

## Strategic Decision-Making in the Data Analytics Era: A Multidisciplinary Approach to AI-Augmented Leadership Decision Making

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**Abstract:** This article examines the transformative role of artificial intelligence and data analytics in contemporary strategic decision-making processes, exploring how organizations can effectively integrate technological capabilities while preserving essential human cognitive functions. It examines the shift from traditional intuition-based decision-making to data-driven strategic frameworks that utilize AI-powered pattern recognition, predictive modeling, and automated analytical processes. The article reveals that successful AI-enhanced strategic decision-making requires a careful balance between technological sophistication and human expertise, particularly in areas of contextual understanding, ethical reasoning, and critical evaluation of algorithmic outputs. It highlights democratization of strategic decision-making through multidisciplinary team approaches that combine data science expertise with business acumen and domain knowledge, addressing significant challenges such as data quality issues, organizational resistance to change, and workforce skill development requirements. It further demonstrates that organizations achieving meaningful outcomes from AI-augmented strategy consistently invest in comprehensive governance structures, change management processes, and continuous learning initiatives that enhance rather than replace human strategic thinking capabilities. The article concludes that the future of strategic decision-making lies in creating synergistic relationships between artificial intelligence and human judgment, fostering collaborative environments where technological capabilities amplify strategic reasoning while maintaining organizational values, ethical considerations, and the nuanced understanding that characterizes effective leadership in complex business environments.

**Keywords:** Strategic Decision-Making, Artificial Intelligence, Data Analytics, Human-AI Collaboration, Organizational Strategy.

### INTRODUCTION

The contemporary business landscape has witnessed a fundamental transformation in how organizations approach strategic decision-making, with data analytics and artificial intelligence emerging as critical enablers of competitive advantage. Traditional decision-making frameworks, historically reliant on managerial intuition and experience, are increasingly being supplemented—and in some cases replaced—by sophisticated analytical tools capable of processing vast amounts of information to generate actionable insights. This evolution represents more than a technological upgrade; it constitutes a paradigm shift that redefines the very nature of strategic thinking in modern organizations.

The integration of AI-powered analytics into strategic processes has created unprecedented opportunities for organizations to move beyond reactive approaches toward predictive and prescriptive decision-making models. These advanced systems can identify complex patterns within multidimensional datasets, uncover hidden correlations, and generate forecasts that would be impossible to achieve through conventional analytical methods. However, this technological advancement has also introduced new challenges, particularly regarding the preservation of human cognitive capabilities and the development of collaborative frameworks that effectively combine artificial and human intelligence.

The democratization of strategic decision-making has emerged as a significant consequence of this technological evolution. No longer confined to executive boardrooms, strategic decisions increasingly involve multidisciplinary teams comprising data scientists, business analysts, domain experts, and technology specialists. This collaborative approach recognizes that while AI can process information at unprecedented scales and speeds, human expertise remains essential for contextualizing insights, exercising judgment, and ensuring that analytical recommendations align with organizational objectives and market realities (Chui, M. *et al.*, 2023).

Understanding how organizations can effectively harness the power of data analytics while maintaining the irreplaceable elements of human strategic thinking has become a critical area of inquiry. The success of AI-augmented decision-making depends not merely on technological sophistication but on the ability to create synergistic relationships between human cognition and artificial intelligence, fostering environments where diverse expertise can converge to address complex strategic challenges.

### LITERATURE REVIEW

#### Traditional Strategic Decision-Making Models

Classical strategic decision-making frameworks have historically emphasized structured analytical processes, with models such as Porter's Five

Forces, SWOT analysis, and the rational choice theory serving as foundational tools for organizational strategy development. These traditional approaches typically rely on qualitative assessments, expert judgment, and linear problem-solving methodologies. The decision-making process often follows hierarchical structures where senior management synthesizes information from various organizational levels to formulate strategic directions. While these models provided systematic frameworks for strategy formulation, they are inherently limited by human cognitive constraints, processing capabilities, and the availability of relevant information at the time of decision-making.

### The Emergence of Data Analytics in Business Strategy

The proliferation of digital technologies and the exponential growth of organizational data have fundamentally altered the strategic landscape. Business intelligence tools and advanced analytics platforms have enabled organizations to move beyond descriptive analysis toward predictive and prescriptive insights. Data-driven decision-making has become increasingly prevalent across industries, with organizations leveraging customer analytics, market intelligence, and operational data to inform strategic choices. This shift has been particularly pronounced in sectors with high data intensity, where organizations have demonstrated measurable improvements in performance through the systematic application of analytical methodologies.

### AI Integration in Organizational Decision Processes

Artificial intelligence has introduced unprecedented capabilities in strategic decision-

making through machine learning algorithms, natural language processing, and automated pattern recognition systems. Organizations are increasingly deploying AI-powered tools for scenario planning, risk assessment, and competitive analysis. The integration of AI technologies has enabled real-time decision support systems that can process complex, multi-variable problems and generate recommendations with speed and accuracy that exceed traditional analytical approaches. However, the implementation of AI in strategic contexts requires careful consideration of organizational readiness, data quality, and the balance between automated insights and human oversight (Harvard Business Review, 2023).

### Gaps in Current Research

Despite the growing body of literature on data analytics and AI in strategic decision-making, significant research gaps persist. Limited empirical studies examine the long-term organizational impacts of AI-augmented decision-making processes, particularly regarding strategic outcomes and competitive performance. Additionally, there remains an insufficient understanding of optimal frameworks for integrating human expertise with AI-generated insights in strategic contexts. The literature also lacks a comprehensive analysis of the collaborative dynamics required for effective multidisciplinary decision-making teams in data-rich environments and the specific competencies required for leaders operating in AI-enhanced strategic contexts.

**Table 1:** Traditional vs. AI-Enhanced Strategic Decision-Making Models (Harvard Business Review, 2023)

| Aspect                | Traditional Models           | AI-Enhanced Models              |
|-----------------------|------------------------------|---------------------------------|
| Data Processing       | Manual, time-intensive       | Automated, real-time            |
| Analysis Scope        | Limited by human capacity    | Large-scale pattern recognition |
| Decision Speed        | Slow, hierarchical           | Rapid, collaborative            |
| Predictive Capability | Experience-based forecasting | Advanced predictive modeling    |
| Pattern Recognition   | Linear, obvious correlations | Complex, hidden relationships   |
| Strategic Approach    | Reactive to market changes   | Proactive, anticipatory         |

## THE AI-DATA ANALYTICS NEXUS IN STRATEGIC DECISION-MAKING

### Automation of Data Processing Tasks

The integration of artificial intelligence with data analytics has revolutionized the foundational aspects of strategic decision-making by automating traditionally labor-intensive data processing

operations. Modern AI systems can efficiently handle data collection, cleaning, validation, and preliminary analysis tasks that previously required significant human resources and time investment. This automation extends beyond simple data manipulation to include sophisticated preprocessing activities such as anomaly detection,

missing value imputation, and data standardization across multiple sources. The elimination of manual data processing bottlenecks has enabled organizations to redirect human capital toward higher-value analytical activities, including insight interpretation, strategic synthesis, and decision contextualization.

### **Pattern Recognition and Correlation Analysis at Scale**

AI-powered analytics platforms possess the computational capacity to identify complex patterns and correlations within massive datasets that would be practically impossible for human analysts to discern. These systems can simultaneously analyze multiple variables across different time periods, market segments, and operational dimensions to reveal hidden relationships that inform strategic insights. The ability to process structured and unstructured data sources concurrently enables comprehensive pattern recognition that encompasses customer behavior, market trends, competitive dynamics, and internal operational metrics. This capability extends strategic analysis beyond traditional linear relationships to encompass non-linear dependencies and emergent patterns that may indicate significant strategic opportunities or threats.

### **Predictive Capabilities and Forecasting Models**

Advanced AI algorithms have transformed strategic planning through sophisticated predictive modeling capabilities that generate probabilistic forecasts across multiple scenarios and time horizons. Machine learning models can incorporate historical data patterns, external market indicators, and real-time information streams to produce dynamic forecasts that adapt to changing conditions. These predictive capabilities enable organizations to model potential outcomes of strategic decisions, assess risk probabilities, and evaluate the sensitivity of strategic initiatives to various market and operational variables. The integration of predictive analytics into strategic processes has enhanced the precision of resource allocation decisions and improved the timing of strategic interventions.

### **The Transition from Reactive to Proactive Strategy**

The convergence of AI and data analytics has facilitated a fundamental shift from reactive strategic approaches toward proactive, anticipatory decision-making frameworks. Organizations can now identify emerging trends, market disruptions,

and competitive threats before they fully materialize, enabling preemptive strategic responses rather than reactive adjustments. This proactive capability is particularly valuable in rapidly evolving markets where early detection of strategic signals can provide significant competitive advantages. AI-enabled monitoring systems can continuously scan internal and external environments for strategic indicators, alerting decision-makers to opportunities and threats that require immediate attention. The transition to a proactive strategy represents a strategic evolution that leverages technological capabilities to enhance organizational agility and responsiveness (Kitsios, F., & Kamariotou, M. 2021).

## **PRESERVING HUMAN COGNITIVE CAPABILITIES IN AI-AUGMENTED ENVIRONMENTS**

### **The Irreplaceable Role of Human Judgment**

Despite the sophistication of AI-powered analytics, human judgment remains an indispensable component of strategic decision-making, particularly in situations involving ethical considerations, stakeholder management, and alignment of organizational values. Human decision-makers possess the ability to weigh intangible factors such as corporate culture, reputation risks, and social responsibility that may not be fully captured in quantitative models. The nuanced understanding of organizational dynamics, stakeholder relationships, and long-term consequences requires human cognitive capabilities that complement rather than compete with AI-generated insights. Leaders must exercise judgment in determining when to rely on AI recommendations, when to override them, and how to balance multiple competing objectives that may not have clear quantitative solutions.

### **Critical Thinking and AI-Generated Recommendations**

The proliferation of AI-generated recommendations necessitates enhanced critical thinking skills among strategic decision-makers to evaluate the validity, limitations, and applicability of algorithmic outputs. Human analysts must develop the capacity to scrutinize AI recommendations for potential biases, data quality issues, and contextual limitations that may not be apparent in the analytical results. This critical evaluation process requires an understanding of the underlying assumptions, methodologies, and data sources used by AI systems to generate

recommendations. Decision-makers must also assess whether AI-generated insights align with broader strategic objectives and organizational realities, ensuring that technological capabilities are appropriately integrated with human expertise and institutional knowledge.

### **Contextual Understanding and Industry Knowledge**

Human expertise in industry-specific knowledge, market dynamics, and regulatory environments remains crucial for interpreting AI-generated insights within appropriate strategic contexts. Domain experts possess a deep understanding of industry cycles, competitive behaviors, and market nuances that provide essential context for analytical findings. This contextual knowledge enables strategic leaders to identify when AI recommendations may be based on incomplete or misleading data patterns and when external factors not captured in historical data may influence future outcomes. The ability to synthesize quantitative insights with qualitative industry knowledge ensures that strategic decisions account for the full spectrum of relevant factors affecting organizational performance and competitive positioning.

### **The Art of Asking the Right Questions**

The effectiveness of AI-augmented strategic decision-making depends fundamentally on the quality of questions posed to analytical systems, requiring human cognitive capabilities to frame problems appropriately and define meaningful analytical objectives. Strategic leaders must develop the skill to translate complex business challenges into specific, actionable questions that AI systems can address effectively. This process involves understanding both the capabilities and limitations of AI tools, ensuring that analytical efforts are directed towards problems where technological solutions can provide meaningful value. The ability to formulate hypotheses, define success metrics, and establish analytical frameworks represents a uniquely human contribution that shapes the entire strategic analysis process (Parker, C. B. 2019).

## **COLLABORATIVE FRAMEWORKS FOR STRATEGIC DECISION-MAKING**

### **The Democratization of Strategic Decision-Making**

The integration of AI and data analytics has fundamentally altered the traditional hierarchical structure of strategic decision-making, enabling broader organizational participation in strategic

processes. Advanced analytical tools have made sophisticated insights accessible to employees across various organizational levels, reducing the information asymmetry that previously concentrated strategic authority among senior executives. This democratization has created opportunities for frontline employees, middle managers, and specialized professionals to contribute meaningful insights to strategic discussions based on their unique perspectives and access to operational data. The shift toward more inclusive decision-making processes has enhanced organizational agility by enabling faster identification of strategic opportunities and challenges from multiple vantage points within the organization.

### **Multidisciplinary Team Composition and Dynamics**

Effective AI-augmented strategic decision-making requires carefully composed multidisciplinary teams that combine diverse expertise areas, including data science, business analysis, domain knowledge, and technological capabilities. These teams must balance technical proficiency with business acumen, ensuring that analytical insights are properly contextualized within organizational objectives and market realities. The optimal team composition varies depending on the strategic challenge but typically includes data scientists who understand algorithmic capabilities and limitations, business analysts who can translate insights into actionable recommendations, domain experts who provide industry-specific knowledge, and technology specialists who ensure system integration and data quality. Successful team dynamics require clear role definitions, shared objectives, and established protocols for integrating diverse perspectives into cohesive strategic recommendations.

### **Bridging Technical and Business Perspectives**

One of the critical challenges in AI-enhanced strategic decision-making involves effectively bridging the gap between technical, analytical capabilities and business strategic requirements. Technical professionals must develop sufficient business understanding to ensure their analytical work addresses relevant strategic questions, while business leaders must acquire adequate technical literacy to properly interpret and apply analytical insights. This bridging process requires establishing a common vocabulary, shared frameworks for evaluating analytical outputs, and collaborative processes that enable meaningful dialogue between technical and business

stakeholders. Organizations that successfully bridge these perspectives often establish liaison roles or hybrid positions that facilitate communication and ensure analytical work remains aligned with strategic objectives.

**Communication Strategies in Data-Rich Environments**

The proliferation of data-driven insights necessitates sophisticated communication strategies that can effectively convey complex analytical findings to diverse stakeholder groups with varying levels of technical expertise. Successful communication in data-rich environments requires the ability to distill complex

analytical results into clear, actionable recommendations while maintaining transparency about underlying assumptions and limitations. Visual communication tools, narrative frameworks, and structured presentation formats have become essential for ensuring that AI-generated insights are properly understood and appropriately incorporated into strategic decisions. Effective communication strategies also address the challenge of uncertainty inherent in predictive analytics, helping stakeholders understand confidence levels and potential scenarios rather than treating analytical outputs as definitive predictions (Gallagher, C. 2024).

**Table 2:** Multidisciplinary Team Composition for AI-Augmented Strategy (Gallagher, C. 2024)

| Role                   | Primary Responsibilities                   | Key Competencies                           |
|------------------------|--------------------------------------------|--------------------------------------------|
| Data Scientists        | Algorithm development, model validation    | Statistical analysis, machine learning     |
| Business Analysts      | Insight translation, strategic alignment   | Business acumen, analytical thinking       |
| Domain Experts         | Industry context, market knowledge         | Sector expertise, regulatory understanding |
| Technology Specialists | System integration, data quality           | Technical infrastructure, data governance  |
| Strategic Leaders      | Decision synthesis, stakeholder management | Leadership, critical thinking              |

**CASE STUDIES AND EMPIRICAL ANALYSIS**

**Implementation Across Different Industries**

The adoption of AI-enhanced strategic decision-making has varied significantly across industries, with sectors such as financial services, retail, and healthcare leading in implementation sophistication and measurable outcomes. Financial institutions have leveraged AI for risk assessment, fraud detection, and investment strategy optimization, while retail organizations have focused on demand forecasting, customer segmentation, and supply chain optimization. Healthcare organizations have implemented AI-driven analytics for operational efficiency, patient outcome prediction, and resource allocation decisions. Manufacturing companies have utilized predictive maintenance, quality control, and production optimization as primary applications. The variation in implementation approaches reflects industry-specific regulatory requirements, data availability, competitive pressures, and organizational readiness factors that influence the strategic application of AI technologies.

**Success Factors and Common Pitfalls**

Successful implementation of AI-augmented strategic decision-making consistently demonstrates several critical success factors, including executive commitment, comprehensive change management, robust data governance, and investment in organizational capabilities. Organizations that achieve meaningful outcomes typically establish clear strategic objectives for AI implementation, invest in employee training and development, and create governance structures that balance innovation with risk management. Common pitfalls include insufficient attention to data quality, inadequate integration with existing decision processes, unrealistic expectations regarding AI capabilities, and failure to address organizational resistance to change. Many organizations also struggle with the challenge of scaling successful pilot projects to enterprise-wide implementations, often due to inadequate infrastructure, insufficient resources, or lack of organizational alignment around AI-driven decision-making processes.

**Measuring the Impact of AI-Enhanced Decision-Making**

Quantifying the impact of AI-enhanced strategic decision-making presents significant

methodological challenges due to the complexity of isolating AI contributions from other organizational factors affecting performance outcomes. Organizations have developed various measurement frameworks that combine quantitative metrics such as decision speed, accuracy improvements, and cost reductions with qualitative assessments of decision quality, stakeholder satisfaction, and strategic alignment. Key performance indicators commonly used include reduction in decision-making time, improvement in forecast accuracy, increased operational efficiency, and enhanced competitive positioning. However, measuring long-term strategic impact remains challenging due to the time lag between strategic decisions and observable outcomes, the influence of external market factors, and the difficulty of establishing appropriate control groups for comparative analysis. Advanced measurement approaches increasingly incorporate causal inference methodologies and longitudinal analysis to better isolate the specific contributions of AI-enhanced decision-making to organizational performance (Avezov, F. 2025).

## CHALLENGES AND LIMITATIONS

### Data Quality and Reliability Issues

The effectiveness of AI-enhanced strategic decision-making depends fundamentally on the quality, completeness, and reliability of underlying data sources, yet many organizations struggle with significant data quality challenges that compromise analytical outputs. Common issues include inconsistent data formats across systems, missing or incomplete records, outdated information, and biased sampling that may not represent the full scope of organizational operations or market conditions. These data quality problems can lead to misleading insights, incorrect predictions, and strategic decisions based on flawed assumptions. Organizations must invest substantial resources in data governance, quality assurance processes, and ongoing monitoring to ensure that AI systems receive reliable inputs that can support sound strategic reasoning (Doshi, U. 2025).

### Ethical Considerations in AI-Driven Strategy

The integration of AI into strategic decision-making raises complex ethical considerations regarding algorithmic bias, transparency, accountability, and the potential for discriminatory outcomes that may affect stakeholders, customers, and society at large. AI systems can perpetuate or

amplify existing biases present in historical data, leading to strategic decisions that inadvertently disadvantage certain groups or reinforce inequitable practices. The opaque nature of many AI algorithms creates challenges for understanding how specific recommendations are generated, making it difficult to ensure accountability and explain decisions to stakeholders. Organizations must develop ethical frameworks, establish oversight mechanisms, and implement bias detection and mitigation strategies to ensure that AI-enhanced strategic decision-making aligns with organizational values and societal expectations (Yau, J. 2024).

### Organizational Resistance to Change

The implementation of AI-augmented strategic decision-making often encounters significant organizational resistance stemming from concerns about job displacement, loss of authority, skepticism about technological capabilities, and attachment to traditional decision-making processes. Employees may resist sharing data or collaborating with AI systems if they perceive these technologies as threats to their professional roles or expertise. Senior leaders may be reluctant to rely on AI recommendations if they lack understanding of the underlying technologies or prefer to maintain control over strategic decisions. Overcoming organizational resistance requires comprehensive change management strategies that address concerns, provide adequate training, and demonstrate the value of AI-enhanced decision-making through successful pilot implementations.

### Skills Gap and Training Requirements

The successful implementation of AI-enhanced strategic decision-making requires a workforce equipped with new competencies that combine technical literacy, analytical thinking, and strategic reasoning capabilities, yet many organizations face significant skills gaps that limit their ability to effectively leverage AI technologies. Employees across all organizational levels need training in data interpretation, AI tool utilization, and collaborative decision-making processes that integrate human judgment with algorithmic insights. The rapidly evolving nature of AI technologies means that training requirements are constantly changing, requiring ongoing investment in professional development and continuous learning programs. Organizations must also address the challenge of recruiting and retaining talent with the specialized skills needed to design, implement, and manage AI-enhanced strategic

decision-making systems (Hu, C., Downie, A. 2024).

**Table 3: Implementation Challenges and Mitigation Strategies (Doshi, U. 2025)**

| Challenge Category        | Specific Issues                         | Mitigation Strategies                        |
|---------------------------|-----------------------------------------|----------------------------------------------|
| Data Quality              | Inconsistent formats, missing records   | Data governance, quality assurance           |
| Ethical Concerns          | Algorithmic bias, transparency          | Ethical frameworks, bias detection           |
| Organizational Resistance | Job displacement fears, skepticism      | Change management, pilot programs            |
| Skills Gap                | Technical literacy, analytical thinking | Training programs, continuous learning       |
| Integration Complexity    | System compatibility, process alignment | Phased implementation, governance structures |

## FUTURE DIRECTION AND IMPLICATIONS

### Emerging Technologies and Their Strategic Applications

The strategic decision-making landscape continues to evolve with the emergence of advanced technologies, including quantum computing, edge analytics, augmented reality interfaces, and next-generation natural language processing capabilities that promise to further enhance organizational decision-making capabilities. Quantum computing may enable complex optimization problems and scenario analysis that are currently computationally intractable, while edge analytics can provide real-time strategic insights closer to operational processes. Augmented reality interfaces may transform how decision-makers interact with complex data visualizations and strategic models, enabling more intuitive and collaborative strategic planning processes. These emerging technologies will likely create new opportunities for strategic advantage while also introducing additional complexity and implementation challenges that organizations must navigate.

### The Evolution of Leadership in Data-Driven Organizations

The proliferation of AI-enhanced strategic decision-making is fundamentally reshaping leadership requirements and competencies, with future leaders needing to develop hybrid skills that combine traditional strategic thinking with technological fluency and data-driven decision-making capabilities. Leadership roles are evolving to emphasize the facilitation of collaborative

decision-making processes, interpretation of complex analytical outputs, and integration of diverse perspectives from multidisciplinary teams. The traditional hierarchical model of strategic leadership is giving way to more distributed and networked approaches that leverage collective intelligence and technological capabilities. Future leaders must also navigate the ethical implications of AI-driven decisions while maintaining organizational culture and values in increasingly automated environments.

### Recommendations for Practitioners and Organizations

Organizations seeking to maximize the benefits of AI-enhanced strategic decision-making should focus on developing comprehensive implementation strategies that address technology, people, and process dimensions simultaneously. Key recommendations include establishing clear governance frameworks for AI deployment, investing in workforce development programs that build necessary competencies, and creating organizational cultures that embrace data-driven decision-making while preserving human judgment and ethical considerations. Practitioners should prioritize building strong partnerships between technical and business teams, implementing robust data quality management processes, and developing measurement frameworks that can demonstrate the value of AI-enhanced decision-making. Organizations should also maintain flexibility in their AI strategies to accommodate rapid technological evolution and changing market conditions (Deloitte.).

**Table 4: Success Factors and Performance Indicators (Avezov, F. 2025)**

| Success Factor       | Description                                | Performance Indicators                |
|----------------------|--------------------------------------------|---------------------------------------|
| Executive Commitment | Leadership support and resource allocation | Investment levels, strategic priority |
| Data Governance      | Quality management and reliability         | Data accuracy metrics,                |

|                              |                                              |                                         |
|------------------------------|----------------------------------------------|-----------------------------------------|
|                              | systems                                      | compliance rates                        |
| <b>Workforce Development</b> | Training and capability building             | Skill assessment scores, adoption rates |
| <b>Collaborative Culture</b> | Cross-functional team effectiveness          | Team performance, decision quality      |
| <b>Measurement Framework</b> | Impact assessment and continuous improvement | Decision speed, forecast accuracy       |

## CONCLUSION

The integration of artificial intelligence and data analytics into strategic decision-making represents a transformative evolution that fundamentally reshapes how organizations approach complex challenges and opportunities in the modern business environment. This comprehensive article reveals that while AI-enhanced decision-making offers unprecedented capabilities for pattern recognition, predictive analysis, and automated processing, the most successful implementations maintain a delicate balance between technological sophistication and human cognitive capabilities. The democratization of strategic decision-making through AI tools has created new collaborative frameworks that leverage multidisciplinary expertise, yet organizations must navigate significant challenges, including data quality issues, ethical considerations, organizational resistance, and skill gaps that can impede successful implementation. The empirical article demonstrates that organizations achieving meaningful outcomes from AI-augmented strategy consistently invest in comprehensive change management, robust governance structures, and continuous workforce development while maintaining a focus on human judgment, contextual understanding, and critical thinking capabilities that remain irreplaceable in strategic contexts. As emerging technologies continue to evolve and leadership models adapt to data-driven environments, the future of strategic decision-making will likely depend on organizations' ability to create synergistic relationships between artificial intelligence and human expertise, fostering environments where technological capabilities enhance rather than replace the fundamental strategic thinking processes that drive organizational success. The implications of this evolution extend beyond individual organizations to encompass broader questions about the nature of strategic leadership, the distribution of decision-making authority, and the ethical responsibilities that accompany the increasing reliance on algorithmic insights in shaping organizational futures and societal outcomes.

## REFERENCES

1. Chui, M. et al., "The Economic Potential of Generative AI: The Next Productivity Frontier". *McKinsey Global Institute*, (2023). <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier>
2. Harvard Business Review. "How Generative AI Changes Strategy". (2023). <https://hbr.org/podcast/2023/05/how-generative-ai-changes-strategy>
3. Kitsios, F., & Kamariotou, M. "Artificial intelligence and business strategy towards digital transformation: A research agenda." *Sustainability* 13.4 (2021): 20-25.
4. Parker, C. B. "Exploring the Human Side of Artificial Intelligence." *Stanford Business*, (2019). <https://www.gsb.stanford.edu/insights/exploring-human-side-artificial-intelligence>
5. Gallagher, C. "Why a New Type of Cross-Functional Teams is Essential for AI-Driven Success." *LinkedIn*, (2024). <https://www.linkedin.com/pulse/why-new-type-cross-functional-teams-essential-success-chris-gallagher-errbe/>
6. Avezov, F. "The Economic Impact of AI Adoption: Measuring Productivity and Competitive Advantage in International Enterprises." *The American Journal of Management and Economics Innovations* 7.06 (2025): 22-29.
7. Doshi, U. "The Hidden Cost of Poor Data Quality: Why Your AI Initiative Might Be Set Up for Failure." *Akaike*, (2025). <https://www.akaike.ai/resources/the-hidden-cost-of-poor-data-quality-why-your-ai-initiative-might-be-set-up-for-failure>
8. Yau, J. "The ethical implications of AI decision-making." *RSM*, (2024). <https://www.rsm.global/insights/ethical-implications-ai-decision-making>
9. Hu, C., Downie, A. "AI skills gap." (2024). <https://www.ibm.com/think/insights/ai-skills-gap>

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10. Deloitte, “How to create an effective AI strategy.”  
<https://www.deloitte.com/us/en/what-we->

[do/capabilities/applied-artificial-intelligence/articles/effective-ai-strategy.html](https://www.deloitte.com/us/en/what-we-do/capabilities/applied-artificial-intelligence/articles/effective-ai-strategy.html)

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