Johns Hopkins Carey Business School | Human Capital Development Lab

Don't treat AI like IT: Strategic lessons for self-learning technologies

RESEARCH BRIEF

Why it matters

AI is transforming how firms create value, yet **>70%** projects fail to meet objectives, often because firms treat AI as an IT upgrade, not a strategic capability. Self-learning systems differ from traditional digital tools because they evolve autonomously, operate opaquely ("black box"), and change constantly.

- Self-learning AI systems can outperform humans in data-driven tasks but may also behave unpredictably.
- Firms that treat AI as an IT upgrade risk wasted investment and missed opportunities.
- Organizations need coherent frameworks that connect technical capabilities to strategy, governance, and financial logic.

How we know

The authors synthesize insights from strategy, information systems, and management to address 5 Qs:

- *Where to deploy AI?* Identify value chain functions where it activates strategic strengths.
- *How does AI create competitive advantage?* Link capabilities to customer value, cost reduction, or innovation speed.
- *What are the financial impacts?* Tie AI directly to revenue streams or improved cost structures.
- *What's needed for implementation?* Address organizational barriers and balance transparency with automation.
- *How do we handle AI's ongoing evolution?* Build adaptive governance for rapid change.

What researchers found

- Task superiority allows AI systems to outperform humans in data-intensive, analytical, and predictive tasks, improving operational accuracy and decision-making.
- Black-box perception, which refers to AI's limited interpretability, requires firms to balance automation with intelligibility, trust.
- AI's evolution urges organizations to build adaptive governance, continuous learning.

Together, these properties create the **AI Business Strategy Wheel** i.e. how firms can align AI capabilities with strategic, financial, and organizational goals.

What this means

- **For executives:** Embed AI into business strategy—not as a digital add-on, but as a core driver of value creation and renewal.
- **For HR and learning leaders:** Build organization-wide AI literacy and foster collaboration between data and teams.
- **For innovation and strategy teams:** Balance experimentation with governance and use AI's learning capacity to explore new business models responsibly.
- **For compliance and risk managers:** Define guidelines for algorithmic transparency, accountability, and ethical oversight.

Now what?

- Review current AI initiatives for strategic alignment, governance readiness, and measurable outcomes.
- Identify domains of task superiority where AI yields the highest predictive or operational gains for your firm.
- Develop adaptive systems for model retraining, ethical monitoring, and regulatory responses.
- Link AI usage to financial logic by tracking productivity, innovation, and sustainability metrics.

LINK TO THE STUDY

Reference: Hutzschenreuter, T., & Lämmermann, T. (2024). What is your AI strategy? Systematically integrating self-learning technologies into your business strategy. *Academy of Management Perspectives*, 00(00), 1-24.