From Product to Outcome:

How Rail OEMs Can Add 2-4 Points of EBIT

Lessons from Scania, Daimler Truck, and the lifecycle pricing revolution, applied to rolling stock.

Rail OEMs are leaving 2-4 percentage points of EBIT on the table. The fix is already proven in buses.

Most rail original equipment manufacturers (OEMs) earn between 2% and 8% EBIT on revenues that can run into the billions. At the same time, Scania posted an adjusted EBIT margin of 12.7% in 2023 (Scania Annual Report 2023), and Daimler Truck achieved an adjusted return on sales of approximately 10% in its Industrial Business in 2023 (Daimler Truck Annual Report 2023). Some of this gap is structural and difficult to close: rail vehicles are produced in lower volumes, sold through public tenders with price transparency requirements, and require costly country-by-country safety certification. But a significant part of the gap reflects choices about how vehicles are sold, maintained, and monetised over their working life.

Rail OEMs remain overwhelmingly project-driven: big tenders, razor-thin margins, long delivery cycles, and a constant fight against lower-cost competitors. Once the train is delivered, the revenue largely decreases. In contrast, Scania generates approximately 20% of its revenue from services, comprising maintenance contracts, financing, and fleet tools, and continues to grow this share year on year. Critically, Scania sells to many of the same buyers as rail OEMs: public transport operators, city authorities, and national bus companies.

The central question: can rail OEMs replicate this model? Our analysis says yes. The evidence is already visible in the annual reports of Siemens Mobility, CAF, and Hitachi Rail. Siemens Mobility, which has the most developed service business among rail OEMs, leads the peer group on EBIT margin.

WHERE RAIL OEMS STAND TODAY

Company	EBIT Margin	Revenue	Source
Siemens Mobility	~8.0%	€11.2bn	Siemens AG Annual Report 2024
Talgo	~6.6%	€433m	Talgo S.A. Annual Report 2023
CAF Group	~5.3%	€3.7bn	CAF Annual Report 2023
Hitachi Rail	~4.2%	N/A	Hitachi Annual Report 2024
Stadler Rail	~3.5% (est.)	€4.0bn	Stadler Press Release Feb 2024
Alstom	~2.4%	€17.6bn	Alstom Annual Report 2023/24
Scania (benchmark)	**~12.7%**	**€ 18.4bn**	**Scania Annual Report 2023**

Note: Siemens Mobility EBIT includes signalling, automation and digital alongside rolling stock, and is not a pure rolling-stock comparison. Sources: respective company annual reports as listed. Sources: Scania Annual Report 2023 (scania.com/en/investors). Daimler Truck Annual Report 2023 (daimlertruck.com/investors).

Siemens Mobility leads the peer group at approximately 8%, reflecting both its mature service business and its broader portfolio of higher-margin signalling and automation activities. Alstom, despite revenues of 17.6 billion euros in FY2023/24, sits at the bottom after years of project over-runs and limited services penetration. CAF and Talgo show mid-range numbers, CAF is increasingly extending its Urbos offering beyond vehicle supply into maintenance, digital fleet management and long-term lifecycle services.

THE GAP IS STRUCTURAL

Not all of the margin gap between rail OEMs and bus peers is addressable. Rail vehicles are produced at lower volumes than trucks, procured through public tenders with mandatory price transparency, and require expensive safety certification in each market. These structural factors compress margins regardless of business model choices. What is addressable is the portion that reflects how rail OEMs choose to structure their commercial relationships after delivery. Three structural weaknesses stand out:

1. Project dependency. Revenue arrives in lumps tied to delivery milestones. Once the train is handed over, the relationship and the revenue largely stop. There is no recurring base to carry the business through lean periods.

2. Commoditisation from Asia. CRRC and other lower-cost competitors are winning hardware tenders on price. Competing on hardware alone is a race to the bottom.

3. Value captured by financial intermediaries. In the UK, three Rolling Stock Companies (ROSCOs), Angel Trains, Eversholt, and Porterbrook, control 87% of the rail fleet (Rail Delivery Group, 2018). In 2020 they paid 950 million pounds in dividends to overseas investors (RMT, 2021). Over the decade 2012 to 2020 they extracted 2.7 billion pounds in dividends, representing nearly 100% of pre-tax profits. OEMs have the superior technical knowledge; financial engineers capture the value.

THE CAPABILITY GAP

The bus sector is a directly relevant benchmark for rail. Scania and Daimler Truck sell a significant share of their bus output to the same buyers that dominate rail procurement: public transport operators, municipal authorities, and national transit agencies.

1. Outcome pricing. Scania and Daimler Truck offer multi-year maintenance contracts structured around guaranteed uptime and total lifecycle costs. Rail OEMs price on hardware delivery milestones. The shift to availability contracts is just beginning in rail.

2. Service bundling. Scania generates approximately 20% of its total net sales from services (Scania Annual Report 2023), a share it is actively growing. For most rail OEMs, services remain a smaller portion of revenue and are frequently unbundled and competed away in tenders.

3. Platform modularity. Scania's modular powertrain architecture allows a wide range of vehicle configurations from a standardised set of components. In rail, Siemens' Velaro and Desiro platforms and CAF's Urbos platform represent early moves, but most OEMs still build heavily customised vehicles.

4. Digital and data revenue. Daimler Truck Financial Services generated 2.9 billion US dollars in revenue in 2023 (Equipment Finance News, March 2024, citing Daimler Truck Annual Report 2023). In rail, equivalent digital and data revenues are not yet separately disclosed by any OEM, indicating they are not yet a material revenue line.

5. EBIT transparency end-to-end. Bus leaders manage margin by product line, service contract, and region in real time. Rail OEMs typically manage EBIT at project level, obscuring systemic margin leakage.

WHAT THE LEADERS ARE ALREADY DOING

Siemens Mobility (Leader)	CAF Group (Emerging)	Scania (Benchmark)
Railigent X IoT platform and full-service availability contracts for Velaro fleets in Germany and Spain. Strong growth in customer services reported in FY2024 (Siemens AG Annual Report 2024). **EBIT approximately 8%**, highest in the peer group.	Urbos tram platform: standardised modules deployed across more than 20 cities. Lifecycle maintenance contracts increasingly bundled into tenders (CAF Annual Report 2023). **EBIT 5.3%**, moving in the right direction.	Services approximately 20% of net sales and growing. Modular powertrain supports a wide product range from standardised components. Financial services and connectivity bundled into the offer. **EBIT 12.7%** adjusted (Scania Annual Report 2023).

AVIATION SOLVED THIS 62 YEARS AGO

In 1962, Rolls-Royce introduced Power-by-the-Hour, a fixed-cost-per-flying-hour service covering all engine maintenance and replacement (Rolls-Royce press release, 2012). It was invented to support the Viper engine on the Hawker Siddeley 125 business jet and aligned the interests of manufacturer and operator: the OEM only earned when the engine was flying. The global power-by-the-hour market exceeded 20 billion US dollars in 2018 (Global Market Insights, cited in MRO Business Today, 2022).

Rail rolling stock shares the same fundamental characteristics: high capital cost, long asset lives, complex maintenance requirements, and safety-critical operations. The transition from product sale to outcome service is not only possible. It is overdue.

THE EBIT OPPORTUNITY

The four levers below, based on the Scania and Daimler Truck benchmarks and the trajectory of Siemens Mobility, could lift a typical rail OEM from approximately 4-5% EBIT to 7-8% over a 5-7 year horizon, mirroring the trajectory already demonstrated by Scania, where services represent approximately 20% of net sales and continue to grow.

Current Rail EBIT	+ Service Contracts	+ Digital and Platform	+ Outcome Pricing	Target EBIT (5-7 year horizon)
~4.5%	+1.5pp	+1.0pp	+1.0pp	~7.5%

Illustrative EBIT bridge based on Scania Annual Report 2023 benchmarks and Siemens Mobility FY2024 trajectory. Rail OEM baseline reflects the peer group average. Individual results will vary.

THE FOUR LEVERS

1 **Convert maintenance from cost to revenue**

Bundle preventive maintenance, spare parts, and remote diagnostics into multi-year availability contracts priced on uptime. This shifts a material portion of aftermarket spend from customer-owned to OEM-managed, with recurring revenue replacing one-off project income. Siemens Mobility's Railigent X availability contracts are the most developed proof point in the sector.

2 **Build modular platforms and stop customising everything**

Scania's modular powertrain architecture allows it to serve a wide range of customer needs from a standardised set of components. CAF's Urbos tram applies the same logic to light rail. Rail OEMs that commit to platform discipline and price variants transparently will compress engineering costs and accelerate delivery cycles.

3 **Price on outcomes, not hardware milestones**

Replace milestone-based project payments with performance contracts: pay-per-km, pay-per-seat, or availability-fee structures. This requires real-time fleet data, which is already available via onboard telemetry on most modern fleets, and a willingness to take on performance risk. Public transport operators, who commission both buses and trains, are increasingly comfortable with availability-based contracting. Operators already comfortable with availability-based contracting in buses are natural early adopters for the same model in rail.

4 **Build EBIT visibility end-to-end and manage by contract, not project**
Scania reports services as a distinct revenue and margin category in its annual report, generating approximately 20% of net sales (Scania Annual Report 2023). Most rail OEMs do not publish equivalent service margin transparency. Building contract-level financial reporting is the management foundation that makes the other three levers measurable and defensible.

IMPLEMENTATION ROADMAP

A 5-7 year path to structurally higher margins

Phase	Year 1-2: Foundation	Year 2-4: Scale	Year 4-6: Sustain
Platform and Product	Audit variant complexity. Define modular platform architecture.	Launch one or two standard platforms. Begin systematically reducing engineering variants through platform discipline.	Platform covers the majority of new orders. Variant surcharges fully costed.
Service and Contracts	Pilot availability contracts on two or three fleets. Build data baseline.	Roll out to all new deliveries. Develop service profit and loss capability.	Services approach the Scania benchmark of approximately 20% of revenue. Renew and upsell digital packages.
Pricing and Commercial	Introduce outcome pricing in 20% of new tenders.	Outcome pricing becomes the standard offer. Premium over hardware competitors defended.	Full lifecycle pricing model. Data-backed uptime service levels in all contracts.
Management and EBIT	Implement contract-level profit and loss reporting. Appoint Chief Services Officer.	Real-time EBIT dashboard by contract and platform.	EBIT target 8-9%. Investor communications shifts to service revenue and recurring margin.

CONCLUSIONS

1 **The gap is real and the benchmark is proven.**
Rail OEMs average 2-8% EBIT. Scania averages approximately 13%. Part of that gap is structural: lower volumes, public procurement rules, and certification costs. But a significant part reflects business model choices that are within management's control.

2 **Early movers in rail confirm it works.**
Siemens Mobility, the most service-mature rail OEM, leads peers at approximately 8% EBIT. CAF is moving in the right direction. Siemens Mobility, with the most developed service business in the peer group, also leads on EBIT margin. The direction is consistent with the bus sector benchmark, though Siemens' margin also reflects its signalling and automation portfolio.

3 **The four levers are clear.**
Outcome-based contracts, modular platforms, end-to-end EBIT transparency, and a deliberate shift of revenue toward services. None of these require new technology. They require management commitment and commercial discipline.

4 **The risk of inaction is growing.**
CRRC and other lower-cost competitors are winning hardware tenders on price. Rail OEMs that remain product-centric will face continued margin compression. Those that make the shift will be structurally harder to compete against.

"The train has left the station, for bus OEMs. Rail OEMs still have time to board."

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