

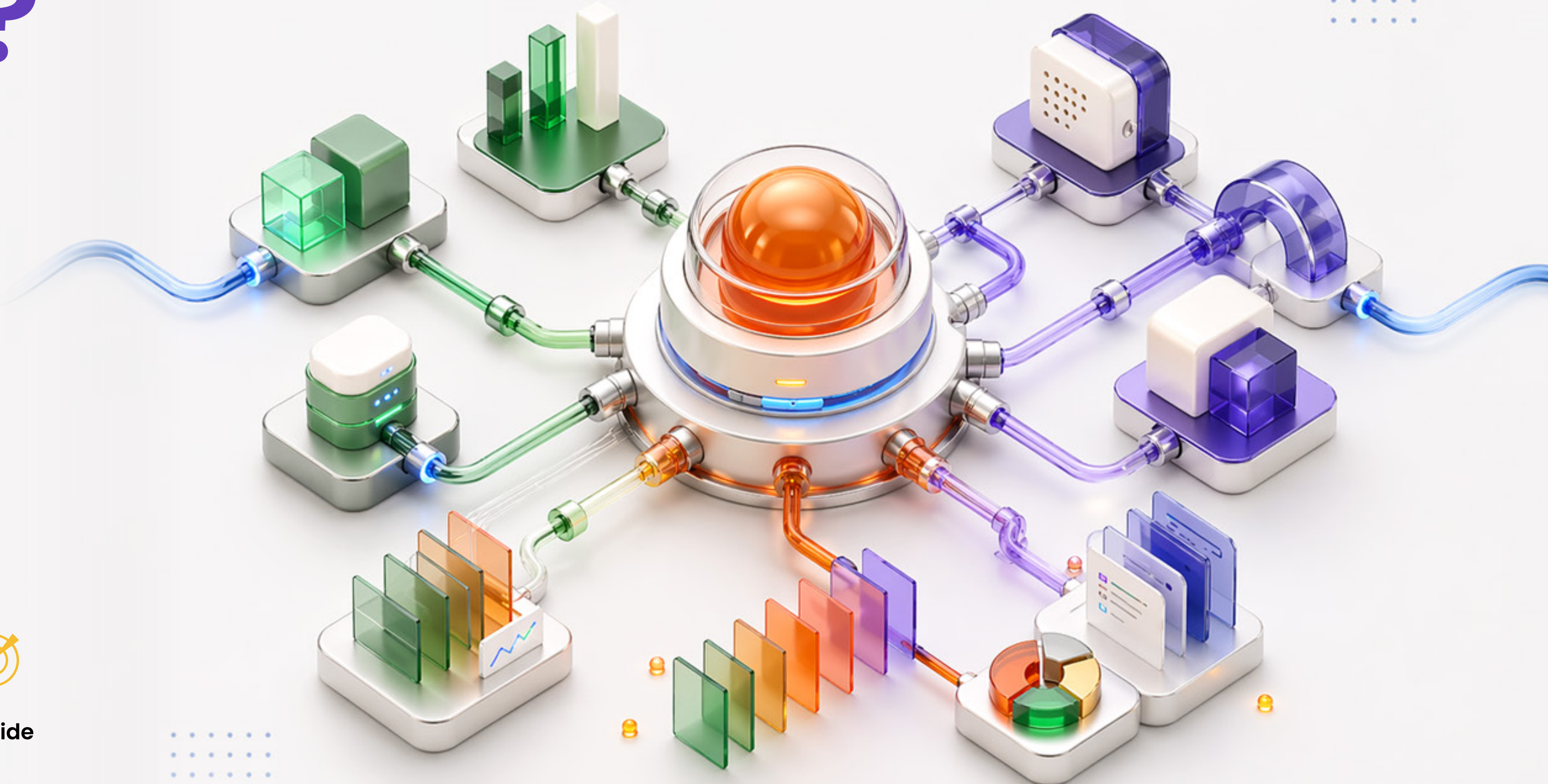
Predictive AI OR GenAI?

A Decision Framework for C-Suite Leaders Who Need Results Today

Are you choosing the right type of AI... or just following the hype?

Different tools designed for different types of jobs. Understanding the distinction is the first step to driving the impact.

Predictive Anticipate Optimize	Generative Create Innovate	Chat Interact Assist	Decide Act Deliver



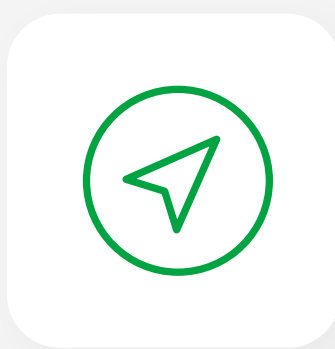
INTRODUCTION

Not All Is The Same

Generative AI has taken over the spotlight lately, which has created a common misconception.



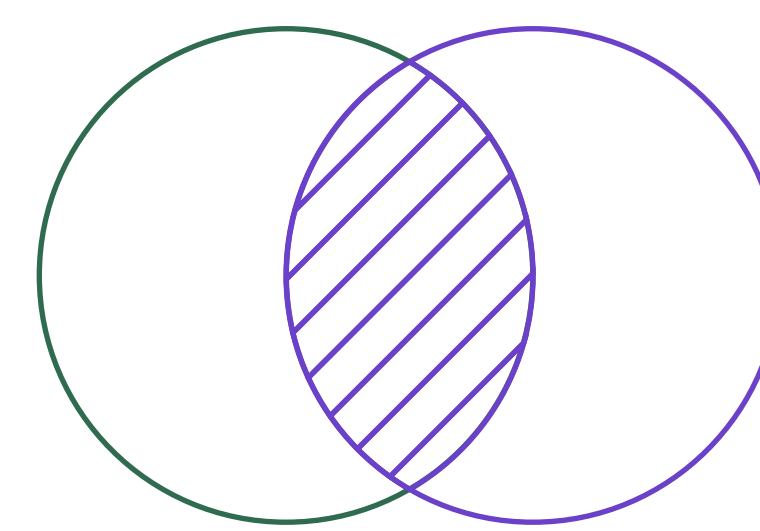
It is easy to think of it as the final evolution of AI.
A new version that replaces (and makes obsolete) every type of AI that came before. **But that's not the case.**



If we think of a navigator, we wouldn't ask them to choose between a compass and a sail.
● One provides **direction**
● The other provides **drive**.



When this distinction is overlooked, there is a high chance of applying the wrong type of AI, and the investment may **fail to deliver returns**.



GENERATIVE AI IS NOT THE FINAL STAGE OF AI EVOLUTION. IT'S A TYPE OF AI DESIGNED FOR SPECIFIC TYPES OF JOBS.



50% of GenAI initiatives never make it past the pilot stage.

This often happens because the technology is still largely used for **individual experimentation**, such as drafting emails, vibe coding an app, or creating social media content. While these use cases improve personal productivity, they often **fail to evolve into scalable processes** that solve real business problems.

Gartner



The goal of this whitepaper is not to pick a winner. Instead, it is about helping you **move beyond experimentation and identify the right starting point** based on your context, resources, and objectives.

Three Layers That Define AI Decisions

These decisions involve both technical and business considerations, and some that sit across both.

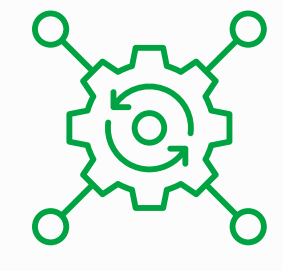


CIO PERSPECTIVE

The focus is on data readiness, infrastructure, integration, and the technical effort required to build and maintain these systems.



Data readiness & quality



Infrastructure & system integration



Technical effort to build and maintain



CFO PERSPECTIVE

The focus is on cost structure, time to value, and how clearly the initiative connects to measurable returns.



Cost structure & budget impact



Time to value & measurable returns



Governance policies, execution risk & financial impact

Key Difference:



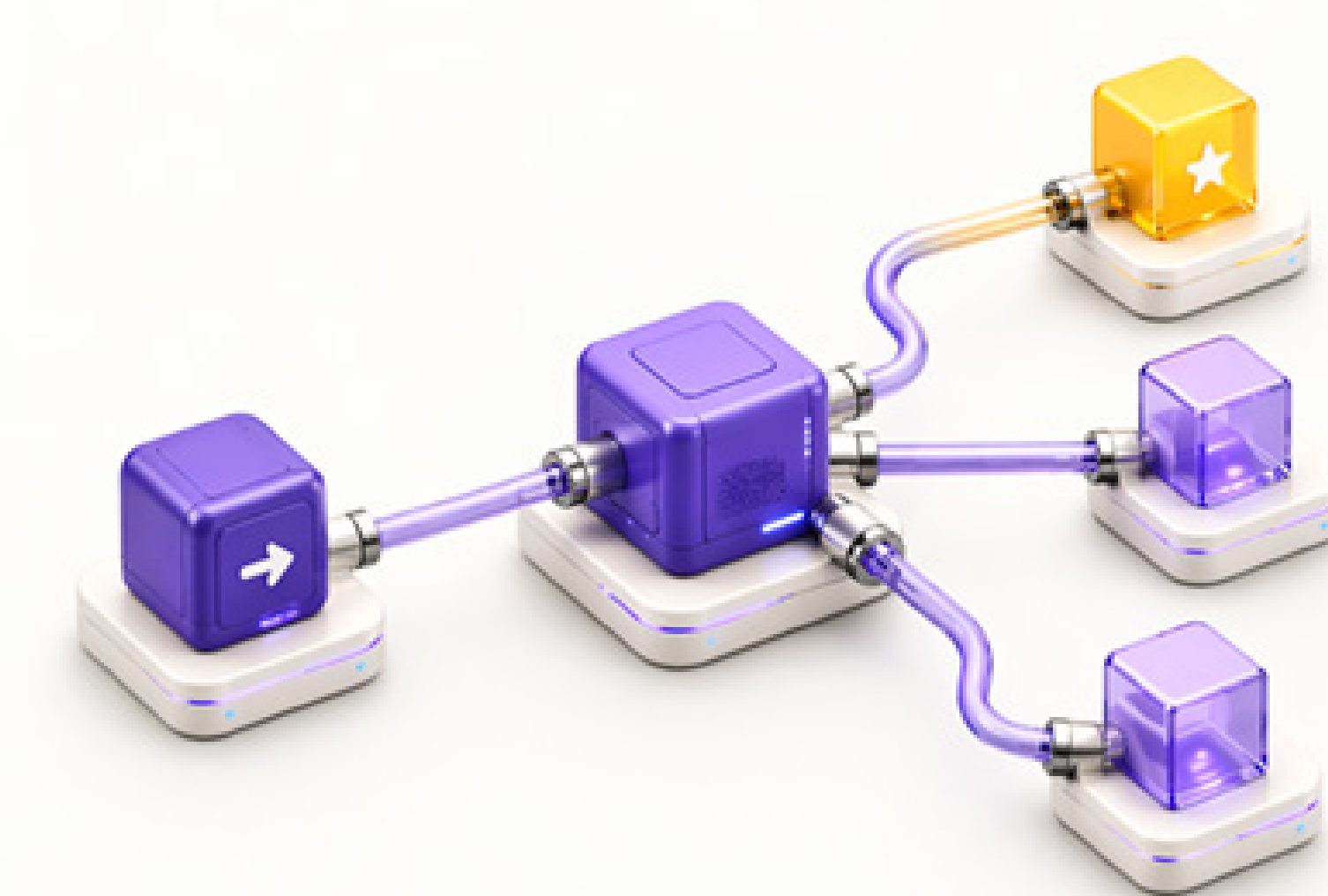
PREDICTIVE AI FOCUSES ON ESTIMATING EVENTS OR BEHAVIORS.

In simple terms, **Predictive AI** is based on machine learning models trained to estimate what is likely to happen. It relies on structured data and can produce forecasts, such as predicting which customers are more likely to buy or detecting fraudulent transactions without analyzing each case manually.



GENERATIVE AI FOCUSES ON PREDICTING THE NEXT TOKEN IN A SEQUENCE OF LANGUAGE.

Generative AI is built on a different family of models, typically large neural networks trained to generate new content. Its strength lies in the ability to produce text, images, code, or documents based on patterns learned from large datasets.



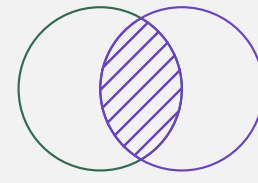
At first glance, generative models may appear to "predict" things, but their function is fundamentally different. They **generate the next most likely token or sequence** in a piece of content, rather than estimating the probability of a business event or behavior. In that sense, LLMs operate on probabilities within language, **not outcomes in the real world**.

Finally, it is important to highlight a nuance that is often overlooked: Generative AI is **not a single approach**. It includes different subtypes, each with distinct requirements in terms of implementation, cost, and complexity.

This also extends to how organizations consume AI. Some rely on **SaaS-based tools** with fixed per-user pricing and predefined interfaces, while others adopt **API-based architectures** that embed AI directly into their systems and scale based on usage.

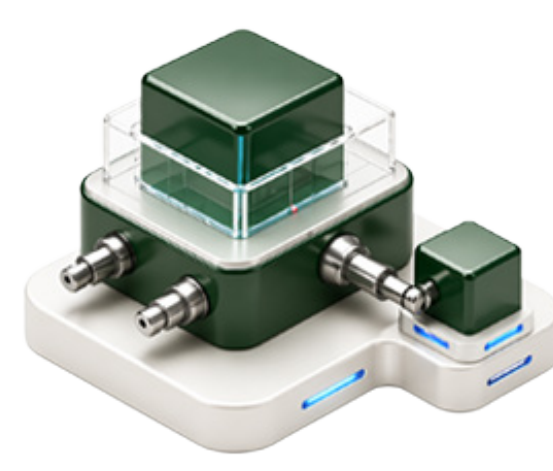


The framework below maps these types (and subtypes) against the **factors that define where and how to start.**



How to Read This Framework

We've broken this down into three simple lenses so you can jump straight to what matters most to you:



The "How" (CIO)

This section is for the technical deep dive. If you're looking into data infrastructure and what it actually takes to build these systems, start here.



The "Why" (CFO)

This is all about the bottom line. Head here to see how the costs break down and how long it really takes to see a return on your investment.



The "Who & What" (shared)

Some things affect everyone. This part covers the talent you'll need and the risks to keep an eye on to ensure the project stays on track.



CIO Perspective

The How: Making AI Work Inside Your Systems

From a CIO perspective, the key question is not only what AI can do, but what it takes to make it work within existing systems and data.



1.1

Data Foundations

The quality and structure of your data define what AI can achieve.

	Predictive AI	Custom GenAI	Third-party GenAI
Data Requirements	<ul style="list-style-type: none"> High relevance Structured historical business data 	<ul style="list-style-type: none"> Very high volume High diversity of public/private data. 	<ul style="list-style-type: none"> Low-medium. Relies on pre-trained models + private data for context
Data Type	Structured (ERP, CRM, operational systems)	Unstructured / multimodal (text, documents, code, images)	Prompts + contextual data (documents, knowledge bases)
Data Preparation Effort	<ul style="list-style-type: none"> Requires cleaning, structuring, and aligning data with specific business outcomes <p>High</p>	<ul style="list-style-type: none"> Requires aggregating large datasets, preparing training pipelines, and organizing data for fine-tuning <p>Very high</p>	<ul style="list-style-type: none"> Focuses on preparing context (documents, embeddings, RAG) rather than full data pipelines <p>Medium</p>

Key Takeaway

Predictive AI depends on structured datasets, while GenAI is built on large volumes of public data. To make it relevant for the business, it usually needs to be enriched with proprietary data. Otherwise, outputs tend to be generic and easily replicable by competitors using similar prompts.

1.2

Technology & Architecture

Infrastructure needs and integration complexity vary significantly across AI approaches.

	Predictive AI	Custom GenAI	Third-party GenAI
Infrastructure	Moderate. Uses existing data platforms and cloud services	Very high. Requires GPUs, training pipelines, and large-scale storage	Low. Infrastructure is managed by the provider
Integration	Critical. Needs to connect with ERP/CRM to act on predictions	High. Requires integration across systems and data pipelines	Medium. Typically integrated via APIs into workflows
Technical Complexity	Medium. Focused on modeling + data engineering	Very high. Involves model training, optimization, and infrastructure management	Low-medium. Focused on configuration and orchestration
Scalability	High if data is well-structured	Complex and costly to scale	High, but tied to usage and cost

Key Takeaway

Technical complexity is something to watch closely. It has a direct impact on project timelines and overall budget, as more complex setups typically require longer implementation and more specialized teams.



1.3

AI Techniques & Learning Models

Different learning paradigms power different outcomes.

	Predictive AI	Custom GenAI	Third-party GenAI
Learning Unit	Structured features	Tokens	Tokens (via API)
Learning Paradigm	Supervised learning	Pretraining + fine-tuning + RLHF	Pretrained + prompting / RAG
Objective	Predict outcomes	Generate content	Generate content

Key Takeaway

Many AI initiatives stall because teams experiment with the wrong type of model. A clear understanding of learning approaches helps narrow down viable use cases from the start.

The Why: Understanding AI Value and ROI

From a CFO perspective, the key question is straightforward: how and when does this create value?



2.1

Value & ROI

How AI translates into measurable business impact

	Predictive AI	Custom GenAI	Third-party GenAI
Business Objective	Improve decision-making (demand, churn, risk)	Build proprietary AI capabilities tailored to the business	Accelerate execution (content, CX, copilots)
Type of Value	Cost reduction, efficiency, and risk mitigation at the process level	Productivity gains and automation, combined with long-term differentiation through proprietary models and data	Productivity gains, faster execution, and team augmentation
ROI Clarity	High (directly tied to business metrics)	Low-medium (long-term, requires scale to become visible, and design new business processes)	Medium (quick individual productivity wins, but harder to connect to core metrics)
Financial Impact	Direct and measurable (e.g., conversion, cost savings)	Potentially high , but realized over time	Indirect (time savings, CX improvements)

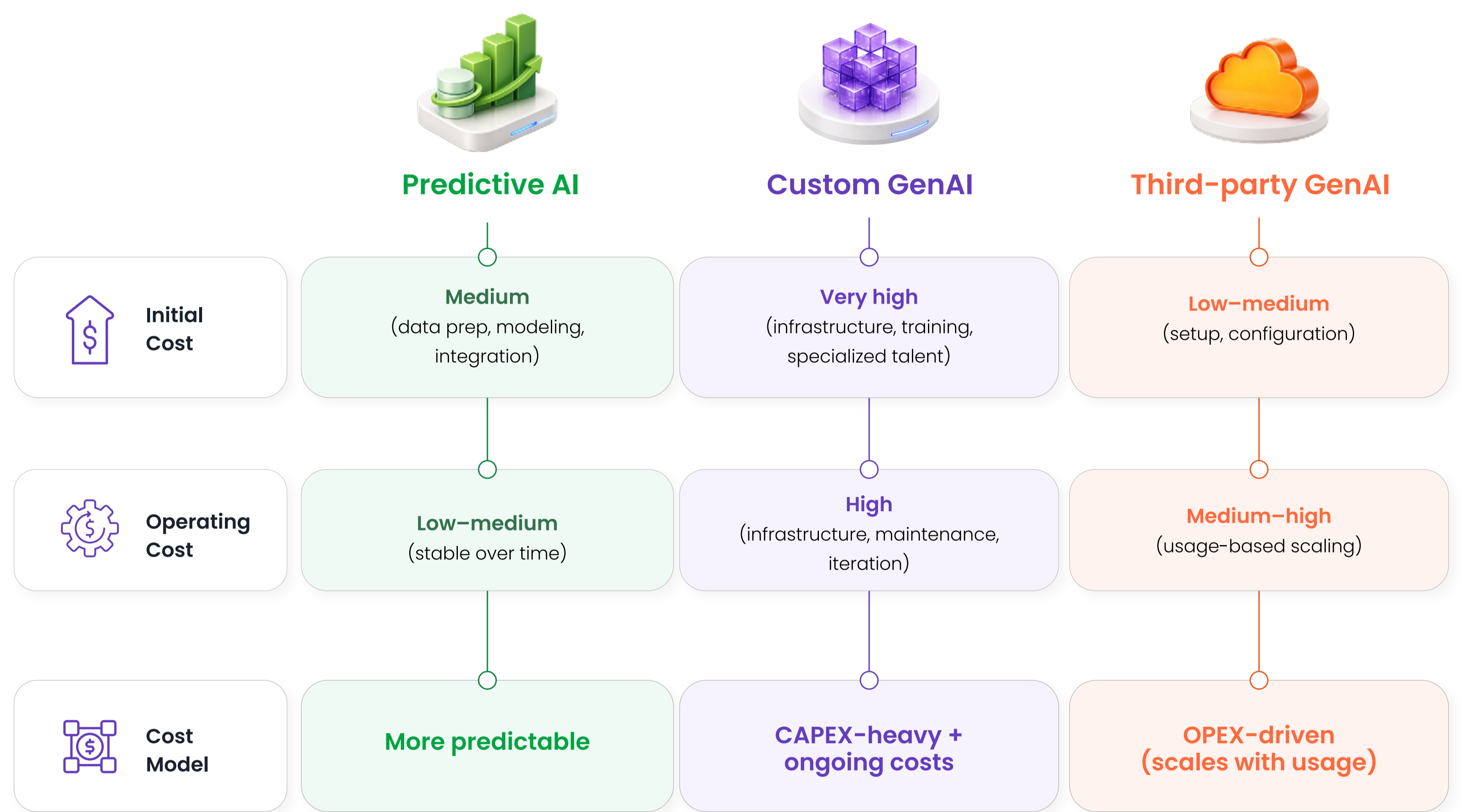
Key Takeaway

Predictive AI fits naturally into processes. GenAI often starts at an individual level, as a tool for experimentation and content creation. The challenge is institutionalizing it into core processes.

2.2

Time to Value

How quickly AI initiatives start delivering results



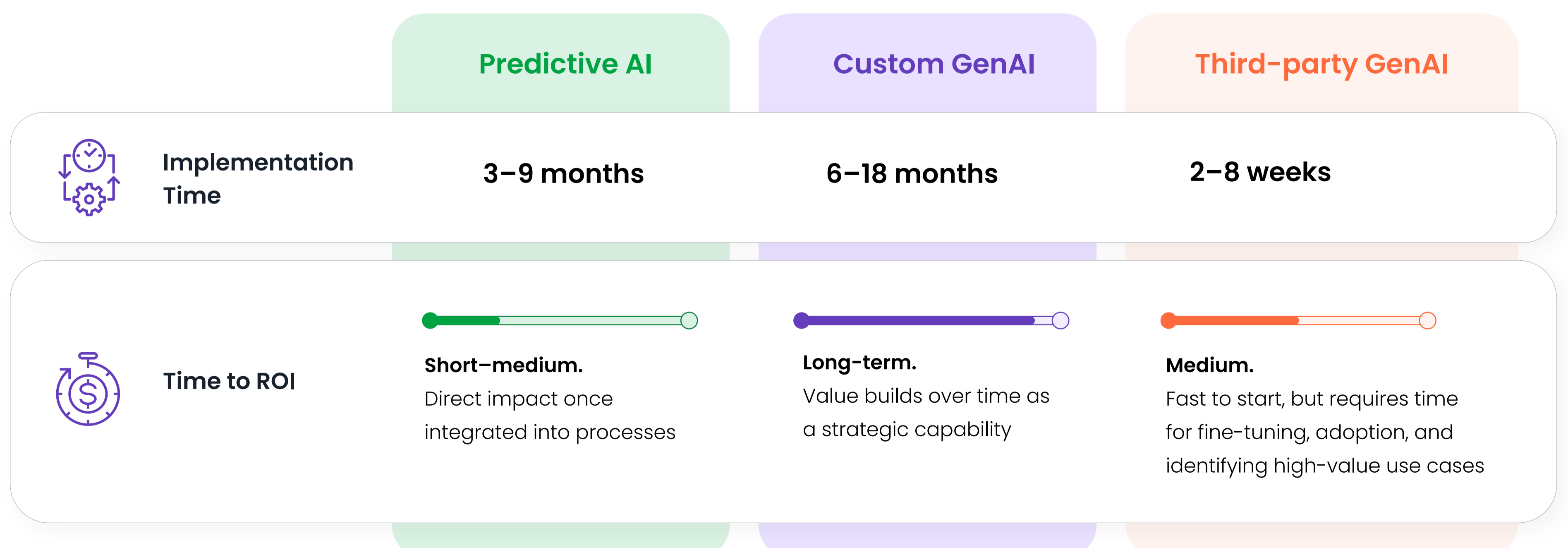
Key Takeaway

Usage-based models can look inexpensive at the beginning, but costs scale with adoption. Aligning usage with high-value processes is critical to maintain ROI.

2.3

Cost Structure

How costs scale across different AI approaches



Key Takeaway

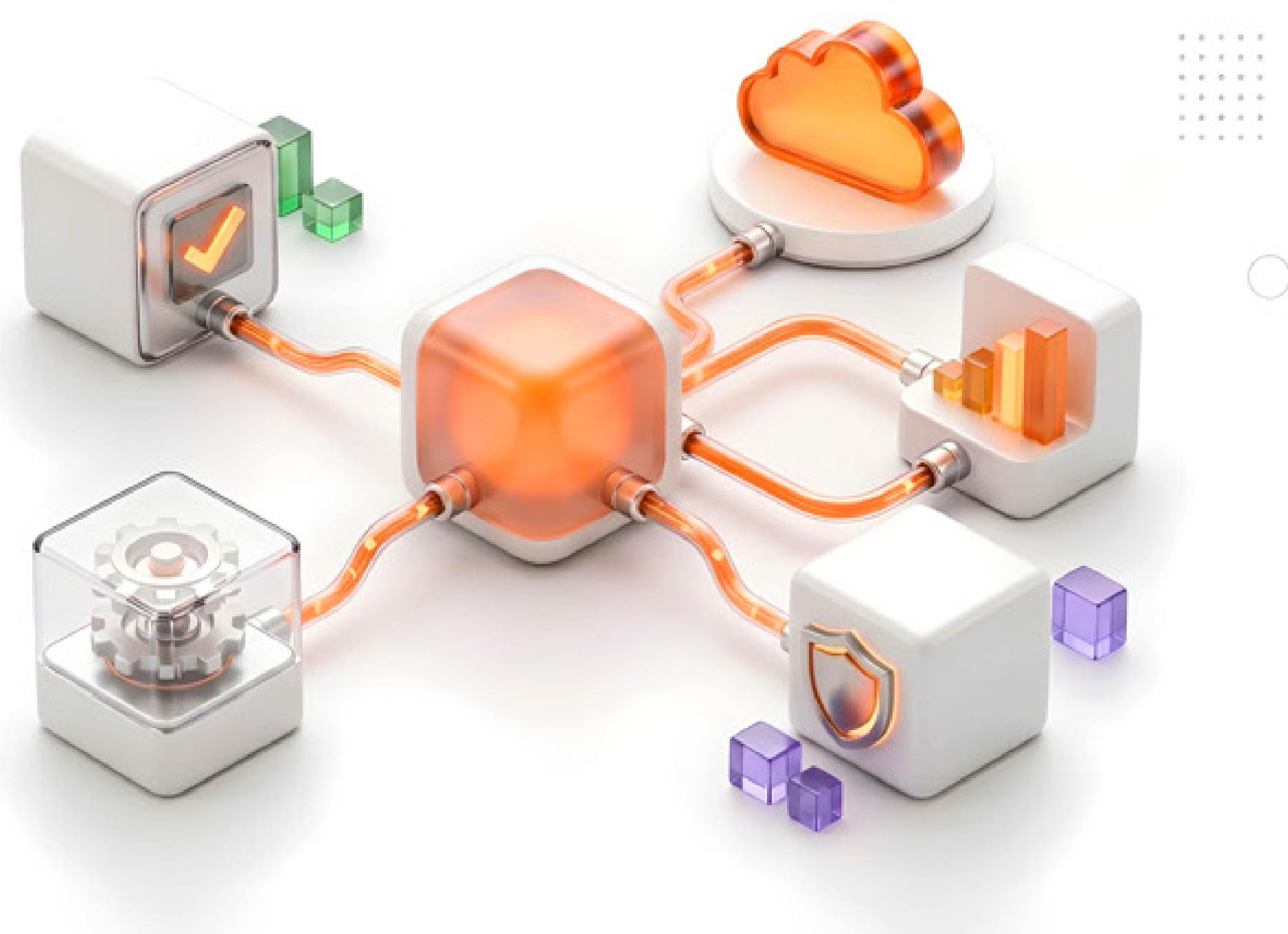
Third-party GenAI can be set up quickly, but the real challenge is adoption, cultural change, and finding the right use cases to embed it into everyday workflows.



Shared Considerations

The Who & What: Organizing People, Skills, and Execution

Some decisions cut across IT and finance. Talent, operating model, and risk define execution, timelines, and cost.



3.1

Skills & Resources

What capabilities and roles are needed to execute successfully.

	Predictive AI	Custom GenAI	Third-party GenAI
Talent Required	<ul style="list-style-type: none"> Data engineers Analysts Data scientists Software developers ML engineers 	<ul style="list-style-type: none"> ML engineers AI engineers, Infrastructure/cloud specialists 	<ul style="list-style-type: none"> Functional teams + light AI expertise
Skill Availability	Medium (more widely available, but in high demand)	Low (highly specialized profiles and design new business processes)	High (lower technical barrier)
Process Integration	Integrated into existing processes to improve decision-making.	Enables new processes and capabilities built from scratch	Starts decentralized, often driven by business teams
Adoption & Cultural Change	Moderate. Requires trust in predictions	High. Requires new ways of working, building, and operating	Medium-high. Requires alignment to move from individual usage to process-level adoption

Key Takeaway

The skill gap has a direct financial impact. It affects how long projects take, how much they cost, and how much value is delayed. As highlighted by Forbes Finance Council, **skill gaps often translate into lost productivity, rework, and delayed initiatives.**

3.2

Risk & Governance

How to manage risk, control usage, and ensure compliance.

	Predictive AI	Custom GenAI	Third-party GenAI
RISK LEVEL	LOW ● ● ●	LOW ● ● ●	HIGH ● ● ●
Vendor Dependency	Low	Low	High
Data Security	High control (internal data)	High (if properly designed)	Higher exposure (external providers)
Compliance	More manageable	Complex but controllable	More complex (external + internal data flows)
Main Risks	Data quality, model drift	Overcomplexity, high investment	Generic outputs, cost scaling, vendor lock-in
Best Use Case	Best for controlled environments with strong data governance	Best for organizations building strategic, proprietary capabilities.	Best for speed, experimentation and non-core use cases.

Key Takeaway

Ungoverned AI is a financial liability. With 63% of organizations lacking formal policies, shadow AI is proliferating. However, organizations that leverage AI extensively in their security response see **\$1.9M lower breach costs than those that don't (IBM).**

3.3

Estimated Project Cost by Company Size (USD)

What investment is required across different AI approaches.

	Predictive AI	Custom GenAI	Third-party GenAI
INITIAL COST	<p>Mid: \$50K – \$200K</p> <p>Enterprise: \$300K – \$1.5M+</p>	<p>Mid: \$150K – \$600K</p> <p>Enterprise: \$600K – \$5M+</p>	<p>Saas</p> <p>Mid: \$50K – \$200K</p> <p>Enterprise: \$300K – \$1.5M+</p> <p>API/BYOK</p> <p>Mid: \$50K – \$200K</p> <p>Enterprise: \$300K – \$1.5M+</p>
ONGOING COST (ANNUAL)	<p>Mid: \$30K – \$100K</p> <p>Enterprise: \$100K – \$300K+</p>	<p>Mid: \$30K – \$100K</p> <p>Enterprise: \$100K – \$300K+</p>	<p>Mid: \$30K – \$100K</p> <p>Enterprise: \$100K – \$300K+</p>
COST PROFILE	Stable & Predictable	High Upfront, Scales Higher	Usage-Based & Variable
PRIMARY COST DRIVERS	Data preparation, Modeling, System integration	Infrastructure (GPUs/cloud), Energy, Training, Specialized talent	Seat licenses, Adoption rate, Vendor pricing, Token usage (API calls), Architecture design, Governance layer
HIDDEN COST	Data quality issues, Integration complexity	Hardware/cloud volatility, Maintenance, Retraining, Talent scarcity	Underutilized seats, Vendor lock-in, Integration effort, Monitoring, Security, Internal tooling
KEY INSIGHT	ROI depends on data maturity	Often underestimated and slow to ROI	ROI depends on data maturity

Key Takeaway

These figures should be seen as directional estimates. Actual costs depend heavily on factors such as **data availability, system complexity, integration scope, and internal capabilities.**



Disclaimer: All cost estimates shown are derived from third-party surveys and generalized market data. They do not constitute formal pricing, quotes, or service estimates provided by Inclusion Cloud, which may vary based on scope, architecture, and business requirements.



Recap



Predictive AI

is often the **most efficient entry point**, with contained CAPEX and a clear path to ROI through better decisions.



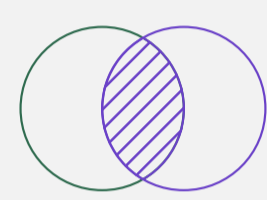
Custom AI

represents a **strategic investment, higher CAPEX and ongoing OPEX** in exchange for building proprietary capabilities.



Third-party GenAI

offers **speed with minimal CAPEX**, but changes the challenge toward managing OPEX, integration, and vendor dependency.



Two Types of AI. Two Case Studies.



Predictive AI

Predicting the Perfect Harvest: Inside Jose Cuervo's Agave Fields

Managing the world's largest agave supply requires a systematic way to anticipate crop needs.

Inclusion Cloud developed a predictive AI solution that structures unstructured data from drone imagery and soil sensors. By cross-referencing this real-time information with historical growth patterns, the system identifies plant maturity and estimates future yields.

This allows Jose Cuervo to adjust irrigation and field management weeks in advance. By using these projections, the company ensures consistent quality in every bottle of tequila served in bars and restaurants worldwide.

WHAT THE MODEL ENABLED

Yield estimation
(maturity & conditions)

Pest & anomaly
detection

Irrigation & resource
optimization

RESULTS

35%

Reduction in irrigation
and pesticide costs

65%

Improvement in
monitoring accuracy



Full integration with SAP
ERP for end-to-end visibility



Generative AI

Reducing Administrative Load in Behavioral Health

Oracle introduced a new module focused on behavioral health, where demand continues to grow, with more than 60 million Americans experiencing mental health conditions.

At the same time, clinicians were spending a significant portion of their time on documentation instead of patient care, in a context where workforce shortages are already a constraint. According to **Health Resources and Services Administration (HRSA)**, over 160 million people in the U.S. live in areas with insufficient mental health providers.

POTENTIAL USES

Clinical note
generation

Patient history
summarization

Context-based
pre-fill

Natural language
retrieval

Coding & compliance support

RESULTS

57%

Reduction in
documentation time

25%

reduction in
EHR time

Ready to move from pilots to ROI?

Book a discovery call with our team.

We'll help you define where to start and how to scale.

✉ hi@inclusioncloud.com ☎ (972) 400-8846

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