

The 4th International Conference on
**KNOWLEDGE MANAGEMENT:
PROJECTS, SYSTEMS, AND
TECHNOLOGIES**

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ROMANIA



Data, Information, Knowledge, and Wisdom



Knowledge Management



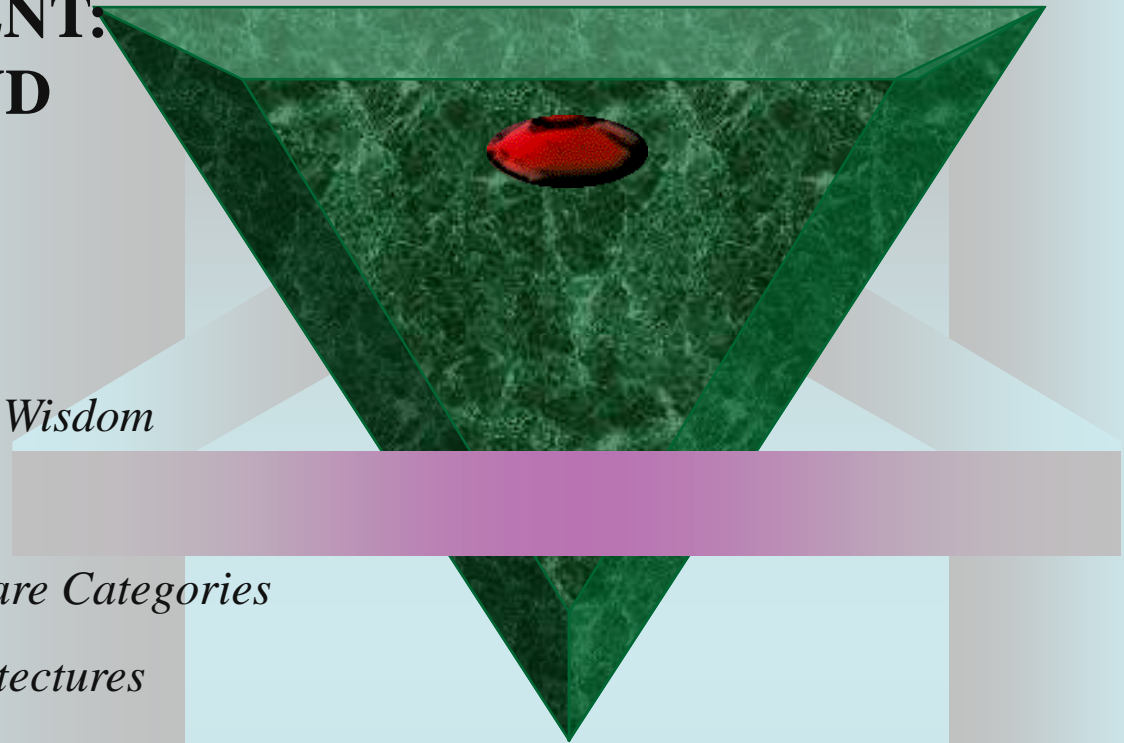
Knowledge Management and Software Categories



Proposed Change to Software Architectures



References



**Should Software Architectures
Change to Adapt to Knowledge
Era?**

<http://ideas.repec.org/p/rom/confkm/15.html>



by Prof. dr. Vasile AVRAM

Academy of Economic Studies Bucharest - Romania

=>Data, Information, Knowledge, and Wisdom

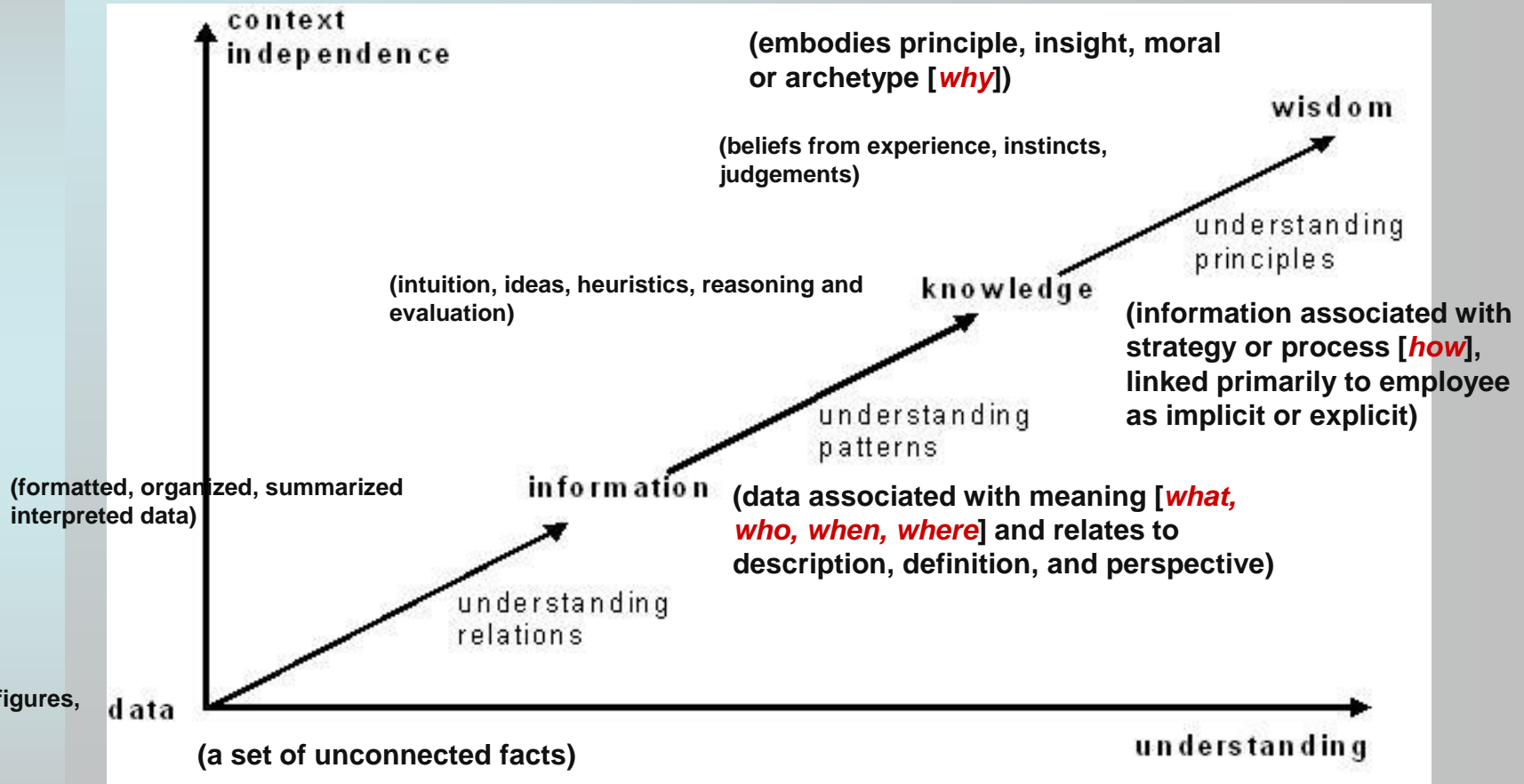


Figure 1 The relationships between data, information, knowledge, and wisdom considering the context independence and understanding (Source: Neil Fleming, Coping with revolution: Will the Internet change learning? Lincoln University, Canterbury, New Zealand)



Knowledge Management

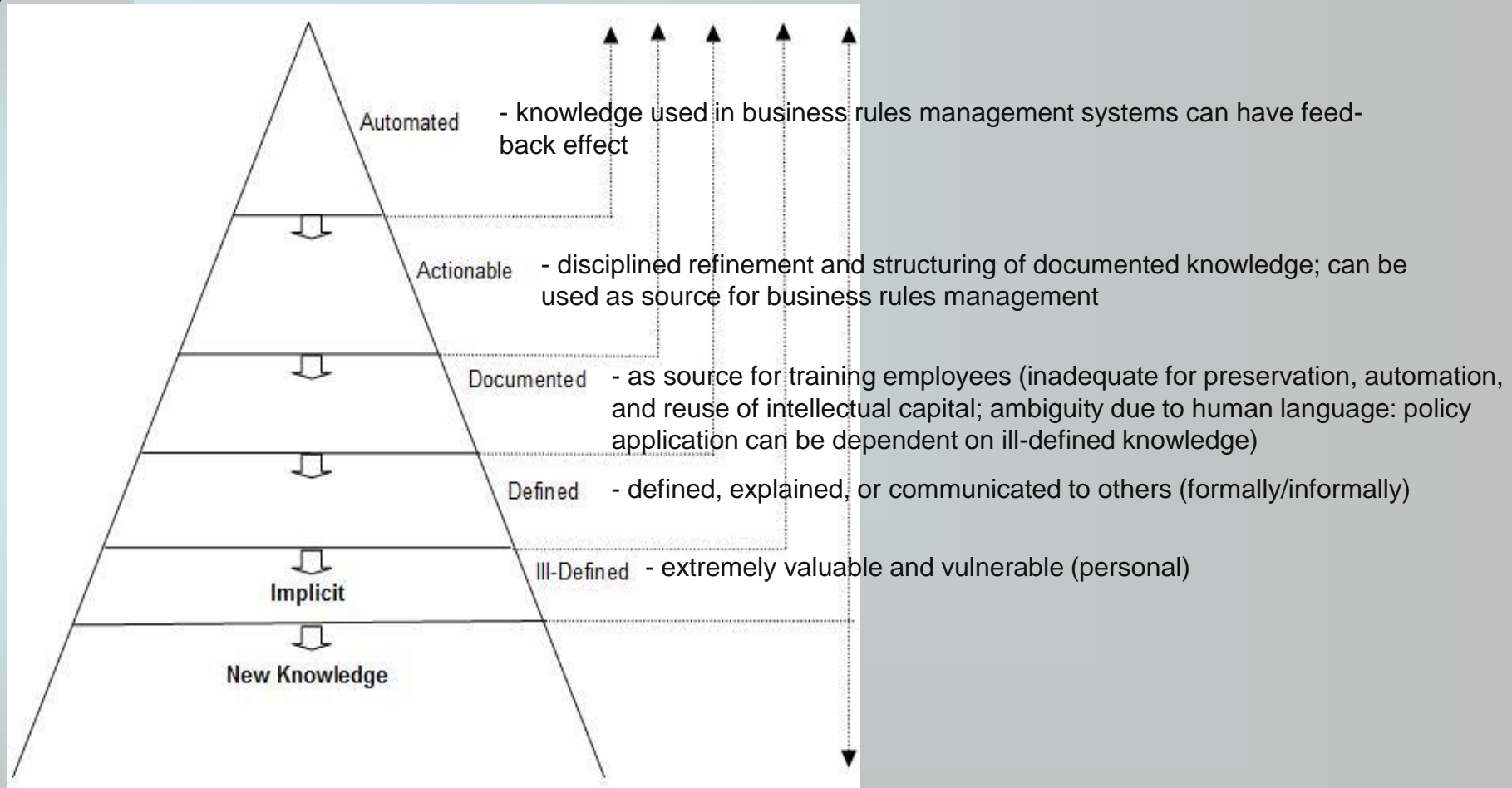


Figure 2 The Knowledge Pyramid

(Source: CORTICON Technologies, Inc., www.corticon.com)

Knowledge Management and Software Categories

There are several categories of application software:

- Back-office;
 - Front-office;
 - ERP;
 - eApplications.
- } → -Vertical
 } → -Horizontal
 } → Industry best practices

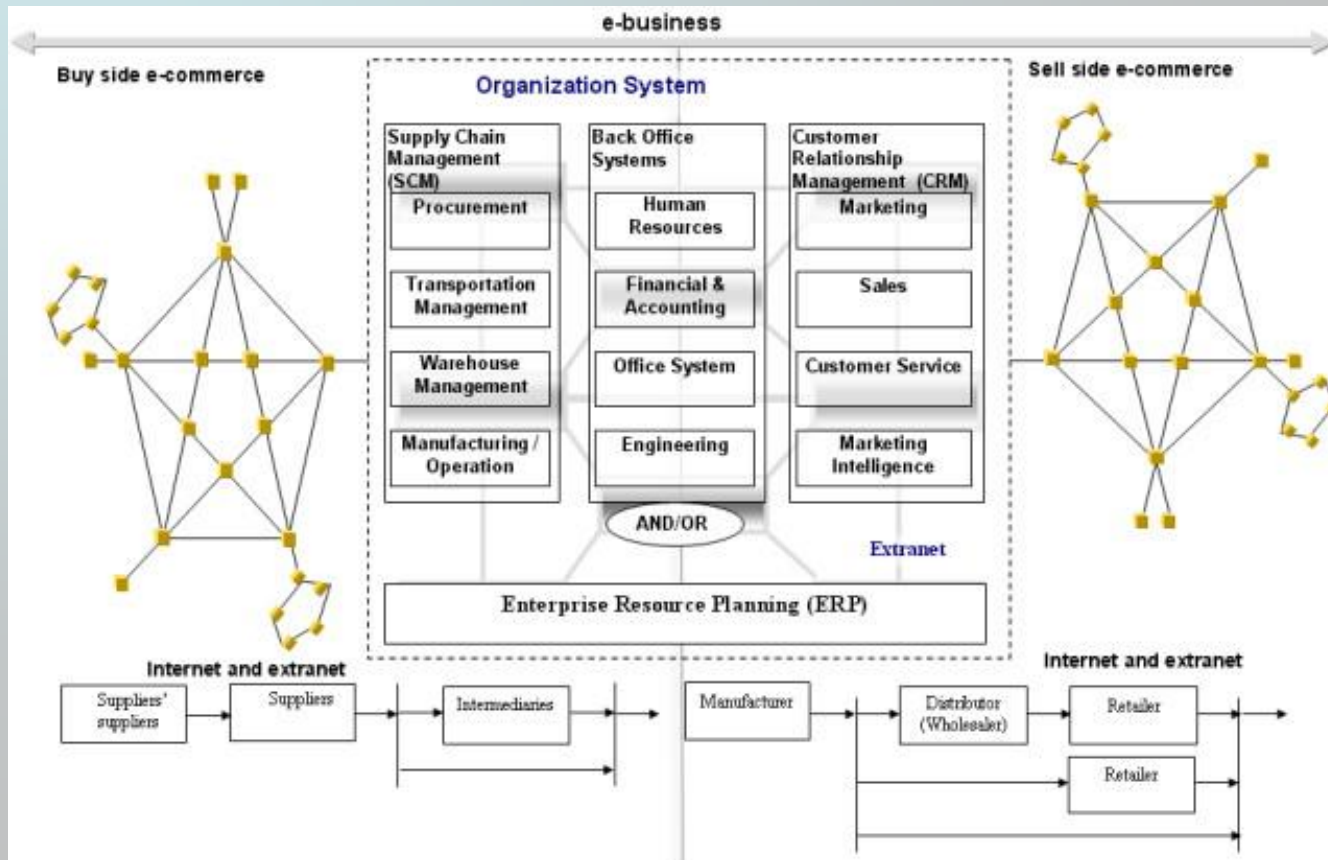


Figure 1.4 The extended company and management of customers and suppliers relationships (Source: Internet Technologies for Business - Business categories and models in Internet, Vasile Avram, <http://www.avrams.ro>)

Knowledge Management and Software Categories



**KM aspects for
Used software**

- **Classic KM of knowledge about software and operation of this**
- **KM of K incorporated (business specific knowledge)**



inherited at product adoption time



Knowledge Management and Software Categories



Software categories depending how incorporate and manipulate modeled domain knowledge:

- **BRMS;**
- **“knowledge externalized”;**
- **“monolithic”.**



Proposed Change to Software Architectures

Two common definition for software architecture:

“Software architecture presents a view of a software system as components and connectors. Components encapsulate some coherent set of functionality. Connectors realize the runtime interaction between components. Albin [8]”

“The software architecture of a program or computing system is the structure or structures of the system, which comprise software elements, the externally visible properties of those elements, and the relationships among them. Len Bass et al. [9]”.



Proposed Change to Software Architectures:

Is to add **a component** in the form of **one or many knowledge repositories** (as RDF files) to systematically acquire, structure, store and maintain knowledge, formalized as business rules, for all business rules that are incorporated in the software product itself. For every company adopting software having this architecture the companion repository acts as “**software inherited knowledge**” (SIK).

SIK:

- Refers to domain knowledge incorporated by software;
- Must be accessible to all persons and/or applications having rights to access and manipulate them;
- Act as a source of enriching every knowledge base deserving / assisting knowledge workers;
- Is a source for preventing the “black-box” syndrome;





Multumesc!

Thanks You !

Merci!





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