Enterprise AI Management Principles

Leading organizations should adopt these 15 management principles for enterprise AI to remain competitive.

Enterprise AI (EAI) encompasses the design, development, monitoring and improvement of artificial intelligence (AI) systems to augment and enhance the productivity and quality of work across the enterprise. We have been focused on EAI and overlapping disciplines for nearly a quarter of a century and have held discussions with hundreds of organizations, including many industry market leaders.

The following are 15 key principles embedded in our distributed AI OS with rationale and implications. The principles are universal by design for any type of organization.

Principle 1: *EAI should have governance, ethics, and security built-in from inception.*

Rationale: Good system design is paramount. Governance is the foundation AI systems are built upon.

Implications: Attempting to add-on governance, ethics, and security after the fact is technically difficult, inefficient, and prone to error.

Principle 2: *Design-in systemic data quality management.*

Rationale: AI systems are only as good as the data they train on.

Implications: Garbage-in / garbage-out; quality-in / quality-out.

Principle 3: *Maintain strong security.*

Rationale: EAI includes the most important human workflow in the enterprise, including strategy, planning, and intellectual property.

Implications: Compromised EAI systems can be devastating to the organization.

Principle 4: *Embed integrity throughout AI systems.*

Rationale: Enterprise-wide AI systems interacts with the entire organization, providing a foundation for integrity.

Implications: If EAI systems lack integrity, so too will the organization.

Principle 5: *Maintain objectivity.*

Rationale: AI systems are an invitation for manipulation from political activists, fraud, and governments with totalitarian tendencies, resulting in misinformation that can lead to a dystopian future. Unless prevented, unconscious bias can also become embedded in AI through human workflow and algorithms.

Implications: Maintaining objectivity in EAI is essential. Cognitive bias is a significant risk in AI systems that has already been realized at scale.

Principle 6: *Provide privacy, transparency and explainability.*

Rationale: In order to earn and maintain trust, EAI systems should be transparent and explainable in a simple manner.

Implications: If employees, customers, and partners don't trust the system, they are less likely to participate and/or attempt to work around the system.

Principle 7: *Empower individuals.*

Rationale: Organizations of every size and type consist of individuals.

Implications: Organizations that lose sight of the needs of individuals tend to experience low morale, high turn-over, and cultural deterioration.

Principle 8: *Adopt enterprise-wide architecture.*

Rationale: Value sometimes arises where least expected.

Implications: The one individual or sensor left out of EAI for the enterprise, supply chain, or ecosystem might be the one that recognized and alerted an existential risk.

Principle 9: *Turbocharge prevention with EAI.*

Rationale: The highest ROI possible is prevention of major crises.

Implications: Failure to prevent crises can lead to a negative spiral, failure, and collapse.

Principle 10: *Accelerate discovery and productivity.*

Rationale: Well-designed AI systems have a unique capacity to augment, enhance, and accelerate discovery, research, development, and execution.

Implications: It may not be possible to catch competitors that are more effective in applying EAI for productivity growth and R&D.

Principle 11: *Establish and maintain a competitive advantage.*

Rationale: AI systems learn quickly, innovation is accelerating, and the gap between AI leaders and laggards is rapidly expanding.

Implications: Organizations that fail to maintain competitive AI systems are at high-risk of falling behind, disruption, and displacement.

Principle 12: *Leverage EAI for continuous human learning and improved decision making.*

Rationale: Rapid machine learning only becomes an advantage when it improves human behavior.

Implications: Failing to rapidly learn in the AI era risks extinction.

Principle 13: *Mitigate risk in development, auditing, and monitoring EAI.*

Rationale: How and who designs, audits, and monitors AI systems can determine the outcome.

Implications: A significant percentage of large enterprise crises have been due to internal actors ("don't try this at home").

Principle 14: *Incentivize accuracy and improvement with knowledge capital.*

Rationale: Data intelligence within the system allows more accurate financial and psychological rewards with digital currency, which can serve to guide organizational and individual behavior.

Implications: Organizations that fail to recognize and reward top performers tend to lose them to competitors.

Principle 15: *Continuously adapt.*

Rationale: "The species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself." – Charles Darwin, *The Origin of Species.*

Implications: The pace of change appears to be accelerating. Organizational cultures that master AI systems for continuous adaptation are most likely to thrive in the future.

What is the end goal of EAI?

KYield's goal is to empower client organizations to transform into continuously adaptive learning organization (CALO) with our KYield OS, which is a distributed AI operating system that provides augmentation and rapid learning in a continuous loop. Embedded functions include semi-automated governance, prevention of crises, multiple proprietary security methods, and enhanced productivity tailored to the mission, goals, and work products of each entity. The modular system is administered with a simple to use natural language interface (NLP).

We offer a menu of flexible options that range from a turnkey system in hybrid cloud format to bespoke services and licensing supported by consulting.

Mark Montgomery is the founder, CEO, and Chairman of the Board of KYield, Inc. He is originator of the theorem 'yield management of knowledge', and inventor of the now patented AI system that serves as the foundation for KYield: 'Modular System for Optimizing Knowledge Yield in the Digital Workplace', issued August 23, 2011. He is also the inventor of the patent-pending 'synthetic genius machine and knowledge creation system', filed in August of 2019. The SGM combines multiple technologies from KYield's extensive R&D, including multi-agent search, knowledge extraction, data physics, modeling, symbolic representation, neural networks, deep learning, and quantum computing. Mark can be reached at markm@kyield.com or on LinkedIn.