

Knowledge Domains Cartography of the Radiopharmacy Center of IPEN - a Case Study

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Management of resources is effective only when the object is known in terms of their relevance, demand, availability, repositories and other pertinent characteristics that can influence its administration (1). Knowledge Management is not different and, in this case, knowledge mapping identifies resources, characterizes their attributes and repositories. An evaluation of this knowledge is also necessary in order to have a coherent Knowledge Management strategy that guarantees the continuity and the development of this resource according to the objectives and goals of the organization in terms of its vision of future. Evaluation allows measuring the critical character of the knowledge sources, facilitating the identification of those likely to add value and those that present risks the organization survival. This kind of diagnostic makes clear the Knowledge Management objectives and, consequently, unveil solutions that correspond to the organization's needs (capitalization and preservation; sharing, appropriation and knowledge creation).

There are several ways to organize and to represent the knowledge resources of an organization. The approach here is a conceptual classification, that organizes the knowledge in a Cartography according to subjects, themes or purposes of common knowledge and it shows the decomposition of the activities of an organization under the point of view of knowledge domains. This model was used by Ermine (2).

A Knowledge Management Project was applied in the Radiopharmacy Center (CR) of the Nuclear and Energetic Research Institute (IPEN), organ of the Nuclear Energy National Commission (CNEN) according to methodology following described.

1. CR was studied under the logic of its processes and its interfaces, considered as a Strategic Business Unit inside of the possible limits of an unit of IPEN. The macro-processes of CR were identified from the analyze of the Quality Management documentation (Integrated Management Norms, Operational Procedures, Work Instructions and other documentation) and they were decomposed in its respective processes and activities. From this analysis, the knowledge that enable such processes were identified and characterized. Tables from the processes and its activities were elaborated associating knowledge–activities–processes.
2. The identified knowledge were represented in a model based on domains, themes and axes, providing a Knowledge Domains Cartography.

3. It was elaborate “criticality criteria”, based on (3), for an evaluation of the critical knowledge domains through questionnaires and interviews with the professionals of CR, whose evaluators were selected throughout criteria of representatively and proficiency.
4. Based on the results that this analysis phase provided, it was possible to point out and suggest a series of Knowledge Management actions (processes), seeking to leverage the more critical domains.

The Critical Knowledge Domains Cartography of the CR is represented in this work using eight diagrams: the first one gives a general vision of all the knowledge axes of CR (the main or strategic axes: Planning, Production Technology, Research and Development, Quality Control, Radiation Protection and Special Processes and one axis of support actions: Norms and Regulations) with its respective themes. The next seven are used to detail each one of the main axes. Each axis is developed in different knowledge domains that are characteristics of the know-how developed in the CR. The considered critical knowledge are marked with red points on the Cartography. A more detailed description of the Critical Knowledge Domains Cartography representation was published by Peil (4).

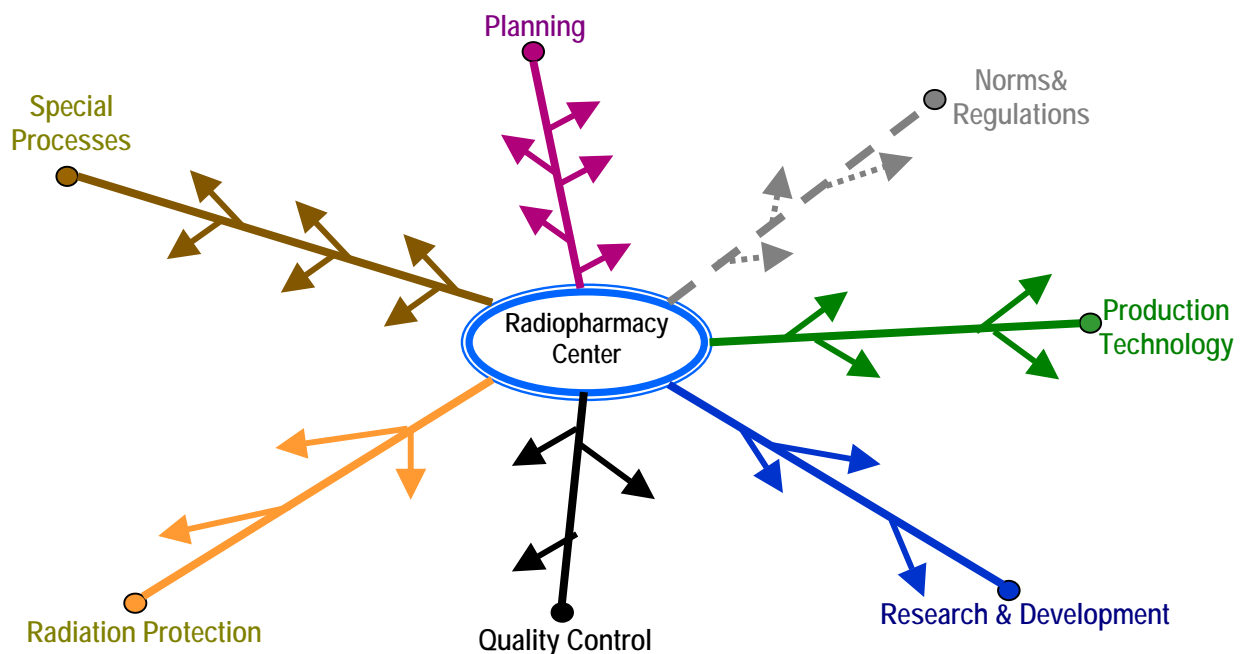


FIG. 1: Knowledge Domains Cartography of CR (general vision)

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- (2) ERMINE, J.-L. La Gestion des Connaissances. Paris: Lavoisier et Hermes Science, 2003.
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- (4) PEIL, O., AUBERTIN, G., ERMINE, J.-L., MATTA, N. La Cartographie des Connaissances Critiques, um Outil de Gestion Stratégique des Connaissances. Actes du Colloque CITE’2001 - Coopération, Innovation, Technologie; 29-30 November, 2001, p. 237-308, Troyes, France.