

DECOR: Delivery of Context-Sensitive Organizational Knowledge

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DECOR facts and figures

DECOR develops and tests methods and tools for business-process oriented knowledge management

- DECOR - delivery of context-sensitive organizational knowledge
- 6 partners from 3 European countries
- runs in the Information Society Technology Programme (IST), within the European Union's Fifth RT Framework Programme (1998-2002)
- overall funding by the European Commission
1.8 MECU - under contract No. IST-1999-13002
- Project start July 1st, 2000 - duration 24 months
- Main idea: Business-Process Oriented Knowledge Management (BPOKM)



DECOR partner organizations

The DECOR consortium consists of technology and method providers, consultants, and end users



IKA - the most important social security institution in Greece



DFKI - the German Research Center for Artificial Intelligence



ICCS / IMU – Information Management Unit of the National Technical University of Athens



PLANET ERNST & YOUNG
- Greek management consultancy company



SEMA Group Benelux - one of Europe's leading IT consulting and systems integration companies



DHC - an innovative IT consulting and software development firm in the SAP area

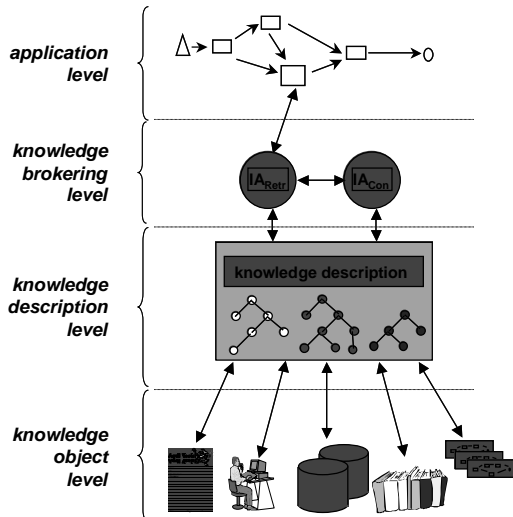


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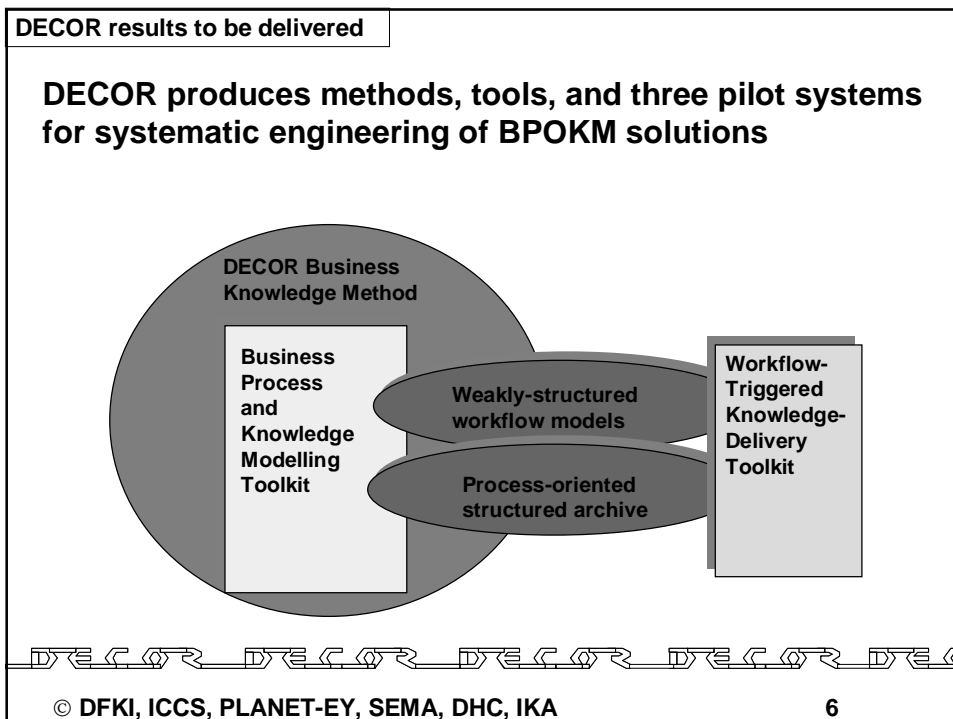
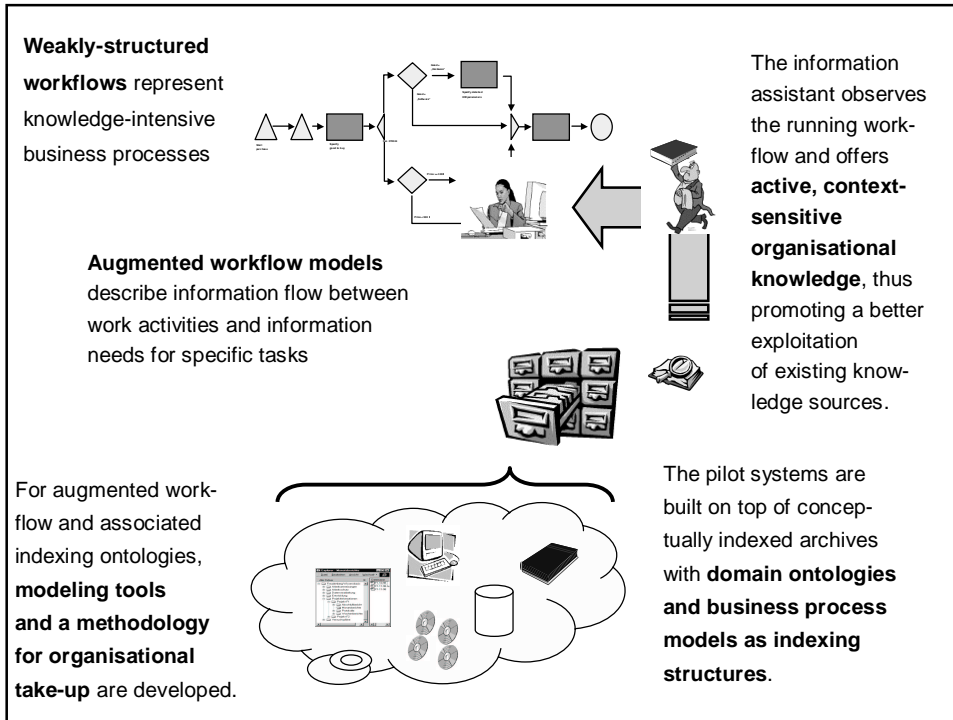
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DECOR's conceptual basis

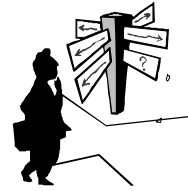
Knowledge Management tools should address context-specific, proactive delivery of information



- Knowledge workers are involved in complex processes
- Process models and their enactment provide context information and facilitate proactivity
- Ontologies are the explicit basis for the knowledge-level description
- Access to various information sources relies on formal knowledge-item descriptions



The method shall provide a guideline how to run a BPOKM project

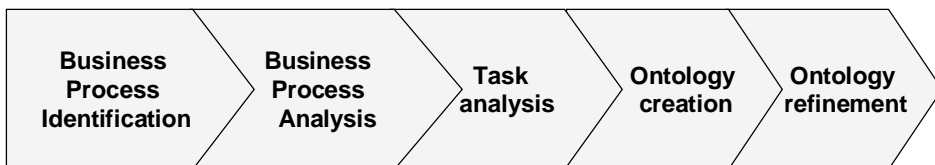


- The method's main elements include:
 - ◆ Identification of knowledge-intensive processes
 - ◆ Process analysis
 - ◆ Domain ontology construction
 - ◆ Analysis of task-specific knowledge needs
 - ◆ Handling with weak workflow structures



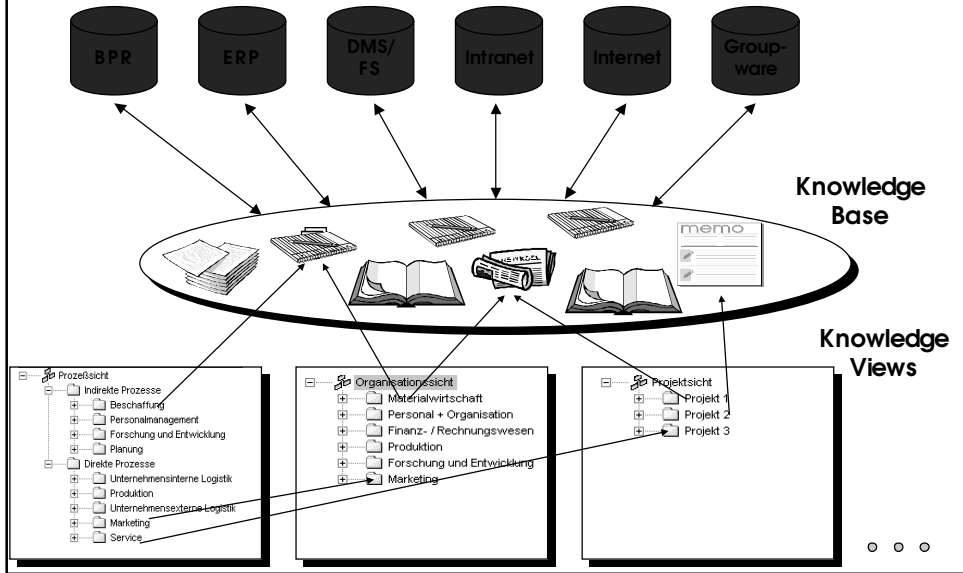
The DECOR method extends and combines well established existing results

- Borrow first steps from an established business process modeling method (CommonKADS)
- Task analysis identifies required knowledge and used sources
- Knowledge areas + source material as ontology engineering input
- Ontology engineering with IDEF5 method
- Future work:
 - Use of text analysis (LSA, MindAccess®)
 - Integration of method and tool (Protégé, VISIO®)



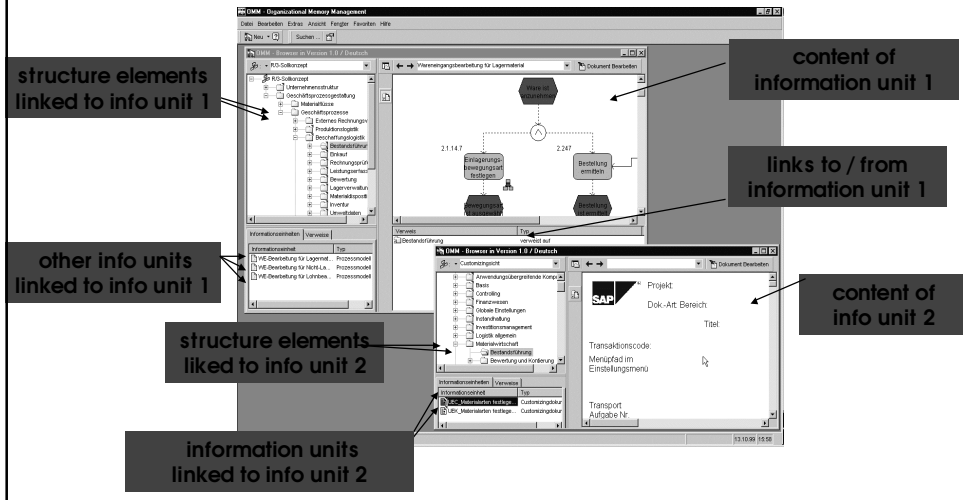
DECOR archive system (1/2)

The CognitoVision® tool (DHC) allows to establish multiple views and manifold links between documents



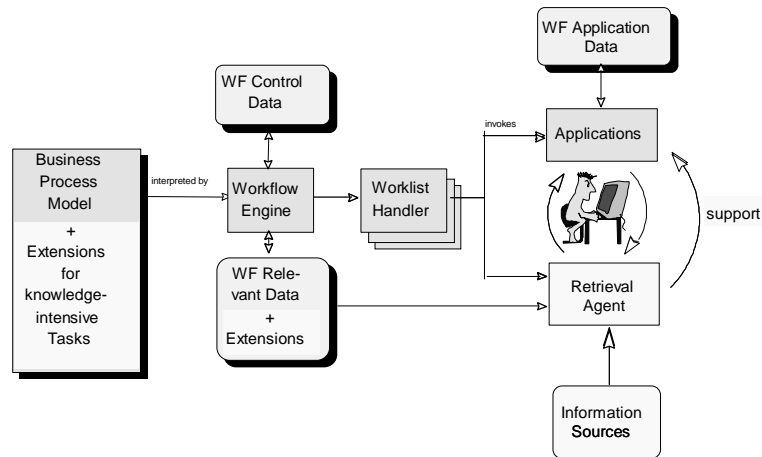
DECOR archive system (2/2)

Information units group documents, metadata, and links to structure elements / other information units in CognitoVision®



Workflow-triggered knowledge delivery (1/1)

The conceptual model of proactive knowledge delivery in KnowMore / DECOR is WfMC-compliant



DECOR workflow approach (1/3)

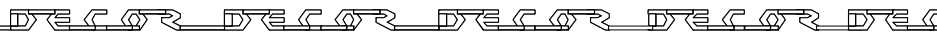
Characteristics of knowledge work do not suggest a typical workflow application scenario (Davenport et al, 1996)

- Unique and of low volume
- Variability in performance across individuals and time
- No strong sequential order
- Frequent exceptions and changes
- Uncertainty in inputs and outputs
- Unstructured work rules and routines
- Involves personal judgement & experience

DECOR workflow approach (2/3)

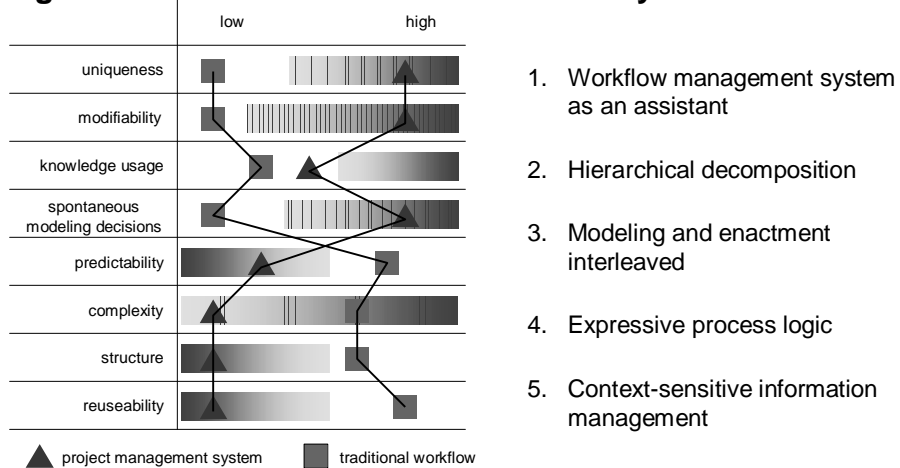
Knowledge-intensive work varies along the project-process spectrum

- ◆ more flexible workflow concepts are required to describe knowledge work:
 - [Ellis & Nutt, 1996]: the *situated work* vs the *workflow* camp
 - [DeMichelis *et al.*, 1997]: „a smooth transition from *ad-hoc cooperative work of humans and standardized, automated interaction between autonomous information systems*“
- ◆ where to locate in the spectrum:
 - ad-hoc activities - flexible workflow with exceptions- standard workflow
- ◆ some observations:
 - often no strong sequential order, but lists of required activities
 - often cyclic, chaotic order of steps, but logical dependencies
 - however, sequential parts or reusable templates for parts
 - at least some MS project like, Timex like support possible
 - sort of top-down refinement while actually executing the process (hierarchical task networks)



DECOR workflow approach (3/3)

The analysis of knowledge-intensive work motivates design decisions for the DECOR workflow system

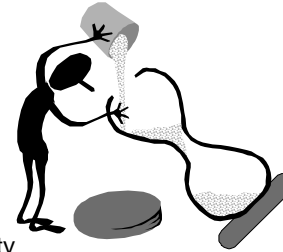


DECOR's weakly-structured workflows combine a project manager's flexibility with traditional workflow's complexity handling

Conclusions (1/3)

The technical realization of the BPOKM infrastructure is good on its way

- DECOR Business Knowledge method
 - ◆ Combine BP task modeling, knowledge elicitation & ontology design
 - ◆ Integrate method with modeling tool!
- DECOR Basic Archive System
 - ◆ Knowledge networks allow for multiple-view knowledge organization
 - ◆ Attributed links between info units and for knowledge organization
 - ◆ Exploit the power of knowledge-rich indexing!
- DECOR Workflow-Triggered Knowledge Delivery
 - ◆ Task activation triggers proactive information delivery
 - ◆ Context variables instantiate query templates
- DECOR Weakly-Structured Workflow Tool
 - ◆ Model repository contains process templates
 - ◆ Stepwise refinement of tasks in the user's responsibility



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Conclusions (2/3)

BP-KM integration potential can be identified in different system lifecycle phases

System design

BP analysis, modeling & reengineering

KM strategy, design & implementation

System operation

Workflow-Enactment

Collaboration tools & processes, (intelligent) document management

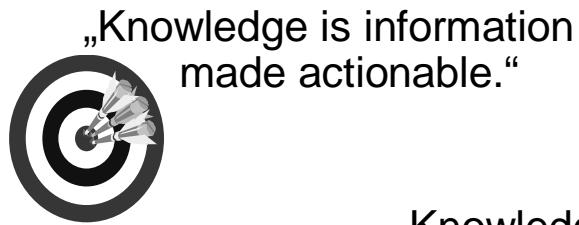
System evolution

Continuous process improvement



Continuous knowledge quality assurance

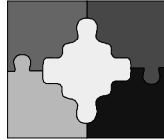
Conclusions (3/3)



„Knowledge is information
made actionable.“



„Knowledge is
in the relationships.“



„Knowledge is
information in context.“