KNOWLEDGE MANAGEMENT IN ECONOMIC INTELLIGENCE

WHAT IS KNOWLEDGE?

Knowledge refers to cognizance of facts or events from an observation, learning, experience, and understanding of a reality in a particular context at a specific period of time.

- It’s the meaning conveyed when information is contextualized with reference to its environment or related events.
WHAT IS KNOWLEDGE?

Information

Context (time)

Knowledge

TYPES OF KNOWLEDGE

Explicit (Objective)

Tacit (Subjective)

Experience

Skill

Priori (theoretical)

Posteriori (practical)
**Knowledge Management**

- **Knowledge Management** refers to the process of conscious co-ordination of knowledge capital (skills, expertise, operation procedures, databases) of a firm in order to capitalize (acquisition, organization, storage and sharing) (Dieng-Kuntz & Matta, 2002); such knowledge for re-use in decision-making process.

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**Economic Intelligence (EI)**

- EI can be defined, at the level of a particular enterprise, as the decision-maker's capacity to exploit its knowledge and the new experiences, while reinvesting those already acquired, in order to solve at best a new decision problem. (Kislin, David and Thiery, 2002).
PHASES OF EI PROCESS

Identification and definition of a decisional problem

Translation of the decisional problem to an information search problem

Identification of relevant information sources

Collection of relevant information

Analysis of the information collected to extract indicators for decision

Interpretation of indicators

Decisionmaking

KNOWLEDGE MANAGEMENT (KM) IN EI

We need to capture explicit and tacit knowledge of an organization so as to facilitate the access, sharing and reuse of such knowledge. Thus, KM is indispensable in EI to ensure:

- Preservation of valuable resources, knowledge sources and activities in the domain.
- Provision of platform for integration of models, information research skills, results etc., for optimization of decision making process.
- Possibility of solving new problems with existing relevant solution or approach, that is, Knowledge Reuse to facilitate quick access to needed resource or solution.
KM CHALLENGES IN EI

○ What knowledge could be capitalized in EI process, models and decision-making activities?
○ How do we acquire, represent and store the knowledge without redundancy and incompleteness?
○ How do we validate the relevance of knowledge to the designated objective of new problem?
○ What method of knowledge diffusion (distribution) for reuse would be appropriate?
○ What update tasks are required, how and by whom?

OUR FOCUS

○ We aim to design a temporal knowledge management framework and to construct “EI knowledge Repertoire” from the integration of EI process and its models from users’ activities.
OUR APPROACH

- Identification and elicitation of knowledge parameters in the phases of EI process.
- Analysis of EI Models.
- Design of an appropriate framework for Capitalization of EI Projects.
- Harmonization of EI models and process; and representation with the aid of ontology or thesaurus.

OUR APPROACH (CONTD...)

- Problem recognition and exploration of the Repertoire for identical cases for problem resolution by reuse of stored knowledge.
- Management of the repertoire in terms of organization and update with current knowledge and review of existing ones.
### IDENTIFIED KNOWLEDGE PARAMETERS IN EI PROCESS’ PHASES

1. **Identification of a decisional problem (DP)**
   - The Skill of identifying Environmental stimuli/factors.
   - The understanding of the decision problem.
   - Precaution skill and guide.

2. **Translation of the DP to an information search problem (IRP)**
   - Competence in changing decision problem to information retrieval problem.

### IDENTIFIED KNOWLEDGE PARAMETERS (CONTD.)

1. **Translation of the DP to an IRP**
   - The expression of Information retrieval problem.
   - Precaution skill and guide.

2. **Identification of information sources**
   - Skill of Information research.
   - Inventory of Relevant sources.
   - Precaution skill and guide.
IDENTIFIED KNOWLEDGE PARAMETERS IN EI PROCESS' PHASES (CONTD...)

- Collection of relevant information
  - Skill of information retrieval.
  - Repository of retrieved information.
  - Precaution skill and guide

- Analysis of collected information
  - Analyzed information and its Structures.
  - Competence in analysis of information.
  - Precaution skill and guide

IDENTIFIED KNOWLEDGE PARAMETERS (CONTD...)

- Interpretation of indicators
  - Skill of adapting available information/resources to react to stimuli with the understanding of the problem.
  - Precaution skill and guide.

- Decision-making
  - Skill of actualizing decisions with the understanding of the problem.
  - Precaution skill and guide.
ANALYSIS OF EI MODELS

- MEPD (Modèle d’Explication d’un Problème Décisionnel) Model for explicit definition of decision-problem
  - Who? Why? What?: identifying the user’s characteristics; analyzing the organizational and environmental factors to define decision problem.

- WISP (Watcher’s Information Search Problem)
  - Translation of the decision-making problem to informational problem or the specification of the problems of finding information by the watcher.

EI MODELS (CONTD...)

- MIRABEL (Model for Information Retrieval query Annotations Based on Expression Levels)
  - For expressing the information problem to initiate searching and analysis of its context in relation to the inference from the understanding of a decision-maker and watcher.

- MORPRI2E (Modèle de Résolution d’un PRI en IE) Model for the Representation of Information Search Problem in Economic Intelligence
  - To represent users in relation to their specific needs, depending on the context, and to find the gaps in the Information System support to adapt to the changing needs of users.
EI MODELS (CONTD...)

- CADRIE (Coordinateur-Animateur dans un Dispositif Regional d’intelligence Economique)
- Specification of the competence of the Moderator of Regional EI

- RUBICUBE (Representation of the User’s needs at the time of Interrogation of an Information system after Identification)

- For the specification of the roles and the competences of the moderator - coordinator of a regional economic intelligence.

- For designing a data warehouse based on the typologies of users- needs and interaction with information systems to generate user-centered multidimensional analysis of a data warehouse.

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EI MODELS (CONTD...)

- AMIE (Annotation Model for Information Exchange)
- Modélisation de l’utilisateur et SIS (Modeling of Users and Strategic Information)

- To Add value to retrieved and analyzed information for decision-making and for the contextualization of information by annotations in a business intelligence system for validation of information relevance and reliability.

Architecture of Strategic Information based on the cognitive evolution of the user by exploring the basis of information to discover its contents, make requests, annotations, and to link research activities.

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EI MODELS (CONTD.)

- Analysis of Architectural image
- Integrating Users’ needs into Multimedia Information Retrieval System
- For indexing of architectural images, to allow a better exchange of information by the actors by EI process.
- Acquisition of information that could aid faster information retrieval for satisfaction of user’s information needs

GENERAL FRAMEWORK FOR CAPITALIZATION OF EI PROJECTS
DETAILED FRAMEWORK FOR CAPITALIZATION OF EI PROJECTS

FUTURE WORK

- We plan to implement the designed framework to enable the integration, storage and consequently re-use of the knowledge parameters.
- Use of case-base technique to facilitate access and retrieval of related solution to emerging problems.
- The management of the repertoire in terms of update with new models or solution and of existing ones will be included.
PROCEEDING...

- Questions
  &
  - Recommendation

- Thank you.