

MAKING BETTER USE OF MANUFACTURING DATA

IMPROVE THE INFORMATION YOUR TEAMS RELY ON

A practical guide to improving reporting, production response and your approach to AI.

holisticon
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START WITH WHAT YOU RECOGNISE

Your factories already generate a lot of data. The challenge is getting that data into a form your teams can trust, understand and use quickly enough.

You may see the problem as slow reporting. Another plant may use different numbers for the same KPI. Production issues may become clear too late. Or you may already be looking at AI and wondering what needs to be in place before you invest.

These problems are connected.

You do not need to solve everything at once. Start with the issue that sounds most familiar below. Each focus area looks at what may be causing it, what to review and where you could start making improvements.

1

REPORTING
TAKES TOO LONG

A management report may look simple when it finally reaches you.

But what you do not always see is the work that happened before it arrived.

Your teams may have exported data from ERP, MES, quality systems and spreadsheets. They may have combined files, corrected formats, reconciled figures and checked the same numbers several times.

By the time the report is finished, a large part of the effort has gone into preparing the information rather than understanding what it means.

WHY IT MATTERS

Manual reporting does more than take up your team's time.

If information is slow to prepare, it also takes longer to reach the people who need to respond. That can mean less time for analysis, later management reviews and slower action when production performance changes.

It can also create dependency on the few people who know which files to use, which adjustments to make and why one number differs from another.

LOOK BEHIND THE REPORT

If reporting regularly takes hours or days, map what happens before the final report reaches you.

- Data being exported manually
- Several files being combined
- The same calculations are being repeated
- Numbers being copied between spreadsheets
- Manual corrections
- Repeated checks
- Time spent asking which figure is right

The report itself may not be the problem. The process behind it often is.

REMOVE REPEATED WORK FIRST

Do not start by trying to automate everything. Choose one important report and identify the repeated work behind it.

Which steps happen every reporting cycle but add nothing useful to the final report or the action that follows?

Those steps are often the best places to start. You may be able to remove repeated exports, automate preparation or agree on definitions without replacing the systems you already use.

Once you have reduced the manual work behind reporting, the next thing to check is whether your different systems and teams are working from the same numbers.

2

TEAMS WORK FROM
DIFFERENT NUMBERS

One KPI should not need three different answers.

But in manufacturing, ERP, MES, quality systems, and local spreadsheets may all show different figures.

That does not always mean one system is wrong, as they may be measuring different things, at different times, using different rules.

FIND OUT WHY THE NUMBERS DIFFER

Start with one KPI that regularly causes debate, such as OEE, downtime, scrap, throughput, yield, good units or production volume.

Then trace how that number is created in each system.

- What does the KPI mean?
- Which source does it come from? When is it updated?
- Are local adjustments made? Who owns the agreed definition?

You may find that the difference comes from timing rather than bad data. One system may update during the shift, another after production is confirmed, and a spreadsheet may include a manual change made later.

AGREE WHAT THE NUMBER MEANS

Technology cannot fix a disagreement that is really about definitions.

If one plant counts downtime differently from another, connecting the systems will not remove the disagreement.

Start with the measures your teams rely on to run the business. Agree what the KPI means, which data should be used, how it should be calculated, when it becomes final, how exceptions are handled and who owns the definition.

You do not need to standardise every measure across every plant at once. Focus on the numbers that affect reporting, production performance and management action.

TRUSTED NUMBERS STILL NEED TO ARRIVE IN TIME

Once your teams agree on the numbers, timing becomes the next issue.

A correct figure that arrives tomorrow may not help with a production issue happening today.

How quickly does trusted information reach the people who need to respond?



PRODUCTION ISSUES SURFACE TOO LATE

Imagine a production line stops at 14:10.

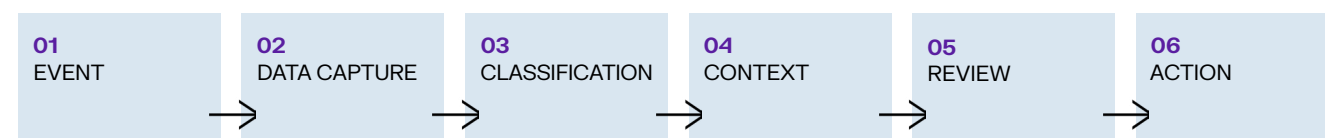
The machine may record the event immediately. But that does not mean the person who needs to respond understands what happened at that time.

The event may need to be classified. Operator information may need to be added. Production data may need to be matched with quality information. Someone may need to check another system before the cause becomes clear.

FOLLOW THE INFORMATION

Choose one important production event and trace what happens before your teams can understand it and respond.

For an unplanned line stop, what happens between the event and the response?



Look for the waiting points. Where is information entered manually? Where does one team wait for another? Where is data only refreshed at the end of a shift? Where does someone need to open several systems to understand what happened?

LIVE DATA IS NOT ALWAYS ENOUGH

A live dashboard can still leave your teams waiting for an answer.

If an event does not have the right context, a live number may tell you that something happened without explaining why.

What matters is whether the right information reaches the right person early enough for them to understand the issue and act.

MEASURE THE TIME TO ACTION

Do not only measure when the data becomes available. Look at the full process from something happening, to someone understanding it, to someone being able to respond.

That can expose delays that are invisible when you only look at the systems.

If the information now arrives sooner but action is still slow, the next thing to review is whether people know what should happen next and who owns it.



ACTION STAYS SLOW DESPITE DASHBOARDS

When people do not have a clear picture of production performance, the obvious response can be to build another dashboard.

Sometimes that helps. Sometimes it gives your teams one more screen to check while the underlying delay stays the same.

The real issue may be late data, disputed numbers, unclear ownership or uncertainty about what action should follow.

START WITH THE ACTION YOU WANT TO IMPROVE

Before asking what another dashboard should show, choose one specific production or management action that needs to happen sooner or with better information.

For example, perhaps you want a repeated line-stop problem to be understood and acted on faster.

Work backwards: Who needs to respond, what do they need to know, how quickly do they need it, which data supports that response and where does the process slow down today?

FIX THE CAUSE OF THE DELAY

The answer may be another dashboard. But it may also be clearer KPI definitions, better source integration, less manual reporting, clearer ownership, faster data capture or fewer approval steps.

Choose the change that addresses the actual delay rather than the technology that is easiest to buy or build.

PRIORITISE THE FIRST IMPROVEMENT

You probably have more than one thing you could improve. Compare each option against the practical questions that matter to your organisation.

- What improves if you fix it?
- How much work is involved?
- Does something else need to happen first?
- What could stop the change working?
- How quickly would your teams notice the improvement?

Once you know exactly what needs to improve, you can judge whether AI is relevant or whether a simpler data or process change should come first.



AI PROJECTS START BEFORE DATA AND OWNERSHIP CLARITY

PREDICTIVE MAINTENANCE. AUTOMATED QUALITY INSPECTION. FORECASTING. SAFETY MONITORING.

There are many possible manufacturing AI use cases. But interest in an idea does not mean it is ready to become a project.

Before approving an AI use case, start with the operational problem you want to improve.

BE CLEAR ABOUT WHAT SHOULD IMPROVE

Do not begin with “Where can we use AI?” Begin with “What are we trying to improve?”

- Reduce unplanned downtime
- Identify quality problems earlier
- Improve forecast accuracy
- Reduce scrap
- Detect safety risks
- Reduce repetitive manual work

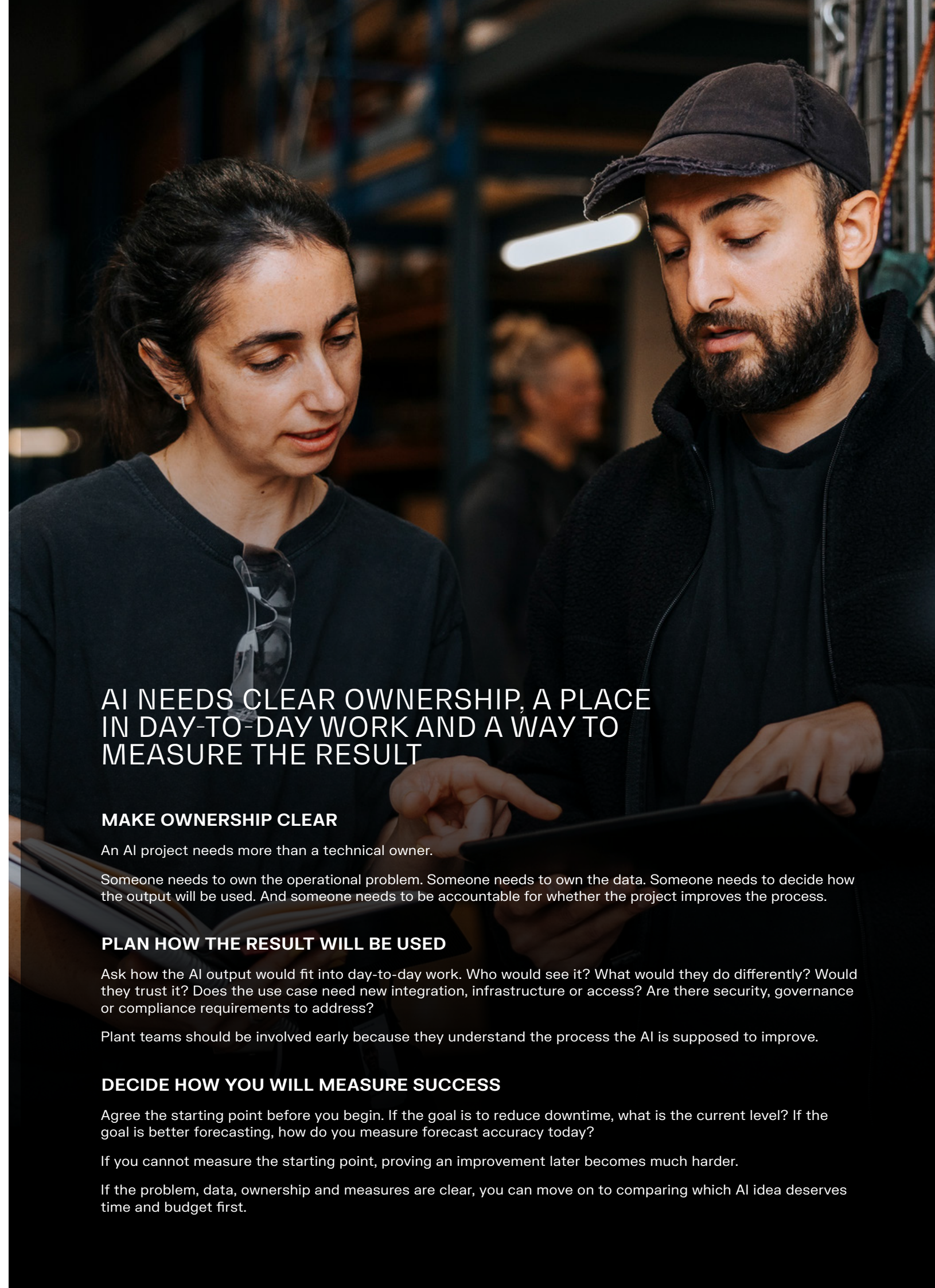
Then define what would change if the project worked. If you cannot describe the improvement clearly, it will be difficult to judge whether AI is the right answer.

CHECK THE DATA

Look at the information the AI use case would need.

- Is the data being captured?
- Is there enough history?
- Can your teams access it?
- Do you understand the gaps and quality issues?
- Are events labelled consistently?
- Can the data be connected to the result you want to improve?

You do not need perfect data. You do need to know what you have, what is missing, and whether you can address the gaps.



AI NEEDS CLEAR OWNERSHIP, A PLACE IN DAY-TO-DAY WORK AND A WAY TO MEASURE THE RESULT

MAKE OWNERSHIP CLEAR

An AI project needs more than a technical owner.

Someone needs to own the operational problem. Someone needs to own the data. Someone needs to decide how the output will be used. And someone needs to be accountable for whether the project improves the process.

PLAN HOW THE RESULT WILL BE USED

Ask how the AI output would fit into day-to-day work. Who would see it? What would they do differently? Would they trust it? Does the use case need new integration, infrastructure or access? Are there security, governance or compliance requirements to address?

Plant teams should be involved early because they understand the process the AI is supposed to improve.

DECIDE HOW YOU WILL MEASURE SUCCESS

Agree the starting point before you begin. If the goal is to reduce downtime, what is the current level? If the goal is better forecasting, how do you measure forecast accuracy today?

If you cannot measure the starting point, proving an improvement later becomes much harder.

If the problem, data, ownership and measures are clear, you can move on to comparing which AI idea deserves time and budget first.



AI IDEAS COMPETE FOR TIME AND BUDGET

You may have several AI ideas. That does not mean you should start with the most ambitious one.

A sensible first project has a clear business benefit and a delivery path your organisation can realistically support.

EXPECTED BUSINESS BENEFIT

Look at the expected business benefits. If the AI use case works, what changes in practical terms?

- Lower cost
- Time saved
- Higher output or capacity
- Fewer quality problems
- Lower operational risk
- Additional revenue

Then check how realistic it is to deliver:

- Do you have the necessary data? How much integration is required?
- Will you need new infrastructure or sensors?
- How much time will plant, IT and data teams need to contribute?
- Do you have the skills and capacity to support the project?

DO NOT IGNORE HOW PEOPLE WILL USE IT

A technically strong use case will not help if nobody uses the result.

Ask who needs to trust the output, who needs to act on it and what would change in their existing process.

A smaller project that fits naturally into day-to-day work may be a better first step than a more ambitious idea that needs major process change.

COMPARE AI IDEAS ON THE SAME BASIS

- Expected business benefit
- Data available and understood
- Delivery effort
- Technical dependencies
- Clear operational ownership
- Ability to measure the result
- How easily the result can be used in day-to-day work

SOMETIMES THE ANSWER WILL BE TO WAIT

You may discover that data needs to be connected, KPI definitions need to be agreed or the process itself needs to be fixed first.

That is still a useful outcome. It is better to find that out before you commit to the AI project.

FIND YOUR FIRST PRIORITY

You now have six places where manufacturing data can create extra work or slow down action. Use these questions to identify which one deserves attention first.

1

WHERE IS YOUR TEAM SPENDING THE MOST TIME?

Look for repeated exports, spreadsheet work, reconciliation and checking. If this is the main problem, start with the reporting process.

2

WHICH NUMBERS CREATE THE MOST DEBATE?

Look for KPIs that differ between plants, systems or teams. If people spend time working out which number to trust, start with definitions, sources and ownership.

3

WHICH PRODUCTION ISSUES BECOME CLEAR TOO LATE?

Think about downtime, quality or throughput problems that are understood after the best time to respond has passed. Map what happens between the event and the response.

4

WHICH IMPORTANT ACTIONS ARE STILL SLOW?

Choose one specific production or management action and work backwards. Identify the information, timing and ownership it needs.

5

WHICH AI IDEA HAS A CLEAR OPERATIONAL PROBLEM BEHIND IT?

If you cannot clearly describe what the use case should improve, it is probably not ready to prioritise.

6

WHICH AI IDEA IS WORTH PURSUING?

Consider the data, workload, dependencies, ownership and ability to measure the result.

If several of these areas sound familiar, do not try to fix everything at once.

Start with the issue having the biggest effect on your organisation today. That could be the one taking up the most reporting time, affecting production performance, or delaying how quickly your teams can respond to an issue.

Once you have chosen where to start, use four questions to understand what needs to happen next:

1. What is causing it?
2. What needs to change?
3. Who owns it?
4. How will you know it has improved?

You do not need to solve everything at this stage. The aim is to identify one practical starting point, make the first improvement and then decide what to address next.

HOW HOLISTICON APPROACHES THIS

Manufacturing data problems rarely sit in one place.

Slow reporting often starts with disconnected systems or inconsistent definitions, so teams spend more time pulling information together and verifying which numbers they can trust. Those same underlying issues can also delay production information, particularly when several manual steps sit between an event and the people who need to respond. If AI is added into the mix, it becomes even more important, because a promising use case can be difficult to move forward when the data, ownership, or measures are not yet clear.

Our approach starts with the problem affecting your organisation today: we understand what is causing it and identify what needs to change.

We can help you:

- Reduce manual work in reporting and data preparation
- Connect information across systems, plants and teams
- Create clearer definitions and ownership for important measures
- Improve how quickly production information reaches the people who need it
- Check whether an AI use case has the right data, ownership and measures behind it
- Decide which AI ideas are practical to take forward

Think about the issue having the biggest effect on your organisation today.

Where are teams spending the most time preparing or checking information? Where are different teams working from different numbers? Where is production information arriving too late? And if AI is part of your plans, what still needs to be in place before you invest?

Answering those questions will help you see where attention is needed first.

CHOOSE YOUR NEXT STEP

By this point, you may already have a clearer idea of where the problem sits. The next step is deciding whether you need help working through the wider challenge or whether you are ready to look more closely at AI.

Start with a free consultation with our team to go through the challenges you are experiencing, whether that is slow reporting, fragmented data, delayed production information or plans for AI, and help you identify a practical next step.



Book a free consultation

Or if AI is already a part of your plans, it is worth understanding what is already in place before you decide where to invest.

Spend 10-15 minutes assessing whether your organisation has a clear direction, usable data, clear ownership and the wider conditions needed to use AI well.

YOU WILL RECEIVE

- An AI readiness score
- A clear view of your strengths and gaps
- Practical recommendations on where to focus first

Use the results to see what is already in place, what needs attention and what should happen before you invest further.



Take the assessment

