



CRAFTING COMPELLING BUSINESS CASES FOR AI TRANSFORMATION

Abstract

Developing business cases to support artificial intelligence (AI) investments is a crucial step in the AI investment and implementation process. It helps determine AI's successful implementation within an organisation. Generic, delayed, and misaligned business cases often fail to withstand senior leadership scrutiny, resulting in missed AI opportunities. Enterprises need a strategic, accelerated approach to building business cases that are rooted in client needs and highlight true investment potential.

This paper introduces the Prioritised Requirements, Insight, and Strategic Methodology, or the PRISM framework. PRISM is a structured seven-step approach that applies generative AI (GenAI) as a co-pilot across the business case development lifecycle. The framework compresses business case development from weeks to days by redirecting effort from document production to analytical evaluation. It enables consultants to create contextual and client-specific business cases, empowering senior leadership to make quick, insightful, and strategic decisions about AI investments.

Note: Readers seeking a rapid overview can navigate directly to the blue-highlighted insight boxes, framework diagrams, and summary tables.

Introduction

The AI Adoption Gap is a Business Case Problem

Over the past few years, artificial intelligence (AI) has advanced significantly as a mature technology. In 2025, 88% of organisations used AI in at least one business function, an increase from 72% in 2024¹. Similarly, adoption of generative AI (GenAI) has accelerated sharply, from 33% of organisations in 2023 to approximately 79% in 2025. As GenAI moves from experimentation to operational deployment¹, this upward trajectory is expected to continue.

Despite this broad enthusiasm, fewer than one-third of organisations have successfully scaled AI beyond pilots¹. Further, many organisations still take up to four months to put GenAI initiatives into production². Another study reveals that 66% of enterprises feel dissatisfied with the progress of AI and GenAI, partly due to unclear investment priorities³.

Clearly, the path from a promising AI/GenAI idea to a funded programme remains a significant bottleneck. A key factor here is that the process used to fund AI and GenAI investments has changed little in the last two decades. Organisations still struggle to build business cases that are specific, fast, and credible enough to secure funding approval.

Enterprises today need a robust framework that uses analytics and architecture to guide business case development as well as accelerate the AI adoption strategy. When paired with generative AI (GenAI), such a framework can help enterprises benefit from low-risk, contextual AI implementations. This helps boost stakeholder confidence and drive organisation-wide adoption. The Prioritised Requirements, Insight, and Strategic Methodology (PRISM) is a structured, repeatable framework that uses AI to accelerate the business case development journey, from data discovery to finalisation.



Challenges

Three Structural Limitations

Most enterprise operations are governed by deterministic systems, such as enterprise resource planning (ERP) platforms, supply chain engines, and manufacturing execution systems (MES). These systems apply defined rules to known data states. AI and agentic AI are still establishing production-scale credentials in operational domains where precision, repeatability, and auditability are critical.

In contrast, business case development is inherently probabilistic and iterative. The process involves proposing hypotheses, weighing evidence, revising assumptions, and

forming tentative conclusions. While this makes GenAI a suitable technology for business case development, the traditional process presents several challenges.

The typical path from an AI idea to a funded programme follows a similar pattern in nearly every organisation. It involves weeks of research, workshops, scoring business cases, and drafting documents. But the research results often arrive late and appear generic, consequently failing to withstand scrutiny from chief financial officers (CFOs).

As seen below, enterprises struggle with three structural limitations that hinder the development of effective AI business cases support as digital adoption accelerates.

Table 1: Three structural limitations of traditional AI business case development

 Bandwidth constraints	 Context compression	 Template dependence
Senior consultants who can understand both the client's strategy and their technology landscape are scarce and expensive. Their effort is often divided between building the case and active deliveries, leading work to be delegated to junior analysts who may lack the context to make a credible business case.	It is extremely challenging for any analyst to absorb large volumes of information – annual reports, investor presentations, IT landscape briefings, and market research – within a short span of time. Inevitably, the business case is built on a limited subset of available information.	The industry typically uses a small number of standard formats for business cases. A heavy dependence on templates erodes specificity. An AI business case for a global materials science company will be almost identical to one for a speciality chemicals manufacturer, making neither truly compelling.

Implication: Ineffective business cases compromise AI initiatives

In 2024, Gartner had predicted that 30% of GenAI projects would fail within the next year⁴. In reality, by the end of 2025, nearly 50% of GenAI projects were abandoned after proof of concept due to ambiguous business value, among other reasons⁵. Analysts typically build business cases around vendor capabilities rather than the client's strategic needs. This leads to AI investments that are technically sound but strategically disconnected from the client's objectives. Business cases that do not align with the overall enterprise strategy or are too generic to sustain organisational commitment through delivery are more likely to fail. It is important for enterprises to understand that the business case is critical because it is a stage where strategic alignment is either established or lost.

The PRISM Framework

From Raw Data To Funded Programmes

The PRISM framework builds on the insight that teams need a smarter way to create successful AI business cases. It helps practitioners restructure the entire analytical process by using AI to load client context. It chains each step’s output to the next step, and reserves decisions for human judgement. It processes the client’s strategy, generates context-specific use cases, and applies consistent scoring rigour. The result is a seven-step methodology that empowers consulting teams to

build impactful, board-ready business cases in days rather than weeks.

The framework is supported by a companion prompt library, making the methodology reproducible at scale. Each prompt defines a bounded analytical task with specific inputs, outputs, and quality checks, which form the foundational blocks of a multi-agent AI architecture. A master orchestrator agent coordinates each PRISM step sequentially.

Fig 1 · Value drivers of the PRISM framework



Four Phases · Seven Steps

The Seven-Step Methodology

The PRISM framework moves through four phases – CONTEXTUALIZE → IDEATE → VALIDATE → REALIZE – each comprising structured AI-augmented steps that chain their output forward into the next.

Table 2: The Seven-Step Methodology of the PRISM framework

CONTEXTUALIZE

NO.	STEP	AI CO-PILOT ACTIONS	OUTPUTS
01	Strategic Analysis	- Reads annual reports, investor decks, and filings - Extracts IT-lens SWOT (strengths, weaknesses, opportunities, threats) - Tracks strategic priorities and digital maturity signals	- SWOT analysis for the IT landscape - IT opportunity map - Narrative anchors
02	IT Landscape Context	- Maps existing systems to business domains - Scores AI readiness - Identifies gaps and quick-win zones	- Domain-to-system mapping - Gap analysis - AI readiness score

IDEATE

NO.	STEP	AI CO-PILOT ACTIONS	OUTPUTS
03	Use Case Generation 	- Combines market intelligence with IT landscape - Generates 10–15 feasible, client-specific AI use cases	- Pipeline of strategic use cases - linked to domains, problems and technology levers
04	Scoring & Ranking 	- Applies weighted multi-criteria scoring: strategic fit, feasibility, speed, impact complexity - Produces a ranked shortlist	- Weighted matrix - Top 5 use cases ranked - Transparent scoring rationale - All use cases are ranked

VALIDATE

NO.	STEP	AI CO-PILOT ACTIONS	OUTPUTS
05	SME Refinement HITL Gate 1 	- Integrates domain expert and client SME feedback - Revises shortlist with confidence ratings and open-item log	- Revised shortlist - SME endorsements - Confidence assessment

REALIZE

NO.	STEP	AI CO-PILOT ACTIONS	OUTPUTS
06	6a) Solution Framing 6b) EA & IT Validation HITL Gate 2 	- Drafts solution architecture, capability overview, phasing, and risk register - Validates build feasibility and integration practicality based on EA and IT landscape	- Architecture & capability overview - Phased plan & risk register - EA sign-off
07	Business Case Finalisation 	Compiles C-suite-ready business case: ROI model, investment summary, strategic alignment, next steps	- Executive summary - ROI table & investment plan - Next steps

Human-In-The-Loop

Two Gates, Not One

The PRISM framework has two mandatory human review gates, each serving a distinct but complementary purpose. Ignoring any one gate results in business cases that are either well-scoped but poorly built, or well-built but poorly scoped.

Gate 1

Step 5 · SME Refinement

Validates whether the right problems are being addressed. AI models do not have any knowledge of organisational history, interpersonal dynamics, or undocumented institutional context. Domain experts challenge the AI conclusions against organisational realities before the shortlist is finalised.

Gate 2

Step 6b · EA & IT Validation

Confirms that the enterprise architect has verified the proposed solution can be built within the client's IT landscape – checking API availability, architecture governance rules, and whether data pipelines still exist. A business case passing both gates is validated for business relevance and technical practicality.

Implication: Both gates are critical

AI models are unaware of client-specific conditions – for instance whether the ServiceNow instance exposes the APIs needed, whether an enterprise architecture board has a 'no new middleware' rule, or whether a data pipeline has been decommissioned. Together, both HITL gates address the leading causes of business case failure: addressing the wrong problem in a precise manner, and proposing the right solution with hidden implementation blocks. A business case that passes both gates is effectively validated for the people who fund and deliver AI programmes.

The PRISM Prompt Library

From Methodology To Best Practices

While consultants have used structured methodologies for decades, what sets the PRISM framework apart is its prompt library. It includes eight production-grade prompts that encode senior analytical practices into a format that any team

member can apply consistently, regardless of their experience.

Each prompt is mapped to the seven steps along with a dedicated enterprise architecture validation sub-step for Step 6b. The prompts are engineered to produce a specific, auditable output that flows directly into the next step.



Table 3: Four distinct characteristics of PRISM's prompt library

01 Structured Context Loading Every prompt requires named client inputs. Generic inputs are structurally excluded. Hence, the framework cannot produce a generic output because the prompt will not execute without client-specific data.	02 Chained Context Persistence The output from each step becomes the next step's named input. The SWOT from Step 1 feeds Step 2. The IT landscape context from Step 2 informs scoring in Step 4. The business case in Step 7 reflects everything that preceded it – not just the last prompt.
03 Enforced Quality Floors The output format is defined within the prompt. An analyst using Step 4 cannot skip the five scoring criteria or weighted calculations because the prompt requires both. The quality floor applies across the team, regardless of seniority.	04 Cost Efficiency Design Structured prompts with defined output formats generate precise, bounded responses, eliminating verbose padding. Context chaining passes only the relevant output from the previous step – preventing token bloat across all seven steps and significantly reducing total token consumption per engagement.

Fig 2: A sample prompt pattern in the PRISM framework

PRISM PROMPT ARCHITECTURE · STEP 01		SAMPLE: STRATEGIC 07 · ALL PHASES ANALYSIS	
ROLE	You are a [senior management consultant / scoring analyst / enterprise architect – assigned per step]		
CLIENT	[CLIENT_NAME] Industry: [INDUSTRY] Year: [REPORTING_YEAR]		
PRIOR STEP OUTPUT	[Paste structured output from previous PRISM step]		
CONTEXT	[Annual report / IT landscape map / use case list – as applicable to this step]		
TASK	e.g. Step 1: Extract strategic priorities and produce an IT-lens SWOT analysis. e.g. Step 4: Score each use case on 5 weighted criteria. Show all calculations. e.g. Step 6b: Validate solution architecture against IT landscape. Flag blockers.		
DELIVER	1. [Named output – e.g. SWOT table / Scoring matrix / Architecture flags] 2. [Ranked output with rationale – feeding directly into the next step] 3. FLAGGED FOR HUMAN REVIEW – items requiring domain expert or EA sign-off		
QUALITY RULES	- Every observation must be specific to [CLIENT_NAME] – no generic statements - Cite the source document for every factual claim - Do not proceed past any BLOCKER flag without explicit human sign-off		
→ OUTPUT	Named deliverable structured for direct input into the next step		

Implication: Improve output quality with standardised prompts

When prompt architecture is standardised across all seven steps, the quality floor rises for the entire team. A new analyst using the PRISM prompt library produces the same structured, client-specific output as a senior practitioner. Additionally, every engagement further refines the library – over time transforming it into a critical analytical asset that contains valuable institutional knowledge and stays within the enterprise.

Applying the PRISM Framework

A Real-World Success Story

About the Client

A global speciality materials and intelligent identification company running a multi-platform enterprise technology stack spanning ERP, financial analytics, IT service management, and customer relationship management. Their core business spans speciality materials, smart labels, and identification solutions, serving a broad range of industrial and consumer markets.

Business Context

The client's engagement team was preparing for a quarterly strategic review session on AI and innovation with their IT and business leadership. The objective was to present a credible, prioritised AI investment pipeline – not a generic list of AI use cases, but a validated set grounded in strategic priorities, IT landscape, and operational realities.

Challenges

The client's business spanned multiple segments with operations across manufacturing, supply chain, finance, IT, and customer experience. Each area had distinct challenges, levels of data availability, and degrees of AI readiness. A traditional consulting approach would typically require six to eight weeks of discovery effort alone. The engagement team was lean and operating under significant time constraints.

Outcomes Delivered

9

AI use cases generated across 5 business domains covering IT operations, industrial asset maintenance, manufacturing quality inspection, commercial margin management, and supply chain automation.

40 - 45%

Potential annual improvement across cost reduction, operational efficiency, and revenue enablement.

2 days

Complete pipeline of use cases, two platform deep-dives, and business cases for the top five areas – presented to senior leadership within two days.

Solution: PRISM Outputs

1-2

CONTEXTUALIZE: The AI co-pilot used the client's publicly available annual report, investor presentation, and IT landscape briefing to create a comprehensive IT-lens SWOT analysis and an AI readiness score for eight business domains. This reduced discovery effort from several days to a few hours.

3-4

IDEATE: Nine client-specific AI use cases were generated across five business domains. All nine were scored on five weighted criteria and classified as either Stage 1 (demo to be planned) or Stage 2 (innovation pipeline / discovery stage).

5

VALIDATE-SME REFINEMENT HITL: A working session with the solution architect, engagement team, and client IT managers helped refine the shortlist. Two use cases were elevated based on client endorsement. One was deprioritised due to a known data availability gap not captured in the IT landscape briefing.

6

REALIZE: The enterprise architect reviewed AI-generated solution architecture against the enterprise platform landscape. Integration dependencies were flagged, one capability scope was adjusted to eliminate a custom middleware requirement, and implementation phasing was realigned to architecture governance processes.

7

REALIZE: Full four-quadrant deep-dive slides were produced for each Stage 1 use case – including solution architecture, KPIs, implementation phasing, and ROI models.

Implication: Identify AI opportunities faster

Infosys leveraged the PRISM framework to deliver a complete pipeline of nine use cases, two platform deep-dives, and business cases for the client's top five business areas. These were prepared and presented to senior client leadership within two days – a fraction of the time a traditional discovery approach would have taken.

Business Outcomes

Re-engineering Ways of Working

Establishing Trust Through Client Context

PRISM equips consulting teams with a clear map of the client's landscape, modelled use cases, and a tailored investment strategy. It shifts the focus from announcing capabilities to demonstrating understanding of the client's context – making a powerful first impression.

Building a Strategic, Long-term Partnership

PRISM reimagines the client relationship journey. Instead of projects scoped, delivered, and closed, every engagement begins with a domain-led, client-specific business case – laying the foundation for joint development, client validation, and continuous improvement.

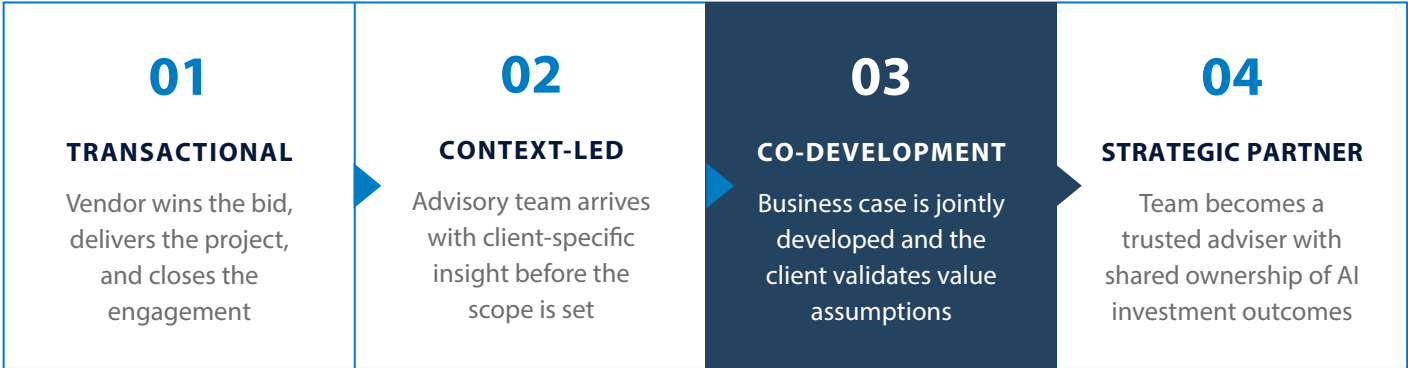
Sharpening the Competitive Edge

PRISM drastically reduces the time and effort required for business case development, shifting the standard from template-based vendor documents to shared artefacts that leverage client knowledge and boost client confidence.

Creating a Living AI Pipeline

With accelerated business case development, enterprise IT and strategy leaders can maintain a refreshed AI investment pipeline reviewed every quarter and advanced to funding when the time is right – enabling a more strategic approach than a single annual bet on AI investments.

Fig 3: How PRISM helps teams move from transactional relationships to strategic partnerships



Implication: From transactional interactions to strategic partnerships

The PRISM framework helps consultants and analysts build sustainable and unique relationships where client priorities, IT constraints, and business value assumptions are embedded in the analysis from the start. The engagement evolves from a vendor delivering the scope to two parties building a shared understanding of where AI investment creates the greatest value. According to McKinsey, enterprises categorised as 'high performers' in AI use have deeper commitment from senior leadership, and nearly three-quarters of high performers are already scaling AI – in contrast to one-third of other organisations.

Design Principles

What Makes PRISM Distinctly Superior

The PRISM framework was developed and validated within enterprise advisory engagements across manufacturing, mining and metals, materials science, and speciality chemicals. The framework rests on four design principles that make it distinctly superior to casual AI use in advisory work.

Context Before Generation

No AI output is produced without first loading client-specific strategic, financial, and technical context. Generic inputs are explicitly blocked from the workflow – enabling relevance in every output.

Sequenced and Chained

Each step builds on the last. The business case that emerges in Step 7 reflects every piece of analysis and client input

that preceded it – establishing coherence across the entire framework, not merely the last prompt.

Human Authority at Every Gate

The AI co-pilot drives speed and depth. Human judgement – from the engagement team and client domain experts to the enterprise architect – drives the decisions that shape the outcome. The framework is explicit about which role belongs to AI and which must be performed by people.

Documented and Reproducible

The companion prompt library – eight structured prompts with defined input variables, enforced output formats, and usage notes – means the framework does not depend on any individual's skill. It can be taught, validated, and improved as a shared practice asset, fostering replicability at scale.

Implication: Looking towards a multi-agent horizon

Each PRISM prompt defines a bounded analytical task with specific inputs, outputs, and quality checks – mirroring the building blocks of a multi-agent AI architecture. In a fully agentic implementation, these become discrete coordinated agents: a strategic analysis agent, an IT landscape agent, a scoring agent, and a solution framing agent. Each agent passes structured outputs to the next, while HITL gates route consequential decisions to human reviewers. A master orchestrator manages the sequence, dependencies, and conditional branching. The PRISM framework is the manually guided version of such a system. An agentic version would be the logical next step.



Conclusion

From AI Ambition to AI Investment

Effective AI programmes begin with early investment decisions driven by solid business cases that take into account an organisation's strategy and IT constraints. Further, these business cases must be specific enough to withstand CFO scrutiny. A well-reasoned investment-led business case is more likely to inspire confidence and approval than one that is generic, delayed, or disconnected.

The PRISM framework re-sequences the approach to business case development. It redirects the time spent on analytical work towards judgement calls that only experienced practitioners can make. A lead consultant using the PRISM framework can shorten business case

creation from two weeks to two days, while delivering a document with a higher standard of client specificity and analytical depth.

The framework also addresses the three structural gaps of bandwidth, context, and consistency in business case development. It offers a seven-step process for AI augmentation, a prompt library that makes every step reproducible, and two human review gates that validate AI-generated analysis before it reaches a decision maker. With this framework, enterprises can benefit from business cases that streamline the journey from AI ambition to AI investment – making it clear, fast, credible, and successful.

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References

Sources

1. McKinsey QuantumBlack | The state of AI in 2025: Agents, innovation, and transformation – mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai
2. McKinsey QuantumBlack | The state of AI in early 2024: Gen AI adoption spikes and starts to generate value – mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-2024
3. BCG | From Potential to Profit with GenAI – bcg.com/publications/2024/from-potential-to-profit-with-genai
4. Gartner | Gartner Predicts 30% of Generative AI Projects Will Be Abandoned After Proof of Concept by End of 2025 – gartner.com/en/newsroom/press-releases/2024-07-29-gartner-predicts-30-percent
5. Gartner | Why 50% of GenAI Projects Fail – And How to Beat the Odds – gartner.com/en/articles/genai-project-failure

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