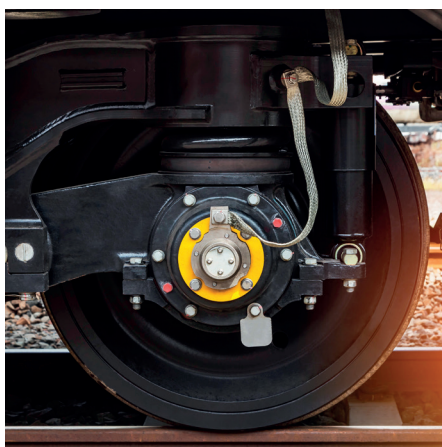
Date	Target	Country	Acquiror	Country	Target Description
Aug 22					H&H Engineering Construction, Inc. provides engineering and construction services for the railroad and transit industries
Aug 22	Rail Welding division of  A Caterpillar Company				Progress Rail's rail welding services division is a specialized provider of flash-butt welding

RailWorks is a specialty railroad construction and maintenance company, and uses M&A to expand its service offerings and capabilities. Its acquisition of Progress Rail's welding division added flash-butt welding to its capabilities, which expanded its maintenance of way service offering. Railworks' acquisition of H&H Engineering strengthened its engineering and construction offering, while increasing engineering capacity for internal needs.

4. Technology acquisition

Date	Target	Country	Acquiror	Country	Target Description
May 22	 powered by CANDO		 TRINITY INDUSTRIES		Quasar is an end-to-end rail logistics software platform that provides real-time data to freight rail shippers and operators

Trinity Industries is a rail transportation and services company. In 2021, it launched a technology service platform with the goal of offering fleet analytics and supply chain intelligence to its customers. In order to accelerate the growth of its digital offering, Trinity acquired Quasar thereby gaining capabilities like yard management, activity-based costing and new data visualization tools.



Public comparables

Trading and operating performance figures

Rail-related manufacturing

Company	Country	Market cap. (US\$ million)	% of 52- week price	EBITDA	TEV/ EBITDA
		124,283.3	97.1%	13.8%	18.5x
		20,739.4	83.8%	7.7%	8.3x
		18,774.2	97.8%	18.1%	14.4x
		10,260.7	63.4%	15.9%	11.3x
		10,711.8	75.9%	5.0%	22.9x
		4,012.3	82.1%	7.9%	14.4x
		1,264.3	74.7%	19.5%	11.5x
		934.6	53.3%	6.1%	11.0x
		1,026.0	74.7%	7.3%	5.8x
		456.1	67.9%	9.2%	14.9x
		323.1	92.5%	6.3%	19.9x
		Low	53.3%	5.0%	5.8x
		Median	75.9%	7.9%	14.4x
		High	97.8%	19.5%	22.9x

Source: S&P Capital IQ as of 18 January 2023

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- Corporate finance services

Rail rolling stock is one of our focus areas. Combining comprehensive sector knowledge with global execution has led Oaklins to become one of the most experienced M&A advisors in the rail rolling stock sector, with a large network of relevant market players worldwide. This results in the best possible merger, acquisition and divestment opportunities for rail rolling stock companies.

If mergers, acquisitions, or divestitures of businesses or business units are part of your strategy, we would welcome the opportunity to exchange ideas with you.



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Sébastien leads Oaklins' rail rolling stock team and is a managing partner at Oaklins E. Canada. He has been involved in the rail industry for well over 15 years and has built a network of contacts with industry leaders. Sébastien has closed several transactions, such as debt financing, equity financing and acquisitions for CAD Railway Industries, a leading Canadian maintenance, repair and operations service provider focused on the North American rail industry.

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