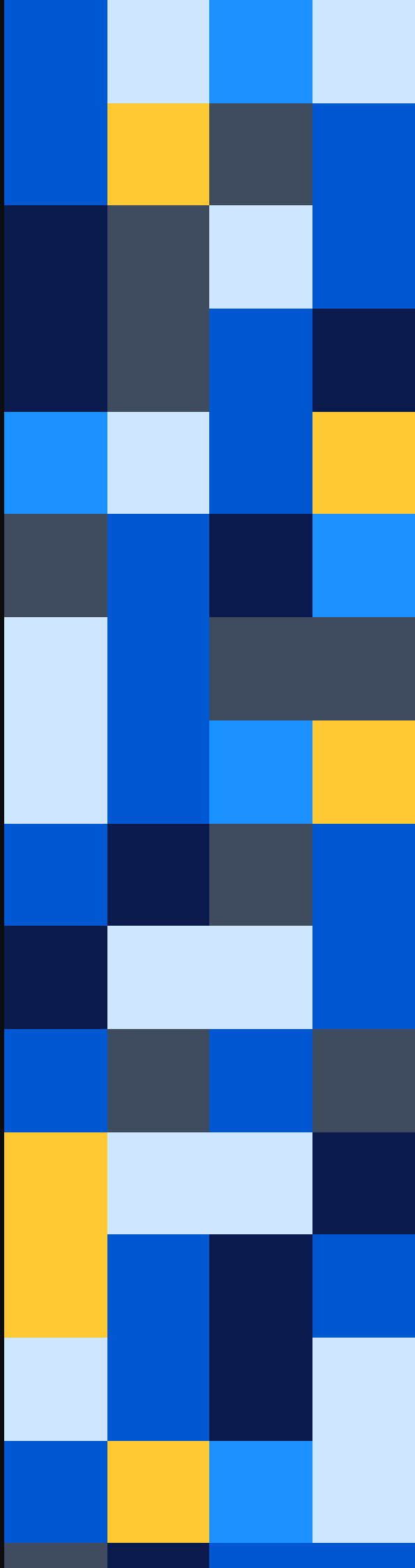
Automotive | Xenon AI

# The path to AI implementation in automotive

## A practical guide for automotive, from engineering to aftersales.



HUDACE

Run Smarter. Grow Faster.

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In automotive the pressures are specific: ever-tighter launch timelines, exacting quality measured in parts per million, supply chains that span the globe, and demand that shifts with every model and market. AI can help with all of them, but only once you know where to begin. This guide lays out a practical path, from a first honest look at readiness to lasting value, written for automotive from engineering to aftersales.

# Charting a clear course for AI in automotive

Ask an engineering lead, a plant lead, a supply chain lead, and an aftersales lead where AI should start, and you will hear four different answers: speed up the next launch, lift OEE, cut defects to single-digit parts per million, secure global supply. The opportunity spans engineering, manufacturing, and aftersales, and so does the temptation to chase all of it at once.

What is usually missing is a route. Deciding to use AI is not the same as knowing which problem to solve first, which engineering, quality, and supply data to trust, or how you will recognise a result on the line.

This guide gives automotive leaders that route. It moves through the journey in order, from a candid read of where you stand to the work of holding on to value once a programme is live. None of it is abstract. Each stage reflects how vehicle makers and suppliers actually run.

Along the way you will see where Hudace and Xenon AI fit across engineering, manufacturing, supply, aftersales, and finance, so the path stays practical rather than theoretical.

# Evaluating your AI readiness

Start with an honest picture of your line, your supply, and your data.

AI rewards preparation. Before the first model or agent, understand how engineering, manufacturing, quality, and supply data flow, and how launch timelines and global supply shape what is possible. A grounded readiness check turns interest into progress.

## Find your starting point, not a score

Readiness is less about owning the newest sensor and more about the conditions around it: leaders aligned on the goal, data you can rely on from line to ledger, and teams, in engineering and on the floor, willing to work in new ways. This is not a test to pass. It is a way to see where you are strong and where you still need to build.

A few signs you are ready to take the next step:

- You can tell apart what your people are ready for and what your systems are ready for.
- You can name specific tasks AI could take on: demand forecasting, production sequencing, quality prediction.
- You know whether engineering, quality, and supply data are reachable, accurate, and current.
- You have a real sense of the skills you hold, from the line to data, and the ones to add.
- You can put rough numbers on the time and budget involved.

Done early, this spares you stalled projects later, and lets you scope from facts rather than hope.

### How Hudace helps

Running engineering, manufacturing, and aftersales on Hudace means you already have a connected view across the vehicle lifecycle, which is a real head start in spotting where AI adds value.

A short readiness session with our team ranks AI opportunities by model, line, and plant, so your first projects are the ones most likely to pay off. Talk to Hudace.

# Defining strategic AI goals and expected ROI

Tie every AI effort to a number the line already lives by.

AI earns its place when it moves a number that matters: OEE, defect PPM, on-time delivery, time to launch. Set goals that are specific, owned, and measurable before the work starts.

## Clear goals turn effort into outcomes

The most useful projects open with a plain statement of what should change and by how much: a faster launch, lower defect PPM on a critical part, fewer line stoppages. Anchor it to a priority, name who owns it, and the work stays focused.

> **The question is rarely whether AI can do the task. It is whether you have decided what a good result looks like, in quality, in uptime, in time to market, before you start.**

Worth settling early:

- The outcome you are after, written as a number you can track by model or line.
- The specific problem, not the broad theme, you are solving.
- A shared view across engineering, manufacturing, supply, and finance on what is feasible.
- Metrics you are willing to revisit each launch and each quarter.
- A first ROI range, held loosely enough to adjust.

### How Hudace helps

Hudace helps you put numbers behind the ambition. Because engineering, manufacturing, and supply data already live in the platform, goals and ROI ranges come from what is really happening across your models and lines.

That makes the case for investment far easier to stand behind, and to revisit at each launch.

**20% faster**

model launches at Driveline Group, after aligning engineering, manufacturing, and aftersales on one platform. **Read the story.**

# Building your internal AI coalition

## Adoption runs through engineering, manufacturing, supply, and finance alike.

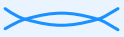
The best model in the world stalls without owners. Progress depends on a small group, drawn from across the business, who share both the goal and the responsibility for reaching it.

Early on, gather a group that reaches well beyond IT: engineering, manufacturing and quality, supply and logistics, aftersales, and finance. Their job is not only to comment. It is to own a piece of the change, so it never rests on one team.

This is the group that connects intent to execution. They know which problems are worth solving on the line and in the field, and their involvement carries a project past the first launch.

### What a strong coalition gets right

- It brings the right people in at the start, with a real stake in the outcome.
- It agrees how decisions, risk, and oversight will work before issues arise.
- It leaves room to question, test, and learn out loud.
- It funds the unglamorous parts: enablement, communication, and time.



### How Hudace helps

If alignment is the hard part, a Hudace discovery session gives your group a structured place to surface use cases across the lifecycle and agree on priorities, turning scattered opinions into a shared plan.

When the focus shifts to skills, Hudace Learning offers practical paths so everyone, from the line to finance, feels ready for the change rather than unsettled by it.

# Data, the line, and infrastructure

Good AI depends on good data, from the line to the ledger.

AI is only as good as what it runs on. Real-time, trustworthy data, joined across engineering, manufacturing, quality, and supply, is what separates a promising pilot from something dependable. In automotive, much of that data starts on the line and the supplier network.

## Lay the groundwork for intelligent action

Xenon AI can only reason over what it can reach and trust. That means moving away from data trapped in separate systems toward a connected foundation: engineering and configuration, machine and quality signals, orders, and supply, unified and current enough to act on.

Where to focus:

- Data quality: are engineering, quality, and supply records clean enough to use without heavy rework?
- Connectivity: can you bring machine, quality, and supplier data into one view?
- Infrastructure: can your environment flex through launch and volume?
- Ownership: IT keeps systems ready, but engineering, manufacturing, and finance share it.
- Budget: plan for integration, migration, data quality, and training.

None of this slows you down in the end. It is the difference between AI that demos well and AI you can run a launch on.

### How Hudace helps

Hudace gives Xenon AI one governed, real-time view across engineering, manufacturing, and supply, so forecasting, sequencing, and quality work from a single source of truth.

Still untangling older systems? ACE with Hudace shortens the path to a modern, connected core.

# Navigating change across engineering, the plant, and aftersales

Bring people with you, from the line to the dealer network.

AI changes the shape of work, not only the tools. The automotive businesses that get the most from it treat the human side as the main event: building skills, adjusting how work is done, and giving people a reason to lean in.

## The technology shift rides on a human one

New capability brings honest questions. Will my role change? What happens to the judgement I bring on a build, a quality call, a supplier decision? Will I keep up? Left unanswered, those questions quietly turn into resistance.

Handled well, this stage is where an engineer or a line leader stops bracing against AI and starts using it, because it makes their own call sharper.

What helps the shift land:

- Map the skills that are changing and offer real paths to build them.
- Talk early and often, especially where daily work in engineering or on the line will look different.
- Be straight about changing roles, with AI assisting expertise rather than replacing it.
- Set expectations on pace, launch by launch.
- Back it with budget for learning, champions, and the culture work that sticks.

### How Hudace helps

Hudace Learning gives your teams structured, hands-on paths to grow confident with Xenon AI, from the why through to daily use in engineering, on the line, and in aftersales.

The result is people who feel ready for the change instead of caught out by it, whatever their role.

# Measuring success and scaling AI

A pilot proves the idea. Measurement decides what scales across models and plants.

Getting one thing working, on one model or one line, is the start, not the finish. The automotive businesses that scale well look hard at what worked and why, then carry that evidence into the next model and the next plant.

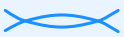
## Let the evidence choose your next move

Useful measurement is not a box-ticking exercise. It is how you learn what really happened, build the confidence to expand, and avoid scaling something for the wrong reasons.

What to track once a pilot lands:

- Measures that reflect real use: OEE, defect PPM, on-time delivery, time to launch.
- Actual ROI against what you expected, and the surprises along the way.
- Whether the approach travels to other models and plants.
- The resourcing, so people and systems are ready for the next launch.
- What you learned, written down, so the next rollout starts further ahead.

Scaling is not simply doing more. It is doing more of what is proven, with a clear idea of what good looks like.



### How Hudace helps

Hudace shows you how Xenon AI is used across the business: which models, which plants, how often, and to what effect.

That visibility keeps your attention on the work that pays back, and makes the case for the next investment concrete.

# Risk, safety, and responsible AI

Value and trust have to grow together, with vehicle safety first.

AI does not remove human responsibility. In automotive it raises the stakes on it. Bias, errors, quality escapes, and exposed data are safety, recall, and reputation risks. As AI spreads, the guardrails have to spread with it, and a qualified engineer stays in the loop on safety-critical calls.

## Make trust part of the design

Whether AI is sequencing a line, predicting a defect, or choosing a supplier, the same questions apply: is it secure, is it safe, can you explain the call? Answering them is the job of clear governance, with engineering, quality, safety, and IT deciding together how AI is run and watched.

Worth getting right:

- Naming the risks plainly: unsafe automation, biased data, quality escapes and recalls, exposed customer or vehicle data.
- Keeping a qualified engineer in the loop on safety-critical decisions.
- Meeting the rules on safety, quality, and data that apply to you.
- Giving quality, safety, and model checks a clear owner.
- Treating customer and connected-vehicle data with the same care as your own.

### How Hudace helps

Keeping operations on one platform means less data scattered across systems to defend, and a cleaner trail when quality or an audit asks. Hudace adds granular access controls and built-in compliance.

AI Agent Governance gives you the policies, monitoring, and oversight to keep Xenon AI safe, reliable, and accountable as it grows.

# Sustaining value across the vehicle lifecycle

Launch is a milestone. Lasting value is the work that follows it.

Going live is the easy thing to celebrate. Keeping value flowing as models, demand, and technology shift is the harder, more rewarding work, and it favours automotive businesses that stay curious.

## Keep the momentum, and the direction

Maturity does not arrive on launch day. It builds through small iterations, shared learning across models and plants, and a willingness to revisit what worked last launch. Staying ready for what is next takes both the mindset and the systems to support it.

How to stay ahead:

- Watch how AI performs across models and plants, and tune where the numbers point.
- Keep your processes loose enough to adopt what comes next.
- Stay close to engineering, line, and aftersales teams, and keep learning shared.
- Pair quick wins with the slower investments that make scale possible.
- Keep a habit of small, structured experiments as new options appear.

Lasting value comes from staying adaptable without losing the plot: vehicles launched faster, built better, and supported for life.

### How Hudace helps

Hudace helps you keep sight of where Xenon AI earns its keep across the lifecycle, so your focus stays on the work that matters.

With Xenon Studio and the wider Xenon AI platform, your teams extend AI at their own pace, and the Hudace Community keeps fresh practice within reach.

# Metrics and formulas that matter

AI earns trust when it shows up in numbers you already manage. These are the measures worth instrumenting from the first pilot, with the formulas behind them, so progress is easy to prove and easy to question.

### Overall equipment effectiveness

```
OEE % = availability % x performance % x quality %
```

The single best read on how well a line actually runs.

### Defect rate

```
Defects (PPM) = (defective parts / total parts) x 1,000,000
```

Quality measured the way automotive measures it.

### On-time delivery

```
OTD % = (deliveries on time / total deliveries) x 100
```

Whether you hold the sequence your customers depend on.

### First-time-through

```
FTT % = (units passing all stations first time / units started) x 100
```

How much you build right, with no rework.

### Warranty rate

```
Warranty % = (warranty claims / units sold) x 100
```

Field quality, straight off the margin and the brand.

### Time to launch

```
Time to launch = months from program start to start of production
```

How fast a new model reaches the line.

Pick two or three to start. Tie each AI pilot to one, set a baseline before you begin, and review it each launch and each quarter.

# Putting Xenon AI to work

A workflow worth starting with, and the questions your teams can ask.

## Launching and ramping faster: a continuous loop

1. **Sense**
   Xenon AI brings engineering, manufacturing, and supply data for the program into one view.

2. **Predict**
   It forecasts demand and flags quality and supply risks before they delay the ramp.

3. **Sequence**
   It plans production and supplier orders to protect takt and the launch date.

4. **Act**
   Owners approve, the platform updates the schedule, builds, and supplier actions, and the loop learns.

### Ask Xenon AI

- "Which quality issues are most likely to delay this launch, and how do we get ahead of them?
- "Where is OEE slipping by line and shift, and what is the biggest loss?
- "Which suppliers put the build schedule at risk this week, and what are the alternatives?
- "Show defect PPM and warranty rate by model and plant, and the main causes.
- "Forecast demand by model and region, and flag where capacity is short.

Every answer runs on your governed data, so it reflects what is really happening across your operations.

# Your AI journey starts on the line

## The next step is closer than it looks.

You do not need every answer to begin. You need a sensible first move, the right people beside you, and support you can lean on. Followed in order, the steps in this guide take an automotive business from a first honest look to results you can measure, in quality, in uptime, in time to market.

One model or your whole portfolio, the shape is the same: a path that grows with you, where every launch teaches you something worth carrying into the next.

Hudace stays with you across that path, from the first readiness conversation to AI working quietly across engineering, manufacturing, supply, aftersales, and finance, with Xenon AI built into the platform rather than added on.

When your line, your data, and your goals point the same way, the results tend to follow.

**Learn more**

See AI-native ERP for automotive at **hudace.com/industries/automotive**.

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