

U S
T .

From AI Pilot to Production



Move the
combined ratio.
Lower expense.
Lower loss.

ust.com

For P&C and L&A leaders, translating AI investment into measurable improvement in the ratios that define profitability.

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EXECUTIVE SUMMARY

Combined ratio is the test

AI earns its place when it moves the combined ratio.



U.S. carriers across P&C and L&A have funded AI initiatives in underwriting, policy service, and claims. Many programs are between proof of concept and production. The gap is execution discipline.



For executive teams and boards, every AI investment must answer one operational question before additional funding is justified:

Which ratio does it move, and by what mechanism?

The reasons carriers buy technology ultimately boil down to two levers:

Expense ratio improvement comes from:

Customer satisfaction reduces lapses and complaint costs



Growth through cross-sell and upsell improves acquisition cost amortization



Operational efficiency reduces underwriting, service, and adjustment costs



Regulatory compliance reduces remediation costs, fines, and exam costs

Loss ratio improvement comes from:

Stronger model risk control



Better risk selection and precision pricing



Earlier fraud detection and recovery identification



Improved reserve accuracy and severity management



Faster claims handling that limits severity creep

Most production-grade AI programs improve both ratios simultaneously.

EXECUTIVE CHECKPOINT

For each AI use case in your portfolio, can your team state whether it lowers expense ratio, loss ratio, or both?

THE PILOT TRAP

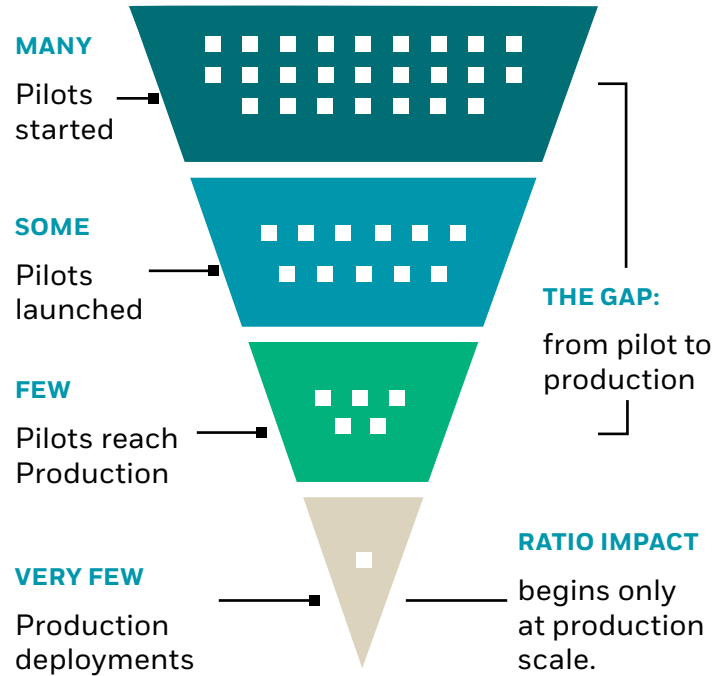
Pilots prove the possibility. Production proves the ratio's movement.

The insight problem is solved. The operationalization problem isn't. Most carriers can prove a model works in a controlled environment. Few can prove it improves the combined ratio in production.

AI tools often operate outside adjuster desktops, underwriting workflows, or servicing platforms, forcing employees to switch systems, duplicate work, and reconcile outputs manually. Adoption slows before measurable business impact appears.

AI pilots often succeed in controlled environments but stall when deployed into live underwriting, claims, and service operations. The result is a widening gap between experimentation and measurable business outcomes.

Most pilots prove the model works. Fewer prove the business can operationalize it at scale.



Common failure points:

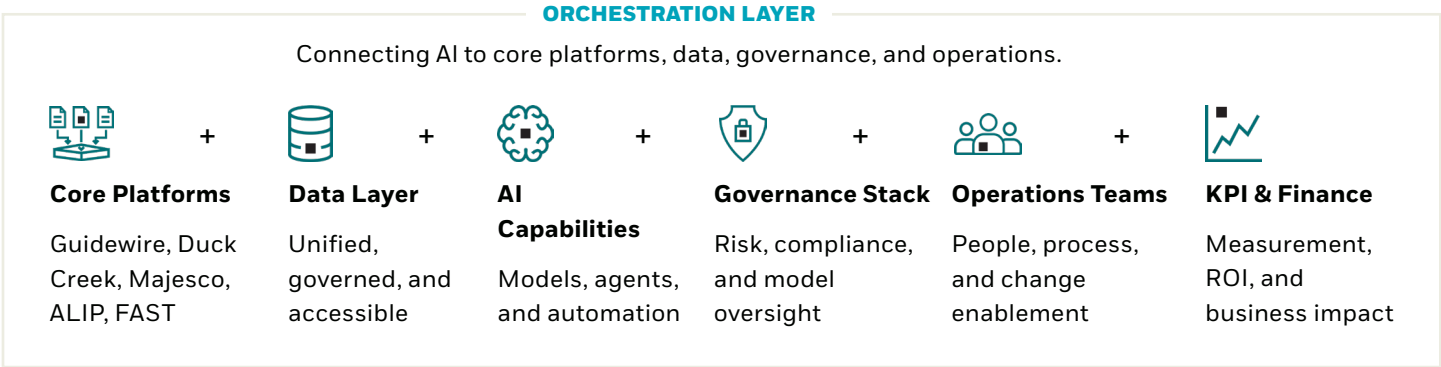
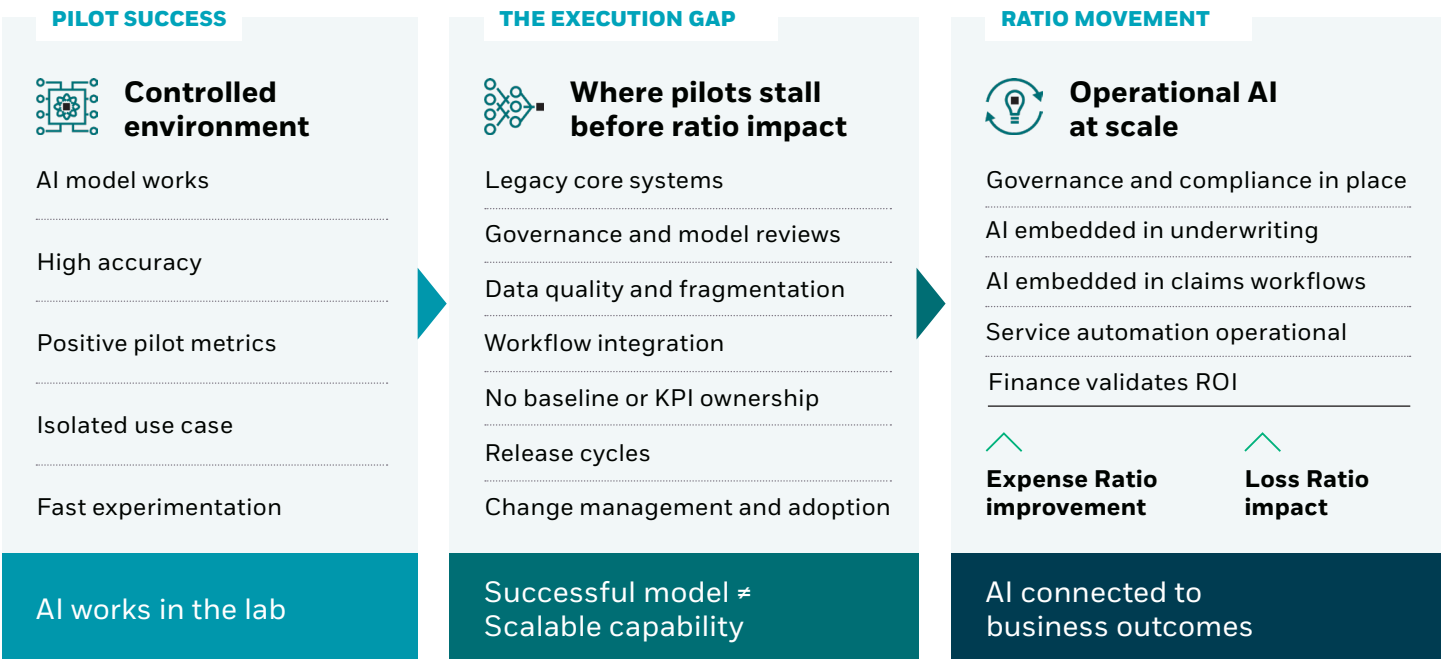
- Data is fragmented across claims, policy, billing, and document systems.
- AI tools sit alongside the adjuster, underwriter, or service workflow rather than within it.
- Governance is added late, pushing the ratio's benefits beyond the budget cycle.
- Teams lack the capacity to redesign processes to support the new capability.
- Success metrics frequently stop at model accuracy or automation rates rather than proving measurable impact on underwriting throughput, claim severity, reserve accuracy, LAE, or servicing cost.

BUSINESS IMPLICATION

AI that stalls in pilot delivers no Expense Ratio relief and no Loss Ratio improvement. The investment shows up in the Expense Ratio before it appears in underwriting or claims performance.

The hardest work starts after the demo

The execution gap is the distance between a working AI model and measurable improvement in the expense ratio or loss ratio.



EXECUTIVE CHECKPOINT

Where did your last AI pilot slow down: data, integration, governance, adoption, or ratio measurement?

WHERE ROI APPEARS FIRST

Tag every initiative to the ratio it moves

Most insurers already have more AI use cases than operational capacity to scale them. The limiting factor is prioritization tied to measurable ratio impact, workflow feasibility, and governance readiness. The strongest initiatives reduce operational expense while simultaneously improving underwriting precision, reserve quality, fraud identification, or severity management.

Insurance carriers perform three core functions: selling policies, administering policies, and adjusting claims on those policies. Each function offers a clear path to expense ratio relief, Loss Ratio relief, or both. The strongest AI investments improve both sides simultaneously.

AI initiatives impact heat map

Intensity of Impact on Expense Ratio and Loss Ratio

Business function	AI Initiative	Expense Ratio Impact	Loss Ratio Impact
 Sell	Submission triage and intake	High	Medium
	Risk appetite matching and pricing	Medium	High
	Accelerated life underwriting	High	High
 Administer	Service deflection and virtual assistants	High	Medium
	Document and correspondence automation	Medium	Medium
	Billing inquiry deflection and payment optimization	High	Medium
 Adjust	FOL triage and routing	High	High
	Severity prediction and adjuster assist	High	High
	Fraud detection and recovery models	Medium	High

For L&A, parallel benefits apply through operating expense ratio improvement and persistency lift. The retained block stabilizes mortality and morbidity assumptions over time.

VALUE POOL WATERFALL

From AI output to ratio movement

“A model metric is not a ratio metric. The chain in between is where production lives.”

AI value becomes credible when it moves from a model metric to an operational metric to a ratio that finance recognizes.

Executive teams and finance organizations do not fund model accuracy alone. They fund measurable operational and financial improvement that can be validated against the baseline.

Worked example. FNOL triage automation in claims:

- Model output. Loss complexity score and routing recommendation at first notice.
- Operational metric. Routing accuracy improves. Cycle time drops. Reassignments fall.
- Cost metric. Unallocated loss adjustment expense declines as adjusters carry larger appropriate case loads.
- Impact on ratios. Expense ratio improves through lower ULAE. Loss Ratio improves through earlier first contact, better reserves, and lower severity creep on contested losses.
- Income statement. Combined Ratio improves through both levers.

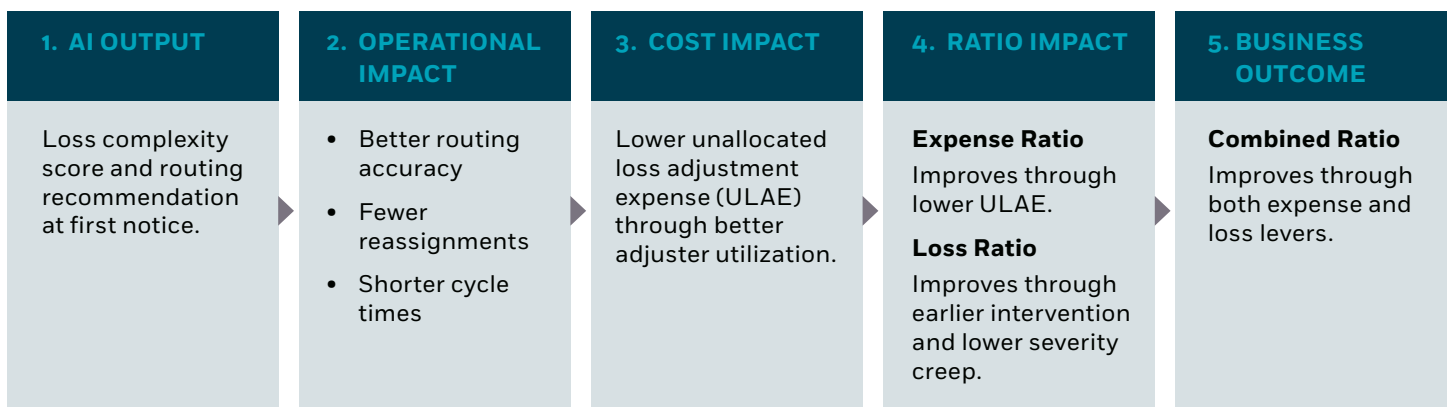
Every production AI initiative should demonstrate a measurable chain from model output to workflow adoption to financial impact. Missing links in that chain are where most programs stall.

Many insurers can demonstrate model accuracy. Far fewer can demonstrate a repeatable chain between AI output, operational adoption, and financial performance.

Production-scale AI initiatives should follow this chain. If a use case stops at model performance or operational metrics alone, finance will struggle to validate enterprise value.

Business implication:

The strongest AI programs measure operational adoption and financial impact together, not separately.



WHAT BLOCKS SCALE

Every blocker has a price

AI scale failures begin when operational ownership, workflow redesign, governance execution, and integration complexity are underestimated during pilot planning. AI outputs require employees to leave the core claims or underwriting workflow to access recommendations, creating shadow operations and reducing adoption. Operational teams report activity improvements, but no finance-aligned owner validates whether Combined Ratio improvement actually occurred.

Small execution gaps can quickly become operational drag, delayed ROI, higher remediation costs, and weak adoption.

Each blocker creates a measurable impact on the combined ratio and maps to a specific UST capability within the orchestration stack.

Blocker	What it looks like	Cost on the Combined Ratio	UST capability
Data readiness	Fragmented claims, policy, billing, and document data	Loss Ratio benefit never materializes because the model lacks trusted inputs	UST IQ
Legacy integration	AI tools running outside core platform workflows	Expense ratio benefit stalls because adjusters and underwriters do not adopt the tool	UST SmartOps
Weak ownership	No P&L owner and no finance partner accountable for ratio movement	Ratio impact is claimed but never validated against the baseline	Operating model
Governance gaps	Limited testing, explainability, and audit trail	Approval delays push ratio benefit past the current budget year. Remediation cost lands in expense ratio.	CyberProof
Quality and release risk	AI-driven changes outpace test coverage and release controls	Production defects produce rework, customer complaints, and reserve volatility. Both ratios move the wrong way.	UST QE360

EXECUTIVE CHECKPOINT

Which blocker is most likely to prevent your next AI initiative from showing up on the Combined Ratio?

PILOT-TO-PRODUCTION OPERATING MODEL

Six roles. One ratio target.

Production AI requires coordinated ownership across business, technology, data, risk, and operations. Six roles need to be defined for every use case that enters production. Each role is accountable for a specific contribution to ratio movement.

The most effective insurers treat AI as a cross-functional operating model, not a standalone technology initiative.

Required roles	Risk and compliance
 Business owner: Defines the ratio hypothesis, operational KPIs, and the adoption targets.	 Risk and compliance: Sets control requirements aligned with NAIC and state DOI expectations. Protects the program from remediation costs.
 Data leader: Ensures data inputs are usable, governed, and trusted enough to support a decision.	 Operations leader: Redesigns workflows and oversees frontline adoption.
 Enterprise architecture: Designs the AI integration path to Guidewire, Duck Creek, Majesco, Sapiens, ALIP, or FAST so the expense ratio benefit reaches the daily workflow.	 Finance partner: Validates the ratio baseline before the pilot and tracks benefit realization through production.

Insurers discover that building the model is materially easier than coordinating operational adoption, governance approvals, release cycles, workflow redesign, and financial validation simultaneously.

That responsibility increasingly falls to a seventh role: the orchestrator.



- The orchestrator aligns AI vendors, data partners, the core platform, the cloud foundation, governance requirements, and internal business teams so AI can move from isolated pilots into scalable operational workflows.
- As AI initiatives expand across business functions, platforms, and teams, coordination requirements increase significantly. The insurers achieving the greatest business impact establish orchestration capabilities early, creating alignment across technology, operations, data, and governance from the outset.
- UST supports this orchestration model for insurers by helping connect AI capabilities, core platforms, governance controls, and operational workflows into production-scale programs.

BUSINESS IMPLICATION

Without shared accountability across operations, governance, technology and finance, AI programs struggle to move from pilot activity to measurable enterprise value.

WORKFLOW REDESIGN

AI must fit the work

Every insurance workflow has three components: people, process, and technology.

AI changes who makes decisions, how exceptions escalate, how frontline teams spend time, how quality is measured, and how operational accountability is enforced. When AI is layered onto workflows designed for manual operations, carriers often create duplicate review paths, exception queues, and manual reconciliation work that offset expected productivity gains.

That is why workflow redesign matters.

The insurers generating measurable value are redesigning operational workflows around AI capabilities instead of inserting AI into workflows designed for manual work.

Questions determine whether AI scales operationally:



Operations leaders:

- Which task should AI perform end-to-end?
- Which decision should be left to a human?
- Which exceptions require escalation, and to whom should they be escalated?
- Where should AI outputs appear within the existing core platform workflow?
- How will quality and drift be monitored?



Business owners and finance:

Which ratio does this redesign improve, and how?

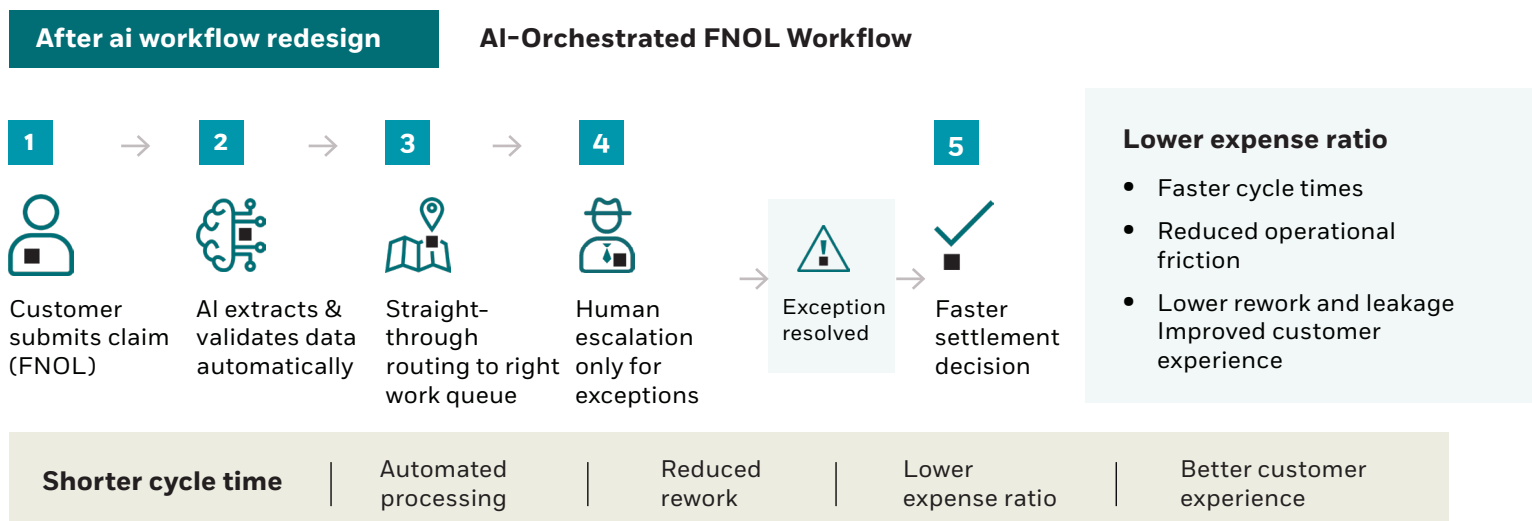
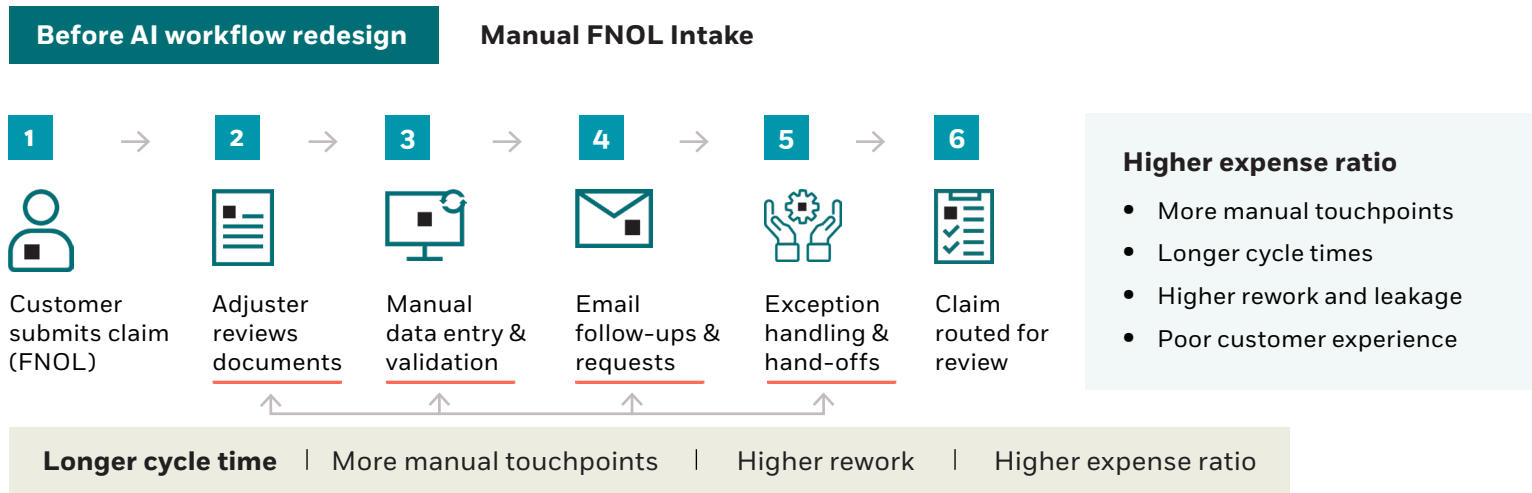
AI programs can optimize model performance while leaving operational friction untouched.

When AI is layered onto manual workflows without redesigning, insurers create shadow operations that increase friction instead of productivity. The result is slower adoption, inconsistent usage, and weaker operational impact.

The executive question is whether frontline operations perform faster, more consistently, and with lower operational cost after AI enters production.

AI must fit the work, not the other way around

AI creates enterprise value when it is embedded into operational workflows, reducing manual effort, accelerating decisions, and improving measurable business outcomes.



EXECUTIVE CHECKPOINT

For your highest-priority AI initiatives, can the operations leader define the workflow redesign and the finance partner name the ratio mechanism?

GOVERNANCE BY DESIGN

Governance protects both ratios

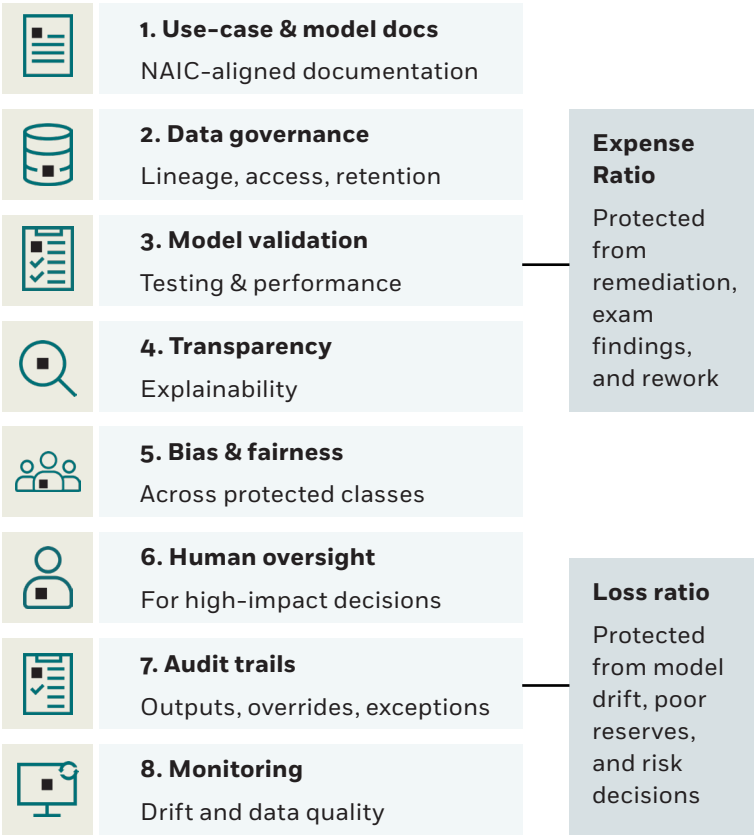
Governance determines whether AI can survive production scrutiny long enough to generate measurable Combined Ratio improvement.

The carriers operationalizing AI most effectively are embedding governance, testing, auditability, and monitoring requirements directly into delivery workflows from the beginning.

Core controls

- Use-case documentation aligned with NAIC model audit expectations.
- Data lineage and access management, and retention controls.
- Model testing, validation, and performance benchmarks.
- Explainability standards for adjusters, underwriters, and regulators.
- Bias and fairness checks across protected classes.
- Human oversight points for high-impact decisions.
- Audit trails for every model output and every override and exceptions.
- Ongoing monitoring for performance drift and data quality.
- Audit trails for model outputs and overrides.

AI governance control stack



Strong governance accelerates value and protects both ratios.
Weak governance delays value and increases cost.

GOVERNANCE IN PRACTICE

Trust is operational

For insurers, AI governance must address practical questions in NAIC model audits, state DOI examinations, and internal risk reviews:

- Can we explain how the decision was made?
- Can we show what data was used to produce it?
- Can we prove that human oversight exists where required?
- Can we monitor performance drift over time?
- Can we produce documentation for an exam on short notice?

Leading carriers are operationalizing governance through defined escalation paths, evidence standards, audit-ready workflows, monitoring cadences, and named accountability owners rather than treating governance as a periodic compliance review.

UST IQ and CyberProof support this operating model by helping insurers structure governance workflows, monitoring, evidence management, and security controls around production-scale AI programs.

Operational governance maturity reduces remediation effort, accelerates regulatory response readiness, and limits the operational drag associated with audit findings and model rework.

Governance question	Owner	Evidence source	Refresh	Audit-response track Be ready for an exam	Drift-monitoring track Stay ahead of risk
1. Can we explain how the decision was made?	Model Owner	Model docs, explainability logs	Quarterly	Document rationale & explainability	Track model performance
2. Can we show what data was used?	Data Owner	Data lineage, feature store	Quarterly	Provide data lineage & source evidence	Monitor data quality & freshness
3. Can we prove human oversight exists where required?	Process Owner	Approval logs, oversight records	Real-time	Show human-in-the-loop & approval evidence	Review override rates & trends
4. Can we monitor performance drift over time?	Model Owner	Monitoring reports, metrics dashboard	Monthly	Share monitoring reports & thresholds	Detect & alert on drift signals
5. Can we produce documentation for an exam on short notice?	Governance Owner	Governance repo, evidence library	Monthly	Assemble exam packet quickly & consistently	Maintain continuous evidence trail

ROI FRAMEWORK

Combined Ratio = Expense Ratio + Loss Ratio

AI programs generate operational activity long before they generate measurable financial improvement. Executive skepticism increases when productivity claims fail to translate into Combined Ratio movement.



Momentum inside a pilot

Model accuracy, automation rates, and productivity gains can create momentum inside a pilot. Executive scrutiny increases once the conversation shifts to expense performance, claims economics, underwriting quality, and measurable profitability improvement.



Confidence weakens

This is often where executive confidence weakens. Operational metrics alone rarely survive CFO scrutiny without validated financial linkage.



Strongest AI programs

The strongest AI programs treat the Combined Ratio as the primary measurement of P&C profitability. It is also the cleanest forcing function for AI investment discipline. Every approved use case should be traceable to one or both sides of this equation.

For L&A carriers, parallel measures apply: operating expense ratio, claims expense ratio, persistency, and net flows. The same logic holds. Every initiative pulls a specific lever.

BUSINESS IMPLICATION

Operational adoption, financial accountability, and executive measurement discipline determine whether AI remains experimental or becomes an enterprise capability.



Build the business case in three steps

Every AI initiative should create a clear, validated path from model output to Combined Ratio improvement.

Baseline



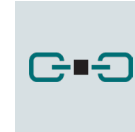
Capture Pre-AI Expense and Loss Ratios at the use-case level.

Hypothesize



State which lever the AI initiative pulls and the mechanism that produces the movement.

Validate



Track the chain from model output to the operational metric to the ratio movement, with finance as the auditor.

Expense ratio drivers AI moves



Acquisition cost through lead scoring, agent enablement, faster quote turnaround.



Underwriting expense, reduced through submission triage, accelerated underwriting, automation.



Policy administration cost Lowered through self-service, document automation, billing deflection.



Loss adjustment expense, improved with ULAE portion. Adjuster productivity and triage automation.



Compliance cost controlled governance automation, audit-ready documentation, exam response.



Service and contact cost optimized with virtual assistants, intent classification, agent assist.

Loss Ratio drivers AI moves



Risk selection strengthened by more consistent underwriting decisions..



Pricing precision Improved with better segmentation-level loss-cost matching and rate adequacy.



Reserve accuracy enhanced by severity prediction and IBNR refinement.



Claim leakage reduced through overpayment, missed defenses, and missed recoveries.



Fraud exposure, reduced through earlier identification of suspicious claims.



Cycle-time-driven severity limited through faster resolution caps medical, legal, and rental escalation.

MEASUREMENT CADENCE

Track ratio movement, not promises.

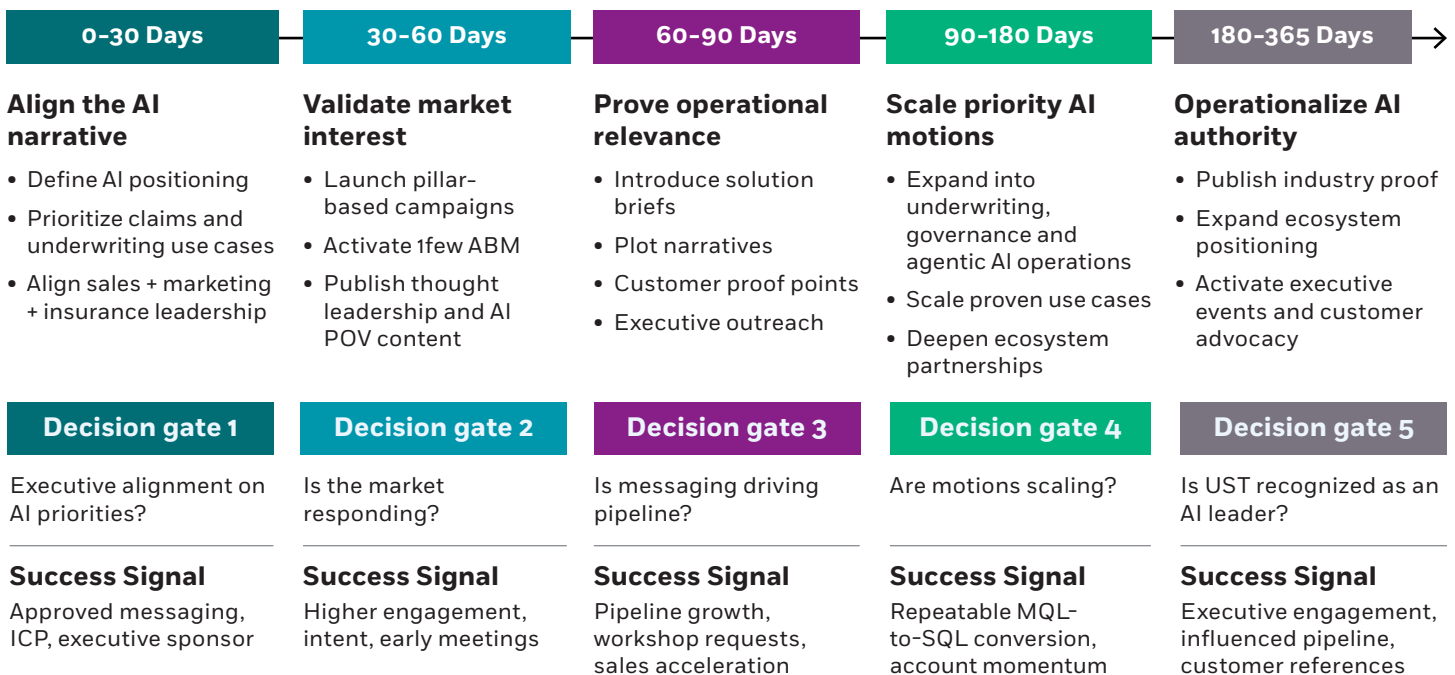
Strong pilot metrics frequently create organizational momentum before measurable underwriting, claims, servicing, or financial improvement appears at production scale. Automation rates, workflow activity, and model performance generate early momentum. Executive confidence builds when operational improvements begin showing sustained impact on expense performance, claims economics, underwriting quality, and profitability.

This is where measurement discipline becomes critical.

A measurement cadence keeps AI investments accountable from concept through scale. Every gate produces a finance-validated read on the impact ratio.

Recommended cadence:

- **Before the pilot:** Establish expense and loss ratio baselines. Align success metrics, ownership, and expected business impact.
- **During the pilot:** Track adoption, operational performance, exceptions, and quality. Link operational improvements to financial impact.
- **Production launch:** Confirm adoption, quality, governance, and controls. Begin measuring financial results.
- **Monthly:** Review operational and financial performance against business objectives.
- **Quarterly:** Validate financial impact against the baseline and decide whether to scale, refine, or pause.



EXECUTIVE CHECKPOINT

Do your AI programs have a benefits owner, a finance partner, and a recorded ratio baseline?

READINESS SCORECARD

A practical maturity assessment for leadership teams

Production AI programs stress-test operational coordination, governance execution, integration readiness, frontline adoption, and financial accountability simultaneously. Leadership teams often discover readiness gaps only after a pilot enters production workflows.

This assessment is designed to help executive stakeholders evaluate the organizational capabilities required to scale AI across claims, underwriting, service, and operational functions while sustaining measurable Combined Ratio impact.

Score each dimension from 1 (low) to 5 (high). The output provides a shared view of what must improve before the next AI use case can achieve a Combined Ratio benefit.

AI production readiness scorecard

Rate your organization across five dimensions to assess AI maturity.

Dimension	1. Early Ad hoc/Initial	3. SCALING Defined/Advancing	5. Production ready Embedded/Optimized	Your score (1-5)
GOVERNANCE & RISK	Governance is ad hoc. Controls are added late. Limited oversight.	Policies and standards defined. Oversight in place for key use cases.	Governance is built in. Continuous monitoring, auditability, and model risk management.	_____
INTEGRATION & WORKFLOWS	AI tools are standalone. Manual handoffs and duplicate work.	Partial integration into workflows. Some automation in production.	AI is workflow-native. Seamless integration across core systems and desktops.	_____
ADOPTION & CHANGE	Low adoption. Limited training and change management.	Growing adoption in targeted teams. Change management in progress.	High adoption. Users empowered and benefits realized.	_____
DATA READINESS	Data is fragmented and inconsistent. Limited quality and access.	Key data sources identified and governed Quality improving.	Trusted, high-quality data accessible for AI at scale. Strong data governance.	_____
FINANCIAL OWNERSHIP	No financial owner. No baseline or ROI measurement.	Shared ownership with finance. Baseline and KPIs established.	Finance-led ROI tracking. Benefits measured and linked to ratio impact.	_____
MATURITY SCORE	5-10 Emerging AI experimentation with limited production readiness.	11-18 Scaling Capabilities exist but operational barriers remain.	11-18 Production ready Governance, integration, adoption, and finance alignment support enterprise scale.	Total score _____ (out of 25)

EXECUTIVE CHECKPOINT

What is the single greatest barrier preventing your organization from turning AI experimentation into measurable ratio impact?

12-MONTH ROADMAP

Move from scattered pilots to a governed Ratio Impact

Scattered pilots frequently generate experimentation activity while leaving operational adoption, governance consistency, and measurable ratio movement fragmented across the organization. Teams move in parallel; governance maturity varies by use case, and executive stakeholders struggle to evaluate where measurable business impact is actually emerging.

A realistic roadmap reduces pilot fatigue and provides leadership with a clear investment path. Each phase concludes with a finance-validated decision tied to the combined ratio.

Phase	0 to 90 days	90 to 180 days	180 to 365 days
Focus	• Prioritize high-value use cases. • Establish Expense Ratio and Loss Ratio baselines • Define business owners, governance requirements, workflow dependencies and finance partners.	• Build production pilots. • Integrate workflows into core platforms. Implement controls. • Track operational metrics that ladder to ratio impact.	• Scale validated capabilities across business units. • Optimize adoption and executive reporting • Institutionalize governance. • Confirm sustained ratio movement at production scale.
Ratio decision point	Which use cases have the strongest balance of ratio hypothesis, governance readiness and operational feasibility?	Which initiatives demonstrate measurable Expense ratio or Loss Ratio movement?	Which capabilities become enterprise standards on the Combined Ratio?

BUSINESS IMPLICATION

Sustained AI value comes from disciplined scaling decisions tied to operational readiness and measurable business outcomes, not from increasing the number of pilots in market.

WORKSHOP

Turn the playbook into Ratio Impact.

Most carriers already understand where AI can generate operational value. The larger challenge is integrating those capabilities into live insurance workflows quickly enough to produce measurable combined ratio impact.

That transition often stalls because governance, workflow integration, operational ownership, and financial accountability are not aligned for production scale. The result is familiar: successful pilots with limited enterprise impact and little measurable ratio movement.

Our AI Pilot-to-production workshop is designed to help executive teams identify where those gaps exist before additional AI investment scales across the enterprise.

In a single executive working session, your team will:



Prioritize the top AI initiatives by their impact on Expense ratio and Loss Ratio potential.



Align business, technology, operations, and finance stakeholders around measurable KPI ownership.



Build carrier-specific operational and financial baselines for each targeted workflow.



Identify governance, integration, workflow, and model-risk gaps relative to NAIC and state DOI expectations.

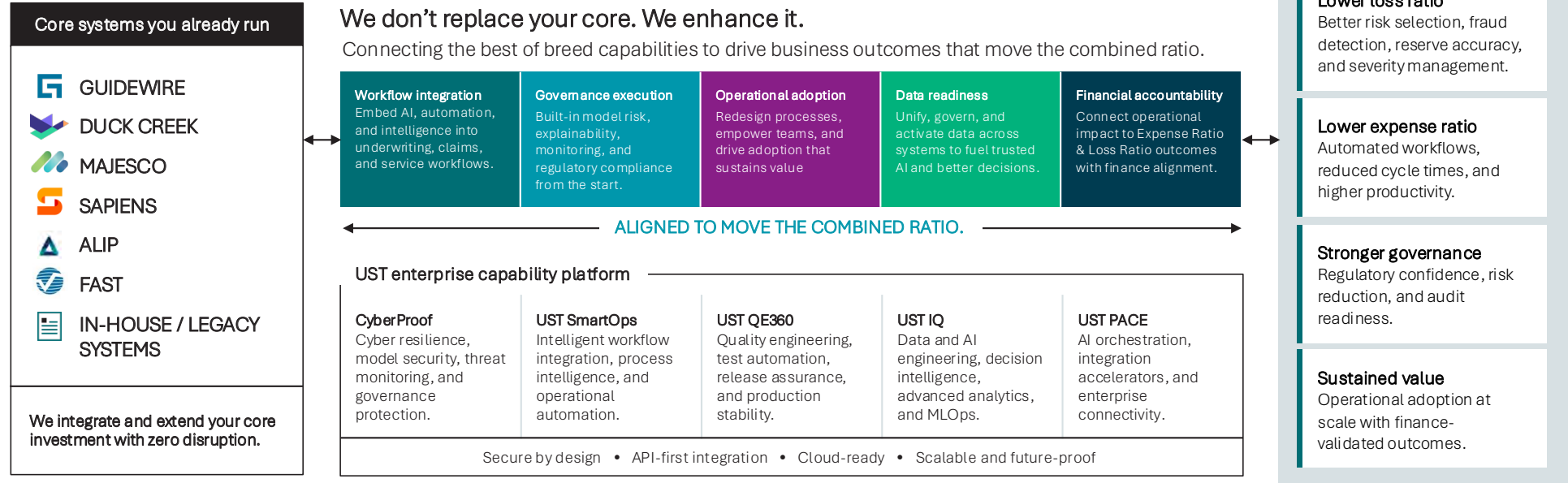


Define a 12-month practical roadmap for scaling AI across core insurance operations, with named owners and financial validation.



Book an executive working session with UST's insurance and AI transformation leaders to help your organization move from AI experimentation to production-scale operational discipline.

Your AI Orchestration partner



Enterprise systems we integrate with



Business and core modernization support



Foundation that powers everything



Operationalizing AI Inside the insurance enterprise

UST helps insurers operationalize AI inside the core systems, workflows, and governance environments they already run.

Carriers are not replacing core systems. The challenge is extending those environments with AI, automation, data intelligence, cybersecurity, and workflow orchestration capabilities that produce measurable operational and financial impact without creating additional complexity.

UST acts as the operational integration and execution layer between:

- Core insurance platforms
- AI and automation technologies
- Enterprise data environments
- Governance and security controls
- Frontline underwriting, claims, and servicing workflows
- Finance and operational accountability models

Rather than introducing another disconnected AI layer, UST helps carriers embed AI into production insurance operations so adjusters, underwriters, service teams, and operations leaders can work inside the workflows they already use every day.

NEXT STEP

Book a 20-minute review to align where operational, governance, integration or financial gaps are slowing AI scale across your organization.



Since 1999, UST has worked side by side with the world's best companies to make a powerful impact through transformation. Powered by technology, driven by AI, inspired by people, and led by our purpose, we partner with our clients from design to operation. Our AI-driven digital solutions, proprietary platforms, engineering, R&D, products, and innovation ecosystem turn core challenges into impactful, disruptive business outcomes. With deep industry knowledge and a future-ready mindset, we infuse expertise, innovation, and agility into our clients' organizations—delivering measurable value and positive lasting change for them, their customers, and communities around the world. Together, with 30,000+ employees in 35+ countries, we build for boundless impact—touching billions of lives in the process.

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