

The Evolution of Knowledge – Different Perspectives and Their Relevance in the Age of AI

Over the years, numerous frameworks have been developed to explain how knowledge is acquired, developed and applied. Although they originate from different disciplines and were developed for different purposes, they often describe remarkably similar concepts from different perspectives.

As organisations become increasingly knowledge-driven and AI-enabled, these models take on renewed relevance. AI can process information, reason over knowledge and support decision-making, but its effectiveness depends fundamentally on the quality, structure and governance of the knowledge made available to it.

The following outlines several well-known frameworks, the contexts in which they have been applied, and the common themes that emerge.

The DIKW Hierarchy

Perhaps the best-known framework is the **DIKW Hierarchy**:

Data → Information → Knowledge → Wisdom

Developed within the fields of information science and knowledge management, the DIKW Hierarchy has been widely adopted to explain how raw data is transformed into meaningful knowledge that supports judgement and decision-making. It has influenced disciplines ranging from business intelligence and analytics to enterprise architecture, information management and knowledge management.

Its strength lies in its simplicity.

Raw data is organised into information. Information is interpreted to create knowledge. Knowledge is then applied with judgement to produce wisdom.

The model clearly distinguishes between possessing information and knowing how to use it effectively.

Its simplicity, however, is also one of its limitations. The progression between knowledge and wisdom is presented as a single step, leaving little explanation of how knowledge develops into understanding, reasoning or effective decision-making.

Bloom's Taxonomy

Originally developed by educational psychologist Benjamin Bloom in 1956, Bloom's Taxonomy provides a framework for classifying learning objectives and cognitive development. It remains widely used within education, professional training, instructional design and competency development.

Rather than focusing on information itself, Bloom described the progressive development of cognitive capability:

- Remember
- Understand
- Apply
- Analyse
- Evaluate
- Create

The emphasis here is not on what is known, but on what can be done with what is known.

Bloom highlights that genuine learning is more than remembering facts. It involves developing progressively deeper levels of comprehension, reasoning and creativity.

The SECI Model

Developed by Japanese organisational theorists Ikujiro Nonaka and Hirotaka Takeuchi in the early 1990s, the SECI Model explains how organisations create, develop and share knowledge. Based on research into how successful Japanese companies created and leveraged organisational knowledge, it distinguishes between knowledge held by individuals through their experience, skills and judgement (tacit knowledge) and knowledge that has been captured and documented as organisational assets, such as policies, procedures, business rules and best practice (explicit knowledge). It also explains how people learn from that documented knowledge, applying it in practice until it becomes part of their own understanding and experience. As a result, the model has become highly influential within organisational learning, innovation management and enterprise knowledge management.

The SECI Model identifies four stages in the continual creation and development of organisational knowledge:

- Socialisation – People share their knowledge, skills and experience with one another.
- Externalisation – That knowledge is captured and documented so it can be shared, reused and applied more widely.
- Combination – Different pieces of documented knowledge are brought together, organised and connected to create new knowledge and insights.
- Internalisation – People learn from that documented knowledge and apply it in practice until it becomes part of their own understanding, experience and expertise.

Unlike the DIKW Hierarchy or Bloom's Taxonomy, the emphasis is not on progression through a hierarchy of learning or cognition, but on the continual creation, refinement and sharing of organisational knowledge.

A Practical Perspective

Drawing on the common themes across these models, the following model describes learning as a progression through five related concepts:

1. **Information** – Facts and data.
2. **Knowledge** – Information organised into context and relationships.
3. **Understanding** – Explaining how and why things work.
4. **Intelligence** – Applying understanding to reason and solve problems.
5. **Wisdom** – Exercising sound judgement about what should be done.

This model distinguishes understanding from intelligence. Understanding is the ability to explain how and why something works. Intelligence is the ability to apply that understanding to analyse unfamiliar situations, solve problems and adapt to new circumstances. Each stage builds on the one before it: information becomes knowledge, knowledge leads to understanding, understanding enables intelligence, and intelligence, exercised with sound judgement, contributes to wisdom.

Comparing the Models

Although developed independently and for different purposes, these frameworks exhibit considerable overlap.

Model	Primary Focus	Principal Application	Limitation
DIKW	Transforming data into wisdom	Information science, business intelligence and knowledge management	Says little about how knowledge develops into reasoning or how enterprises create and maintain knowledge.
Bloom's Taxonomy	Cognitive development	Education, training and competency development	Focuses on individual learning rather than organisational knowledge.
SECI	Organisational knowledge creation	Innovation, organisational learning and knowledge management	Explains knowledge creation but not how knowledge is governed or operationalised across an enterprise.
Learning Progression	Progression from information to judgement	General learning, decision-making and problem solving	Does not explicitly describe how organisational knowledge is curated and maintained.

Taken together, these models share several important principles.

- They all recognise that information alone has limited value.
- They all describe learning as a progressive process in which each stage builds upon the previous one.
- They all recognise that learning involves more than simply acquiring information or knowledge.
- Although the terminology differs, the underlying progression is remarkably consistent.

Where the Models Begin to Diverge

The differences are equally instructive.

- Some models focus on the transformation of information.
- Others focus on human learning and cognitive development.
- Others examine how knowledge is created and shared within organisations.
- Some distinguish between understanding and intelligence, while others treat them as a single stage within the learning process.
- Some describe learning as a linear progression, whilst others describe it as a continuous cycle.

These differences suggest that each framework explains part of a larger picture rather than the complete picture.

Looking Through an Enterprise Lens

Viewed from within an enterprise, these models become more than academic frameworks.

Information exists in many forms: policies, procedures, contracts, correspondence, emails, customer records, operational systems, financial data, reports and product documentation. Individually they represent sources of information. Collectively they have the potential to become organisational knowledge. Collectively they have the potential to become organisational knowledge.

The difficulty is that organisational knowledge rarely exists in one place.

Some is documented.

Some is embedded within business systems.

Much remains tacit, residing in the experience of subject matter experts and long-serving employees.

Understanding is frequently concentrated within relatively few individuals.

People reason by drawing upon years of accumulated knowledge and experience.

Leaders exercise judgement by balancing commercial objectives, customer outcomes, regulation, ethics and risk.

In many organisations, information is abundant but organisational knowledge is fragmented.

Different departments maintain separate repositories.

Business rules evolve independently.

Critical knowledge is embedded within spreadsheets, emails or individual experience.

Different teams interpret the same policy in different ways.

Knowledge is lost when experienced employees leave.

Technology projects duplicate effort because knowledge cannot easily be discovered, validated or reused.

As organisations become increasingly digital and AI-enabled, these issues become even more significant. AI can only reason using the knowledge made available to it. If that knowledge is incomplete, inconsistent or poorly governed, the quality of the outcomes will inevitably be affected.

The challenge is rarely creating more information.

The challenge is transforming information into trusted organisational knowledge, preserving that knowledge as people, products and regulations evolve, and making it consistently available wherever it is needed.

What the Models Don't Explain

Taken together, these frameworks provide valuable insights into how information, knowledge and learning develop within individuals and organisations.

What they devote comparatively little attention to is the practical mechanism by which organisations create, curate, validate, govern and continuously evolve organisational knowledge.

Questions such as:

- How does information become trusted organisational knowledge?
- How is conflicting knowledge identified and reconciled?
- How is knowledge maintained as products, regulation and business processes evolve?
- How is understanding preserved when experienced employees leave?
- How is organisational knowledge made consistently available across teams, systems and intelligent software?

- How is the quality, governance and traceability of organisational knowledge maintained over time?

These questions become increasingly important as organisations become more knowledge-intensive.

The challenge is no longer simply managing information. It is creating and maintaining trusted organisational knowledge that can be consistently understood, applied and evolved across the enterprise.

The models explain important principles of learning and knowledge. The enterprise challenge is turning those principles into operational capability.

Achieving this requires a structured approach to how organisational information is brought together, organised, transformed into knowledge and maintained over time. We describe this through three complementary concepts: Knowledge Curation, the Knowledge Base and Constructed Knowledge. Together they provide the foundation for trusted organisational knowledge that can be consistently understood and applied by both people and AI.

Knowledge Curation

Before knowledge can be applied, it must first be brought together.

Companies typically hold information across policies, procedures, manuals, contracts, legal documents, operational systems and many other sources. **Knowledge curation** is the process of bringing that information together within one or more **Knowledge Bases**.

This involves uploading documents, connecting to existing data sources, and validating, organising, contextualising and connecting information as it is brought together. The objective is to create a coherent, well-structured body of knowledge that accurately reflects how the business operates.

Knowledge curation is an ongoing discipline. As companies evolve, policies change, products develop, regulations are updated and business processes are refined. The information held within the Knowledge Base must therefore be continually maintained to ensure it remains accurate, relevant and up to date.

Without effective knowledge curation, information fragments, knowledge becomes inconsistent, context is lost and valuable expertise becomes increasingly difficult to locate and apply.

Knowledge Base

A **Knowledge Base** provides the environment in which knowledge is curated.

It enables companies to bring together the information that underpins how they operate by uploading documents, connecting to existing data sources, and organising that information within a single, structured environment.

Information held within a Knowledge Base can include policies, procedures, manuals, contracts, legal documents, product information, operational guidance and other business content.

Rather than remaining distributed across disconnected documents, repositories and business systems, information is organised, contextualised and connected within the Knowledge Base. This enables relationships between information to be maintained and provides the foundation for AI to create Constructed Knowledge.

Constructed Knowledge

Constructed Knowledge is structured, usable business knowledge created by AI from the curated information held within a Knowledge Base.

Using the curated information held within the Knowledge Base, AI analyses, interprets and synthesises information from multiple documents, data sources and business systems to create Constructed Knowledge.

Constructed Knowledge is considerably more than a collection of documents or data. It transforms information into structured, contextualised knowledge that can be readily understood and applied. This can include synthesised summaries, extracted business rules, linked concepts, knowledge schemas, relationships between information, and knowledge assembled from multiple documents and data sources into a single, usable view.

For example, Constructed Knowledge can:

- combine related information held across multiple documents and systems;
- extract and organise relevant content from lengthy documents into a concise, usable format;
- identify and connect related business rules, policies and procedures;
- create structured knowledge that reflects how the business operates rather than how information happens to be stored.

By transforming fragmented information into usable knowledge, Constructed Knowledge enables people, business systems and AI to understand, interpret and apply information consistently.

Where Kognoesis Fits

Building on these principles, Kognoesis enables companies to create, maintain and continuously evolve the knowledge that underpins how they operate.

Through knowledge curation, companies bring together information from documents, data sources and business systems within one or more **Knowledge Bases**. AI then uses that curated information to create **Constructed Knowledge** that can be understood and applied by people, business systems and AI.

As companies evolve, knowledge curation ensures that the information held within the Knowledge Bases remains current, enabling Constructed Knowledge to be continually refreshed to reflect changes to policies, products, regulations and business processes.

The traditional learning models explain how information develops into knowledge, how knowledge contributes to understanding and how understanding ultimately supports judgement and effective action. Kognoesis extends these principles by enabling companies to operationalise knowledge, transforming fragmented information into structured, usable knowledge that can be consistently understood and applied by people, business systems and AI.