

State of *Mission-Critical* Integration.

Why the capability gap is widening across automotive and defence, and what leaders are doing about it.

AN EXECUTIVE PERSPECTIVE
FROM DIADROM HOLDING AB
AHEAD OF THE FULL 2026 REPORT

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 FOREWORD

Why we wrote this.

In every executive conversation I have had over the past year, across automotive, defence, and the in-between, one observation keeps returning. Leaders know their platforms are becoming software. They know complexity is now the defining commercial and operational variable. And almost universally, they are uncertain about what they actually own when it comes to making those platforms work together over time.

That uncertainty does not show up in board decks. It shows up in late releases, in OTA incidents that the press never sees, in capability gaps that get explained away, in aftermarket margins that do not materialise the way the strategy presentation promised. The pattern is clear enough that we decided it was worth writing down.

This report sets out what we are seeing. It is not a vendor whitepaper. We have tried to be straight about what is structural and what is solvable, what is consistent across both sectors we work in, and what the leaders we respect are already doing about it.

Diadrom has spent two decades inside mission-critical software for vehicles and defence platforms. We did not start there because we predicted the convergence. We started there because, for engineering teams trying to make complex systems actually work in operation, integration was the discipline no one else wanted to own. That has not changed. What has changed is that integration is now a strategic concern, not a tactical one.

If this report is useful, it will be because it sharpens a question that should already be on your executive agenda, and because it points at a few starting moves you can take this quarter. If it does anything more than that, we have probably overreached.

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EXECUTIVE SUMMARY

The capability gap, defined.

*In automotive and defence alike, the products that matter are no longer defined by hardware. They are defined by software, integration, and the discipline to keep complex systems working over decades. **Yet across our research, one pattern emerges with striking consistency: the integration layer that makes everything else possible is rarely owned at C-level.***

We call this pattern the **capability gap**, the distance between what a system is claimed to do and what it actually does when it matters. It widens silently across the lifecycle of every complex platform. Five findings below describe where it lives, how it manifests, and what closing it requires.

FINDING

01

Integration is the platform discipline without an owner.

Most mission-critical platforms involve 100 to 300 software and hardware suppliers. Each is selected, contracted and held accountable for its own performance. Almost none are held accountable for how their work behaves together. The integration layer sits between functions and below the visibility of most boards, until it fails.

FINDING

02

Aftermarket margin is decided before the platform ships.

For automotive, software-defined aftermarket is projected to become the largest single revenue stream within a decade. For defence, sustainment already represents 60 to 70% of total program cost. In both cases, the economics depend on the integration discipline established during development. Yet the majority of leaders we have interviewed do not track aftermarket margin as a separate P&L, meaning the largest financial outcome of their software investment is operationally invisible.

FINDING

03

Update maturity lags reality.

Over-the-air updates in automotive and capability updates in defence have the same structural challenge: synchronised understanding of what is in the field, what is being introduced, and what can be verified before release. A substantial share of automotive leaders report at least one significant OTA incident in the past 18 months. In defence, the capability update cycle from identified need to operational deployment runs measurably slower than the threat environment demands. The common cause is not engineering capability. It is integration governance.

FINDING
04**The Nordic talent pattern signals where the discipline lives.**

Swedish automotive engineering talent has been migrating into defence at an accelerating rate since 2023. The reverse is also true: defence is hiring automotive's integration discipline as much as its products. This is the clearest signal that mission-critical software competence is becoming sector-agnostic, and that organisations treating it as a hardware-era specialty will lose talent to those treating it as a strategic discipline.

FINDING
05**The CEO question is no longer “is it tested”. It is “what will happen when we release”.**

Across our interviews, the consistent C-level pain is not a lack of testing. It is the absence of objective insight into how the system will behave once it leaves the lab. Confidence at release is built from continuous visibility, not from incremental quality gates. This is the difference between assurance and audit, and the gap most current organisations have not yet closed.

These findings have a common implication. Integration is no longer a tactical concern to be delegated downward. It is a strategic discipline that determines whether mission-critical platforms (vehicles, defence systems, industrial infrastructure) will work over the years and decades they are supposed to serve.

THE COMMON IMPLICATION

The starting point, for any leader reading this, is a single question:

Who in your organisation owns the answer to what will happen when you press release, and how do you know?

Industry context.

Why the integration imperative has arrived at the boardroom faster than most organisations have adapted their structures to receive it.

INDUSTRY CONTEXT

The integration imperative.

For two decades, the story of automotive was electrification. For two decades, the story of defence was force structure and platform acquisition. In both cases, the discipline that has now become decisive (integration of software, hardware and configuration across the lifecycle) was treated as a technical detail to be solved by engineering. That assumption is no longer holding.

What changed is not the technology. It is the proportion of value, risk and operational continuity that now rests on whether systems work together over time. A modern truck has more lines of code than a fighter jet did in 2010. A modern defence platform has more software dependencies than a passenger aircraft did a decade ago. The components are still built by specialists. But the consequence of integration failure has shifted from "the system doesn't ship" to "the platform doesn't perform."

The integration imperative is not a technical project. It is a strategic one. And it has arrived at the boardroom faster than most organisations have adapted their structures to receive it.

Across our research, this pattern has a name. We refer to it throughout this report as the capability gap, the measurable distance between what a platform is claimed to deliver and what it actually delivers in operation. It is the single most consistent risk we observe across automotive and defence platforms.

THE PATTERN WE NAME

Three converging forces.

FORCE 01

The software-defined transition

SDV in automotive. Continuously-updated capability in defence. Software becomes the platform's most economically significant subsystem, and its most failure-prone. Integration moves to the centre of value creation in both sectors.

FORCE 02

The defence rearmament

Sweden's budget on a trajectory from 2% to 3.5% of GDP by 2030. EU expanding similarly. The capital is arriving; the integration capacity to absorb it is not. The constraint is no longer money. It is the ability to make complex systems function together.

FORCE 03

The aftermarket battlefield

Automotive software aftermarket projected to be the largest revenue stream within a decade. Defence sustainment already 60 to 70% of program cost. Both decided not at launch but in the years that follow, in the integration layer.

These three forces converge in a single requirement: **organisations need a discipline for managing integration across the platform lifecycle.** Most do not yet have one.

The structural mismatch.

Most automotive and defence organisations were designed around hardware. Their P&L structures, their engineering disciplines, their supplier governance and their risk frameworks all reflect this. Software was added on top, often as a separate division. Integration, the seam between software, hardware and configuration, was the responsibility of no specific function.

This worked when software was a feature. It does not work when software is the platform. The gap is not a tooling gap or a process gap. It is a structural gap: the discipline that has become most critical to product success has no organisational home. The leaders we interviewed who are closing this gap are doing three things in common: creating explicit C-level accountability for integration across the lifecycle; separating integration from feature development as a governance discipline, not just a function; and treating release readiness as a board-relevant question rather than an engineering decision. None of these is technical. All of them are organisational.

What "integration" actually means.

In this report, integration refers to the discipline of ensuring that the components of a mission-critical system (its software, hardware, configuration, data, and lifecycle artefacts) function correctly together across operational conditions and across time. It includes but is broader than software testing, system engineering, configuration management, release management, OTA infrastructure, diagnostic coverage, lifecycle traceability and the governance structures that hold these together. It is distinguished from these adjacent disciplines by its end-state: a platform that is observable, updatable and reliable in operation, not a platform that has passed a release gate.

Implications **for leaders.**

Six starting moves the leaders we respect are taking now. None requires a five-year transformation. All can be initiated within a quarter.

— IMPLICATIONS FOR LEADERS

Six moves the leaders we respect are **taking now.**

The findings in this report describe a discipline that has become strategic but has not yet been organised strategically. Closing that gap is the leadership work of the next 24 months. The recommendations below are not a transformation roadmap. They are the starting moves that the leaders we interviewed are taking now, and that the rest of the market will follow.

REC.

01

Name an explicit owner of integration at C-level.

The most common pattern across our research is that integration sits between functions. Engineering owns development, supply chain owns suppliers, quality owns testing, operations owns service, but no one owns the whole. The result is competent local optimisation and incompetent platform performance.

The simplest first move is also the hardest: name a single C-level executive responsible for integration across the lifecycle, with budget, authority and board visibility. The title varies (Chief Platform Officer, VP of System Integrity, Head of Lifecycle Engineering). **What matters is that the role exists, sits at the executive table, and is accountable for outcomes that span functions.**

REC.

02

Govern integration separately from feature development.

Feature teams are correctly optimised for delivery velocity. Integration discipline is optimised for system robustness over time. The same team rarely does both well, and when it tries, integration loses, because feature releases create visible business pressure and integration debt does not.

The structural answer is to separate integration from feature development at the governance level. Feature teams ship. An integration function decides whether what they ship is releasable into the platform. **This is uncomfortable. It is also how every mature mission-critical industry (aviation, pharmaceuticals, nuclear) operates.**

REC.

03

Treat release readiness as a board-relevant question.

In most organisations, the decision to release a software update is made several levels below the executive committee. This made sense when software releases were product features. It does not make sense when software releases can affect 100,000 vehicles in the field or a deployed defence capability in operational use.

Add release readiness as a standing item in operational board reviews. Not as a process check, but as a confidence check. The question is not “did we test it?” but “do we know what will happen when we deploy it, and are we comfortable with that?”

Most organisations cannot answer that question today. Building the ability to answer it is a board-level priority.

REC.
04**Restructure the aftermarket P&L to reflect software economics.**

Software aftermarket revenue is often buried inside legacy service or maintenance P&Ls, where it is invisible as a strategic line item. This obscures the largest projected economic outcome of the entire software investment.

Create a separate P&L for software-driven aftermarket value, with margin transparency, customer lifecycle attribution, and platform-level cost allocation. **The act of measuring it forces clarity about what is being built, why, and whether it is actually working.** Without it, software aftermarket remains an aspiration in earnings calls and a missing line in budgets.

REC.
05**Establish baseline integration visibility now, not after the next incident.**

The pattern across our interviews was consistent: organisations that have not yet experienced a major integration incident assume their current process is adequate. Organisations that have experienced one (a failed OTA, a capability that did not work in operation, a sustainment cost overrun) restructure within 12 months of the event.

The leadership choice is whether to act before or after the event. Establishing a baseline assessment of integration maturity, risk exposure and lifecycle visibility for a critical platform is a small investment relative to the cost of a major incident, and a much smaller investment than building the capability after one has happened. **This is true regardless of which partner conducts the assessment.**

REC.
06**Plan for cross-sector talent flow.**

The Nordic auto-to-defence migration of integration-skilled engineers is not a recruitment market dynamic. It is a structural shift driven by where mission-critical software discipline is now needed most acutely. For automotive: assume that your best integration talent is being recruited by defence and plan retention accordingly. For defence: assume that the engineers you need are sitting in automotive companies right now. **For both: recognise that the discipline is the same and the talent pool is increasingly shared.**

Each of these recommendations is operational. None requires a five-year transformation. All can be initiated within a quarter. The first practical step, for most leaders, is to establish the baseline that all of the above depends on: an objective measurement of where the capability gap actually sits in your platform.

THE CHOICE OF WHEN TO START IS THE ONLY VARIABLE


 ABOUT DIADROM

Built on automotive rigour. **Trusted** in mission-critical.

Diadrom Holding AB is a Swedish systems integrator specialised in mission-critical software for automotive and defence platforms. Headquartered in Gothenburg and listed on Nordic Growth Market (NGM, ticker DIAH), we have spent two decades inside the integration layer of complex products, from vehicle diagnostics and over-the-air update infrastructure to defence platform validation and lifecycle governance.

Our work sits at the seam where software, hardware, configuration and operational use meet. We work with leading European OEMs, Tier 1 suppliers, and defence primes on the discipline that this report describes.

This preview ships ahead of our full 2026 report, which will include complete survey data, sector-specific deep-dives for automotive and defence, and cross-cutting analyses. Publication planned for the second half of 2026.

THE STARTING MOVE

System Insight Audit

A structured two-week engagement providing leaders with an objective measurement of the capability gap on a defined platform: integration maturity, risk exposure and release readiness.

The output: a prioritised risk register and executive-level roadmap, delivered live to the customer's leadership team. **Fixed price. Defined scope. No ambiguity in deliverables.**

200k

SEK · FIXED PRICE

2 wk

ON-SITE DURATION

7

DELIVERABLES

25+

YEARS DISCIPLINE

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Start with the question that matters.

Who in your organisation owns the answer to what will happen when you press release, and how do you know?

DIRECT LINE

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NEXT STEP

System Insight Audit
Two weeks · Fixed price · Executive read-out