



AI and Automation in 2025

OR HFMA– Salishan

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Jeff Means

Jeff is an entrepreneur in healthcare revenue cycle management (RCM), automation, and AI-driven innovation. He has pioneered partially and fully autonomous solutions that deliver meaningful productivity and quality improvements. Over the past 20 years, he has led projects that delivered over \$1B in client benefits and brought eight AI-powered solutions to market. He is currently the co-founder and CEO of Long Tail Health Solutions – using generative AI to change paradigms for Clinical Denials and Utilization Management.

Jeff is a graduate of the United States Military Academy (West Point) with a BS in foreign languages and holds an MBA from the University of Chicago. A veteran of the war on terror, he served in Southwest Asia and Africa. Jeff lives in the Chicago suburbs with his wife, Carissa, and their children, Lucas (15) and Lindley (12).



What We Will Learn

AI Basics and State of the Art

Automation Gain

Use Case Evaluation

AI Safety and Lessons Learned



How We Got Here

Problem Statement #1:

Healthcare organizations have invested in automation for years and most initiatives have delivered little return on investment.

Problem Statement #2:

Every technology vendor claims to be using AI and it is difficult to understand what these tools do, how they fit into the ecosystem, and what is the real value add.



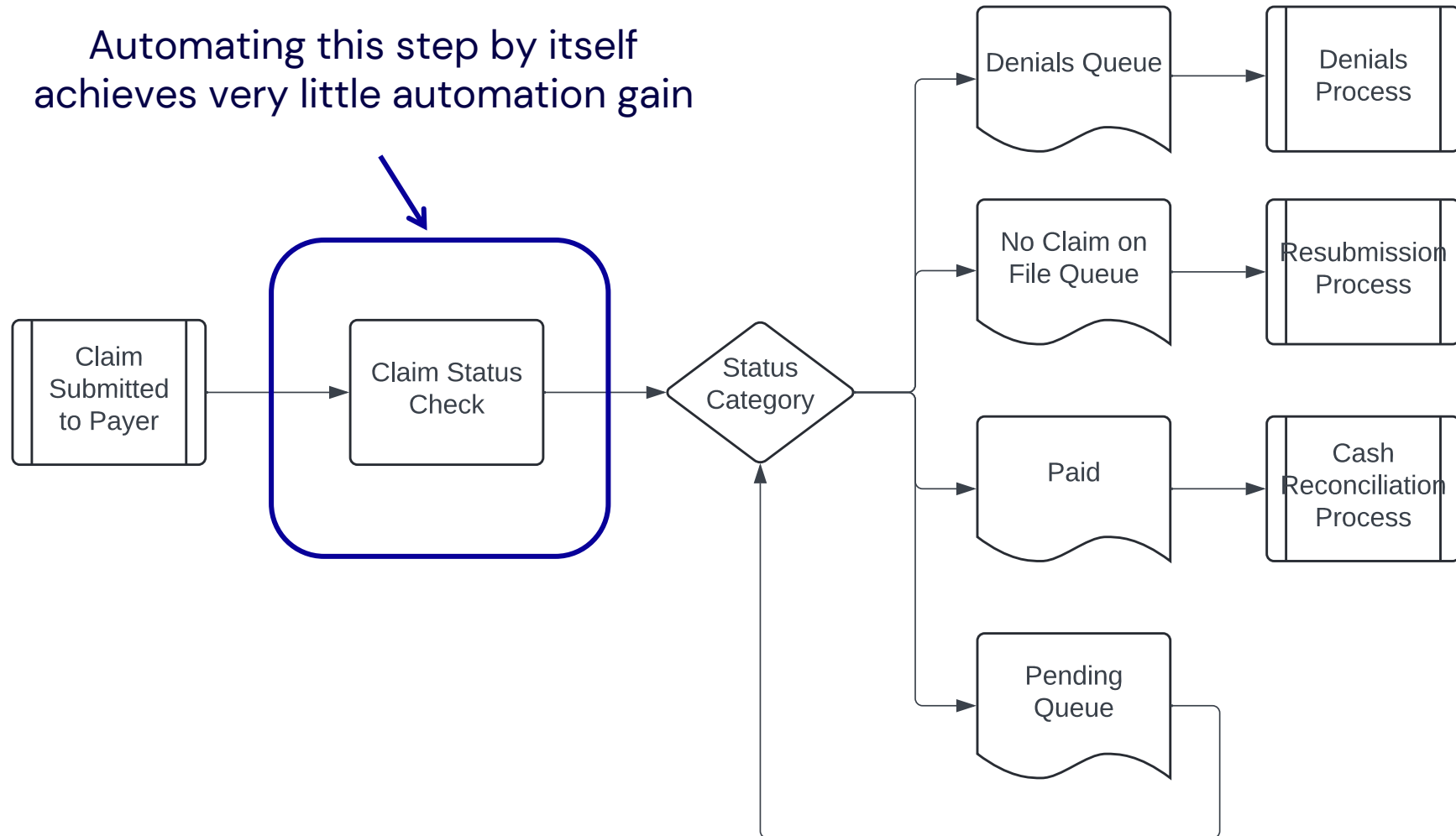
The Goal: Automation Gain

"Automation Gain" is the net realized labor savings harvested from the automated activity.



Use Case #1: Claim Status Checking

Automating this step by itself
achieves very little automation gain



The Modern Automation Toolkit

Predictive Analytics & Machine Learning

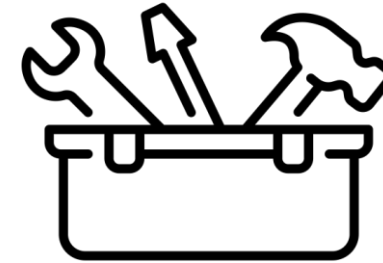
Generative AI

Robotic Process Automation

Business Rules Management

Systems Interfaces (APIs)

Business Intelligence



Large Language Models (LLMs) - 101

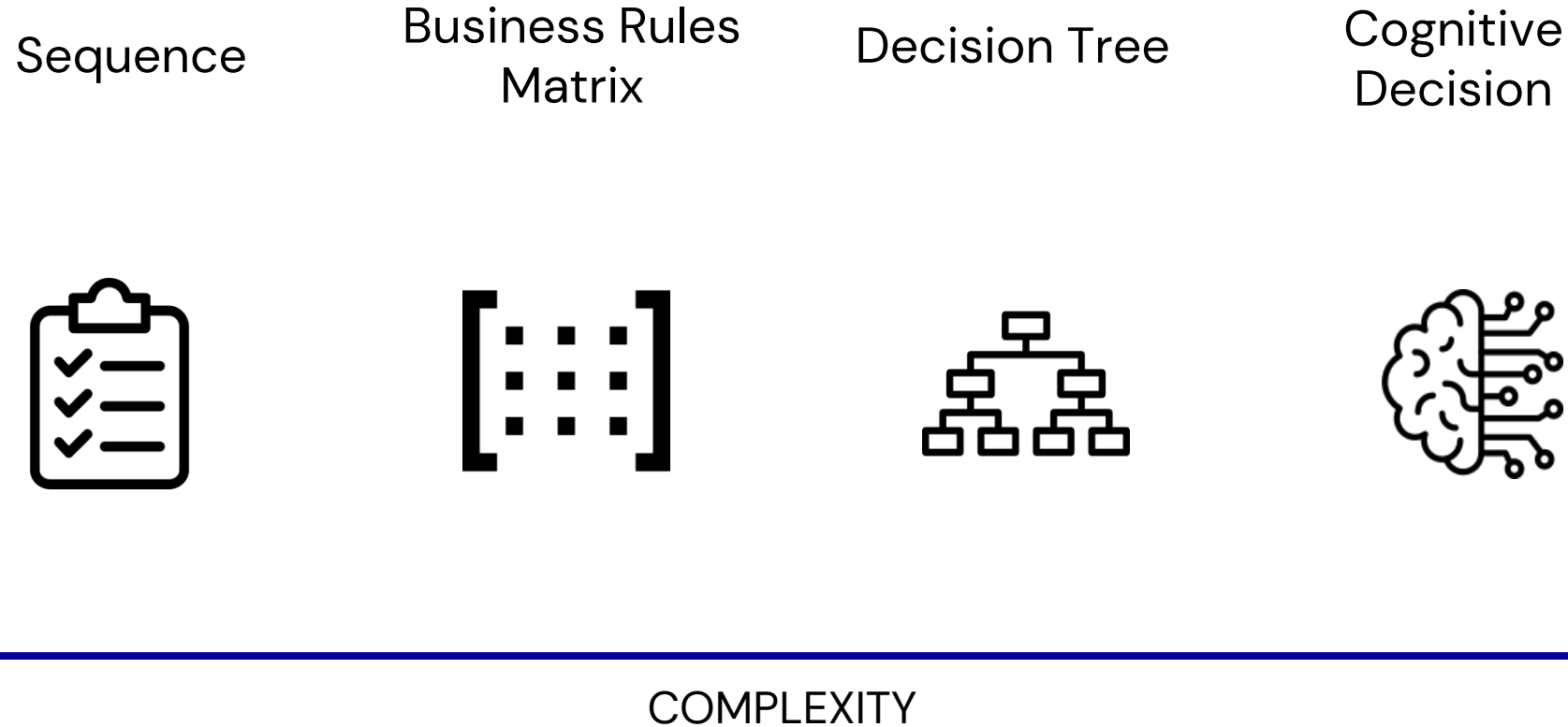
An LLM is a neural network, trained on massive amounts of text data, that identifies the patterns and relationships between words, phrases, and sentences.

- ✓ Predicts the next word(s) or phrase(s) in sequence
- ✓ Translates between languages
- ✓ Creates summaries and responses
- × Does NOT *understand* the meaning of language

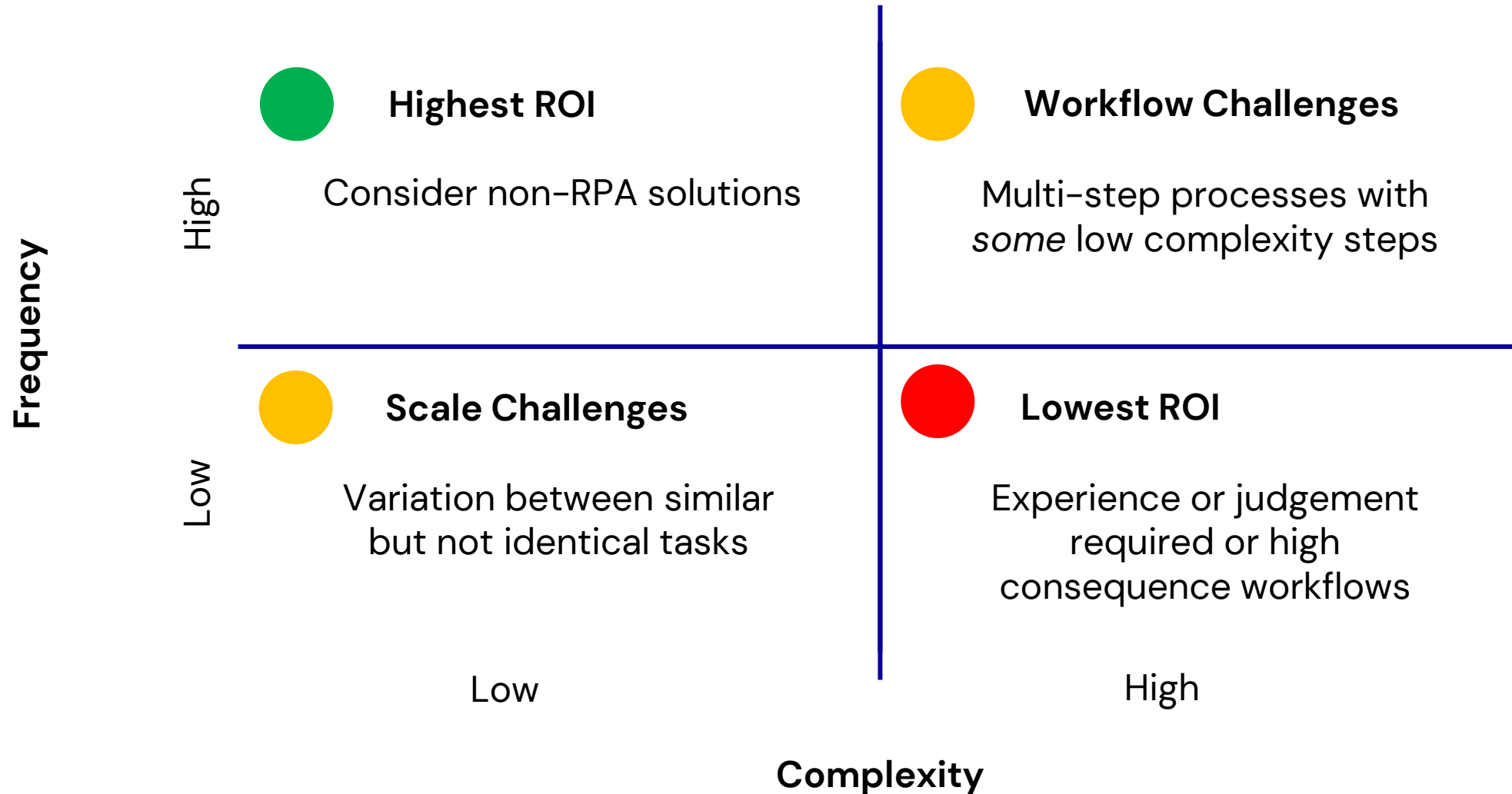
Artificial intelligence is *simulation* of human intelligence using computer systems



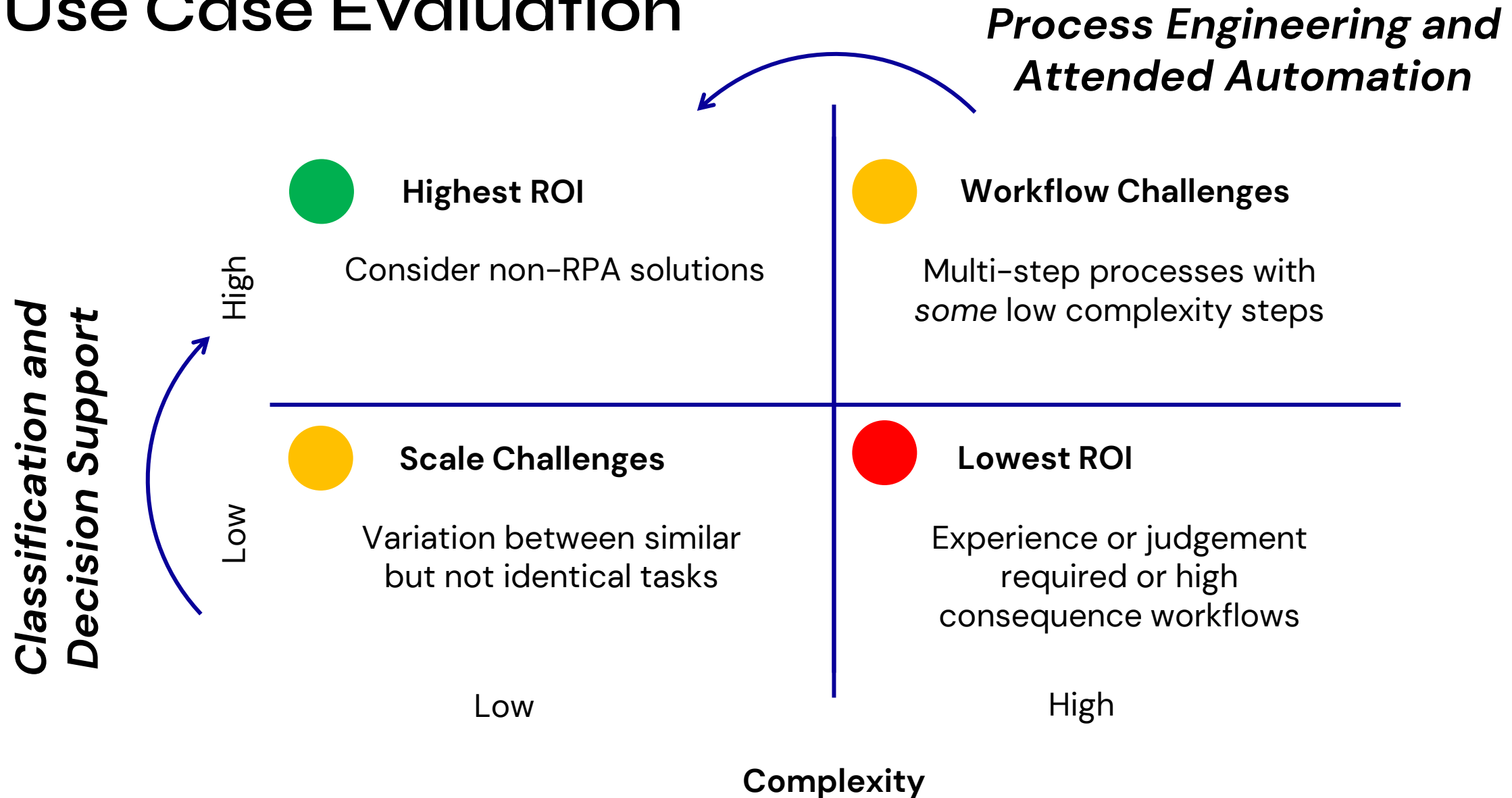
Task Evaluation Framework



Use Case Evaluation



Use Case Evaluation

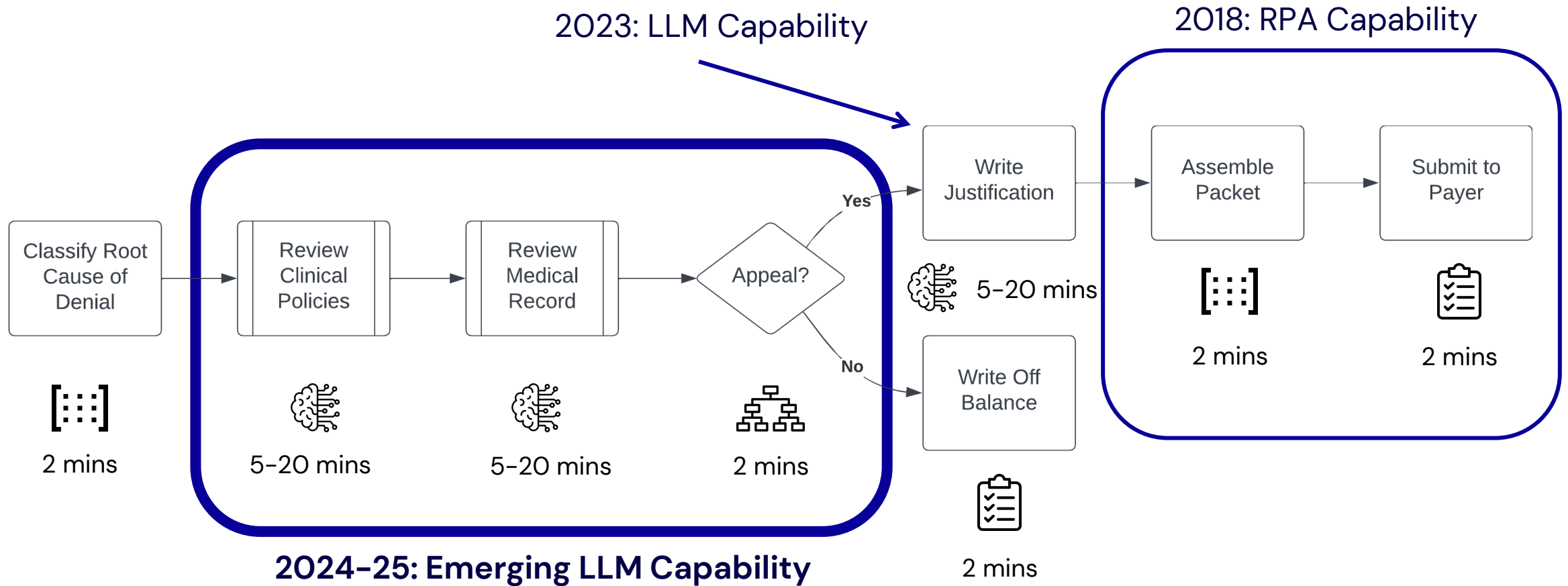


Use Case #2: Clinical Appeals

- Use case with very high ROI and relatively high volume
- Half of the steps have low complexity
- Many steps that require data hand offs
- Several steps with high complexity decision-making
- With investment, the complex steps can be commercialized
- Expected automation gain: 20 mins



Use Case #2: Clinical Appeals



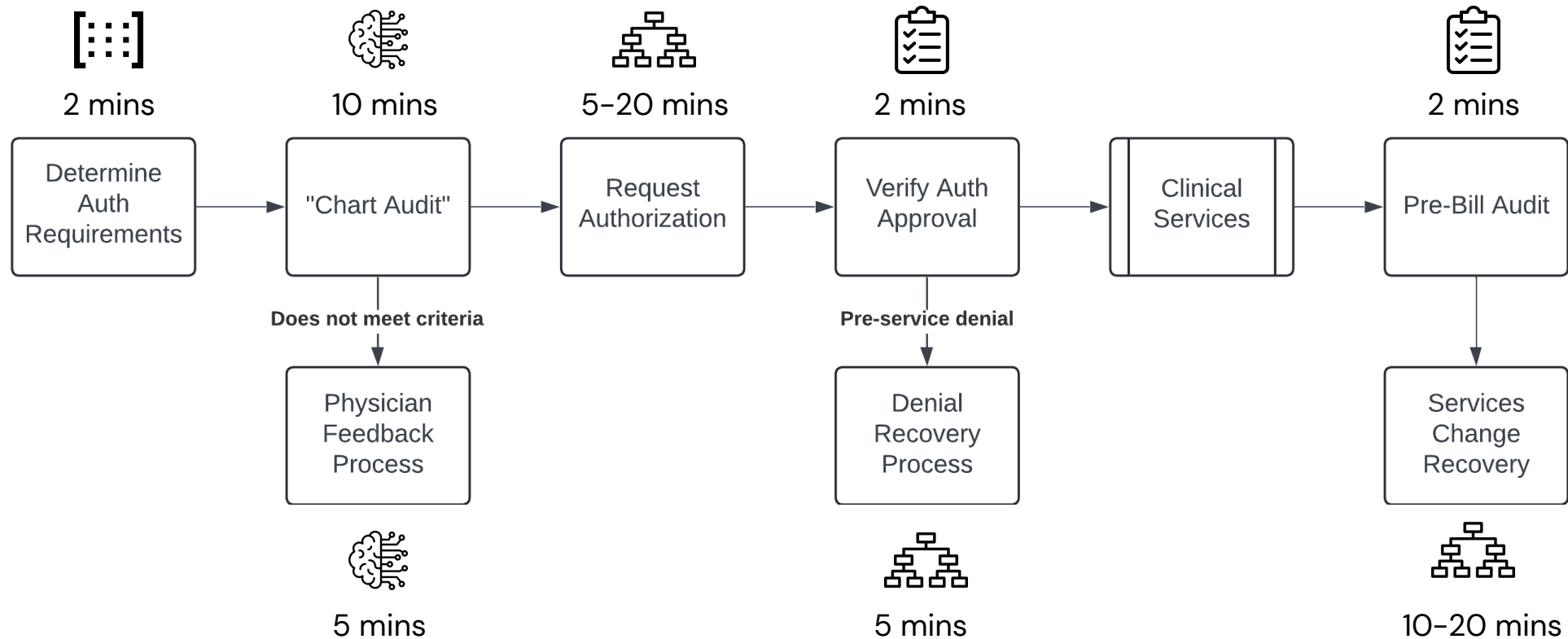
Use Case #2: Clinical Appeals

Metric	Definition	Benchmark ⁺	Expressed Per \$1B of NPSR	Expressed as Gross Charges (on Remits)*	Expected Metrics Based on Size of Provider Organization		Gross Charges Denied (on Remits)
						Net Value of Denials	
Initial Denial Rate	\$ Denied / \$ Remitted	4.20%	\$ 42,000,000	\$ 168,000,000	Expected Initial Denials	\$ 241,500,000	\$ 966,000,000
	- Filtered to Medical Necessity	0.72%	\$ 7,200,000	\$ 28,800,000		\$ 41,400,000	\$ 165,600,000
	- Filtered to Authorizations	1.56%	\$ 15,600,000	\$ 62,400,000		\$ 89,700,000	\$ 358,800,000
	- Filtred to Documentation Requests	1.92%	\$ 19,200,000	\$ 76,800,000		\$ 110,400,000	\$ 441,600,000
		+ Source: The Optum 2022 Revenue Cycle Denials Index					
Recovery Rate	\$ Recovered in Payments / \$ Denied	72.0%	\$ 30,240,000			\$ 173,880,000	
	- Filtered to Medical Necessity	50.0%	\$ 3,600,000			\$ 20,700,000	
	- Filtered to Authorizations	60.0%	\$ 9,360,000			\$ 53,820,000	
	- Filtred to Documentation Requests	90.0%	\$ 17,280,000			\$ 99,360,000	
				as % of NPSR			
Denial Reimbursement Loss **	Net \$ Left Un-Recovered		\$ 11,760,000	1.2%		\$ 67,620,000	
	- Filtered to Medical Necessity		\$ 3,600,000	Last bit		\$ 20,700,000	
	- Filtered to Authorizations		\$ 6,240,000			\$ 35,880,000	
	- Filtred to Documentation Requests		\$ 1,920,000			\$ 11,040,000	
		Ave Wage	FTEs/\$1B NPSR	Total Cost	Expected Staffing Expense		
Cost to Collect ***	Operational Teams Expense		52.0	\$3,335,000		299.0 \$	19,176,250
	- UR nurses	\$ 85,000	15.0	\$1,275,000		86.3 \$	7,331,250
	- Admins	\$ 55,000	4.5	\$247,500		25.9 \$	1,423,125
	- Denials	\$ 65,000	2.5	\$162,500		14.4 \$	934,375
	- Prior Authorization	\$ 55,000	30.0	\$1,650,000		172.5 \$	9,487,500
	Vendor Expenses			\$2,000,000		\$	11,500,000
	- Denials Recovery Vendor(s)						
	- Physician Advisory Service (PAS)						
	- Workflow /Automation Support Software						
	- Decision Support / Analytics Software						
			Total Cost to Collect	\$5,335,000		Total Cost to Collect	\$30,676,250
			as % of NPSR	0.53%		as % of NPSR	0.53%

Company Confidential. Permission required for sharing.



Use Case #3: Authorizations



Large Language Models (LLMs) - 201

- Context
- RAG – Retrieval-Augmented Generation
- Fine-Tuning
- Multi-Agent
- Chain-of-Thought Reasoning
- Multimodal
- Agentic Automation

Artificial intelligence is *simulation* of human intelligence using computer systems



Additional Use Cases

Patient Status Recommendation

Concurrent Review / In House Denials

Care Plan Submission

Care Gaps Closure

Outbound Scheduling

Appointment Reminders/Instructions

COB/Eligibility Denials



AI Safety & Lessons Learned

- ChatGPT, Grok, Gemini are *not* HIPAA compliant!
- AI is *both* more accurate and less accurate ...
- Break tasks into the smallest components
- Use the best tool for each task
- Optimize the process *first*, then automate
- *Solve* for the limitations of your tools
- First solution is probably not the final
- Log *everything*



The Future is Bright...

Contact Me to Discuss More

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(not AI ...)

