Knowledge Systems vs Data Management Systems

COMPANIES NEED TO UNDERSTAND HOW THESE SYSTEMS DIFFER AND WHAT VALUE THEY PROVIDE WHEN MAKING STRATEGIC INVESTMENT DECISIONS TO LEVERAGE THEIR DATA.

Understanding the difference between Knowledge Systems and Data Management Systems is crucial because these systems have different purposes, functionalities, and characteristics. Even though some overlap in functionality and scope may exist – for example, both systems may involve storing and retrieving data and information – it is essential to understand that both serve distinct purposes and should not be confused.

For example, Knowledge Systems often rely on data management systems to store and manage their data, which can add to this confusion. However, the purpose of a knowledge system is to organize, store, retrieve, and apply knowledge or information to solve problems, make decisions, and support decision-making processes. They aim to capture expertise, insights, and understanding that can be utilized to address complex issues and improve business processes. To do this, they use data that has been analyzed, interpreted, and contextualized to extract insights, patterns, and actionable intelligence. This may include raw data, metadata, annotations, and expert opinions.

In practice, knowledge systems offer capabilities for knowledge discovery, inference, reasoning, and decision support. They can incorporate technologies like knowledge graphs and artificial intelligence, such as machine learning and natural language processing, to facilitate the understanding and use of information. They are mainly used by knowledge workers, domain experts, analysts, and decision-makers who require actionable information and insights to perform their tasks effectively.

Eclipse Mining's SourceOne EKPS is such a system. It is designed to ingest and transform raw data, both structured and unstructured, into actionable information using a domain ontology and storing it in a knowledge graph. This makes data understandable by machines and humans by applying context by identifying characteristics and interrelations. Analytical engines and AI technologies can use contextualized data to provide new insights and capture knowledge. The system can do this in real-time, enabling enhanced decision-making, and due to its capability of contextualizing and updating data across organizations, it can provide a holistic view across all business processes, enabling downstream visibility of decision impact.

Data Management Systems, on the other hand, are mainly concerned with storing, managing, and manipulating structured or unstructured data. They focus on ensuring data integrity, security, and accessibility, often dealing with large volumes of data generated by various sources. They handle raw data in multiple forms, such as text, numbers, images, and multimedia, focusing on storing, retrieving, and processing it without deriving knowledge or insights.

Data Management Systems are typically used by database administrators, data engineers, data scientists, and application developers who need to manage and manipulate data efficiently within various software applications and systems.

Knowledge and data management systems draw from multiple disciplines, including computer science, information science, cognitive science, and artificial intelligence. This interdisciplinary nature can make it challenging to define clear boundaries between them. While knowledge and data management systems deal with information, they differ in focus, scope, functionality, user base, and outputs. Knowledge systems are oriented toward deriving insights and facilitating decision–making, whereas data management systems primarily handle the storage and manipulation of raw data. Companies need to understand how these systems differ and what value they provide when making strategic investment decisions to leverage their data.

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SourceOne Enterprise Knowledge Performance System

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SourceOne System Benefits

SourceOne® is an Enterprise Knowledge Performance System with intelligent integration that augments the data with context, history, and digital workflow automation to provide breakthrough insights and enable strategic decision-making in near real-time, driving value generation at all organizational levels.

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DATA BECOMES INFORMATION.
INFORMATION BECOMES KNOWLEDGE.