LESSONS FROM THE AI ERA

Look before you leap

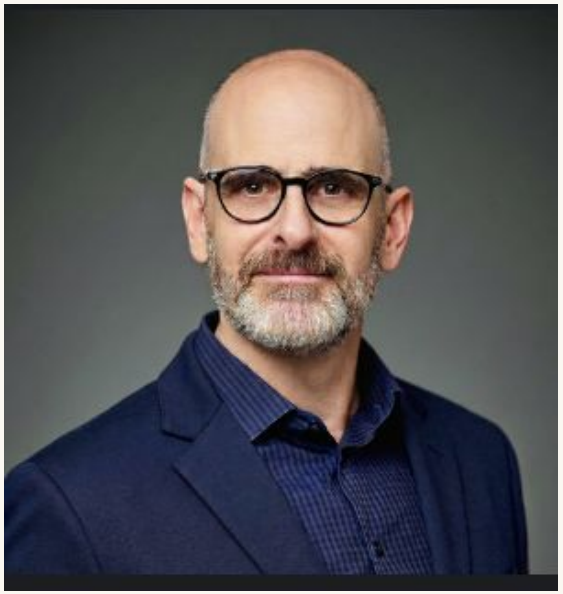
Shawn Rosemarin
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MOBIA Connect 2026
October 21, 2026



WHO'S TALKING

Thirty months of building with AI, most of it the hard way



PODCAST HOST

Beyond the IT Headlines and The Data Wire

AUTHOR AND CONTRIBUTOR

Forbes Technology Council
Field Notes - ShawnRosemarin.com

EXECUTIVE

Office of the CTO
Customer Engineering
Everpure

"AI won't replace humans but humans who can effectively integrate AI into their workflow will replace those who do not."

July 29, 2025

"It's an easy thing to write when you're the executive who approves the budget, blesses the pilot, and shows up for the demo."

THE FOLLOW-UP I DIDN'T SAY OUT LOUD

Did I believe it enough to do it myself?

"I stopped writing the requirements and started writing the thing."

Human + Machine, Part Two, June 27, 2026

90%

of what I build goes nowhere

"I play with the models. I build the systems. And 90% of what I build goes nowhere. But it gives me perspective on what is possible."

IDC webinar, July 9, 2026

"Some of it was good. Some of it was embarrassing. All of it taught me something no demo ever has." Human + Machine, Part Two

THIRTY MONTHS IN THIS MARKET

"Most of what gets repeated about AI in boardrooms today isn't slightly wrong. It's expensively wrong."

- *AI is a program you charter*
- *The company with the best model wins*
- *The bottleneck is GPUs*
- *The payoff is fewer people*

"Every statement here is wrong, and every one carries a price tag your finance team hasn't been handed yet." Human + Machine, Part Two

ASSUMPTION 1 OF 4

Chartering AI buys a tidy slide deck and no capability

WHAT WE BELIEVE

"AI is a program we charter, staff, fund and review at steering committee."

WHAT IT COSTS

- "You don't buy AI. You don't buy an AI box. You actually build AI."
- "The distance between sponsoring AI and building AI is the entire lesson."

"The most dangerous place to stand right now is one level above the work." Part Two

WHO TOLD ME

95%

of organizations reported zero return on $30 to 40B of generative AI spend[1]

The authors put the cause on a learning gap, not model quality.

1. MIT NANDA, "The GenAI Divide," July 2025, preliminary findings. My quotes, IDC webinar (July 9, 2026) and Human + Machine, Part Two.

ASSUMPTION 2 OF 4

Your model choice is a rental your competitor can sign for by Friday

WHAT WE BELIEVE

"The company with the best model wins."

WHAT IT COSTS

- "Somewhere in your company there is a slide that credits your AI advantage to the model you selected. Delete it."[1]

"If your only edge is 'we use a great model,' you have no edge." Part Two

WHO TOLD ME

3.3

model providers the average AI builder now uses, mixing frontier and open-weight models[2]

Your competitor rents the same ones.

1. Human + Machine, Part Two, June 27, 2026. 2. ICONIQ, 2026 State of AI report, via State of Scaling, Sept 2026.

ASSUMPTION 3 OF 4

Expensive GPUs sit idle because the data can't keep up

WHAT WE BELIEVE

"The bottleneck is GPUs. Buy more, ship faster."

WHAT IT COSTS

- Starved GPUs "waste compute cycles while still drawing full power."[1]
- Gartner predicts 60% of AI projects without AI-ready data will be abandoned through 2026[2]

"The expensive hardware isn't idle because it's slow. It's idle because it's starved." Part Two

WHO TOLD ME

"The GPUs are here, the factory runs, but basically the data has not been refined... So just putting more GPUs is not going to solve the problem."

Kevin Deierling, NVIDIA

Even the GPU company says the fix is upstream.

1. Forbes Technology Council, Feb 10, 2026. 2. Gartner, Feb 26, 2025. Survey of 1,203 data leaders. Quote, The Data Wire, June 12, 2026.

ASSUMPTION 4 OF 4

AI made work cheap to produce. It made nothing cheap to judge

WHAT WE BELIEVE

"The payoff is fewer people. Same work, smaller team."

WHAT IT COSTS

- "AI did not lower the value of seasoned human judgment. It quietly inflated it."
- The scarce skill is taste, "the judgment to know which of five plausible answers is the right one."

"The accountability of a human to a human is gonna be more important than ever." Ep 23

WHO TOLD ME

"It doesn't matter if it's AI, even if it's thousands of AI, there is somebody within the organization that's accountable to that information."

Armel Roméo Kouassi, SVP and Global Head of ALM, Northern Trust

Cut the people, and nobody answers for the number.

Card and closing line, The Data Wire, Ep 23, August 10, 2026. Bullets, Human + Machine, Part Two.

FOUR EXPENSIVE ASSUMPTIONS

Each belief sends a bill that finance hasn't seen yet

1	2	3	4
~~AI is a program you charter~~	~~The best model wins~~	~~The bottleneck is GPUs~~	~~The payoff is fewer people~~
A tidy deck, no capability	**Your edge is a rental and flexibility**	**Starved hardware, full power bill, poor results**	**Human+Machine is the payoff**

THREE FACTORY QUESTIONS

Every factory starts with the product. Most AI programs started with the machinery

"If we were building a factory, the first question we would ask ourselves is, what are we building?" IDC webinar, July 9, 2026

Where most organizations entered

1

What are we building?

The end product and the decision it changes

→

2

Do we have the raw materials?

Data, in a state a machine can use

→

3

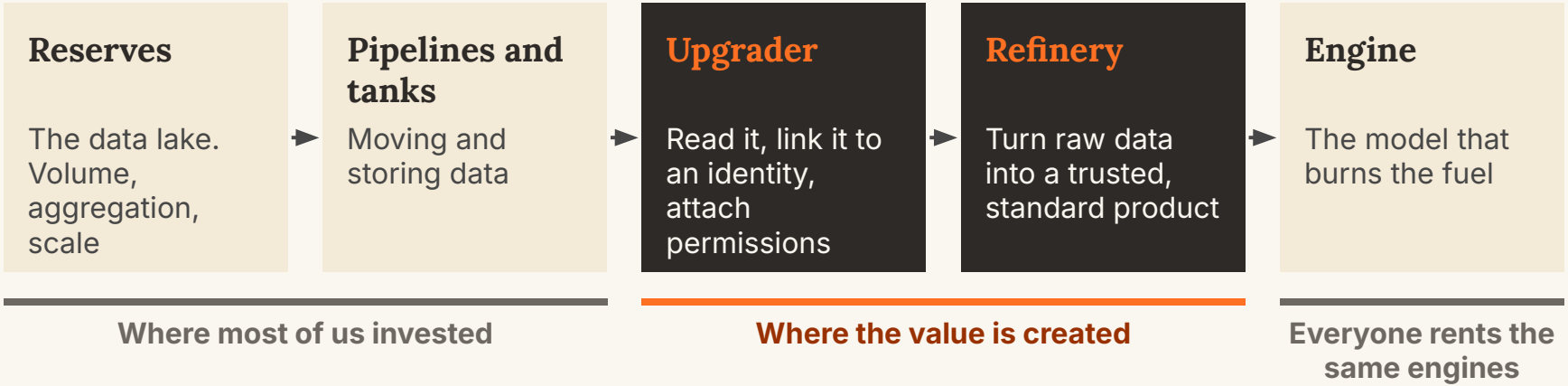
What machinery converts one into the other?

Models, GPUs, platforms, pipelines

Which box did your last AI budget start in?

FROM CRUDE TO FUEL

Everybody built the pipeline. Nobody built the refinery



"The models are ready. The question is, what are you feeding them?"

Forbes Technology Council, September 16, 2026.

"Oil's value isn't in the ground. It's created in the refinery."

Forbes Technology Council, September 16, 2026

5 of 400

use cases have the data to support them. Paul Lewis, CTO of Pythian, calls them "the magic 5."

59%

of companies don't measure data quality at all[1]

- **"Raw data was never the product."** Forbes, September 16, 2026

1. Gartner, as cited in Forbes Technology Council, September 16, 2026. Paul Lewis, Beyond the IT Headlines, December 2025.

AI-READY DATA IS NOT WELL-MANAGED DATA

Well-managed data is correct inside each system. AI-ready data agrees across them

	Well-managed	AI-ready
Scope	Inside each system	**Across systems**
Meaning	Lives in the application	**Travels with the data**
Governance	Set per application	**Set at the data layer**
Standard	Backed up, secure, compliant	**Represents the use case**
Test	Each system is internally consistent	**The systems agree with each other**

- **"The model doesn't know your rules."** IDC webinar, July 9, 2026

Rows draw on Gartner, Feb 26, 2025.

THE CFO TEST

Two leaders walk in with different numbers for the same metric. Both are right

LEADER A

Same metric

Correct inside System A.
Well-managed. Not AI-ready.

≠

LEADER B

Same metric

Correct inside System B.
Well-managed. Not AI-ready.

"The truth is that, in many cases, both numbers are technically correct."

"The definitions were never aligned."

Forbes Technology Council, September 16, 2026.

HEALTHCARE

Healthcare data is as well-managed as data gets, and half of it still can't feed a model

STRANDED

Over half

of clinical data in healthcare is stranded behind technical debt

Shammy Narayanan, Welldoc

READY

A knowledge graph linked a patient record scanned from paper 25 years ago across three generations of one family. It flagged a hereditary risk and prompted testing.

"...they were able to address that before it became fatal in nature."

Ashish Gupta, on a healthcare customer

Beyond the IT Headlines, April 22, 2026 (Welldoc) and July 2, 2026 (Ashish Gupta).

THE UPGRADER

Your unstructured data needs an upgrader before any model can use it

IN THE OIL SANDS

Heavy bitumen	Upgrader	Synthetic crude

"An 'upgrader' is an industrial facility that converts heavy bitumen into lighter synthetic crude oil that can be more readily transported and refined."

IN YOUR DATA

Contracts, scans, PDFs	Read, link, permission	Model-ready

Here's the bitumen. "A lot of our data, unsurprisingly, like other industries is locked in figures in PowerPoint slides or committee decisions." AI platform lead, global pharma

80 to 90% **of today's data is unstructured[1]. The upgrader step can't be skipped.**

Upgrader definition, Forbes Technology Council, Sept 16, 2026. Pharma quote, The Data Wire, Ep 24. 1. MIT Sloan, as cited in Forbes, Feb 10, 2026.

THE REFINERY

AI-ready data comes out of a refinery, not a pipeline

1 Distillation
Tag every input with lineage and permissions

2 Desalting
Strip noise, duplicates and unusable personal data

3 Cracking
Break messy inputs into small, usable facts

4 Reforming
One trusted source of truth, like a single customer identity

5 Blending
One enforced definition for every metric

6 The lab
A spec for every data product, and a plan for bad batches

"If recovery and refinement costs exceed expected value, you leave it in the ground."

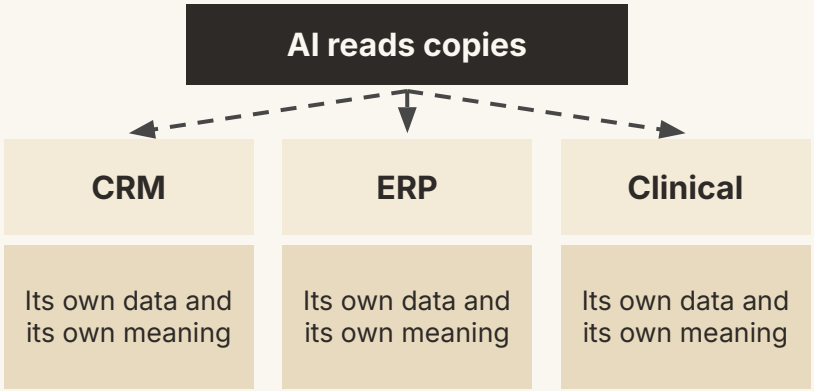
The recall test. *"If we trained on something we shouldn't have, can we remove it, prove we removed it, and re-run safely?"* **"If you can't answer that, you don't have governance. You have optimism."**

Steps adapted from Forbes Technology Council, Sept 16, 2026. Recall test, 2026 Predictions, Dec 22, 2025.

DATA AT THE CENTER

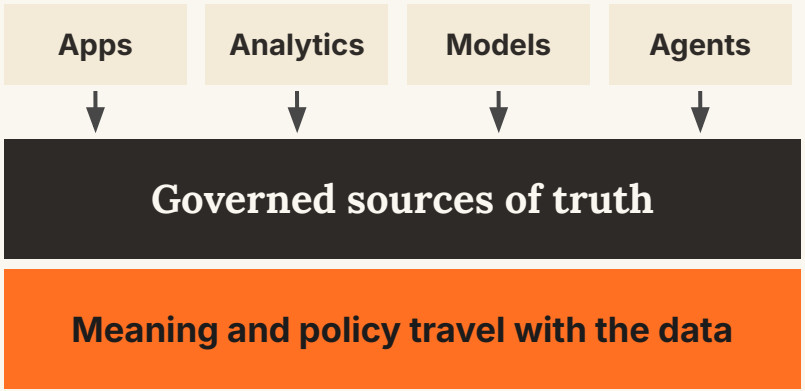
Govern the data under your applications, not inside each one

APPLICATION-CENTRIC



"Every seam in your stack shows up as drag in your business."[1]

DATA-CENTRIC



"...data being primary instead of the application being primary." Ashish Gupta[2]

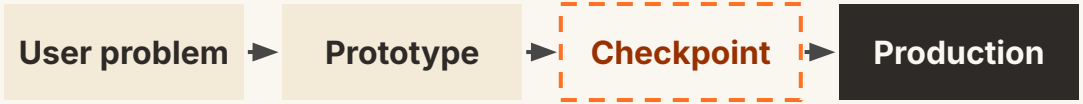
"The governance can't live in the model. Governance has to live in the data." July 9 webinar

1. 2026 Predictions, December 22, 2025. 2. The Data Wire, July 2, 2026.

WHO RUNS THE REFINERY

Every refinery needs operators. In AI, that's the forward deployed engineer

THE PATH



"Everybody's playing around, but few have actually built this into full-scale production."

"You need strong engineering and product on the front lines, working directly with users on real life use cases."

AI platform lead, global pharma company

"The FDEs are the ones... looking at all this saying, what's ready to actually roll into my environment? What's secure? What's compliant?"

THE ECONOMICS

73%

of enterprise buyers view FDEs positively[1]

5 to 10x

return on fully loaded cost before the model pays off[1]

Aim them at the five of 400

1. ICONIQ, State of Scaling, September 2026. Quotes, mine and the pharma lead's, The Data Wire, Episode 24.

IN CONVERSATION

Doing the foundation work before anyone asked for AI

GUEST

Dave Bates

Infrastructure Manager, Eastlink

Raw materials and machinery, done in the right order

1. What did you have to fix underneath before you could take on anything new?
2. What does your team spend its time on now that it didn't two years ago?
3. When the business comes to you with an AI ask, what do you check first?

Lesson 7, July 29, 2025

~~*Start with Pull but evolve to Push*~~

"The aspirational outcome is delivering answers before the question is asked!"

- **"'Pull' became 'push' faster than I forecasted."**

  Lesson 11, Human + Machine, Part Two, June 27, 2026

  I got exactly what I asked for. It deleted the moment where a person would have caught the mistake.

THE CHECKPOINT PUSH DELETED

Pull had a checkpoint built in. Push deleted it

PULL



You ask, you read, you judge

PUSH



The answer arrives before the question, and the judgment step goes missing

"*Pull has a checkpoint built in: you ask, you read, you judge. Push deletes the checkpoint.*"

THE CHECKPOINT PUSH DELETED

Each step up the ladder removed a human check, and nobody voted on it

WHAT I PREDICTED IN DECEMBER 2025

"Time-to-trust" replaces "time-to-answer"

"In a world of infinite answers, trust is the only real constraint."

● Human checks left in the loop

Search ●●●

We searched, then judged the results ourselves

LLMs ●●○

We moved to models and trusted the machine

Agents ●○○

Agents take a whole workflow end to end with very little human interaction

Swarms allow agents to collaborate with one another

THE FIFTH ASSUMPTION. SPEED IS PROGRESS

"The better the work looks, the less you scrutinize it, and the more expensive the error you let through."

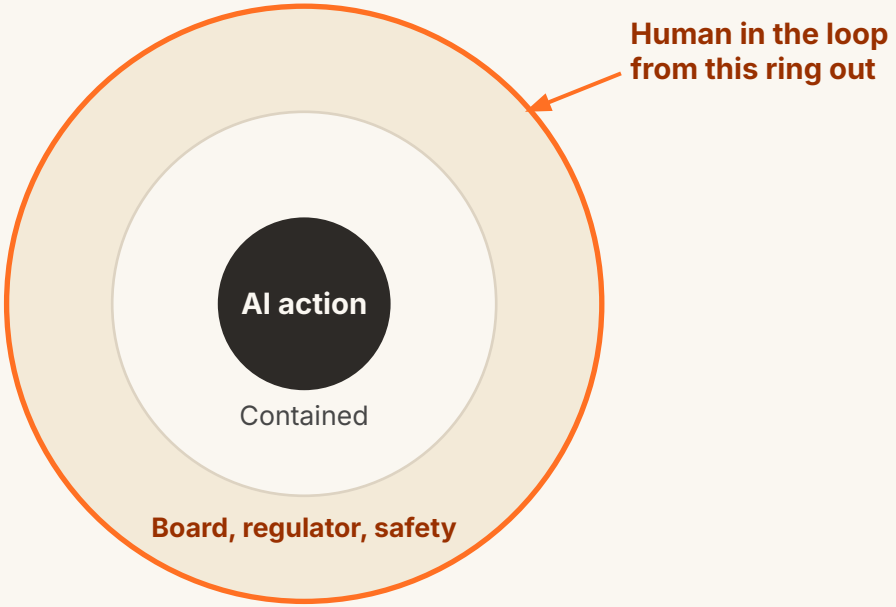
Human + Machine, Part Two, June 27, 2026

"The polish is the camouflage."

> *"You ask the LLM to write tests... and every test is green. It passes because there's nothing in there."*
>
> Ratinder Ahuja, CTO for Security and AI

WHERE TO PUT IT BACK

Put the human back where the blast radius is big enough to matter



"If this thing goes bad, how big is the blast radius? If it's big enough, then maybe that's the checkpoint you need a human in the loop."

Rick Orloff, CISO

"In IT a bad decision might affect data or a business process. In OT it can potentially affect a physical system and ultimately safety."

Global CISO, elevator and escalator manufacturer

"Verification stopped being a phase and became the job." Part Two

WHERE TO PUT IT BACK

Design the checkpoint into the workflow before the agent ships

BLAST RADIUS	WHO ACTS	THE CONTROL
Contained and reversible	The agent acts	Every action is logged, and someone samples the log
Material to customers or money	The agent proposes	A named person approves before anything moves
Board, regulator or physical safety	A person decides	The agent prepares the case. It never holds the pen.

The test. *"Who has actually reversed an agent action in the last quarter?"* If nobody has, nobody is checking.

SCORE YOUR ORGANIZATION

Score your organization. Start with the raw materials

RAW MATERIALS

1. **Visibility.** What share of our data estate can we see and classify by what's inside each file, not just who made it and when?
2. **Yield.** For the one decision costing us the most money, how much of its data is usable without a person rebuilding it first?
3. **Allowlist.** Is there an enforced list of what data may enter a model or agent, and a record of what already has?

SCORE EACH ONE

2	Yes, and we could prove it tomorrow
1	Partly, or someone believes so
0	No, or we don't know

SCORE YOUR ORGANIZATION

Then score the human judgment

HUMAN JUDGMENT

4 **Hands.** When did our most senior AI sponsor last build something themselves, instead of reviewing a steering deck?

5 **Checkpoint.** Where AI pushes answers before anyone asks, where is the human check, and who reversed an AI output last quarter?

6 **Accountability.** For every material number AI touches, can we name the person who'd explain it to the board or the regulator?

SCORE EACH ONE

2 Yes, and we could prove it tomorrow

1 Partly, or someone believes so

0 No, or we don't know

READING YOUR SCORE

Some of you won't like your number. That's the useful part

0 to 5	6 to 9	10 to 12
You started at question three of the factory	The raw materials or the judgment is there, rarely both	Either you're ahead or you scored generously. Ask someone two levels down to score it too

- *These bands read your own number. They aren't a benchmark, and no survey sits behind the cutoffs.*

THREE MOVES IN NINETY DAYS. YOU, NOT YOUR TEAM

"The unglamorous work isn't a technology project. It's a personal one."

DAY 30

Build one thing yourself

Be your own forward deployed engineer on one piece of your work

DAY 60

Run a yield audit on one decision

Grade its inputs. Decide what to leave in the ground.

DAY 90

Put one checkpoint back

Pick one push workflow. Set the threshold and name the human.

"AI won't replace leaders, but it will expose who was leading and who was just managing tasks."[2]

2.1x

Employees whose manager actively supports AI use are 2.1 times as likely to use it a few times a week or more[1]

Title, Human + Machine, Part Two. 1. Gallup, November 8, 2025, 19,043 U.S. employees. 2. 2026 Predictions, January 8, 2026.

DATA PRIMACY

Every lesson today lands in the same place. Put your data at the center

WHAT WE CALL DATA PRIMACY

"...enterprises optimizing their IT around governed sources of truth defined by their own business model, rather than around any individual application."

Everpure, From Data Processing to Data Primacy

"...when you have the context between these different sources of record, then you are in charge."

WHAT WE LEARNED	THE ANSWER
The model is a rental	Your governed data is the edge nobody else can rent
The GPUs are starved	Refine the raw materials before you buy more machinery
Well-managed isn't AI-ready	One source of truth per customer, product and policy
Push deleted the checkpoint	Governance lives in the data, so every agent inherits it

"AI is not a product. It's the next paradigm on which we leverage our data." July 9 webinar

~~*AI won't replace humans but humans who can effectively integrate AI into their workflow will replace those who do not.*~~

2025

"AI won't replace you. But the version of you that refused to build will be replaced by the version of you that did."

"Eighteen months of watching taught me the lessons. Twelve months of building is the only thing that made me believe them."

Look before you leap

Shawn Rosemarin · Everpure · shawnrosemarin.com