

A project for developing a knowledge management system

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Introduction

- Increasing interest in acquisition, distribution and exploitation of knowledge in everyday business activities
- Launching of the development of a knowledge management system for its own demands
- Collaboration of the business sector with the academic community for scientific research purposes and potential broader social significance of the project

Project participants

- The KONČAR Group
 - The business activity mostly in: power generation, distribution and transmission of electrical energy, industry and electric traction
- The University of Zagreb
 - The leading scientific and teaching institution in Croatia
- The Faculty of Humanities and Social Sciences
 - Social sciences and humanities
- The Faculty of Electrical Engineering and Computing
 - The technical sciences
- Open for other collaborations (business or science)

Project objectives

- To develop a knowledge management system
 - To enable an effective management of all segments of intellectual capital of an organization
 - To increase productivity and market competitiveness
 - To increase capability for generating new values for all parties to the agreement
- To implement the knowledge management system in other companies
- Potential broader social significance

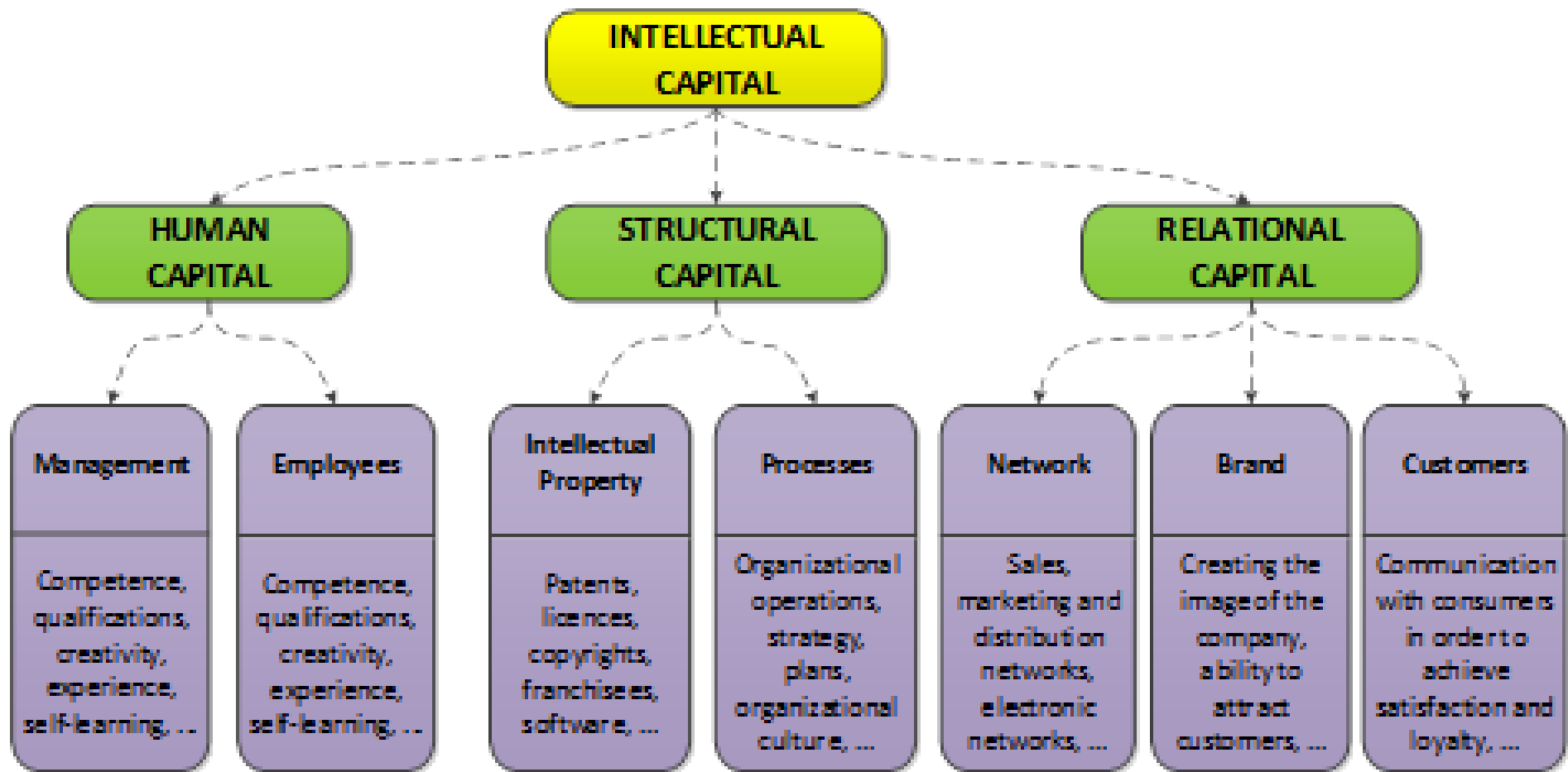
Intellectual capital

- ~ 80% of today's economic value comes from intangible resources
- Intangible resources:
 - resources recorded on information storage media
 - knowledge possessed by the organizations' employees
- Intellectual capital => the entire knowledge of an organization

Knowledge management (KM)

- A set of activities practiced within an organization with a goal to identify, record and apply knowledge, thereby stimulating also the creation of new knowledge
- Forms of knowledge:
 - Explicit – the knowledge that is recorded on some permanent medium
 - Tacit – the knowledge that can be found in people's minds
- Convert as much tacit knowledge as possible into explicit knowledge for an effective distribution of knowledge

The structure of the intellectual capital

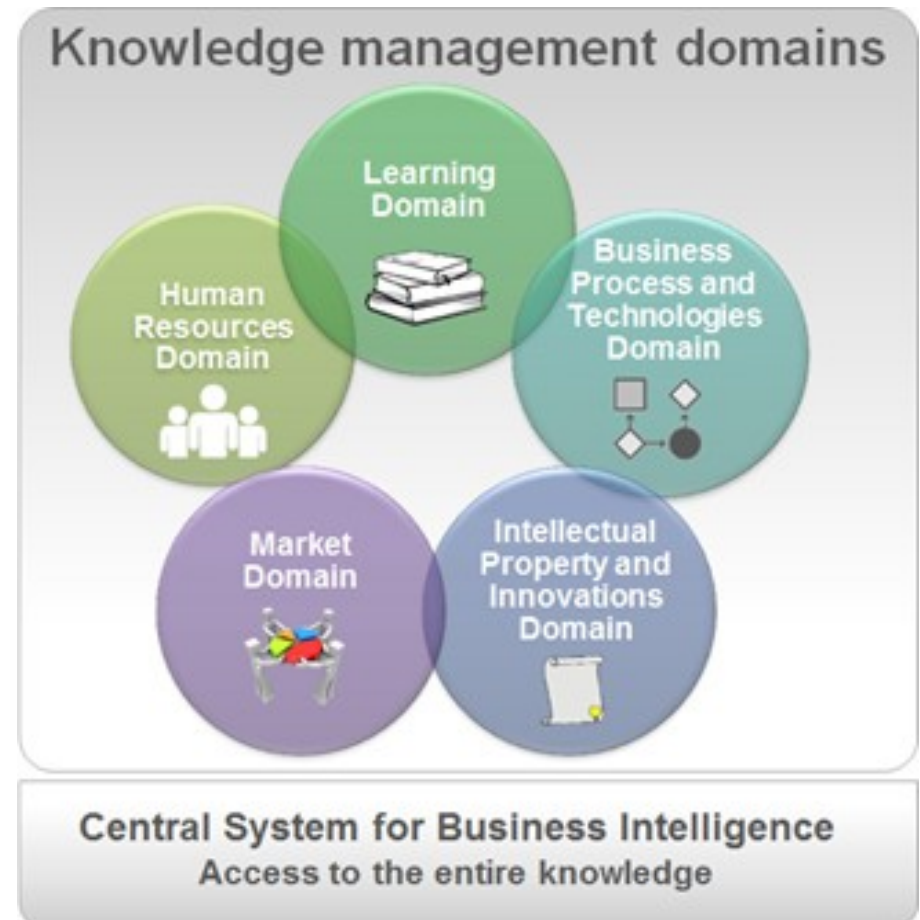


KM at the KONČAR Group

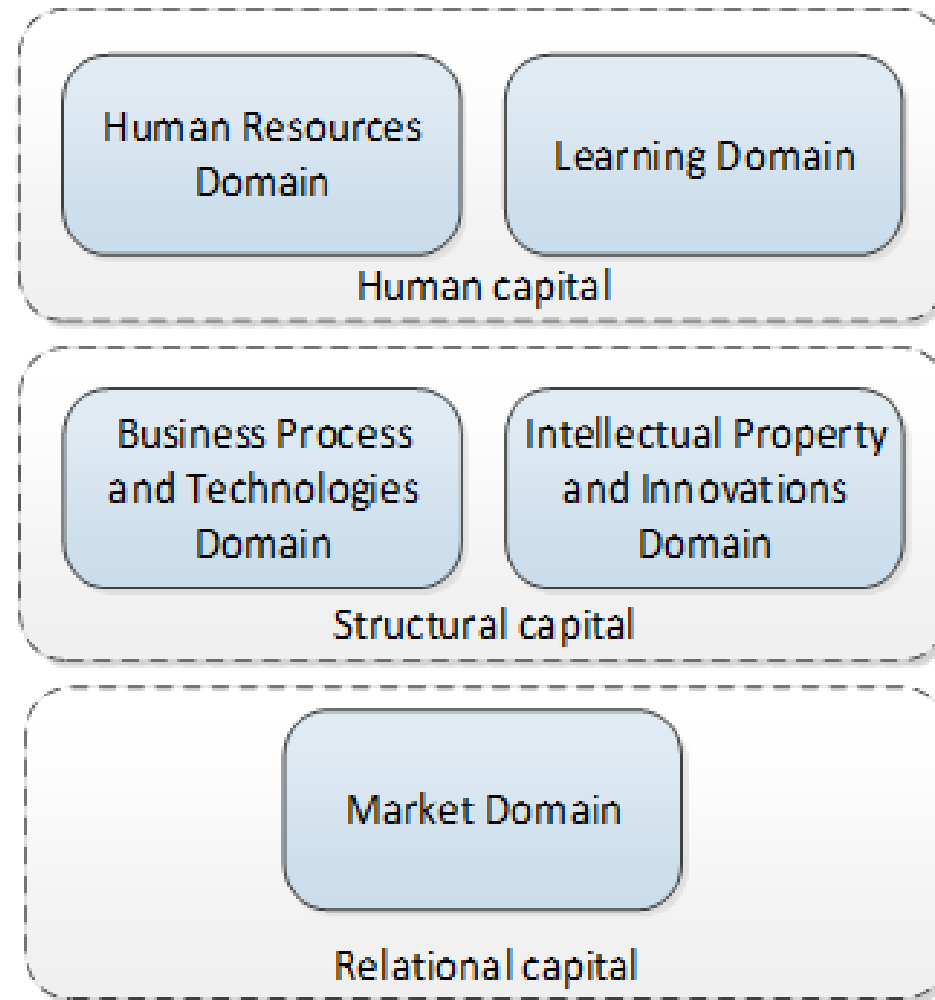
- Builds its business on research activities and production of its products
- The 18 dependent and 1 affiliated company of the KONČAR Group implement their projects using products that are primarily the result of organization's knowledge and development

Knowledge management domains

- Human resources
- Learning
- Natural Language Processing
- Business Process and Technologies
- Intellectual Property and Innovations
- Market



Intellectual capital and KM domains



System overview and approach

- The development of knowledge management solutions for all domains
- The construction of the Central System for Business Intelligence
 - To enable single-point access to the entire knowledge of the company
- Iterative approach to the development and implementation

Main tasks (1)

- The automation of the following processes: collection, transformation and induction of knowledge
- Acquisition of existing knowledge is related to the automated:
 1. collection of information from structured and unstructured (primarily textual) data that the KONČAR Group and similar companies have in abundance
 2. derivation of knowledge from information by automated reasoning (i.e. machine learning or expert systems)
- To develop a central business intelligence system able to make conclusions based on the information incorporated from structured and unstructured resources

Main tasks (2)

- To develop tools for text analysis and information extraction from text:
 1. the management of human resources (automatic analysis of resumes and competencies; linking employees' competencies and projects' requirements)
 2. the management of intellectual property and innovations (detecting patentable innovations based on the technical documentation; efficient search of patent databases)

Main tasks (3)

- To develop tools for text analysis and information extraction from text:
 3. the management of business processes and technology (computer-aided development of company's knowledge base)
 4. the knowledge management of the market (automated analysis of tenders; analysis of competitor activity and extraction of relations between entities relevant for company's business activities)

Main tasks (4)

- The management of digital resumes of the employees and their competencies for the human resource management
 - To structure and standardize the dynamic digital resumes and automate the process of their loading into the central database
 - To identify and analyze the preferences of the employees regarding the specific methods of acquiring knowledge for educational and training activities
 - To develop a taxonomy of the employees' competencies
- Goals: to optimize job positions, as well as find employees with an optimal profile for a specific job position

Main tasks (5)

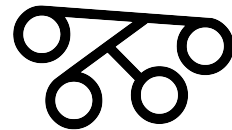
- Digitization process of paper documents
 - To convert from paper form to machine-readable text
 - To structure and standardize the digitized documents as well as to annotate them with metadata
 - To incorporate into the central database
- An e-document management system
 - To enable search and manipulation of large collections of both digitally born and digitized documents
 - To ensure the longevity and authenticity of e-documents and e-records

Conclusion

- The KONČAR Group launched the development of a knowledge management system for its own demands
- Main objective: To enable an effective management of all segments of intellectual capital of an organization and to increase productivity and market competitiveness
- Collaboration with the scientific community: the University of Zagreb, the Faculty of Humanities and Social Sciences and the Faculty of Electrical Engineering and Computing
- Implementation of the knowledge management systems in other companies
- Open for other collaborations in the business sector and scientific community



KONČAR



Thank you!