

## **AI Strategy as Business Strategy: Competing in the Intelligence Stack**

S. Dutta and Y. Doz

*Former Founding Dean, SC Johnson College of Business, Cornell University, USA  
Solvay Chaired Professor of Technology Innovation Emeritus, INSEAD, France*

For decades, strategy has revolved around three enduring questions: Where will we compete? How will we win? What capabilities do we need? Artificial intelligence (AI) does not eliminate these questions—but it changes how they must be answered.

Much of the current conversation focuses on firms that build AI—those developing models, infrastructure, and platforms. But for most organizations, that is not where competition will play out. Most firms will compete as users of AI, embedding intelligence into their operations, decisions, and customer interactions.

For these firms, the central question is no longer simply where to position themselves in a market. It becomes far more operational and immediate: How do we use AI to build and sustain competitive advantage? Answering that question requires a different mental model of the firm.

### **Competing in the Intelligence Stack**

Firms today compete not only in markets, but within a layered system through which intelligence is generated, refined, and executed. This system can be understood as an AI stack, composed of five interdependent layers: data, models, decisions, workflows, and interfaces.

At the base is data—the signals the organization can capture about customers, operations, and environments. These signals feed models that interpret patterns and generate predictions. Those predictions inform decisions, which are then executed through workflows (or routing). At the top, interfaces shape how the organization interacts with customers and users, generating new data that feeds back into the system.

### **Where will we compete? From Markets to the AI Stack**

This architecture shifts strategy from a question of market positioning alone to one of how intelligence flows through the organization. The key is not simply where a firm sits in the stack. It is how effectively it uses each layer to create advantage—and how well those layers are integrated.

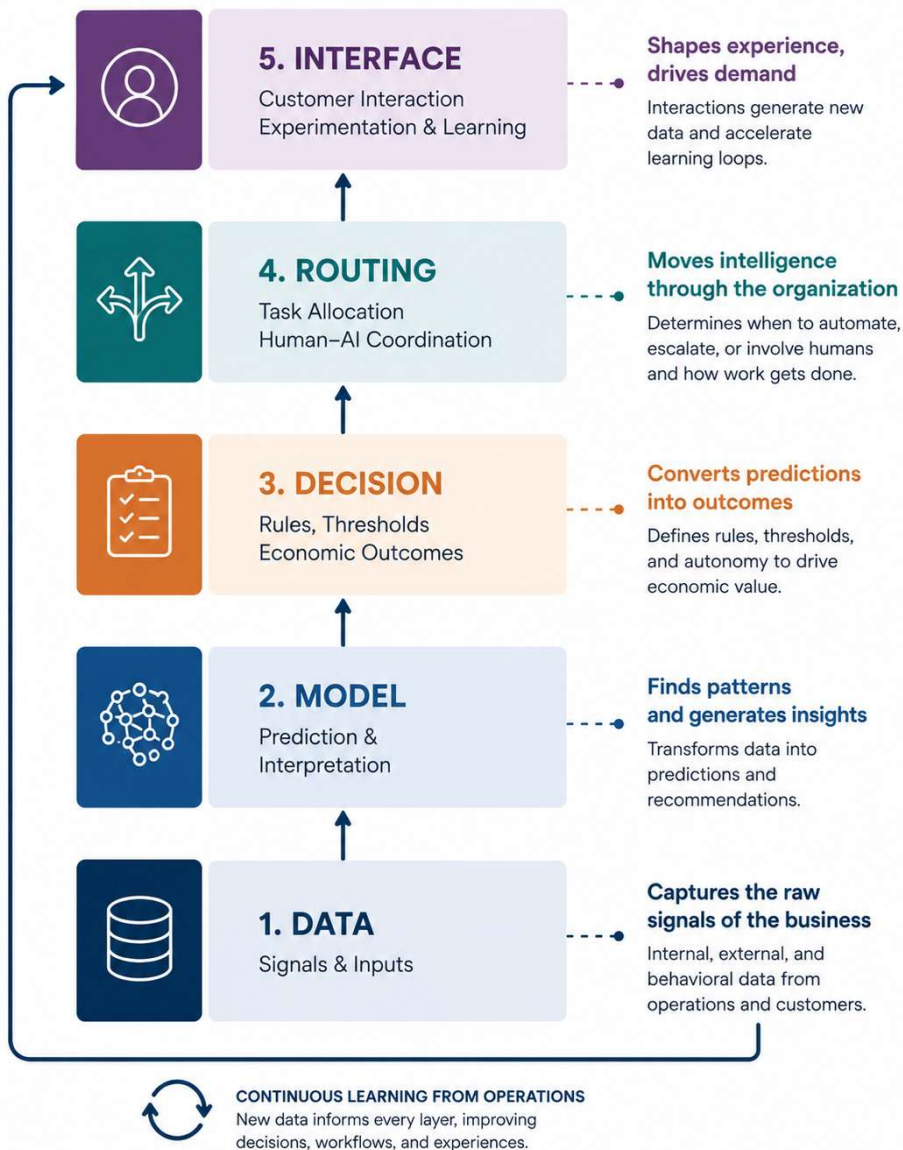
#### *Turning Data into Signal Advantage*

At the data layer, the question is not just how much data a firm has, but how distinctive and compounding it is.

Consider Visa, which processes billions of transactions across its network. Its advantage lies not only in scale, but in the ability to observe patterns across merchants, geographies, and time. Or

Tesla, which continuously collects driving data from vehicles in use, feeding improvements into its systems. In industrial settings, companies increasingly capture operational data from equipment deployed in the field, turning usage into insight.

In each case, the strategic question is the same: Does the firm possess data that is difficult to replicate, and does that data accumulate faster than competitors'? Advantage at this layer comes from data that compounds—becoming more valuable over time because it improves the system that generates it.



### *Using Models as Leverage, Not Just Technology*

Few firms will have the capacity to build frontier models. However, many may choose to build proprietary models based on open-source technology and small foundational models (which are often as effective as larger models). Yet others will choose to buy models from other providers. Differentiation will emerge from how models are adapted, fine-tuned, and deployed.

The key trade-offs are familiar but newly intensified: control versus cost, differentiation versus standardization, independence versus dependence on external platforms. The firms that win at this layer are not those with the most advanced models, but those that apply models in ways that competitors cannot easily replicate.

### *Where Value Is Captured: The Decision Layer*

The decision layer is where predictions become economic outcomes. Pricing, approvals, recommendations, and risk thresholds all sit here. This is where firms translate intelligence into action—and where value is ultimately captured.

At JPMorgan Chase, for example, lending decisions increasingly rely on data-driven models. At UnitedHealth Group, claims processing involves complex decision rules balancing cost, risk, and patient outcomes.

The strategic question is not whether decisions are automated. It is who defines the rules, how quickly those rules can change, and how much autonomy the system is given. Firms that control this layer effectively can continuously refine how value is created and captured.

### *The Hidden Source of Advantage: Workflow Design*

The next layer of routing or workflow in simple terms determines how intelligence actually moves through the organization. It governs when decisions are automated, when they are escalated, and how tasks are allocated between humans and machines.

Consider Uber, where matching drivers to riders is not just a prediction problem but a workflow problem—balancing speed, efficiency, and fairness in real time. Or Shopify, which orchestrates a wide range of merchant tools and services into coherent workflows.

This layer resembles earlier transformations in manufacturing. Automation alone did not create advantage. Advantage came from redesigning workflows to enable continuous improvement. The same is true with AI. Firms that design workflows well achieve not only efficiency, but also greater resilience.

### *Interfaces as Engines of Feedback*

At the interface layer, firms interact directly with users, shaping both demand and feedback. Companies like Amazon and Meta Platforms have long understood that interfaces are not just

channels of delivery, but engines of experimentation. Every interaction becomes an opportunity to test, learn, and adapt.

Control of the interface allows firms to accelerate feedback loops—but it also introduces new risks. Over-optimization can erode trust, and excessive experimentation can create what might be called customer fatigue. The strategic challenge is to balance learning and experience, extracting insight without degrading the relationship.

### **How Will We Win? From Position to Intelligence Flow**

In traditional strategy, the answer to “How will we win?” was anchored in position. Firms sought advantage through cost leadership, differentiation, scale, or control of scarce resources. Success depended on where a company stood relative to competitors — and how defensible that position was over time.

Artificial intelligence changes this logic. Position still matters, but it is no longer sufficient. In AI-enabled organizations, advantage increasingly depends on how effectively intelligence flows through the firm: from data to models, from models to decisions, from decisions to workflows, and from workflows back to customer and operational interfaces.

Across the AI intelligence stack, each layer contributes to advantage. At the data layer, firms compete to capture richer and more distinctive signals. At the model layer, they compete on how those signals are interpreted. At the decision layer, they compete on how predictions are translated into economic choices. At the workflow layer, they compete on how intelligence is routed between humans and machines. At the interface layer, they compete on how interactions generate new signals and strengthen the system.

But the real source of advantage is not any single layer. It is the integration among them. Experiments at the interface generate new data. Better data improves models. Improved models refine decisions. Better decisions reshape workflows. And redesigned workflows generate new performance signals that feed the system again.

Advantage emerges from intelligence that moves across the organization, rather than remaining trapped in isolated tools, teams, or functions. A company may have strong data but weak decision logic. It may deploy powerful models but fail to redesign workflows. It may control the customer interface but fail to convert interaction into insight. In each case, the stack remains fragmented.

The key strategic questions therefore change. Leaders must ask: How does intelligence move through the organization? Where does it get stuck? Which layers do we control? Which layers depend on external providers? How quickly can signals from one layer improve behavior in another?

Cost leadership and differentiation do not disappear. But increasingly, they become outcomes of intelligence flow. Firms reduce costs because their systems sense, decide, and route work better.

They differentiate because their interfaces, models, and workflows adapt more effectively to customer needs.

In the age of AI, firms do not win simply because they choose the right position. They win because they build systems in which intelligence flows continuously from signal to action.

### **Capabilities as Integration, Not Technology**

This shift also changes how we think about capabilities. The critical capability is not AI itself. It is the ability to integrate human judgment and intelligent systems into the operating model, so that intelligence is embedded directly in how the firm runs.

In traditional organizations, capabilities were built around assets, processes, and expertise. Strategy evolved through periodic adjustments: moments of analysis followed by execution. In AI-enabled firms, that logic becomes less sufficient. Strategy increasingly depends on how effectively intelligence moves through the organization — from signals to models, from models to decisions, from decisions to workflows, and from workflows back to interfaces.

Every layer of the stack becomes part of this flow. Data is continuously generated and curated. Models are updated. Decisions are refined. Workflows adapt. Interfaces generate new signals. The organization improves not because any single tool is powerful, but because the layers reinforce one another.

This requires a different kind of capability: architectural integration. At each layer, firms must design how humans and intelligent systems interact: who defines the rules, who supervises the models, who intervenes when decisions are ambiguous, and how feedback is captured and applied. Governance at the data layer, supervision at the model layer, accountability at the decision layer, task allocation at the workflow layer, and trust at the interface layer all become part of a single system.

The goal is not automation alone, but embedded strategic agility: the ability of the organization to sense, decide, and act through integrated intelligence. Firms that build this capability do not simply deploy AI tools. They design an operating architecture in which intelligence flows continuously across the firm. Advantage, in this view, does not come from possessing AI in isolation. It comes from integrating AI into the architecture of the firm so that data, models, decisions, workflows, and interfaces work together as a system.

### **Strategy Has Moved Into the Stack**

AI does not affect all sectors equally. In software and digital services, it can reshape entire business models. In logistics and services, it often improves coordination, routing, and efficiency. In physical industries, the impact may be slower, but grows as data, connectivity, and automation become more embedded in operations.

This variation reinforces a central point: strategy remains context-specific. There is no single AI playbook. But across contexts, one shift is consistent. The AI stack does not replace strategy. It relocates it.

Firms must now decide not only where to compete, but how to design systems in which intelligence flows effectively from data to action. They must integrate layers that were once separate: data, models, decisions, workflows, and interfaces. Control of any single layer is not enough. Advantage comes from how well the entire stack works as a system.

Strategy, in this sense, is no longer defined only by position. It is defined by how effectively the organization turns intelligence into action — continuously, reliably, and at scale.

Strategy has not disappeared in the age of AI. It has moved into the architecture of the firm: into the AI stack, the design of workflows, and the flow of intelligence through them.

The firms that understand this shift will not just use AI. They will build organizations whose intelligence systems improve how they sense, decide, act, and adapt. They will compete not simply with AI tools, but through the architecture of intelligence itself.