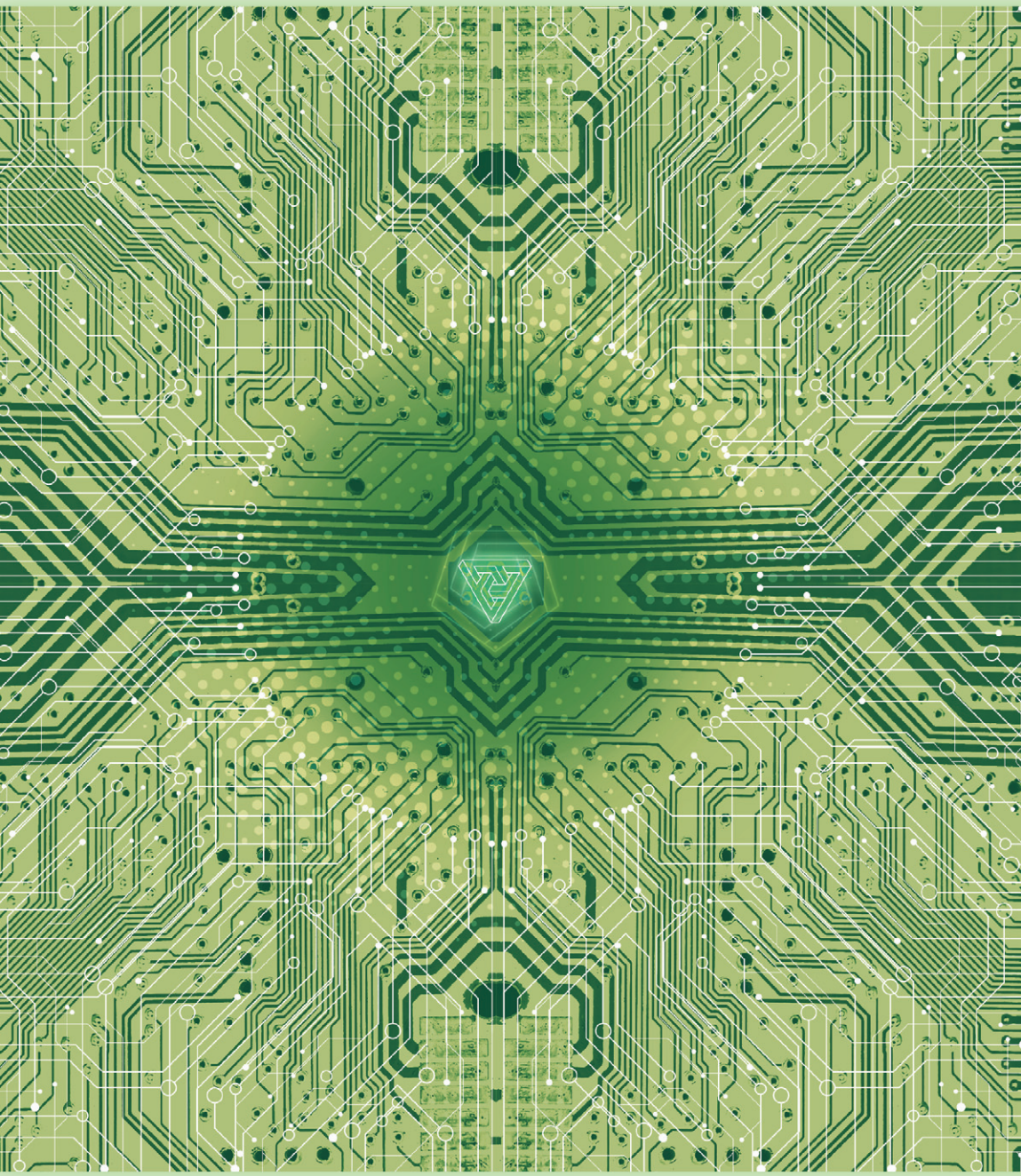
# AI-DRIVEN KNOWLEDGE MANAGEMENT ASSETS

## Strategies for the Modern Business Landscape



Edited by

**MILTIADIS D. LYTRAS & MEIR RUSS**

# AI-Driven Knowledge Management Assets, Volume 2

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# AI-Driven Knowledge Management Assets, Volume 2: Strategies for the Modern Business Landscape

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INVESTOR IN PEOPLE

*To Fay, that keeps me grounded every day, with all my love.*

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# Introduction

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Chapter 1

# Unveiling the AI-Driven Knowledge Asset Landscape: Foundations, Innovations, and Integration Strategies

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## Abstract

Artificial Intelligence (AI) is reshaping the nature, value, and dynamics of knowledge assets in organizations. This chapter offers a foundational exploration of AI-driven knowledge management assets, emphasizing how emerging technologies create, enhance, and transform these assets across industries. We begin by classifying core types of knowledge assets, including human, structural, and relational assets, and then examine the emergence of AI-generated content, codified intelligence, and autonomous process insights as new forms of digital capital. Particular focus is given to AI's role in business process automation, where algorithmic knowledge increasingly serves as a central asset. We also present a framework for integrating AI-generated knowledge into traditional enterprise systems and human workflows, emphasizing the balance between augmentation and automation. This chapter positions AI-enhanced knowledge assets not as replacements for human contribution but as catalysts that elevate decision-making, innovation, and organizational adaptability.

*Keywords:* AI-driven knowledge management; knowledge assets; KM ecosystem; innovations; integration strategies

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## Introduction: Redefining Knowledge Assets in the Age of Artificial Intelligence

The concept of knowledge as a strategic asset has long been established in management literature (Edvinsson & Sullivan, 1996; Russ, 2021; Sarirete et al., 2022; Chui et al., 2020; Visvizi et al., 2020). Traditionally, organizations have invested heavily in capturing explicit knowledge (manuals, reports, systems) and fostering tacit knowledge (expertise, intuition, experience). In the digital era, these assets became structured in enterprise platforms, knowledge bases, and learning ecosystems. However, with the exponential rise of artificial intelligence—especially natural language processing (NLP), machine learning (ML), and generative AI—a new class of *AI-driven knowledge assets* has emerged, challenging the traditional taxonomy of organizational capital (Böhm & Durst, 2025; Rezaei, 2025; Wang et al., 2025; Zhang, Zhang, et al., 2025).

In this new paradigm, knowledge is not only consumed and shared—it is generated, structured, and autonomously created by intelligent systems. AI can now create new product ideas, generate workflows, summarize vast datasets, optimize decisions, and even derive abstract conceptualizations from real-time data. These capabilities are not simply tools—they are assets in their own right, possessing informational, strategic, business, and financial value.

At the same time, the rise of AI-generated knowledge creates a dual imperative: how to *integrate these new assets* effectively into organizational infrastructure, and how to ensure that *human intelligence is not displaced, but empowered and enhanced* in the process. Businesses must now manage not only what people know but also what machines know—and ensure the synergistic alignment between the two (Kloth & Jonathan, 2025; Zhang, Zhang, et al., 2025; Liu et al., 2024; Olan et al., 2024; Chen, 2024; Iaia et al., 2024; He & Burger-Helmchen, 2024).

In this chapter, we explore:

- The *types of knowledge assets* evolving under AI's influence;
- The emergence of *AI-generated assets* as core to business process automation;
- The *enhancement pillars* that support AI integration into traditional systems and workflows.

Through this lens, we aim to provide a conceptual and strategic grounding for the rest of the volume, which will explore sector-specific applications, managerial implications, and advanced deployment strategies.

## Mapping the New Landscape of Knowledge Assets in the AI Era

The digital transformation era has long expanded our understanding of knowledge assets beyond simple documentation and expertise. However, with the rise of AI—particularly generative AI, intelligent automation, and advanced

analytics—organizations are now seeing the formation of entirely new *asset classes* that blend human cognition with machine intelligence.

This section outlines the foundational knowledge asset types in modern business and explores how AI technologies are generating, reshaping, and/or augmenting them. We propose a layered structure that distinguishes between *traditional*, *digitally enhanced*, and *AI-driven* knowledge assets (c.f., Russ, 2021, Fig. 3), all of which must be strategically managed for competitive advantage.

### *Traditional Knowledge Asset Categories*

Drawing from classical knowledge management theory (Edvinsson & Sullivan, 1996; Nonaka & Takeuchi, 1995; Sveiby, 1997), knowledge assets typically fall into the following categories:

a. Human Capital

- Expertise, skills, creativity, experience, intuition
- Carried by individuals; hard to codify but critical for innovation
- Traditionally developed through training, mentorship, and job rotation

b. Structural Capital

- Documented procedures, databases, manuals, software code, and patents
- Owned by the organization; easier to standardize and replicate
- Embedded in processes, IT systems, and organizational routines

c. Relational Capital

- Knowledge embedded in customer relationships, networks, and partnerships
- Includes client insights, market intelligence, feedback loops, and co-creation knowledge

These assets are *context-bound* and evolve over time. Their management relies on cultural, managerial, and infrastructural support to capture, store, and disseminate value-adding knowledge.

### *Digitally Enhanced Knowledge Assets*

With digitization, many traditional assets have become big-data enabled, *data-rich, and system-integrated.* Examples include:

- Enterprise knowledge bases integrated with ERP and CRM platforms
- Cloud-based documentation and versioning tools (e.g., SharePoint, Confluence)
- Learning management systems (LMS) track competence development
- Searchable repositories of structured and unstructured data (e.g., customer support histories, R&D insights)

These tools enable knowledge scalability and faster retrieval, but they still rely heavily on *human input and structuring*.

### *Emergence of AI-Driven Knowledge Assets*

Artificial intelligence brings an entirely new dimension: *knowledge that is generated, inferred, or autonomously maintained by intelligent systems*. As shown in Table 1.1, this includes:

These assets *do not exist statically*—they are continuously refreshed and refined based on incoming data, interactions, and environmental triggers. They represent a new form of *intangible digital capital* that is often:

- Context-aware
- Predictive
- Personalizable
- Dynamic

### *New Ownership and Value Considerations*

AI-generated knowledge assets raise *complex questions of ownership, validity, and lifecycle management*:

- Who owns the insights generated by AI trained on employee behavior?
- How do we validate the correctness of continuously updating algorithmic knowledge?

Table 1.1. AI-Driven Assets.

| Type of AI-Driven Asset | Description |
|---|---|
| Algorithmic knowledge | Insights derived from ML models (e.g., churn predictions, fraud detection) |
| Generated content assets | Summaries, reports, articles, or solutions created by GenAI tools |
| Behavioral and intent inference models | Knowledge based on analysis of user behavior, decision paths, and preferences |
| AI-enhanced ontologies and taxonomies | Dynamically evolving classification systems using AI and NLP |
| Cognitive process maps | Knowledge flow maps created through an AI-driven process mining |
| Multimodal knowledge objects | Integrated content combining text, voice, image, and video (e.g., AI-created training simulations) |

- Can AI-generated knowledge be patented, licensed, or sold?
- Organizations must now build *governance frameworks* not just for knowledge protection, but also for *knowledge ethics, explainability, and traceability.*

### *Toward an Integrated Asset Architecture*

To move forward, businesses should treat *AI-generated knowledge* not as a parallel stream but as a *complementary layer* on top of human-created and system-stored assets. This requires:

- Blended repositories that capture both human and machine outputs
- Version control systems for AI-generated content
- Metadata standards for AI-inferred knowledge (e.g., confidence level, data source)
- Transparent tagging of AI-augmented decision inputs in workflows

By combining *traditional*, *digitally enhanced*, and *AI-driven knowledge assets*, organizations can create a resilient and intelligent *knowledge architecture* that supports innovation, decision-making, and agility at scale.

## Integrating AI into Traditional Systems and Human Efforts: Pillars and Prerequisites

As organizations begin leveraging artificial intelligence to extend or reimagine their knowledge management capabilities, they face a complex yet essential challenge: *how to integrate AI-driven assets into existing systems, workflows, and human-centered processes*. This integration is not simply technical—it is conceptual, operational, and cultural.

While much of the excitement around AI centers on disruption and transformation, the *most effective deployments are those that enhance*, rather than replace, traditional systems and human intelligence. In this section, we introduce the *four strategic pillars* for such integration and highlight the *organizational conditions* required for success.

### *Four Enhancement Pillars for AI–KM Integration*

The proposed pillars framework includes four foundational strategies that guide the effective integration of artificial intelligence into knowledge management systems. These pillars—*Augmentation over Automation*, *Embedding AI into Existing Enterprise Infrastructure*, *Orchestrating Human-Machine Collaboration*, and *Dynamic Knowledge Lifecycle Management*—serve as a roadmap for organizations aiming to enhance the value of their knowledge assets while maintaining human-centric decision-making and adaptability.

Pillar 1: Augmentation over Automation.

Contrary to the dystopian fear that AI will replace humans, most successful AI-KM implementations aim to *augment human intelligence* rather than eliminate it. This means designing systems that:

- Provide *recommendations*, not commands;
- Suggest *next-best-actions*, not replacements;
- Support *exploratory learning*, not rigid prescriptions.

AI-generated knowledge (e.g., a suggested course of action, a synthesized report) should be positioned as a *second opinion* to be validated, contextualized, and refined by humans. This ensures trust, accountability, and adaptability—especially in complex, ambiguous decision-making environments.

Pillar 2: Embedding AI into Existing Enterprise (Data/Information/Knowledge) Infrastructure.

Rather than discarding traditional KM systems, organizations must embed AI functionality within them. This includes:

- Adding *semantic search* and *automated tagging* to document repositories;
- Integrating *chatbots or copilots* into internal platforms like SharePoint, Confluence, or Teams;
- Using *process mining tools* within ERP systems to uncover and streamline tacit knowledge workflows.

This embedded approach not only preserves prior investments but also ensures that users continue to work within familiar environments, reducing friction and increasing adoption.

Pillar 3: Orchestrating Human-Machine Collaboration.

AI integration demands new forms of *collaboration between humans and digital agents*. Knowledge workers are no longer just consumers of AI output—they are co-creators, trainers, and evaluators of AI-driven knowledge. Organizations must establish:

- *Feedback loops* where employees flag incorrect or irrelevant AI suggestions;
- *AI training protocols* based on internal knowledge models;
- *Decision checkpoints* where human judgment overrides automated conclusions in sensitive contexts.

Such structures foster a culture of shared intelligence, where machines amplify human insight rather than operate in parallel silos.

Pillar 4: Dynamic Knowledge Lifecycle Management.

AI-generated knowledge is *non-static*—it evolves with data streams, user behavior, and environmental inputs. As a result, knowledge lifecycles must become: