

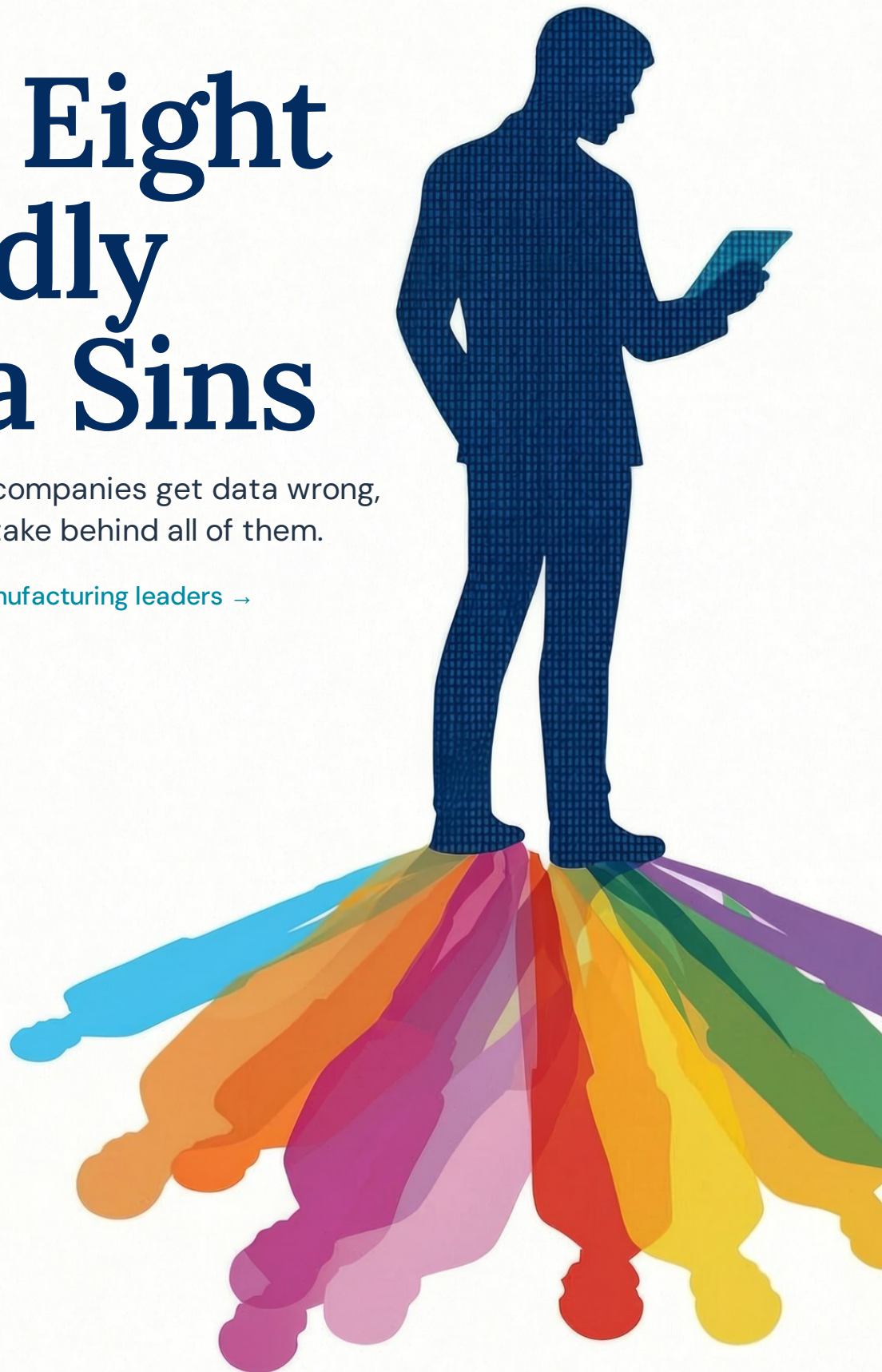


PROGRESS LAB

The Eight Deadly Data Sins

The many ways companies get data wrong, and the one mistake behind all of them.

[A field guide for manufacturing leaders →](#)



September 2026

Before we start

If you run a manufacturing company or a plant, you have probably already been sold "data" at least three times. Once as ERP. Once as Industry 4.0. And now as AI.

Each time the pitch was similar. Collect everything, connect everything, and the insight will follow. Each time, a few months in, you found yourself staring at a screen that told you a lot of things, except the one you need at that moment.

This is not a paper about technology. I have spent over ten years helping factories make sense of their data, from industrial equipment to aerospace electronics, medical devices and more, and technology was never the core reason a data initiative failed.

The seven deadly sins are a surprisingly good taxonomy for how organisations mishandle data, because every one of them is a human failure mode, not a technical one. Sloth, Gluttony, Lust, Greed, Wrath, Envy, Pride. You will recognise most of them in your own team.

But don't worry, you're in good company. We all sin to some degree. The stories you're about to read will feel familiar because they happen often, in many companies. I've seen them firsthand. The purpose of this paper is not to point fingers, but to help you see, so you can decide how to best move forward.

Then there is an eighth sin. I am not going to tell you what it is yet. Read the seven first. By the time you reach the end you may have guessed it. Either way, it will give you the key to understand how real change happens.

Here is how to read this. Each sin gets a short chapter: what it is, what it looks like in practice, what it costs, and a handful of questions to ask yourself before you decide it does not apply to you. At the end there is a scorecard. Fill it in honestly. Then decide what to do about it.

Let's get started.



Luca Sorgiacomo
Founding Partner
Progress Lab

The map

Seven ways companies mishandle data, and an eighth that I will only name once you have met the other seven. Each chapter ends with a few questions. Answer them before you decide the sin does not apply to you.

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01 Sloth

Data you never collected, never read, never acted on



Sloth has three layers to it, and they are worth separating because they need different cures. Not gathering the data in the first place. Gathering it but never analysing it. Analysing it and then not acting on what you found. It is the sum of all the small events that were not recorded, the reports that weren't read, and the insights that were not followed by a decision.

Sloth is the most common data sin and the least dramatic. Nothing blows up. Nothing is expensive on the day it happens.

Think of a garden hose left on the lawn in summer. There is a small leak at the joint. Not much, a drop every few seconds. Nobody fixes it because it is not worth the walk to the shed. By the end of the quarter you have paid for a swimming pool's worth of water and the lawn is still dry, because the water didn't go where you needed it. Sloth with data works the same way. No single missed entry matters. You pay it later, when it's too late to fix the problems it created.

WHAT IT LOOKS LIKE IN PRACTICE

Phantom statuses

A shopfloor worker finishes a work order but doesn't update the ERP because they're in a rush to start the next one. The following morning MRP runs against a status that is no longer true and plans material for an order that already shipped. If you start looking for this failure mode you will find it everywhere: operations that are complete but open; batches on hold in the system and moving on the floor; tools that are "in maintenance" and cutting steel; deals in the "negotiation" stage holding production capacity for a prospect who said no last month.

Hidden treasures

Your best setup technician has been tuning the same machine for twelve years. He knows which parameter to nudge when the coolant is cold and which fixture needs a shim. None of it is written anywhere. Then the machine crashes during a night shift, the tool needs replacing, the replacement is ordered by someone who does not know what to order, and three weeks of deliveries slip.



Data leaking out of the process, used by no one.

**No single missed entry matters.
The accumulation is what you pay for.**

”

The multi-headed monster

Two variants of the same product are handled with a single part number, because splitting them "would create a mess in the ERP". The bill of materials includes most components from both variants, so you over-purchase on every order. A few costly subassemblies that change by variant must be launched separately. One time out of three it doesn't happen and production stops for missing material. All due to a decision made five years ago to save the three minutes it takes to copy and tweak a BoM.

The curse of Cassandra

A new intern is tasked with creating a statistical process control dashboard for a production line. It shows a steadily increasing deviation on one measure, drifting close to the minimum tolerance, but not yet there. The quality manager praises her work, but when she asks what they're going to do about the deviation he answers "it's ok, we've always worked this way". At the end of the internship she's offered the job, but she accepts one somewhere else. The week after, a customer calls: the components are not passing incoming inspection. The data was collected. It was analysed. It was even presented well. It just didn't lead to a decision.

WHAT IT COSTS

Taken one event at a time, Sloth produces only inconveniences: wrong MRP runs, expedited purchases, undiscoverable quality issues, half-hours spent figuring out the status of orders, endless meetings that could have been avoided with a report, knowledge that walks out of the door with the people who hold it and needs rebuilding.

But looking at the overall impact, Sloth is a permanent tax on everything else: smaller margins, longer lead times, lower inventory turns, mediocre service quality. It drags the whole company down beneath less lazy competitors.

ASK YOURSELF

-  When was the last time you made a decision based on a piece of data reported to you?
-  When was the last time a scrap entry led to a documented root cause?
-  If your most experienced technician left tomorrow, would you feel confident about the rest of the team handling things?
-  How many operations in your ERP are out of sync with reality? How many bills of material do not reflect how production works?

The remedy

Telling people to record more or better never works for longer than a month. The remedy is twofold.

First, make recording the path of least resistance: a terminal at the machine rather than in the office, a scan rather than a keyboard, a phase that can't start if the previous one isn't closed, a system warning when data is incoherent, work instructions that are only a click away.

Second, care about what gets recorded. Show the operator who entered the scrap that somebody handled it. Discuss the non-conformity reports and the improvement suggestions in the morning stand-up. Stop and take the time to analyse why a number is moving in the wrong direction.

People feed a system that feeds something back.

02 Gluttony

Recording everything, understanding nothing



If Sloth is the leak, Gluttony is the flood. It is what happens when a company, often as a reaction to years of Sloth, decides that the answer is to collect everything. Every sensor, every parameter, every second. Recording with no purpose or no plan.

Have you ever tried to drink from a fire hose? You get wet, bruised, and you are still thirsty.

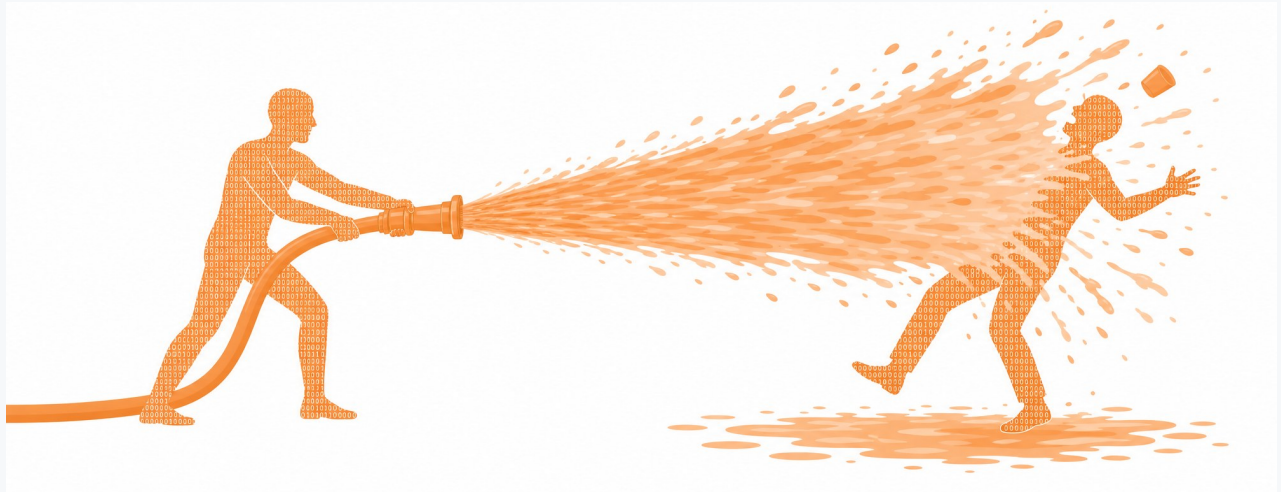
WHAT IT LOOKS LIKE IN PRACTICE

The abandoned lake house

A mid-sized plant installs three hundred sensors across its lines. They generate about 2.4 million data points a day into a shiny new data lake. Six months later, when someone finally audits the project, 95% of that data has never been reviewed by a human or a model. After a breakdown you go hunting for patterns and discover that two sensors, out of three hundred, could have provided a warning. The ROI on the project is negative and, more damaging, the organisation now believes that "IoT does not work here". It did work. It was just aimed at nothing.

The KPI graveyard

Sixty-eight metrics, tracked in a forty-seven page automated monthly report, which the executive team reads up to roughly page three plus the last two paragraphs. A declining quality trend for a leading product line sits on page twenty-two for four consecutive months. It is discovered when the main customer for that line leaves, taking 16% of revenue with it. Every number needed to see it coming was in the report, but nobody was ever going to read page twenty-two.



More is not better: a firehose of data aimed at people who asked for a glass.

Gluttony makes you feel data-driven while making you slower to notice anything.

”

WHAT IT COSTS

Storage and licences are the small part. The large part is attention. Every metric you track that nobody needs dilutes the ones that matter, and every dashboard tile you add makes the important one harder to find. Gluttony makes you feel data-driven while making you slower to notice anything.

ASK YOURSELF

-  For each sensor or data stream you added in the last two years, can you name the goal it was supposed to achieve? ("Having more data" is not a valid answer.)
-  Of the KPIs your team tracks, how many do you actually check regularly?
-  If you had to cut your KPI list to seven, which seven would survive, and why have you not done it already?

The remedy

Start from the decision, not from the data. Which question, if answered, would change what your team does that week, that month, that quarter? Collect for that. This is not to say you should never store raw data you do not yet understand. It is to say that storing it is not the same as being able to use it, and only the second one counts.

03 Lust

Falling in love with one number



Lust is the sin of the single metric. You find a number that seems to explain your plant, you fall for it, and from then on you see everything through it. Context, fluctuations, seasonality, the other variables that lead to the number: all forgotten. OEE is the classic object of this affection, but on-time delivery, cost per unit, margin and utilisation all attract the same devotion.

Picture yourself on the motorway, eyes on the speedometer, needle steady at 130. A perfect number. Then the engine coughs and you coast onto the hard shoulder. The fuel gauge was right there, a few centimetres to the left, and you never looked at it. The speedometer never lied. It just never told you the one thing that mattered.

WHAT IT LOOKS LIKE IN PRACTICE

Looking at the part, forgetting the whole

Two machines in consecutive process steps. Machine A runs at 45% OEE, Machine B at 90%. The production director looks at the board and asks the team to improve the efficiency of A. It sounds perfectly reasonable, doesn't it? Half the plant would make the same call.

Now add the one piece of context the OEE board does not show. Machine A has a capacity of 100 pieces per hour. Machine B, downstream, can only process 50. Machine A is at 45% because it is starved by the machine after it, and pushing its saturation up will only pile more work in progress between the two. The result is cash and floor space tied up while overall throughput does not move by a single piece. The metric was correct. The decision was wrong.

A star so bright it blinds

Demand is abundant, so the board sets a goal for the sales department to raise average sales margin to 20%, in the hope of increasing profits. Reps start rejecting deals below 18%. By the next quarterly review the margin target is achieved. Revenue and profits are up thanks to market growth, and everybody is celebrating. And yet overall production has slightly decreased and there is unused capacity, which means profit has been left on the table in favour of an arbitrary number on an abstract KPI. More subtly, the customers who were turned down have moved to the competition, and nobody has noticed the drop in market share.



While a number looks great, others are pointing to failure

Your top KPI is not lying. But it's not telling you what really matters now.

”

More but not better

After months of slowdown, the market is experiencing a sudden burst of demand driven by geopolitical events, and there's no guarantee it will last. It's no time to increase fixed costs by hiring or adding equipment, but output must go up to deliver the orders coming in. The COO demands more pieces per hour, so the production manager raises the speed of the initial assembly line.

Pieces per hour go up on the first line, and the COO's chart looks great. Two weeks later final assembly starts struggling. Parts arrive with defects that weren't there before: misaligned fits, loose fasteners, missing checks that operators skip to keep up with the new pace. Final assembly slows down to rework them, a batch slips past inspection and comes back as a customer complaint. The plant is working harder than ever, and shipping fewer good units than before the speed-up.

WHAT IT COSTS

Lust deceives you. You think it will take you to one destination and it leads you somewhere else, usually a place you don't like. You spend money on projects that hit their KPI and miss the point. People learn to game the system and deliver numbers instead of value, since that's what leadership loves.

ASK YOURSELF

- Which metrics get the most airtime in your management meetings?
- Can people in your team explain the impact of their KPI target on the larger business?
- What would it mean to triple those numbers, or hit 100%? What negative consequences could it lead to?

The remedy

Always pair a metric with its constraint. OEE is harmful if you don't keep an eye on throughput and on the capacity of the neighbouring steps. Pieces per hour mean nothing without first-pass yield. Margin means nothing without volume and market share. Before you act on a number, ask the person closest to the process if it would be good if that number went up. You will be surprised how often the answer is "it depends".

04 Greed

Data that belongs to a department,
not to the company



Greed is hoarding. Every function owns its system, its data and its version of the truth, and shares none of it. Sales has the CRM. Operations has the ERP. Engineering has the PLM. Finance has a spreadsheet that contradicts all three. Each is a small kingdom that does not talk to the others.

Picture a river valley where every farmer has built his own dam. Each pond is full and beautifully kept. Downstream, the fields are dry, and every farmer blames the one above him. Nobody did anything wrong locally. The system failed as a whole.

Greed with data often starts involuntarily. It stems from the fact that different systems don't share data natively. The sin is in entrenching the situation, focusing only on your own world until it becomes a parallel reality that stops being relevant the moment you step out of your office.

WHAT IT LOOKS LIKE IN PRACTICE

The great divide, part 1: Sales and Operations

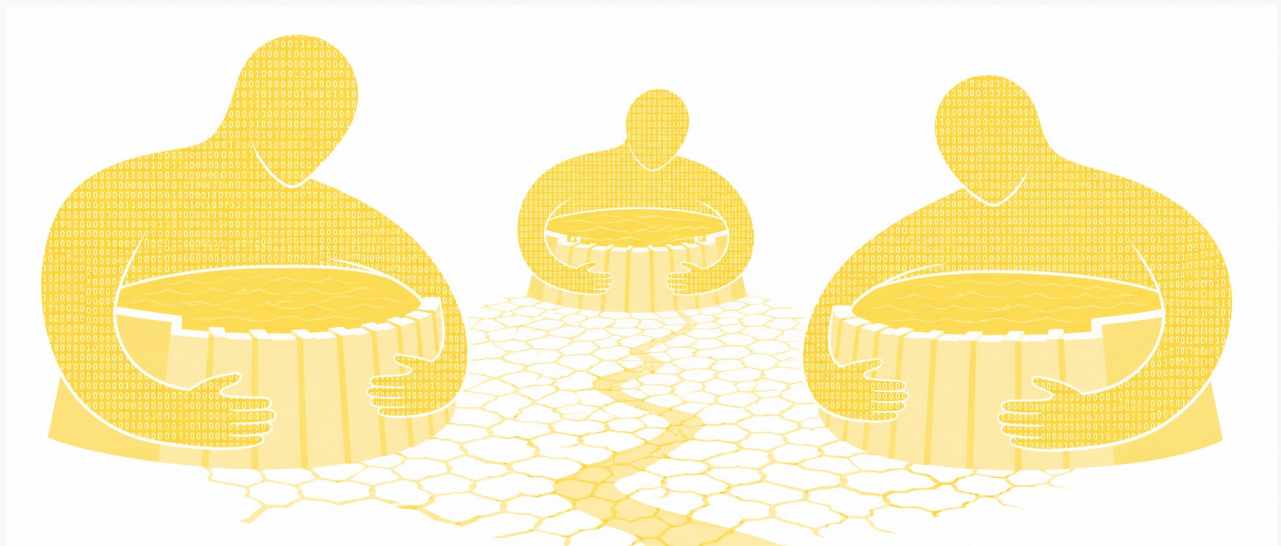
A salesperson commits to a four-week delivery to land new customer X without checking capacity, because the CRM has no idea what the plant is doing. Operations discovers the commitment when the order enters the MRP and picks up the phone. Sales: "Can't we fit this in before customer Y's order and push that one back?" But it's too late to do anything except pay overtime, penalties and rush delivery, and pray customers X and Y won't get too mad at a broken promise.

The great divide, part 2: Engineering and Operations

An engineer updates a specification in PLM. The change never reaches production, which builds 180 units to the old drawing. Quality control catches the discrepancy three weeks later, the customer rejects 80 units, and the cost is scrap, rework, and a reputation that will take years to repair.

The great divide, part 3: Operations and Finance

The MES on the floor records an 8% defect rate. The ERP that Finance uses for inventory valuation never receives it. Inventory is overstated for four months until the physical count, when the write-down surprises everyone, including the auditors.



Everyone guards their own silo, and the value stays locked inside each of them.

Integration is not a software feature. It is an agreement between departments that the software then enforces.

”

WHAT IT COSTS

Penalties, expediting, scrap and rework are the visible part, but they get flagged as a hiccup rather than a structural issue linked to data silos. Worse and less visible are the hours spent every week by capable people copying or matching data between systems, and chasing information on the phone or through formal email requests.

For many, "let's add a weekly meeting" feels like the solution, condemning four to eight people to two hours a week of discussion that could be replaced by two clicks on a custom screen.

ASK YOURSELF

-  Which spreadsheets contain information that's needed by multiple people but accessible only to one?
-  How many times do your people need to pick up the phone to get information from another department?
-  How many recurring meetings exist only to align departments on business-as-usual items?

The remedy

The idea that all company information can sit in the same place is wishful thinking. No single system is good at everything.

That's why you want to build a railway network for your data. Smooth routes that move specific pieces of information quickly across departments. Keep meetings for cases where decisions need to be made in real time, or where nuance is necessary to understand the context. For everything else, especially simple numbers and status updates, make them available on demand. A shared physical board, a web page, an automated email, take your pick.

One important thing: when multiple software systems are in place, for each piece of information that needs to live in more than one, decide which tool holds the truth and how the others align to it. Make sure that alignment happens before a mismatch generates issues, ideally with automatic and auditable data flows.

This is not always simple. But solving Greed is one of the biggest levers you have on performance, because every process that crosses a department boundary gets faster the moment the information goes along with it.

05 Wrath

Deciding fast, on data you have not understood



Wrath is the sin of the impulsive decision. A number lands on your desk, it looks very bad or very good, and you act, ignoring trend, seasonality, context, and the possibility that the number is simply wrong. It is the most satisfying of the sins, because it feels like leadership. It is also the one that does the most cultural damage, because everyone remembers it.

Everyone has done this in the shower. The water is cold, so you turn the tap towards hot. Nothing changes for a few seconds, so you turn it further. Then it scalds you, so you slam it back to cold, and you are freezing again. None of the individual moves was wrong. The mistake was reacting to each moment without waiting to see where the last move was taking you.

WHAT IT LOOKS LIKE IN PRACTICE

Nipped in the bud

A plant starts a setup-time reduction programme with a four-month timeline. Everyone knows there is a learning curve. By week seven, setup times on the pilot machine are slightly worse than baseline, which is exactly what you would expect while operators unlearn old habits. The VP sees the number, declares the initiative a failure and cancels it. Eighteen months later a competitor runs a nearly identical programme, sees it through, and reports a 40% reduction. The first plant paid for the training, lost the opportunity, and taught its people a lasting lesson: do not volunteer for the next one.

The blame game

A quality report shows a 12% defect rate on parts from Supplier A, against a historical 2 to 3%. The purchasing director is on the phone within the hour, angry, threatening to pull the business. A week later the investigation finds that the defective parts came from Supplier B and were miscategorised at goods receipt. Supplier A's parts were fine. What got damaged is the relationship.

The mirage

A components manufacturer exhibits in Germany for the first time. Three days, twelve requests for quotation, two of them from big names everyone knows. 8% of booth visitors asked for a quote, against their usual 3%. Within weeks one of them closes, worth 5% of the yearly revenue target.

The board reads it as proof that the German market wants them and starts setting up a local entity. Within six months there is an office, a German-speaking technical salesperson, a translated catalogue and a certification project. About €300k a year of committed cost.



Bad numbers rain down, and the first instinct is to shut off the tap rather than fix the source.

A bad number now triggers a reaction rather than a question.

”

The other eleven RFQs, in the meantime, go nowhere. Nine were engineers gathering comparative prices for a mandatory shortlist whose winner was already decided; the two big names were procurement doing exactly the same thing. The one that closed was a customer whose usual supplier temporarily couldn't keep up with his demand, and he never comes back. The order-to-quote ratio in that market turns out to be a third of the domestic one, because the incumbent has been there for twenty years and switching costs are high.

A good number can burn you just as badly as a bad one.

WHAT IT COSTS

Cancelled initiatives that would have worked, leaving only sunk costs. Damaged supplier and employee relationships. Money poured into shiny opportunities that led nowhere. But the worst effect is a culture where people learn to avoid looking at numbers, because a good one may trigger a frenzy and a bad one will trigger fire rather than a question.

ASK YOURSELF

- ?

When a metric jumps, is the first question "why?" or "who?"
- ?

In the last three years, how many initiatives have been launched or killed without enough context?
- ?

Before you escalated your last supplier or employee issue, had anyone verified the data at the source?

The remedy

A small, boring discipline: when an important piece of information arrives, good or bad, take the time to understand where it comes from. Ask why, five times. Look at how the number changed over time. Ask the person closest to the source about it. On daily issues that is usually a few minutes, maybe an hour, and it will save you from the far more frequent case where the problem was in the spreadsheet. On strategic issues it's worth taking weeks or months, if you can afford it. If you can't, still make sure you think through and map the options and risks before you make the move.

06 Envy

Measuring yourself against the wrong benchmark



Envy is an excessive focus on others. It looks at the measures others have designed, the tools and methods they've implemented, the numbers they've achieved, without understanding that they don't necessarily apply to your business. It's a close relative of Wrath: the outward focus comes with a lack of real understanding of what is being observed and how it translates to your own context.

It is a little like a keen amateur cyclist who buys the same bike as a Tour de France winner. The bike is genuinely excellent. It is also built for a rider who weighs sixty-five kilos, trains thirty hours a week and has a team car behind him. On the local hills, on a Sunday, the 80kg amateur is uncomfortable, slower and considerably poorer.

WHAT IT LOOKS LIKE IN PRACTICE

Apples to oranges

A VP visits Toyota, comes back inspired and decides to implement the Toyota Production System. Around €400k is invested with the goal of becoming Lean. The reality, which nobody stated out loud, is that the company makes engineered-to-order equipment with a different bill of materials on every order, while Toyota's system was built for predictable, repetitive demand. Kanban does not survive contact with one-off BOMs. After nine months, the initiative is abandoned. The 5S boards remain, which is not nothing, but not worth €400k either.

Which game are you playing?

The COO has just announced the new operations scorecard. For each KPI he showed a slide about an "exemplar" company and its number, which is now the goal. Achieving all targets is impossible by definition. Each of those best-in-class companies got there by making a deliberate trade-off: fastest delivery at the cost of inventory, lowest cost at the cost of flexibility, highest quality at the cost of speed. For five quarters in a row the scorecard shows only one number in the green. Three line managers have left, and the board is still asking why.



Chasing somebody else's summit to a destination you may not want.

Trying to excel at everything is a decision to excel at nothing.

”

Better, and yet wrong

A CEO is tasked by the board with catching up to a competitor whose flagship product promises 30% better performance at a price 5% lower than theirs. She launches R&D on a mission to design a new product line that beats those numbers. Eleven months later, a prototype shows good signs: 42% performance improvement, 12% cost reduction. This is the quantum leap she was looking for, and she moves forward.

The launch is a marketing success and customers start buying, but within two quarters revenue drops by 30%.

To hit the goal, R&D tightly coupled the product's components and eliminated the modular options. Core customers, who loved the brand for its adaptability, couldn't integrate the new rigid units into their existing setups. Sales spiked at first, driven by power users, but mainstream customers walked away to suppliers willing to customise.

WHAT IT COSTS

Expensive programmes that do not fit and fail. Targets that demoralise instead of motivate, because they cannot be hit. And a subtler loss: while you are busy copying, you are not finding out what your trade-off and strategy should be, which is the only benchmark that matters.

ASK YOURSELF



Who do you compare your company against? How similar are its product mix, business model and customer base to yours?



Which trade-offs are you accepting when you set your goals? (Hint: if the answer is "none", that's the problem.)



What is the one thing your customers pay you for that a "best in class" competitor would refuse to do?

The remedy

Benchmark against your own history first and your direct competitors second, and treat everyone else as a source of ideas rather than a target. Steal techniques by all means. Just check the size of the bike before you buy it.

07 Pride

Building data systems to be admired, not used



Pride is the sin of well-designed but useless data. It's data as decoration. Sometimes it's a focus on form over substance. Other times it's a number chased for the bonus or the applause, with no impact on the business. Its worst expression is deceitful manipulation. Whenever data is used to impress and convince rather than to assess and decide, that's Pride.

It's worth separating it from Lust. With Lust, you believe the number too much. With Pride, you use the number to look good, and at some level you know it.

Many towns have a fountain like this. Grand, ornamental, expensive to maintain, and dry most of the year because the pump broke and the water was never the point. Meanwhile the drinking fountain around the corner, ugly and functional, has a queue.

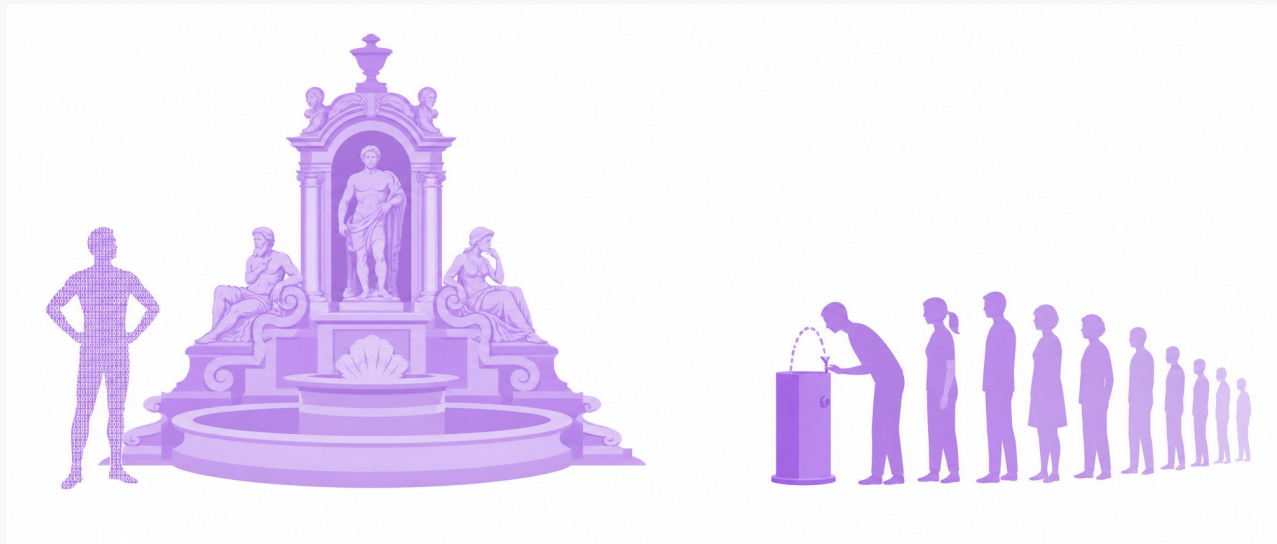
WHAT IT LOOKS LIKE IN PRACTICE

A blind bird's-eye view

A company commissions a custom dashboard. Real-time, beautifully designed, €85,000. The VP it was built for opens it for about five minutes before the monthly board meeting, or when a peer comes to visit. His actual decisions still come from a weekly email from the plant manager. When someone finally asks why, the answer is as honest as it is devastating: "It doesn't tell me what I need to know."

Under control, maybe

Large LED displays across the plant show live OEE for every line. Visitors love them. The numbers, however, are computed from theoretical cycle times that nobody ever validated, so the operators, who know the real cycle times better than anyone, learned within a week that the numbers don't match reality. They stopped looking. Nobody investigates the gap, nobody acts on a red line, and the display becomes a very expensive light fixture.



A monument to behold, the world moves on elsewhere.

Once operators have seen a number that lies, they will assume the next one will lie too.

”

The moving goalpost

A plant proudly reports 94% on-time delivery. It's on the screen in reception, it's in the board pack, and it's been stable for two years. The number isn't made up. It's just measured against the latest confirmed date, and every time an order is about to slip, customer service calls the customer and agrees on a new one. Orders are never late. They're re-promised. Measured against the date the customer actually asked for, the figure is 61%. Everyone in customer service knows. Nobody says so, because whoever "fixes" the definition will be the one presenting a 33-point drop to the board.

Flawless on paper

An Italian plant belongs to a foreign group. Every month it sends HQ a reporting package, and the plant manager's bonus depends on three numbers in it: scrap rate, inventory value and on-time shipments. Scrap somehow turns into "rework" or "engineering samples". Obsolete stock nobody will ever use stays on the books at full value, because writing it off would hurt the quarter. And the last week of every quarter is chaos, with half-finished orders rushed out to hit the target. HQ looks at the consolidated slide and sees a well-run plant. Then a new group controller shows up unannounced during the stock count, and €2M of dead inventory comes out in a single afternoon. The plant manager never lied. He just always picked the flattering option, one month at a time.

WHAT IT COSTS

The money is the least of it. Pride teaches the organisation that data is theatre. Once people have seen a number that lies or simply says nothing, they will assume the next one will too, and that assumption is very hard to undo.

ASK YOURSELF

-  How many active users does each of your reporting tools have, and which decisions did they support last month?
-  Where does your leadership team actually get the numbers it decides on: the dashboard, or an email?
-  For your headline KPIs, is the definition the one that matters to the customer, or the one that is easiest to keep green?
-  Is anyone's bonus tied to a number that the same person reports?
-  How many people in your team believe in the goals and benchmarks set for them?

The remedy

Pride doesn't go away with a sermon about honesty. It goes away when looking good and being good become the same thing. A few practical moves:

Design every report backwards from the decision. Who looks at this, when, and what will they do differently if it's red? If you cannot answer, do not build it.

Validate inputs with the people who know. The operators know the real cycle times. Customer service knows the real delivery dates.

Define KPIs from the customer's point of view. On-time means the date you first agreed with the customer, not the one you last renegotiated.

Separate the scorekeeper from the player. If a bonus depends on a number, someone other than the person receiving the bonus should own how it's measured.

Make it safe to publish a worse, truer number. The first person who fixes a flattering definition should be thanked in public, not questioned about the drop.

And if you're a leader, take the data you're shown seriously, but never blindly. Ask questions about it. Decorative data is easy to spot: the people presenting it can't explain why it looks the way it does, nor how to verify it. When the analysis is honest and deliberate, act on it, and expect others to do the same.



But...who's sinning?

It's you.

But don't worry. It is everybody else too. In over ten years I have not met a company that was free of all seven, including the one I run.

No business can run 100% on data. Data is not always available, and that's not always Sloth. Data is not always precise, and that's not necessarily Pride. Sometimes focusing on one KPI for a period of time is a necessity, not Lust.

Data is a model, a compressed representation of reality, and reality is much more nuanced than anything you can put on a chart. It's so complicated that we all fail to model it properly at times.

And that's the point. Because data is never a perfect mirror of reality, what decides whether it helps or hurts is never the data alone. It's what people do with it.

Which brings us to the eighth sin.

08

The eighth sin

Forgetting that data is a people's problem



Look back at the seven. Every one of them, without exception, was a story about people. A shopfloor worker in a rush to start the next order. A quality manager who told an intern "we've always worked this way", and lost her. An executive team that stopped reading at page three. A board that fell for a margin target, and another that saw a mirage in Germany. A salesperson who promised four weeks without seeing the plant. A COO with a slide full of exemplar companies. A customer service team quietly re-promising dates. A plant manager choosing to show only the good side.

Not one of them was a story about a database.

And yet, when companies think about data, they think about the database. When they plan a data investment, the plan is servers, licences, sensors, integration, a vendor, a go-live date. The plan rarely includes, as a line item with a budget and a name next to it, the things that decide whether any of it will be used. Obtaining the budget is on the plan. Obtaining buy-in from the people who will type into the system every day is not. Ensuring that someone in the building can actually analyse and interpret what comes out is not. Cleaning up the bad inputs that the new system will faithfully reproduce is not. Deciding who owns each number, and what happens when it goes red, is not.

The same happens in everyday decisions, far from any project. Nobody designed the incentive that turned scrap into "engineering samples". Nobody decided that the intern's chart didn't matter. The habits, the incentives and the conversations around the data were left to chance, and chance has a strong preference for the path of least resistance.

Think of a road. You can build the finest road in the region, perfectly surfaced, beautifully lit. If it goes somewhere people do not want to go, it stays empty. If it goes where they want to go but the on-ramp is awkward, they take the old lane through the village. Traffic follows the path of least resistance, and so do your operators, your planners, your sales team and your managers. You do not get to choose whether that happens. You only get to choose whether the path you build makes it easier to get to the destination or not.

The eighth sin, then, is treating data only as a technology problem. Every data initiative is an organisational change project that happens to involve technology, and every data-driven decision is a human decision that happens to involve numbers. If you budget and manage it only as technology, you will get a system that works, on paper, and a company that has learned to route around it.

This is not to say that the technology does not matter. Bad tools make good behaviour hard, and I have spent my career building better ones. But the best tool I ever deployed succeeded because a plant manager decided to close every phantom order himself until his supervisors got the message. The tool made that possible. He made it happen.



The finest road in the region, and everyone still walking the path beside it.

Every data initiative is an organisational change project that happens to involve technology.

”

The scorecard

Below is a simple self-assessment. Score each sin from 0 to 3: 0 means "not us", 1 means "occasionally", 2 means "regularly", 3 means "this is how we operate". Be honest. Nobody is watching, and the number is for you.

Sin	The question that decides it	Score (0–3)
Sloth	Is there data in our systems that everyone knows is stale? Or critical operational knowledge that lives only in people's heads or inboxes?	
Gluttony	Do we collect data or track KPIs that nobody has acted on in the last six months?	
Lust	Is there one metric that dominates our decisions without nuance or context?	
Greed	Do our departments' systems disagree, and do we spend hours each month reconciling them?	
Wrath	Have we launched or killed initiatives, or judged people, on numbers we later found to be wrong or premature?	
Envy	Are our targets borrowed from contexts that don't apply to us?	
Pride	Do we have reports or KPIs that look good but aren't used for decisions, or don't reflect reality?	
People	Do our data initiatives lack budget and ownership for adoption, skills and data governance?	



How to read your total.

0–6: you are in better shape than most and can consider yours a data-driven company. Now you know where to focus to get even better and consolidate your competitive advantage.

7–14: you are in the same league as many other businesses, including successful ones. You probably have some good systems in place, but you have also been burned by failed projects and broken processes. That means a real opportunity to gain an edge over the competition, because data will make you faster and more confident. Pick the one place where you can start, and try. Keep the eighth sin in mind and you'll see how big an impact you can have.

15+: do not start an AI project this year. It will hurt you badly. Start with the eighth row instead: give someone the ownership, the time and the budget to fix your two highest-scoring sins, and score yourself again in six months.

Closing thoughts

I promised at the beginning that this was not a paper about technology, and I have kept that promise. But you will have noticed that every remedy pointed in the same direction: make the right behaviour the easy one, start from the decision rather than the data, pair every number with its context, let information flow to where it's needed, check before you react, choose your own benchmark, and define your numbers so that looking good and being good are the same thing.

None of this is glamorous. None of it makes a good slide at a conference. It is also, in my experience, the entire difference between a data initiative that changes how a plant runs and one that becomes a story people tell about why "that stuff doesn't work here".

It does work, when you do it this way. One of our clients went from paper to fully digital production in six months, and doubled order volume without adding headcount. The software mattered. What made the difference was deciding, department by department, who needed which information, when, and what they would do with it.

And what about AI?

It can be of huge help in building good data products, but it won't free you from these sins. If anything, it raises the stakes, because a model will trust your phantom statuses and your miscategorised scrap with the same enthusiasm as your good data, and it will be much harder to spot the issue.

So before you become AI ready, become honest. Fill in the scorecard. Pick your worst sin. Fix it with the people who live with it every day.

Then, and only then, think about what system to add next.

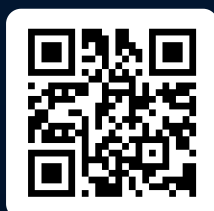


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Progress Lab

If you want to talk through your scorecard, or you're planning a data or AI investment and want a second opinion before you commit budget, I'm happy to have a conversation. No slides, no pitch, just the questions above applied to your plant. **[Book a complimentary call here.](#)**

Talk through your scorecard →

Find out more



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