

From Product to Outcome: How Rail OEMs Could Add 2-4 Points of EBIT

Lessons from bus, truck and aerospace lifecycle models, applied to rolling stock.



EXECUTIVE SUMMARY

The Margin Challenge

Most rail OEMs operate at relatively modest margins despite multi-billion-euro revenues. Part of the gap to adjacent industries is structural, but part reflects project-based economics, execution risk and limited capture of lifecycle value. The opportunity is not to replace the rolling-stock business, but to extend it: from delivering the asset towards managing more of its economics over the full lifecycle.

The Lifecycle Opportunity

Much of the required technology already exists. The bigger challenge is commercial: defining the customer outcome, allocating performance risk, using lifecycle data and pricing correctly. Availability, predictable lifecycle cost and lower operational risk are what customers ultimately value. When OEMs take greater responsibility for these outcomes, improvements in reliability and maintenance efficiency can become sources of margin rather than purely technical benefits.

What OEMs should do

Focus on three profit levers: reduce lifecycle cost through better risk and operational management, scale solutions across platforms and installed fleets, and capture more recurring lifecycle revenue. Support all three with end-to-end profitability management. Transit Strategy estimates an illustrative 2–4 percentage-point EBIT opportunity over three to five years, starting with selected fleets and bids where performance risk, data access and contractual responsibilities can be controlled.

INTRODUCTION

Rail customers are not buying predictive maintenance, digital twins or remote diagnostics. They are buying predictability: fleet availability, lifecycle cost and lower operational risk. For passengers and transport authorities, that ultimately means a reliable and comfortable journey that arrives when promised. Technology enables that outcome; it is not the outcome itself.

Rail OEMs already possess much of the required technology. The bigger challenge is commercial. Service penetration alone does not determine profitability; what matters is how vehicle margin, performance risk and lifecycle revenue are managed together. Outcome-based models can improve these economics, but only where the OEM can control the main performance drivers and price the risk correctly.

Adjacent industries show why. Scania demonstrates how platform scale and a large installed base can support recurring lifecycle revenue, while Rolls-Royce shows how transferring performance responsibility changes the incentives around reliability and maintenance. The lesson for rail is not simply to sell more services, but to turn lifecycle performance into lifecycle economics.

This opinion piece examines where the rail margin gap comes from, what can realistically be addressed, and how three profit levers, supported by end-to-end profitability management, could translate into structurally higher margins.

WHERE RAIL OEMs STAND TODAY

Company	Revenue	Services share	Profit Margin*	Comments
Siemens Mobility	€12.4bn	17.7%	8.8%	Siemens reported profit margin
Talgo	€0.6bn	42%	2.3%	Estimated EBIT excl. extraordinary effects. 42% maintenance, 2023-25 average
CAF Group	€4.5bn	16.9%	5.5%	EBIT
Hitachi Mobility	€7.8bn	N/A	8.2%	Adjusted reported EBITA
Stadler Rail	€3.9bn	16.5%	4.4%	EBIT
Alstom	€19.2bn	24.4%	6.1%	Adjusted EBIT 25/26
Scania (benchmark)	€ 18.4bn	22%	10.7%	Adjusted EBIT

*Note: Company annual reports 2025. *Profitability metrics are shown as reported by each company and are directionally comparable, but not fully standardised, as sufficient public data is not available to restate all companies on a common basis*

Siemens Mobility leads the peer group at around 9% operating profitability, supported by a mature service business and a broad portfolio spanning rolling stock, signalling, digital and lifecycle services.

Talgo is particularly interesting. Despite maintenance representing around 42% of revenue on a 2023–25 average basis, underlying 2025 profitability remained low. This points to the importance of project execution and contract economics, not simply service penetration.

CAF combines mid-single-digit profitability with a growing lifecycle business. The company is extending its Urbos platform beyond vehicle supply into maintenance, digital fleet management and long-term service contracts.

Hitachi Rail has significantly broadened its offering through the acquisition of Thales' Ground Transportation Systems business. Together with HMAX, this creates a broader platform across rolling stock, signalling, digital systems and services, with a focus on operational performance, maintenance efficiency and lifecycle cost.

Stadler Rail also sits in the middle of the profitability range, with a meaningful service business alongside its rolling-stock activities.

Alstom already has one of the sector's largest service businesses, with Services representing around 24% of FY2025/26 sales and 38% of group backlog. The opportunity is therefore less about increasing service penetration and more about converting that installed and contracted base into consistently higher-margin lifecycle business.

Scania, used here as an adjacent-industry benchmark, combines a service share of around 22% with adjusted operating profitability of 10.7%, illustrating the potential economics of a more mature lifecycle model.

This comparison suggests that service share alone does not determine profitability. What matters is how vehicle margins, project risk, maintenance contracts, lifecycle cost and recurring revenues are managed together.

WHY THE GAP PERSISTS

Not all of the margin gap between rail OEMs and their bus or truck peers is addressable. It reflects both structural market constraints and choices in how the business model is designed. Different responses are required for the two.

1. Structural market constraints

- **Regulation and homologation** Safety, ECM and vehicle-authorisation requirements increase complexity, slow standardisation and make cross-market scaling more difficult.
Response Design platforms, contracts and service models to minimise local variation and price regulatory complexity.
- **Procurement and price pressure** Lower production volumes and price-sensitive public tenders expose European OEMs to strong international competition, including from lower-cost suppliers such as CRRC.
Response Compete less on upfront vehicle price alone and more on lifecycle cost, availability and operational performance.

2. Commercial and business-model constraints

- **Project-based economics** Profitability remains heavily dependent on large rolling-stock delivery contracts with long cycles and significant execution risk, rather than integrated lifecycle relationships.
Response Shift more of the commercial model towards recurring lifecycle revenue and performance-based contracts.
- **Lifecycle value captured outside the OEM** Financing, leasing, fleet management and residual-value economics are often captured by other players rather than the vehicle manufacturer
Response Selectively expand into lifecycle services, financing partnerships and asset-management models where the OEM has a clear advantage.

- **Platform fragmentation:** Customer-specific variants limit reuse of components, data models and maintenance processes, reducing both industrial and lifecycle scale.
Response: Strengthen platform discipline and fully price exceptions.

CROSS-INDUSTRY EVIDENCE FROM AUTOMOTIVE AND AEROSPACE

Bus, truck and aerospace OEMs show how a large installed base can support more predictable and profitable lifecycle economics. Scania is particularly relevant to rail because it serves many of the same transport operators and combines modular product architecture with maintenance, financing, connectivity and fleet services. Rolls-Royce provides the more advanced outcome-based precedent through Power-by-the-Hour and TotalCare. Three lessons stand out.

1. Shift from intervention to outcome economics

Scania increasingly structures services around uptime, predictable maintenance cost and operational performance, while Rolls-Royce took the principle further by linking long-term service economics directly to engine utilisation and reliability.

Rail implication: When the OEM carries and correctly prices more performance risk, reliability, predictive maintenance and workshop productivity become direct economic levers.

2. Use platform scale to industrialise lifecycle services

Scania's modular architecture allows common components, maintenance processes and digital services to be reused across a large installed base. More than 700,000 connected Scania products support tailored maintenance, fleet management and uptime services.

Rail implication: Greater platform discipline allows lifecycle solutions, data models and maintenance processes to be replicated across fleets rather than recreated project by project.

3. Monetise the installed base over its full life

Scania generates around 22% of revenue from services, including maintenance, financing and digital fleet services. Rolls-Royce demonstrates the potential at greater maturity: in 2025, Civil Aerospace generated £7.2bn of aftermarket revenue versus £3.2bn from original equipment, with a 20.5% underlying operating margin.

Rail implication: The opportunity is not simply to sell more maintenance, but to capture more value from services, upgrades, financing and asset management throughout the asset life.

The cross-industry lesson: lifecycle models do not create margin by themselves. They create the incentives, scale and information needed to manage cost, risk and recurring revenue more effectively

Sources: company annual reports and FY2025 results; Transit Strategy analysis

THE EBIT OPPORTUNITY

The bridge below is an **illustrative management scenario**, not a forecast. The achievable uplift will vary materially by OEM depending on starting margin, installed base, service penetration, product mix and execution performance.

Current Rail EBIT	+ Improved risk and operational management	+ Platform and Scalability	+ Increased lifecycle revenue	Illustrative EBIT uplift (3-5 year horizon)
Base	+1.5pp	+1.0pp	+1.0pp	~3.5pp

*Illustrative Transit Strategy management hypothesis based on peer margin dispersion, lifecycle service economics and the profit levers described in this paper. It is not a forecast and will vary materially by OEM. **Risk & operations:** reliability, workshop productivity, spares, penalties, maintenance planning **Platform & scale:** engineering reuse, variants, data models, service replication **Lifecycle revenue:** spares, upgrades, software, financing, asset services **Profitability management (enabler):** lifecycle P&L transparency, bid/no-bid prioritisation, risk-adjusted pricing, customer and portfolio prioritisation, resource allocation*

THREE PROFIT LEVERS AND ONE ENABLER

Turning predictability into profit requires action on three fronts: lowering lifecycle cost, scaling solutions across platforms and installed fleets, and capturing more recurring lifecycle revenue. End-to-end profitability management is the enabler that ties these together.

1

Reduced lifecycle cost through better risk and operational management

Taking greater responsibility for fleet performance changes the OEM's economic incentives. Failures, downtime, excessive maintenance and poor reliability increasingly become costs that the OEM must manage rather than problems borne primarily by the customer. This creates stronger incentives to improve reliability engineering, condition monitoring, predictive maintenance, maintenance planning and operational risk management. Taking responsibility for maintenance also creates opportunities to redesign how the work itself is delivered. OEMs can often improve workshop utilisation, maintenance planning, labour productivity, spare-parts management and preventive interventions compared with fragmented customer-operated maintenance. The margin opportunity comes from delivering the contracted outcome at a lower lifecycle cost than assumed when the contract was priced.

2

Scalable economics around platforms and the installed base

Greater platform discipline reduces engineering complexity, limits unnecessary variants and allows components, maintenance processes, data models and digital solutions to be reused across fleets. The benefit is therefore broader than lower development and industrial cost. A common platform also creates a larger and more addressable installed base. Once products, processes and interfaces are standardised, lifecycle solutions can be replicated across multiple customers and fleets rather than engineered repeatedly for individual projects. Platform thinking therefore creates both cost scale and commercial scale.

3

Capture more lifecycle revenue

The installed base can be monetised throughout the asset life through financing and leasing, maintenance, spare parts, upgrades, retrofits, software, digital services, condition monitoring and, residual-value and asset-management services. Many of these activities can generate more attractive and more recurring economics than the original vehicle contract. The opportunity is not simply to sell more maintenance and service contracts, but to capture a larger share of the total economic value generated by the asset over its life.

E

Profitability managed end-to-end (Enabler)

Lifecycle business models require a much broader economic view of the customer relationship: vehicle margin, engineering cost, maintenance cost, reliability risk, spares, upgrades, digital services and performance commitments all need to be understood together. This transparency can have a substantial indirect effect on profitability. It allows management to identify margin leakage and cross-subsidies, improve bid and pricing decisions, allocate engineering and commercial resources more effectively, prioritise the most attractive products and customers, and make strategic investments based on total company profitability rather than local project optimisation. End-to-end profitability management creates value both directly, through better pricing, portfolio and resource-allocation decisions, and indirectly, by improving the effectiveness of the three profit levers above.

ILLUSTRATIVE IMPLEMENTATION ROADMAP

A 3-5 year path to structurally higher margins

Phase	Year 1-2: Foundation	Year 2-3: Scale	Year 3-5: Sustain
Platform and Product	Map variant complexity and lifecycle cost. Define platform and service architecture	Reduce variants and reuse components, processes and data models across fleets	Use platform standards in new bids. Fully price exceptions
Service and Contracts	Pilot availability-based service models in selected fleets. Build performance and data baseline	Make an availability-based option standard in relevant new bids	Scale lifecycle contracts and renew/upsell digital services
Pricing and Commercial	Build lifecycle pricing model and risk guardrails for selected tenders	Apply risk-adjusted pricing and commercial guardrails	Full lifecycle economics embedded in bid and renewal decisions
Management and EBIT	Assign executive ownership for lifecycle profitability	Track margin, cash and risk by contract and platform.	Set margin uplift targets and steer portfolio by lifecycle profitability

IMPLICATIONS FOR RAIL OEMs

- 1 Be selective about where to take performance risk**
Outcome-based models should start where the OEM can control the key drivers of availability, maintenance cost and data. Not every fleet or contract is suitable.
- 2 Industrialise lifecycle economics across the installed base**
Use platform discipline, common data models and standardised service concepts to replicate lifecycle solutions across customers and fleets rather than rebuilding them project by project.
- 3 Capture more lifecycle value where the OEM has an advantage**
Selectively expand into maintenance, upgrades, software, financing partnerships and asset-management services where OEM knowledge, data or installed-base access creates an advantage.
- 4 Manage and price lifecycle profitability end-to-end**
Give clear executive ownership to lifecycle profitability and manage margin, cash and risk across the vehicle, service and contract lifecycle.

Rail OEMs already have the technology. The next step is to turn lifecycle performance into lifecycle profit.

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