METHODOLOGY FOR THE IMPLEMENTATION OF KNOWLEDGE MANAGEMENT

SYSTEMS

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| PHASE I. Identification | • Identify the conceptual blocks of knowledge  
• Classify into ontological categories  
• Define the target knowledge (knowledge requirements) | • Templates and questionnaires to identify blocks of knowledge  
• Reference models concerning the target knowledge | • Conceptual blocks of knowledge  
• Target knowledge  
• Categories | • Office automation tools  
• Modelling tools |
| PHASE II. Extraction | • Extract knowledge from sources in order to define the input variables and categorise it  
• Define the extraction and calculation procedures | • Templates to define the input variables  
• Reference models for extracting and calculating target knowledge | • Set of input variables  
• Extraction and calculation procedures | • Office automation tools  
• Modelling tools |
| PHASE III. Representation | • Establish the relations within the target knowledge  
• Draw up the knowledge map | • Metamodelling (UML)  
• Ontologies  
• Conceptual maps | • Model of the Knowledge map | • Modelling tools  
• Ontology engineering tools |
| PHASE IV. Processing | • Develop the technological infrastructure supporting the knowledge map by following an object-oriented methodology for the development of computer systems | • BPM techniques  
• ETL techniques  
• Document/DBMS  
• Data warehouse  
• OLAP  
• Data mining | • Knowledge portal (Executable knowledge map) | • BPM tools  
• ETL tools  
• Document/DBMS  
• Data warehouse  
• OLAP  
• Data mining |
| PHASE V. Utilisation | • Establish training and continuous improvement mechanisms among the members of the organisation  
• Carry out maintenance and the feedback process on the knowledge management system | • e-Learning  
• Groupware  
• TQM  
• ISO standard of quality | • Efficient use of knowledge within the organisation | • Office automation tools  
• Modelling tools  
• Learning tools |

**Fig. 1.** KM-IRIS Methodology for knowledge management in an organisation.
Fig. 2. KMS relation with information and knowledge.
Fig. 3. Phase II of the KM-IRIS Methodology for knowledge management.
Fig. 4. Specialised version of the KM-IRIS Methodology for knowledge management in an enterprise.
Fig. 5. Conceptual diagram for obtaining the map of enterprise knowledge at the CIM level.
Fig. 6. Technological infrastructure proposed to support a knowledge portal.