

For boards, CEOs, CFOs, CIOs, CTOs, COOs, and Chief Data / AI Officers

AI investments deserve ROI cases that survive the boardroom.

A working playbook for building, defending, and staging-gate staging-gate AI business cases that finance, risk, and the board will sign.

Audience

CEO · CFO · CIO · CTO · COO · CDO/CAIO · Strategy · Board

Outcomes

Board-ready business cases · Risk-adjusted ROI · 90-day action plan

The question on the table

How does the executive team construct an AI ROI case that captures captures the **total value of change**, prices the **total cost to serve, serve**, and still wins board scrutiny?

1 · VALUE

Hard, soft, and strategic stack

2 · COST

Eight categories, not a SaaS bill

3 · MEASURE

Six-layer KPI architecture

4 · GOVERN

Trustworthy AI, board-grade

Five disciplines separate board-ready AI cases from pilot theater. theater.

A credible AI ROI case requires more than a vendor deck and a labor-savings spreadsheet. The cases boards approve look like the cases boards can defend.

01	Treat AI as transformation, not procurement	Stage against an operating-model redesign — workflows, data, governance, talent — not against a SaaS replacement cycle.
02	Capture the full value stack	Hard financial value, soft operating value, and strategic option value — labor savings alone understates the prize and overstates the conviction.
03	Price the full cost to serve	Inference, integration, verification, governance, change, and lock-in — the cloud bill is roughly the smallest line on the page.
04	Measure what the business owns	Six metric layers — adoption, productivity, quality, risk, financial, strategic — with the counterfactual explicit and the cohort tracked.
05	Govern for board-grade risk	Trustworthy-AI controls, stage gates from pilot to production to scale, and quarterly board review tied to risk-adjusted ROI.

Most AI cases are rejected long before they reach scale —and boards have good reasons.

25% of AI initiatives delivered their expected ROI in IBM's 2025 C-suite study — only **16% scaled enterprise-wide.**

Board engagement matters

26% of boards discuss AI at every meeting. meeting.
In 63% of high-ROI organisations AI is on every agenda vs 13% in low-ROI counterparts.

Four reasons boards reject pilot-stage cases

Pilots overstate wins and understate cost

Cherry-picked cohorts, no counterfactual, hand-tuned prompts, and rollout costs billed to other budgets make pilots look better than the production system will.

Value follows a J-curve, not a step

Learning curve, verification tax, and pipeline adaptation leave early ROI negative; Google Cloud calls out realistic financial modeling as the lever.

Adoption, not model performance, is the bottleneck

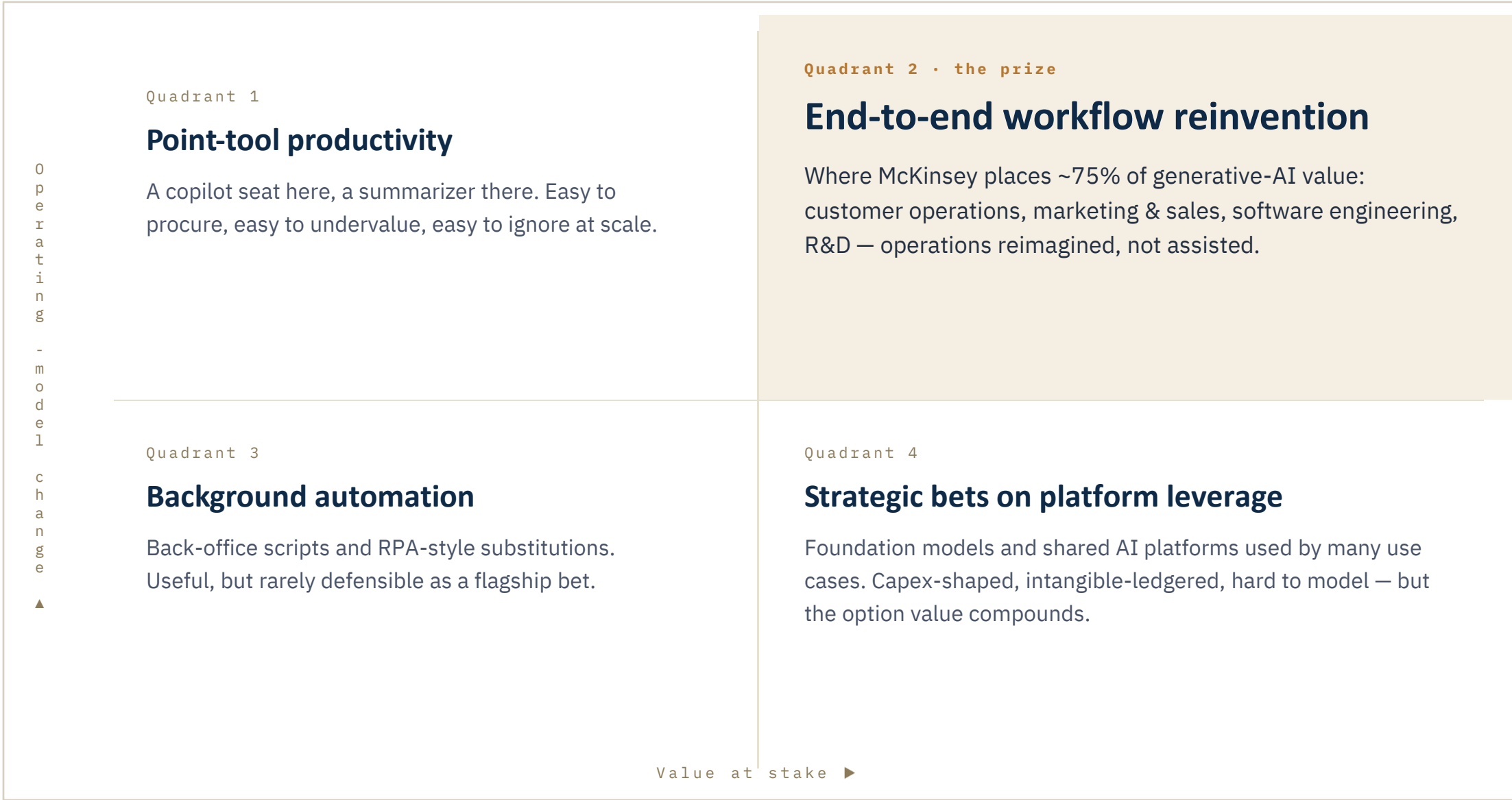
Workflow redesign, verification, and data readiness slow realization; Microsoft reports 79% see AI as crucial yet 59% struggle to quantify productivity gains.

Outcomes are not tied to business metrics

Activity metrics (prompts, calls, hours saved) replace value metrics (margin, NPS, risk reduction); boards discount what cannot be linked to P&L or risk.

AI is an operating-model investment — price it that way and the ROI discussion changes.

Boards fund transformations; they approve tool purchases. The same dollars read differently when scored against different lens — McKinsey warns against paying a "gen-AI premium" for projects rankable on business case alone.



Synthesis • value-at-stake axis calibrated to McKinsey, Deloitte, and IBM C-suite framing.

So what

Stop sizing AI cases against software software contracts. Size them against against the operating model.

If a project sits in Quadrant 1 or 3 it can be funded inside existing OpEx; the discussion is payback and adoption. If it sits in Quadrant 2 or 4 the discussion is transformation, portfolio mix, and capital allocation — which is exactly where boards belong.

McKinsey (2024) places the generative-AI prize at **\$2.6T-\$4.4T annually**, with about 75% concentrated in four functions.

A credible case captures **hard financial value**, **soft operating value**, and **strategic option value** — and refuses to collapse them into “labor savings”

Tier 1 ▶ Hard financial value

What shows on the P&L this
this year.

Direct cost reduction

Headcount substitution, processing cost, channel cost, vendor consolidation.

Revenue uplift

Conversion lift, win-rate, cross-sell, expanded wallet share.

Margin expansion

Mix shift, premium capture, productivity gains net of reinvestment.

Working capital

DSO/DPO shifts, inventory turns, capex deferral.

Tier 2 ▶ Soft / intermediate value

What compounds before it
converts.

Throughput

Cycle time, queue depth, time-to-decision, jobs-per-FTE.

Quality & rework

Error rates, first-pass yield, compliance exceptions.

Experience

NPS, CSAT, employee eNPS, ease-of-use.

Speed

Time to insight, response time, prototype-to-production cadence.

Tier 3 ▶ Strategic / option value

What buys the next decade.

Innovation cadence

Shorter idea-to-launch loop, more experiments per dollar.

Platform leverage

One foundation model, many use cases — IBM advises open orchestration.

Resilience & risk

56% of gen-AI users report improved security posture (Google).

Data & regulatory option

Curated data assets and audit trails convertible to future products.

Price the full stack — eight categories boards expect, two of which most which most decks forget.

Common blind spots: Governance, change management, and verification effort are routinely left out of board materials — and are routinely the largest variance between projected and actual costs.

#	Cost category	What it covers	Typical share
01	Model, API & subscription	Licensed model seats, foundation-model APIs, vendor subscriptions.	15–25%
02	Token, inference & agentic	Per-token spend & orchestration across multi-step / multi-agent workflows. Scales non-linearly with autonomy.	10–30%
03	Infrastructure & data	GPU/compute, vector stores, data pipelines, observability, custodianship.	10–15%
04	Integration & workflow redesign	Systems integration, UX redesign, exception paths, telemetry back into source systems.	10–15%
05	Risk, compliance & auditability	Responsible-AI controls, bias testing, security review, regulatory readiness. Often omitted.	5–15%
06	Human review, QA & exceptions	Spot-checks, edge cases, "human-in-the-loop" overrides, model reviews. Scales with autonomy.	5–20%
07	Change, training & adoption	Enablement, communications, incentive redesign, productivity dip coverage.	5–15%
08	Lock-in & exit cost	Architecture flexibility, model portability, re-platforming insurance.	2–10%

What changes the math

Visible cost ≠ total cost. Keep the visible visible line honest and the invisible line line billable.

Google Cloud illustrates the pattern: a single chatbot estimated at roughly **\$24,910 monthly value** against **~\$2,700 monthly cost** — payback in under two weeks — but the model explicitly priced governance and verification, not only the API.

Sourced breakdown; per AWS prescriptive guidance, baseline cost assessment and autonomy-level selection set the error-tolerance envelope.

A seven-step framework that aligns business case, baseline, governance, and stage governance, and stage gates before any scale money moves.

Synthesis Built from McKinsey, Deloitte, IBM, Google Cloud, AWS, Microsoft, NIST, and FinOps frameworks — not a sourced single-source framework. Sources cited per step.

1 Select the use case

Rank the top 20–30 value-accretive projects regardless of AI tag; avoid a "gen-AI premium"; pick a small number of high-impact use cases.

McKinsey "A guide for CFOs"

2 Define baseline & counterfactual

Use a control group or matched cohort. Without a counterfactual the case is a memo, not a measurement.

IBM · AWS prescriptive guidance

3 Map value drivers

Tie each driver to one of the three tiers on slide 5; refuse to leave any line as "productivity" without an operational definition.

Microsoft six dimensions · Google value framework

4 Price total cost to serve

Build the eight-category ledger from slide 6; contingency for governance, verification, and exit; no SaaS-bill blinders.

AWS · IBM · Google Cloud

5 Risk-adjusted return

Apply scenario weights (P25 / P50 / P75). Pair payback, NPV / IRR with risk-adjusted ROI; let the board weigh tail risk explicitly.

Synthesis · Deloitte balanced portfolio

6 Operating metrics

Adoption, productivity, quality, risk, financial, strategic — all six layers, with leading / lagging split and cohort tracking.

See slide 9 · Microsoft, Google, IBM

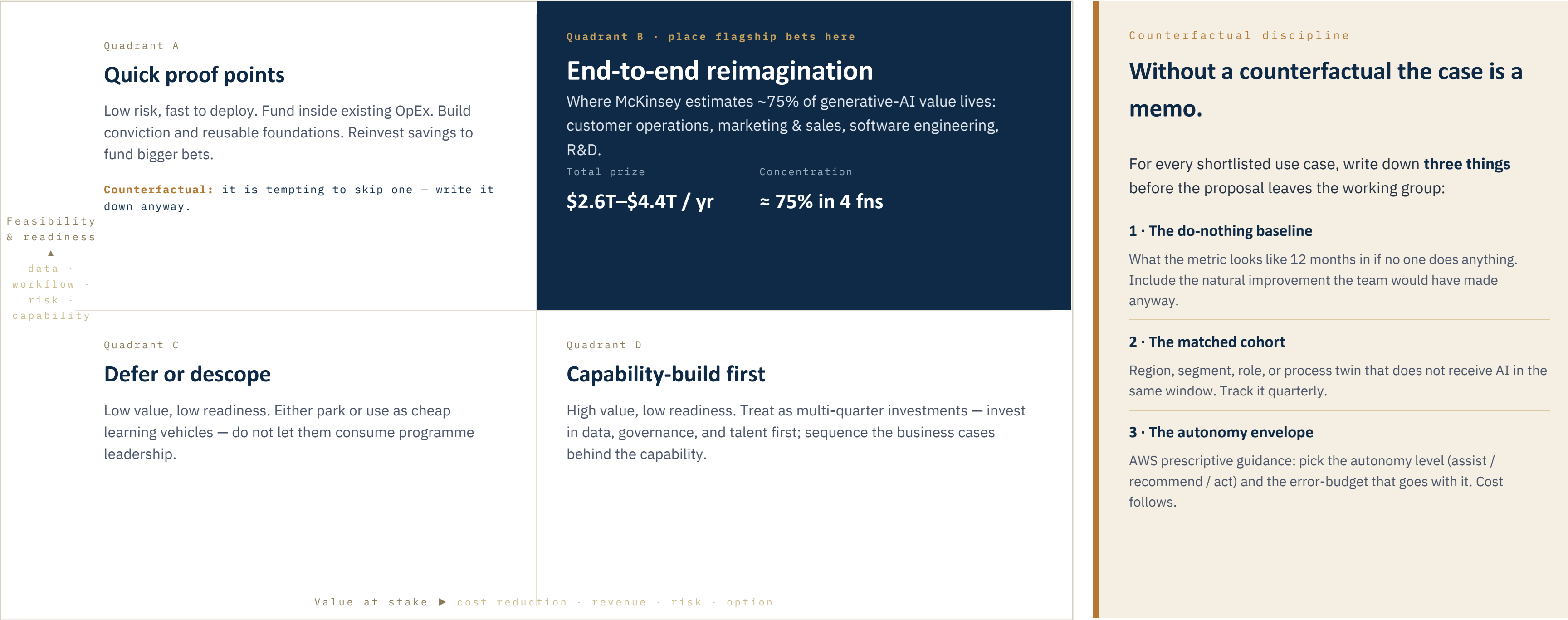
7 Stage-gate cadence

Pilot → production → scale. Each gate has a decision rule, an owner, and a stop condition. Set the next-review cadence.

AWS decision points · Google J-curve

Reading order Use this framework as the spine of the business case. Slides 8 through 12 unpack steps 1, 6, and 7 — and the safeguards orgs forget.

Pick use cases by value-and-feasibility, with the counterfactual written down — written down — not by executive enthusiasm.



Track six metric layers, split leading from lagging, and never measure outcomes without the cohort that did not see the system.

Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6
Adoption	Productivity	Quality	Risk	Financial	Strategic
Active users, weekly depth, abandonment, workflow penetration.	Cycle time, throughput per FTE, tasks closed, hours-to-task-output.	First-pass yield, error & rework, compliance exceptions, NPS / CSAT shifts.	Bias incidents, security findings, audit exceptions, near-miss rate.	Cost-to-serve, ARPU / margin, payback period, NPV / IRR against counterfactual.	New products shipped, data reuse, optionality created, resilience score.
Leading	Leading	Mixed	Lagging	Lagging	Lagging

Timing – leading & lagging

Adoption and productivity move first; financial lags by one to two quarters.

Boards that ask only about cost and revenue at the 90-day review end up killing projects that are tracking. Pair lagging outcomes with leading signals so the scorecard reads in both directions.

Counterfactual

Always pair the AI cohort with a matched non-AI non-AI cohort.

Without it, every improvement looks attributable to AI — including the improvements the team would have shipped anyway. The cohort is the cheapest line item on the measurement budget and the most defensible.

Reference benchmark

45% of gen-AI users reporting reporting productivity gains saw saw productivity at least double.

74% of surveyed enterprises with gen AI report current ROI. 56% report improved security posture. Set your scorecard against comparable benchmarks, not against an abstract target.

Microsoft Worklab cautions that time saved alone is insufficient — pair with quality, effort, and creativity.

Sources: Google Cloud ROI study · Microsoft Digital AI Value Framework · IBM C-suite study · AWS prescriptive guidance. The six-layer split is a synthesis.

AI is a board-grade risk domain — boards that treat it that way post higher ROI; boards that do not, post less.

Board engagement correlates with ROI

The board's cadence is itself a
itself a financial decision.

63% of high-ROI organisations have AI on every board agenda.

13% of low-ROI equivalents do.

26% of all boards discuss AI at every meeting — most do not.

Source: Protiviti global board survey.

Quadrant I · Accountability

Name an executive sponsor for every dollar of AI spend.

AI crosses legal, security, HR, finance, and product. Without a named sponsor the work routes to committee and never to a number.

Quadrant II · Risk controls

NIST AI RMF: govern, map, measure, manage — embedded across the lifecycle. lifecycle.

Trustworthy-AI controls: bias testing, transparency, accountability, security, privacy, validation. Risk-adjust every ROI to make tail events readable.

Quadrant III · Cadence

Establish a quarterly AI portfolio review — not — not annual.

Score the portfolio the way a private-equity firm scores its deals: kill, double, or hold. Document the decision and the data behind it each cycle.

Quadrant IV · Disclosure

Board materials align to audit-committee committee readability.

Plain-English risk language with named consequences. Shadow-AI inventory and stop conditions are reported in the same cover as the wins.

Five Doctor of DT safeguards plus an adoption lever — the cards boards typically boards typically forget, adapted for the ROI setting.

Adapted & synthesis Source field: doctorofdt.com/ai-enabled-framework-research. Five core safeguards plus an adoption lever that determines whether the value is realised — each card is an adaptation of the underlying ideas to the ROI-case setting.

Safeguard 1

Value-stream mapping beyond beyond cost savings

Map each use case against end-to-end value streams, not tasks. Capacity creation and margin expansion live in the seams between functions; per-FTE savings miss them.

Safeguard 2

Reversibility vs consequence consequence matrix

Sort every initiative by reversibility (can we walk it back?) and consequence (what if it fails?). Reversible, low-consequence moves earn speed; irreversible ones earn stricter governance.

Safeguard 3

Pre-mortems and red-teaming teaming

Before each gate, run a structured pre-mortem and an adversarial review. Boards fund evidence that the team has stress-tested the case, not only defended it.

Safeguard 4

Automated circuit breakers and stop stop conditions

Encode thresholds — accuracy floor, cost ceiling, drift breach, OOD rate — that auto-pause or auto-fallback a workflow before a human catches the failure. Pre-define who has the kill-switch authority.

Safeguard 5

Shadow-AI containment protocol

Untracked AI use is a parallel ledger most CIOs do not see. Inventory it quarterly, route shadow use through the same risk gate as sanctioned use, and decide what to standardise, sandbox, or sunset — before the next audit cycle finds it.

Safeguard 6 · adoption lever

Cognitive ROI & human value

Microsoft finds adoption slows when quality, effort, and creativity are ignored. Pair time-saved with cognitive-load and skill-development metrics — without them, realised ROI reliably under-delivers projected ROI.

Cost per token is necessary; cost per **successful outcome** is sufficient.

sufficient.

Token economics is one row of the cost ledger from slide 6 — but it is a row whose framing quietly determines whether the ROI case ages well or ages badly.

The narrow lens

Question

What is our cost per token?

Optimisation

Cheapest model, shortest prompts, aggressive caching.

Failure mode

A cheaper model that ships wrong answers and forces downstream rework.

Multi-agent risk

Hidden — costs multiply across agent calls and reasoning chains.

The board-ready lens

Question

What is our cost per successful outcome?

Optimisation

Right model for the task — accuracy, retry-rate, and human review are part of the unit.

Failure mode

A more expensive model that costs less because it solves the problem the first time.

Multi-agent risk

Made visible — showback, chargeback, and per-task cost ceilings are part of the case.

The metrics that matter

Three numbers FinOps & field research research put on the case.

Cost per inference

Combine model, hosting, and orchestration costs. Show per task and per cohort.

Token yield rate

Successful outputs per million tokens consumed. Each retry and re-prompt erodes it.

Inference efficiency index

Value delivered per dollar of inference — the unit the board actually cares about.

Four sourced reference cases keep the framework close to observable outcomes — not ambitions.

Reference 1 · Google Cloud · value framing

A single chatbot, priced honestly, paid back in under two weeks.

Est. value / mo	Est. cost / mo	Payback
≈ \$24,910	≈ \$2,700	< 2 weeks

Cloud.google.com /blog/topics/cost-management/measure-the-value-and-impact-of-your-ai

Reference 2 · IBM 2025 C-suite study · scaling reality

A quarter of initiatives deliver on expected ROI — fewer still fewer still scale.

25%	16%
delivered their expected ROI	scaled enterprise-wide

IBM recommends starting with cost-saving use cases, baselining time/cost/quality, and using open orchestration to avoid lock-in.

Reference 3 · Google · survey of 2,500+ execs

Most enterprises now report ROI; the conviction gap is in the in the data behind the case.

74%	45%	56%
report current ROI with gen AI	saw productivity at least double	report improved security posture

Reference 4 · Microsoft · M365 Copilot value framework

Time saved alone is insufficient — six dimensions span value, experience, and risk.

- | | |
|-----------------------|----------------------------------|
| · Revenue impact | · Productivity & efficiency |
| · Security & risk | · Employee / customer experience |
| · Quality improvement | · Cost savings |

Microsoft Worklab: 79% see AI as crucial; 59% struggle to quantify productivity gains.

Ten items the executive team must have on the table before asking for scale funding.

Three columns — what we said, what we proved, what we'll do next. Sponsor signs each row; absent signature, the case does not move to scaling.

What we said we'd do		What we proved	What we'll do next	
01	Rank use case among top value-accretive, AI-tag-indifferent No "gen-AI premium." Documented ranking against 20–30 candidates; AI tag absent from decision criteria.		06	Six KPI layers tracked end-to-end Adoption → productivity → quality → risk → financial → strategic. Cadence + dashboards live; one owner per layer.
02	Map value to all three tiers — not labor alone Hard, soft, strategic; each line owned by a named executive; quantified where data permits, bounded where not.		07	Governance: NIST controls + named owners Trustworthy-AI controls embedded; shadow-AI inventory quarterly; tighten controls after each incident.
03	Price the full eight-category cost stack Governance, change, and verification are line items. Stack documented per use case; risk and exit cost separately.		08	Architecture flexibility & lock-in analysis Optionality priced in; multi-provider or abstraction strategy documented; annual re-platform drill booked.
04	Define baseline and matched cohort explicitly Cohort identified; tracking cadence agreed; baseline frozen before pilot; reported as paired deltas each quarter.		09	Cognitive ROI, change, and adoption evidence Quality, effort, creativity, eNPS — adoption's leading edges. Adoption depth, drop-out cause, pulse survey.
05	Risk-adjusted return and stop conditions P25 / P50 / P75 explicit; auto-circuit breakers; named kill authority; thresholds re-tested at every gate.		10	Board-grade cadence and disclosure standard AI on the agenda every quarter; plain-English risk with named consequences; decisions and data archived.

Decision hygiene, not paperwork · sign each row or hold the case

What the next 90 days should look like when the playbook goes from cover slide to working program.

Phase 1Days 1 – 30 · align		Phase 2Days 31 – 60 · build the case		Phase 3Days 61 – 90 · present & stage-gate	
Stakeholder map & sponsor CFO + CIO + line business sign the executive sponsor. Map legal, security, HR, and data owners.		Top 3 use cases: full ROI pack Apply the seven-step framework. Build the 8-category cost stack and 3-tier value.		Board pre-read & decision pack Names, numbers, owners. Decisions required on the front page; risks on the back.	
Rank the top 20–30 candidates Score on value, feasibility, autonomy envelope. Force-rank without AI-tag bias.		Cohort & baseline freeze Match each pilot to a non-AI cohort. Freeze baseline; document the do-nothing path.		Pilot-gate decision Continue, expand, pause, or kill. Document the decision and the data behind it.	
Inventory shadow AI Survey + telemetry sweep. Decide what to standardise, sandbox, or sunset.		Measurement architecture live Wire the six layer KPIs. Pair leading and lagging; auto-collect where possible.		Scale-funding request Risk-adjusted ROI + payback + NPV pair. Capex shape clearly named; cash-flow line.	
Governance baseline Map current controls to NIST AI RMF; name owners; agree a stop-condition policy.		Risk-adjusted scenarios P25 / P50 / P75 explicit. Name the kill-switch authority and the circuit breakers.		Cadence & escalation Quarterly board review booked; audit-committee material staged; escalation path live.	
Cadence		Next checkpoint		Stop condition	
Quarterly board review · monthly exec stand-up · weekly use-case use-case cadence		End of Day 90 · board		Cohort underperforms control → control → revert	
				Owner of the playbook	
				Named executive sponsor + cross-functional team	

Sources cited cited across the deck.

Primary public references that grounded the framework, the cost stack, the value tier model, the governance framing, and the measurement architecture.

Reading order

McKinsey & Microsoft for value framing.
Google Cloud & IBM for measurement and scaling reality.
NIST & Protiviti for governance and cadence.
Doctor of DT and FinOps for safeguards and cost discipline.

Sources · 13 references referenced across slides

McKinsey

Economic potential of generative AI

\$2.6T–\$4.4T annually · ~75% in 4 functions.

mckinsey.com / capabilities / tech-and-ai / our-insights / the-economic-potential-of-generative-ai-the-next-productivity-frontier

McKinsey · CFOs

Gen AI: a guide for CFOs

Rank top 20–30 projects · avoid gen-AI premium.

mckinsey.com / capabilities / strategy-and-corporate-finance / our-insights / gen-ai-a-guide-for-cfos

Google Cloud

How to measure the business value of generative AI

J-curve; learning, verification tax, pipeline adaptation.

cloud.google.com / blog / products / ai-machine-learning / how-to-measure-the-business-value-of-generative-ai

Google Cloud

Measure the value and impact of your AI

≈ \$24,910/mo value vs ≈ \$2,700/mo cost · payback in < 2 weeks.

cloud.google.com / blog / topics / cost-management / measure-the-value-and-impact-of-your-ai

Google · DORA

Generating value from gen AI — ROI study

2,500+ execs · 74% ROI · 45% 2× productivity · 56% improved security.

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Microsoft

Measuring the impact of M365 Copilot and AI

Microsoft Digital AI Value Framework · six dimensions.

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Microsoft Worklab

How we measure the value of AI at work

Quality, effort, creativity · 79% crucial · 59% struggle to quantify.

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IBM

Realize ROI of AI agents

25% deliver expected ROI · 16% scale enterprise-wide · open orchestration.

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AWS

Agentic AI economics — measuring success

Baseline, autonomy level, break-even, decision points.

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Deloitte

AI tech investment ROI

Balanced digital portfolio · shared value scorecard.

deloitte.com / us / en / insights / topics / digital-transformation / ai-tech-investment-roi.html

Protiviti

AI in board-meeting discussions — global survey

26% boards every meeting · 63% high-ROI orgs on every agenda.

protiviti.com / us-en / press-release-ai-board-meeting-discussions-global-survey

NIST

AI Risk Management Framework

Trustworthy AI built into design, development, use, and evaluation.

nist.gov / itl / ai-risk-management-framework

FinOps

Token economics — the atomic unit of AI value

Cost per inference · token yield · showback / chargeback.

finops.org / insights / token-economics-the-atomic-unit-of-ai-value

Doctor of DT

AI-Enabled Transformation — research

Adapted for safeguards on slide 11.

doctorofdt.com / ai-enabled-framework-research

Field research · token economics

Nandagopal IJAIS 2025 · Akpan 2024 · arXiv 2605.09104 · arXiv 2605.17410. Supplements slide 12.