

The Evolution of the Estimator

AI, Strategy, and the Future of Preconstruction



The Question Behind the Question

Will AI replace estimators?

No

“AI will not replace estimators. But estimators who use AI to create better decisions will replace those who only use it to work faster.”

My AI Journey: What I Thought, What I Learned

2017 — I thought technology was ready to fulfill my vision.

2019 — I thought the industry would share my vision of AI in precon.

2020 — I thought better data would solve the problem.

2022 — I thought AI was a technology conversation.

2023 — I thought AI adoption would move faster once the tools became real.

2025 — I thought the question was how AI would change estimating workflows.

2026 — The real question is no longer whether AI belongs in preconstruction.

**This is not the first time
estimating has changed.**

Not the First Time Estimators Had to Reinvent Themselves

Scale ruler

"This will never replace experience."

Calculator

"This will make people lazy."

Spreadsheet

"This will change everything."

BIM model

"This will finally connect design and cost."

AI assistant

"This time feels different."

The Evolution of Estimating: What Each Era Taught Us



THE PRESSURE IS REAL



We Don't Have a Data Problem. We Have a Decision Problem.

The issue is no longer access to information. It is finding what matters.

The image depicts a woman sitting at a desk, looking stressed and overwhelmed. She is surrounded by a massive amount of data and documents. The background is a wall covered in various project-related documents and digital overlays. The overlays include:

- DRAWINGS + SPECIFICATIONS**: Architectural drawings and specifications.
- ADDENDA + RFIs**: Addendum #5 and RFIs 127 and 198.
- EMAILS + MEETING NOTES**: A list of emails and meeting notes, including "Re: Flooring Clarification", "Columns in Gridline D", "MEP Coordination", "Budget Update", "Structural opening", "RE Addendum #5", and "Site Condition Question".
- MODELS + HISTORICAL DATA**: A 3D model of a building and a table of historical data.

The table of historical data is as follows:

Project	Year	Cost (\$M)	Year
Project Alpha	2023	\$24.3M	
Project Beta	2022	\$18.7M	
Project Gamma	2021	\$21.6M	
Project Delta	2020	\$15.9M	
Project Epsilon	2019	\$22.1M	

On the desk, there are stacks of papers with yellow sticky notes: "Check Qty", "Verify Unit", "Review Escalation", "QTO", "Pull Report", and "Check RFI". A laptop and a mug are also on the desk.

**So where should estimators
actually spend their time?**

Where Should Estimators Spend Their Time?

Low-value work

Search
Organize
Copy

High-value work

Strategize
Evaluate risk
Advise

Uncomfortable truth: The danger is not that AI will replace your best estimators. The danger is that your best estimators will spend too much time doing work AI should have removed.

The Future Division of Labour

**AI should handle the work before judgment.
Humans must own the judgment after the output.**

AI

*Search
Extract
Compare
Summarize
Structure*

Humans

*Validate
Challenge
Interpret
Decide
Own*

Real AI Value Today

6 PRACTICAL USE CASES OF AI TODAY IN CONSTRUCTION ESTIMATING

1 REVIEW RFPS

AI quickly extracts and summarizes key requirements, exclusions, dates, and qualifications.



2 ANALYZE PLANS

AI reads drawings and specs to identify quantities, systems, and risks—faster and with fewer misses.



3 BENCHMARK COSTS

AI leverages historical data and market intelligence to benchmark and validate costs in real time.



4 LEVEL BIDS

AI normalizes scopes and line items to identify apples-to-apples differences across bids.



BID COMPARISON				
ITEM	BIDDER A	BIDDER B	BIDDER C	AI INSIGHT
Concrete	\$1,245,300	\$1,198,000	\$1,275,000	✓
Structural Steel	\$842,000	\$812,000	\$910,000	✓
HVAC	\$1,234,900	\$1,105,000	\$1,260,000	⚠
Electrical	\$1,045,600	\$1,012,000	\$1,058,000	✓
Finishes	\$876,300	\$801,000	\$895,000	⚠
General Conditions	\$635,000	\$710,000	\$630,000	⚠
AI INSIGHT				
✓ In Line ⚠ Review ⚠ Outlier				

5 COMPARE SCOPE

AI highlights scope gaps, overlaps, and omissions between documents and bids.



SCOPE COMPARISON	
DOCUMENT A vs BIDDER B	
IN DOCUMENT A	IN BIDDER B
✓ Site Lighting	✓ Site Lighting
✓ Fire Alarm	> Door Hardware
✓ Door Hardware	ONLY IN A
✓ Landscaping	✗ Fire Alarm
	✗ Landscaping
	ONLY IN BIDDER B
	✓ Audio Visual

6 DRAFT PROPOSALS

AI helps draft clear, structured proposals and scope narratives tailored to the project.



INFORMATION
OVERLOAD



AI PROCESSING
& INSIGHT



BETTER DECISIONS
FASTER



STRONGER BIDS.
MORE WINS.

The Real Benefit

If AI gave your team 30% of its time back tomorrow, would you know exactly what to do with it?

Write this down:

“AI should not make estimators less involved. It should make them involved earlier, where the decisions are still shapeable.”

AI can produce output.

Humans must create confidence.

The Estimator's New Role

OLD
**PRODUCES
INFORMATION.**



- ⊗ Manual and time-consuming
- ⊗ Focused on data collection
- ⊗ Answers "what"
- ⊗ Reactive
- ⊗ Siloed impact



NEW
**CREATES
INSIGHT.**



- ✓ AI-powered and efficient
- ✓ Focused on analysis and interpretation
- ✓ Answers "so what" and "what next"
- ✓ Proactive
- ✓ Strategic impact across the project lifecycle



FROM DATA PRODUCER → TO VALUE CREATOR

The Biggest Risk

The biggest risk is not artificial intelligence.

It is artificial confidence.

TREAT AI LIKE A JUNIOR ESTIMATOR

SAME REVIEW PROCESS. SAME STANDARD. SAME ACCOUNTABILITY.



JUNIOR ESTIMATOR



EARLY IN CAREER.
LEARNING. GROWING.
NEEDS GUIDANCE.



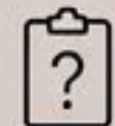
Creates takeoffs
and estimates



Applies unit costs
and assemblies



Develops quantities
and assumptions



May miss risks,
overlaps, or errors



Requires review,
mentorship, and feedback

VALUABLE. BUT NOT FINAL.

VS.



AI ASSISTANT



POWERFUL.
FAST. CONSISTENT.
BUT NOT INFALLIBLE.



Generates takeoffs
and estimates



Applies unit costs
and assemblies



Pulls from historical data
and benchmarks



May miss context,
nuance, or project-specific risks



Requires review, validation,
and human judgment

POWERFUL TOOL. NOT THE FINAL AUTHOR.



SAME REVIEW PROCESS

- ✓ Check quantities
- ✓ Validate assumptions
- ✓ Confirm unit costs
- ✓ Review scope & exclusions
- ✓ Assess risks & contingencies
- ✓ Approve or revise



Would you submit a junior estimator's work
without reviewing it? **No.**

AI can draft the work. It cannot carry the accountability.

Neither should you do that with AI.



ACCOUNTABILITY
IS HUMAN.
ALWAYS.

Don't trust AI. Govern it. Measure it. Improve it.



So what happens next?

**The future is not one tool.
It is a new operating model for preconstruction.**

WHAT'S NEXT IN PRECONSTRUCTION

THREE HORIZONS. ONE TRANSFORMATION.



0-3 YEARS

AI-ASSISTED WORKFLOWS



AI copilots help estimators work faster and smarter



Automated takeoffs, cost checks, and risk flags



Human expertise remains at the center

3-7 YEARS

CONNECTED DATA ECOSYSTEMS



Seamless data flow across design, estimating, scheduling, and field



Shared context and real-time collaboration



Single source of truth drives alignment and speed

7-15 YEARS

PREDICTIVE PRECONSTRUCTION



AI models predict cost, schedule, and risk outcomes



Scenarios optimized for best project outcomes



Preconstruction becomes a strategic advantage



BETTER INFORMATION. BETTER DECISIONS. BETTER PROJECTS.

THE FUTURE OF PRECONSTRUCTION IS INTELLIGENT.

Our Journey from Data to Prediction



The future is not AI

The future is better decisions powered by trusted data.

The Future Operating Model for Preconstruction

Layer 1: Trusted Data

Cost History
Production Data
Market Intelligence
Project Outcomes

Layer 2: Intelligence

AI
Analytics
Benchmarking
Prediction

Layer 3: Better Decisions

Pursuit Strategy
Risk Management
Scope Management
Client Advice

Data becomes the asset.
AI becomes the interface.
Better decisions become the advantage.

The Estimator of 2035

Less calculator, more strategist

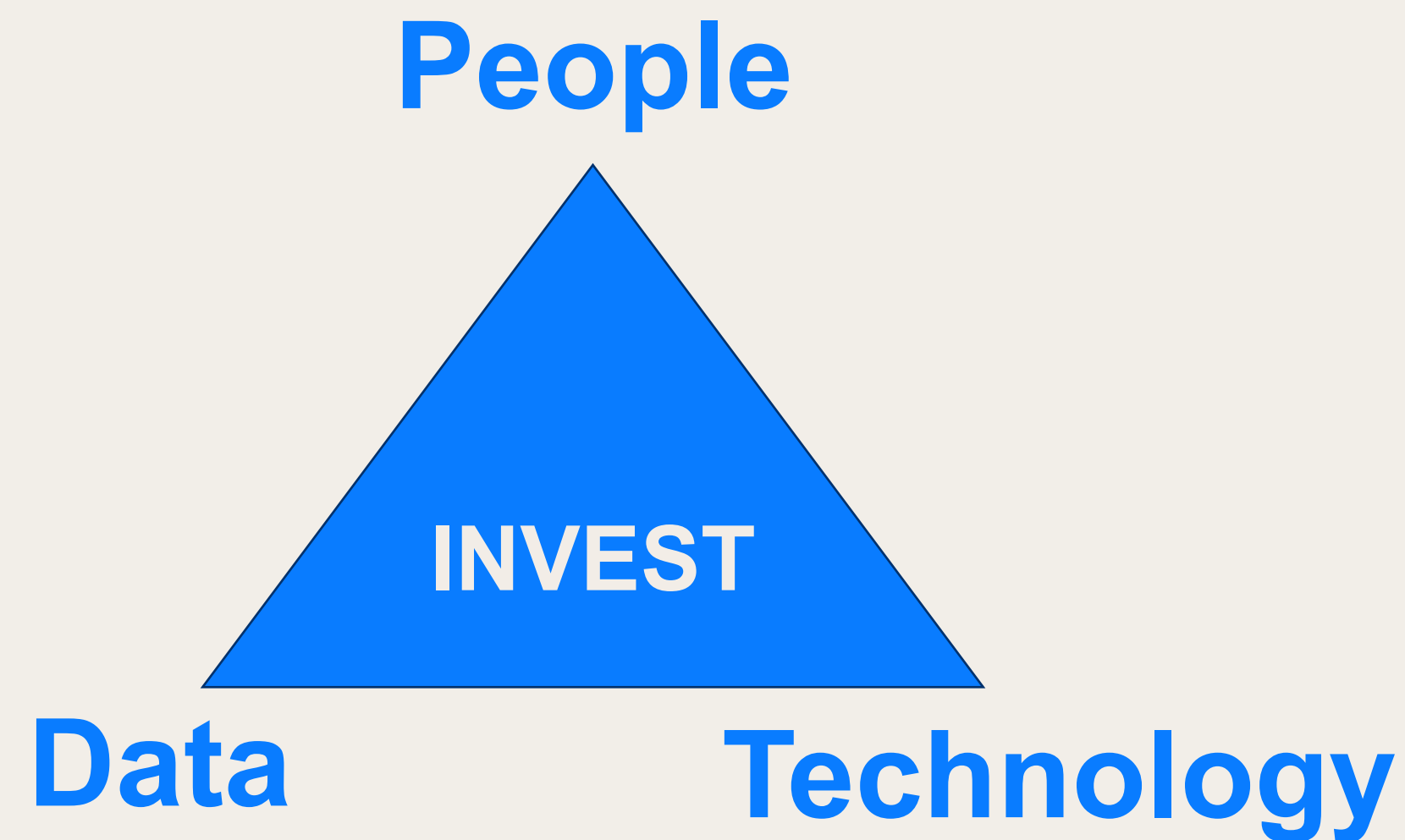
Less document chaser, more risk interpreter

Less report builder, more decision partner

Less order taker, more advisor

“The estimator of the future will not be measured only by how accurate the estimate is. They will be measured by how early they can influence the right decision.”

What Leaders Must Do Now



Most organizations will overinvest in tools and underinvest in behaviour change.

If your AI strategy does not include training, governance, role clarity, and behaviour change, then it is not a strategy. It is a software rollout.

People remain #1.

The Skills We Need

Future skills:

- ✓ Critical Thinking
- ✓ Commercial Acumen
- ✓ Risk Management
- ✓ Communication
- ✓ Data Literacy
- ✓ Relationship Building

The Choice

YOU CAN USE AI
TO MAKE ESTIMATING
FASTER.



YOU CAN USE AI
TO MAKE PRECONSTRUCTION
SMARTER.



- ✓ BETTER DECISIONS.
- ✓ LOWER RISK.
- ✓ HIGHER VALUE.
- ✓ STRONGER PROJECTS.

The 3 Questions Every Preconstruction Leader Should Ask

What should AI do?

Remove friction
Summarize information
Detect patterns
Produce drafts.

What must humans own?

Judgment
Risk
Accountability
Trust
Client advice.

What must leaders build?

Data discipline
Governance
Skills
Behaviours
Confidence.

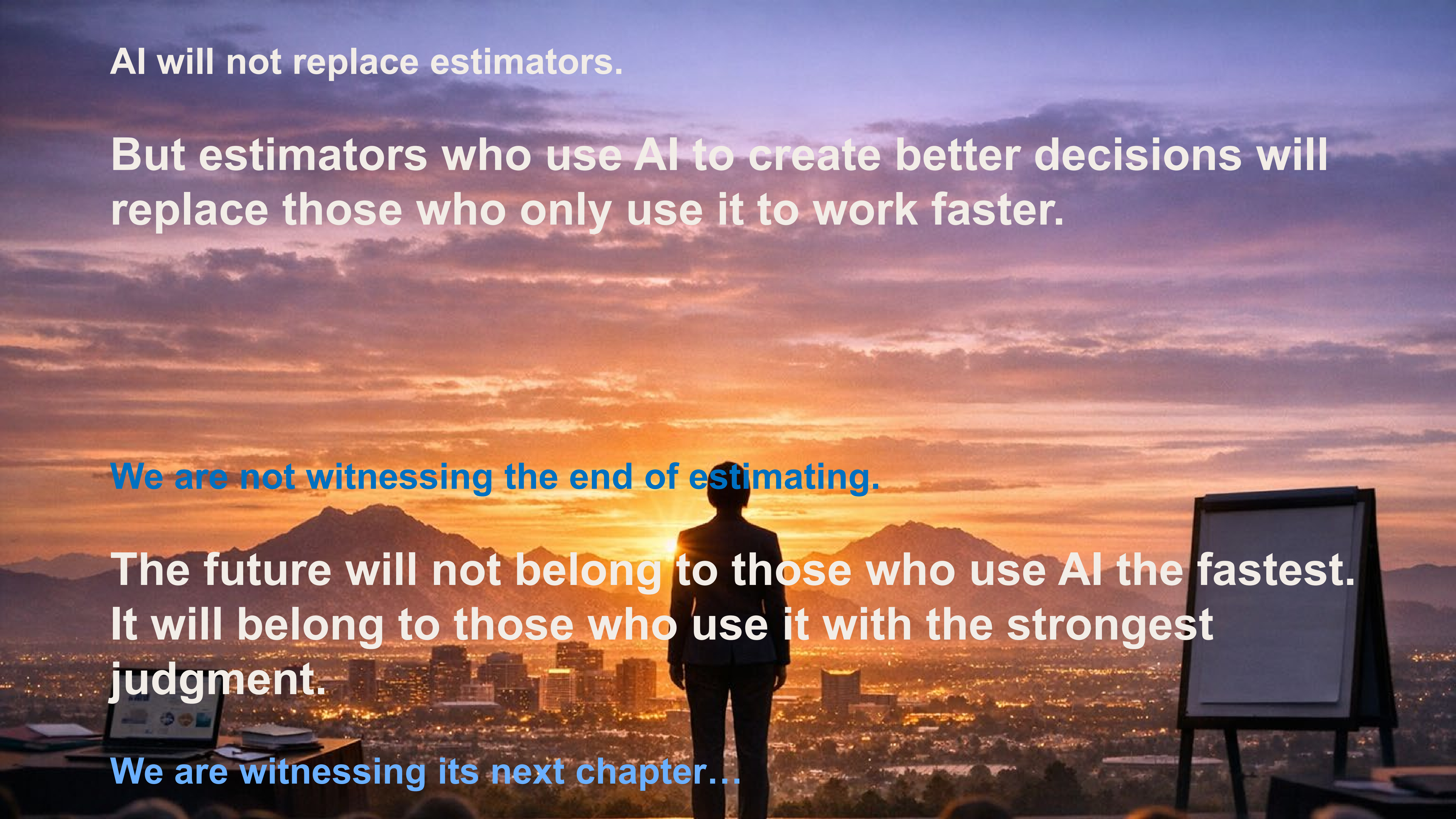
AI will not replace estimators.

But estimators who use AI to create better decisions will replace those who only use it to work faster.

We are not witnessing the end of estimating.

The future will not belong to those who use AI the fastest. It will belong to those who use it with the strongest judgment.

We are witnessing its next chapter...



THANK YOU