# A Organizational Knowledge Management Framework: The COMFENALCO Case

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ACIS 2013, Melbourne

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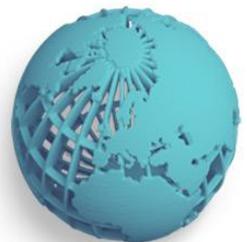
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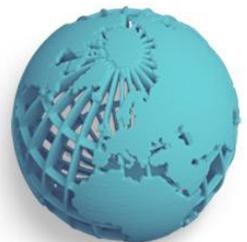
Introduction/Motivation

- The need to share and exploit accumulated organisational knowledge

- Legislative context (Colombia)
  - Digitalization of documents
  - The inclusion of metadata and the storage of files in a number of different formats to facilitate

- In particular: readiness-for-access of information associated with the experience gained during the execution of the different processes and projects within organizations
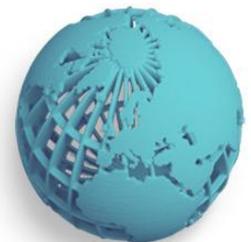
Research objectives

To produce a framework which serves as a guide for successful implementation of an organizational knowledge management system based on a case study of a large regional public organization in the state of Bolívar, Colombia.
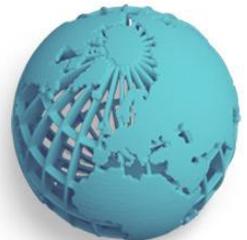
Background: KM

- A drive, within organisations, to consolidate acquired and created knowledge and to promote a culture of sharing (Marin, 2005)

- The construction of frameworks as a key design technique (Fayad & Schmidt, 1997)

- In this context: a *framework* as a reusable design of a complete system:

  – Represented by a set of classes and often based on an object oriented language

  – It describes the usual behaviour of its components within a particular application domain breaking the components into objects and interactions among those objects
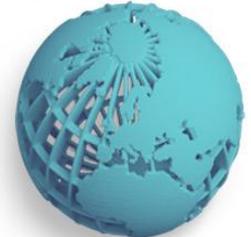
Background: KM cont..

- Organizational knowledge is complex and dispersed among different components and actors

- Organizational knowledge includes:
  - culture of the organization,
  - its identity,
  - policies, procedures, documents, systems and the organization's employees

- Organizational-based knowledge is different from any other "generic" resource
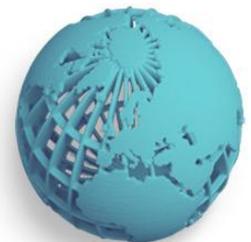
Background: KM cont..

- Information technology used to synthetise, improve and facilitate the scalable use of knowledge management within organizations (Alavi and Leidner, 1999)

- Knowledge acquired through experience and the need for organisations to capitalise on their knowledge assets(Nonaka & Takeuchi, 1995; Davenport & Prusak, 1998; Valhondo, 2003)

- Knowledge elements: the context, the identification of knowledge, the transmission of that knowledge, the media and technology used, decision making, organizational culture and competition (Bernal & Briceño, 2010)
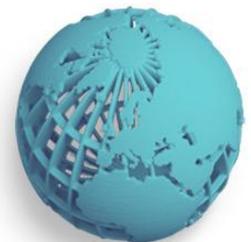
Background: COMFENALCO

A 50-year old non-profit organization which provides services for affiliates' employees (other companies and organizations)

Services:
> Educational facilities (primary, secondary and tertiary)
> social (clubs, hotels)
> Financial (mortgages, credit facilities)
> Sports, discounts, etc.

5 functional areas selected for this study:
> Corporate Strategy and Planning
> Human Resources
> Financial Services
> Legal Services
> Contributions and Subsidies

Bolivar: One of 32 states in Colombia. Pop: 2M, Area: 25798 km² (as large as Sicily)
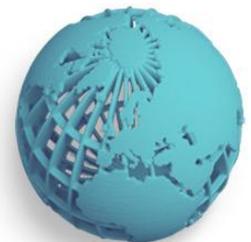
Research Methodology

- A multi-methodological research approach (Nunamaker, Chen, and Purdin ,1990) → design science through a systems development approach
  - Theory building (conceptual frameworks),
  - Systems development (prototyping),
  - and observations (case study)
- Plus Action Research. The research was initially carried out in three phases:
  - A first cut at theory building by adapting a number of conceptual frameworks from the literature
  - Data collection
  - In-depth interviews
- System development :a prototype integrated with the organization's information systems
- Observation and validation

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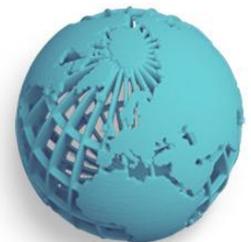
Framework Development

- Integrated with COMFENALCO´s document management system

  ➤ DOCUWARE with a SQL 2008 database

  ➤ CMS: DUPRAL

  ➤ Development environment used: PHP

- The observation phase was conducted by installing the framework modules developed in the dedicated server and by accessing it via the organization´s intranet.

- Test data was added and the subjects who participated in the in-depth interviews were invited to participate in the exercise.

- Every one of the modules and functionality (features) were then presented to the participants drawing parallels with the new decision making facilities and the way those decisions were made during the recent past.

- A feedback session

- The observation phase included an evaluation of all the characteristics listed in Table 1 (see paper) with an emphasis on the integration of the information consulted.
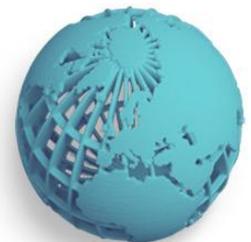
Proposed Knowledge Management Framework ("Knowledge Portal")
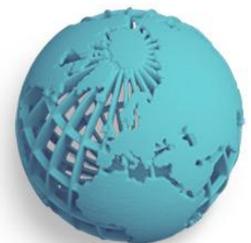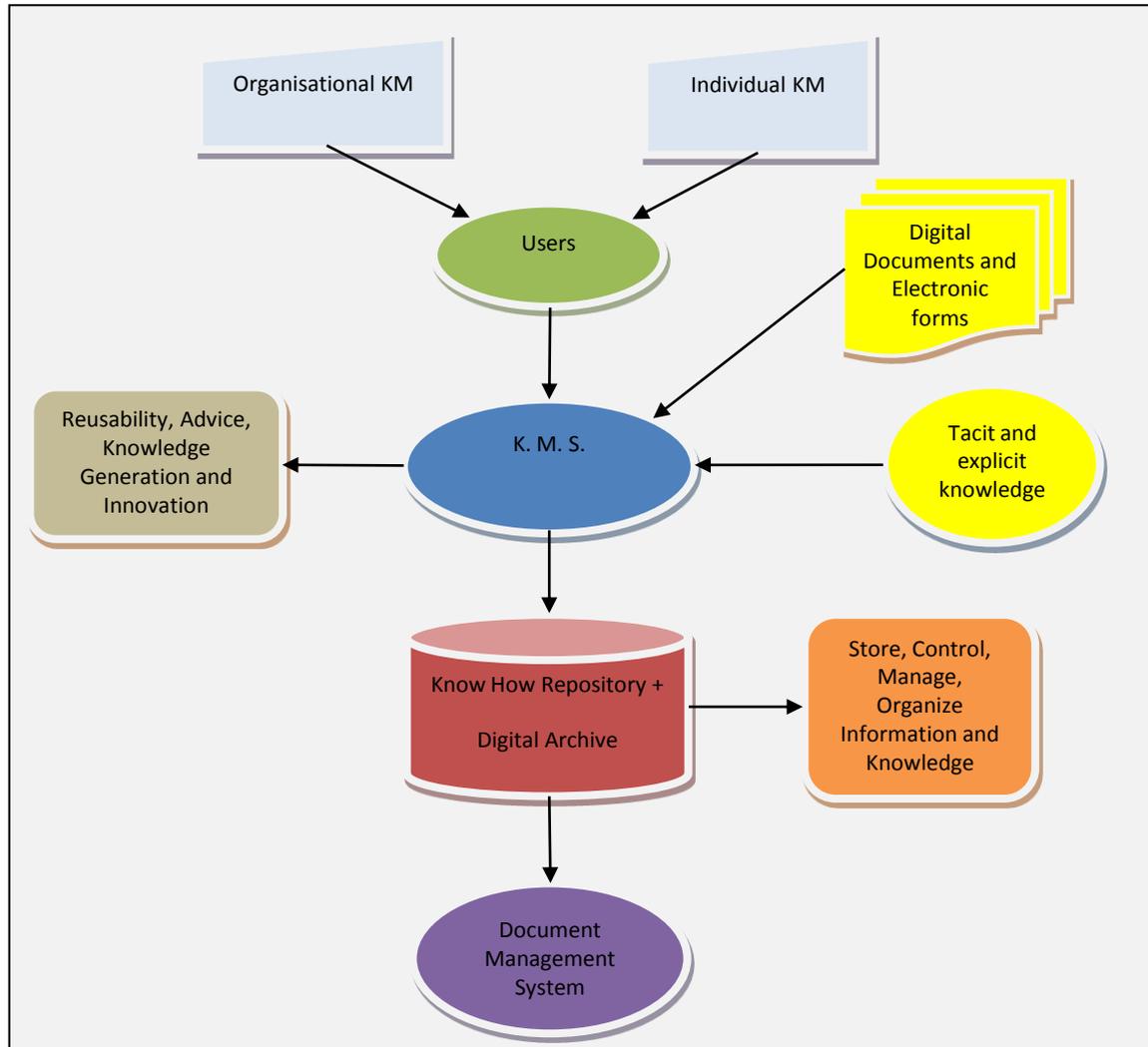
General Scheme of the Framework "Knowledge Portal"

Data Source Layer

Domain Repository

Electronic Documents

Images

Unstructured information (Experiences)

Knowledge Management Layer

Network Services

Data Mining Services

Knowledge Portal

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Knowledge Management System

Knowledge Creation and Presentation Layer

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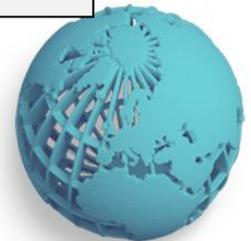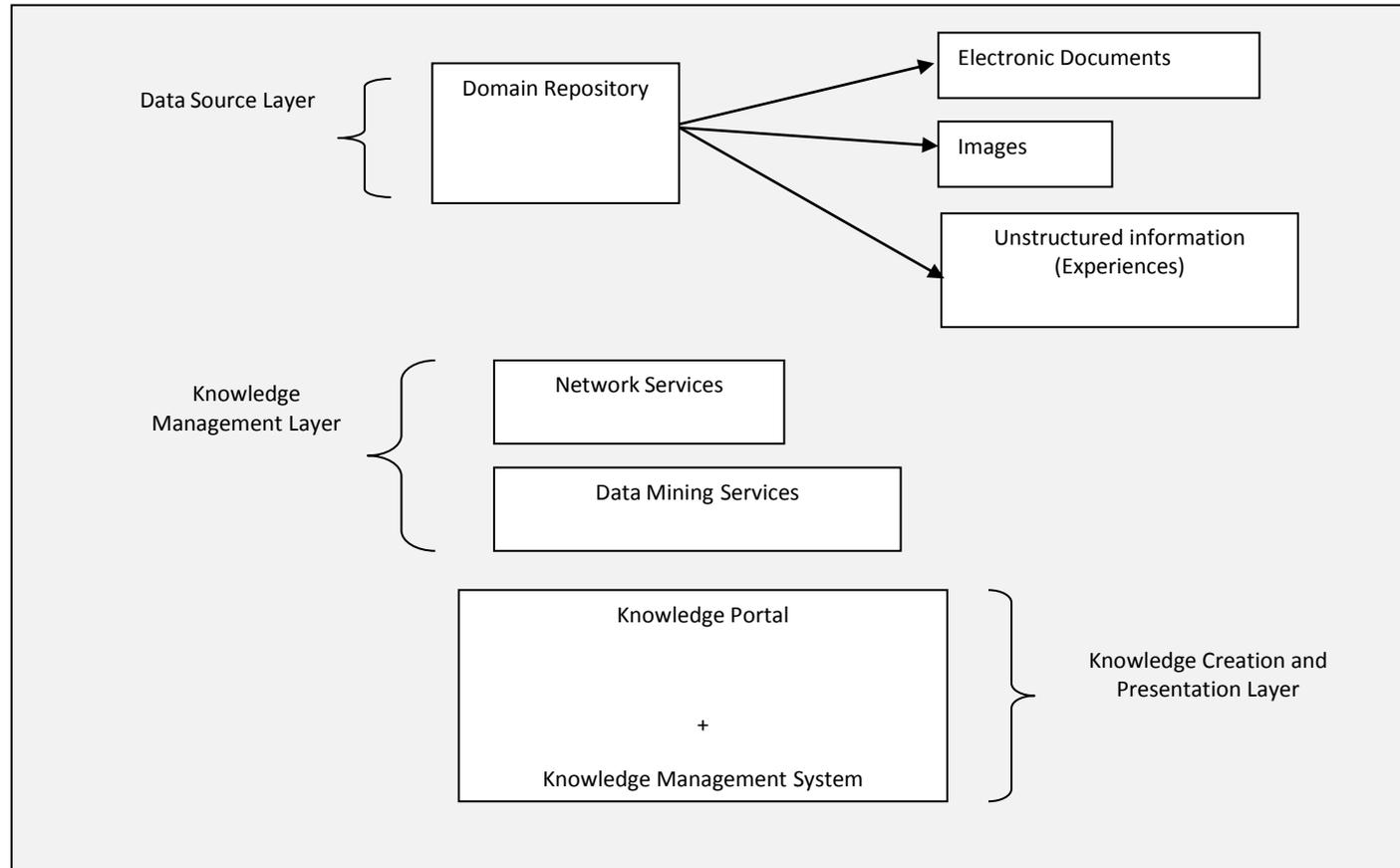
Conclusions

- The main goal of this research was to develop a framework which enables organizations to understand and assimilate the process of knowledge management and to highlight the importance of adopting the practice of using knowledge, a key resource, as part of the culture of the organization so that it can progress and remain competitive in an uncertain commercial world.

- Organizational culture Is a key element in the introduction of a Knowledge Management System. The efforts of every individual in their everyday activities constitute the raw material for the experiences and information that will enrich the KMS which in turn will provide protection, durability, accessibility and consolidation for the tacit and explicit knowledge generated in the organization.

- It is essential to structure the information hierarchy properly and to define the users´ profiles according to the needs of each area within the organization and abiding by the corporate security and business policies.
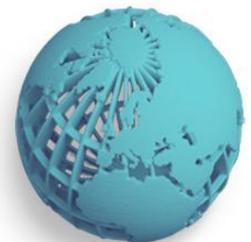
Conclusions Cont…

- Limitations:
  - The proposed framework relies on the existence of a document management system.
  - There must be a total compromise from process owners and project managers who should be committed to contribute detailed, and insightful, information to the system on a regular basis.

- Further work can be pursued to derive the instantiation and customization of the framework so it can be applied to different organizations.

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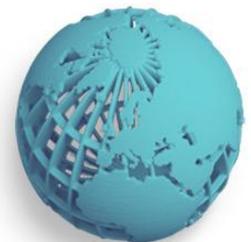
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