Chapter 7
Suggested model for the implementation of Knowledge Management System for dairy industry

7.1 Introduction

Researcher had visited all the dairies and collected data on knowledge management system. As per the findings of the study, it is clear that there is not any single dairy implementing knowledge management system fully. People are not very clear about knowledge management. There is a need to develop an environment of sharing knowledge. Based on the personal interview with the employees, observation during the data collection and data collected through questionnaires researcher had tried to develop a model of Knowledge Management System for the dairy industry Gujarat as per the requirement.

7.2 Knowledge Management System for the dairy industry Gujarat

Before the planning of knowledge management system it is very important to make a clear understanding of following aspects:

1. Identification: This aspect covers employee’s databank, Seminars, Workshops, Interviews, Literatures, Colleagues, Reports, Reviews, Case
studies, Brainstorm, Suppliers, Clients etc. There is clear identification about knowledge sources of the organization.

2. Capturing: In this section the personal knowledge, skills, researches, web page, exit interview, knowledge discovery in database will be captured.

![Figure 5: The tacit-explicit model](https://www.tutorialspoint.com/knowledge_management/knowledge_management_models.htm)

3. Storing the knowledge: This KM aspect storing the knowledge in Project Database, Hard copy database, filling cabinet, Training material, Libraries, Websites, Intranet level, Repository etc.

4. Mapping: This KM aspect mapping the knowledge using the different techniques such as Visual thinking networking, Mind mapping and brainstorming etc.

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5. Sharing/Dissemination: This KM aspect sharing and disseminates the processed knowledge using various techniques such as conferences, workshops and seminars, intranet, trainings, web publishing, publishing the knowledge through activity board and periodicals, bulletin, get together functions and so on.

There are another seven fundamental elements is referred to as a Knowledge System Architectural Model (KSAM) which are given below:

1. Strategy – There should be a very clear strategy for KM. It should be applicable in culture of the organisation.

2. Actors – In any KMS, peoples are fundamental requirements. There are different participants with differing backgrounds and experiences. There are a number of roles involved in a KMS to ensure the system is effective. These include owners, sources, targets, enablers, boundary spanners, communities and champions.

3. Manage the Knowledge Source – A KMS should address the authenticity, reliability, sufficiency and currency of the knowledge. Wherever possible, knowledge should be held by the source external to the system and leveraged when needed rather than maintaining it in the KMS as information.

4. Interface – The user requires some sort of interface with the KMS and this might be interactive mode. The interface may be human, structural or technological for the delivery or facilitation of knowledge or a knowledge
management service. The delivery interface should address the mode, facilitation/interface, a certain style, adaptation techniques, provide access control and be accessible to people with physical restrictions or a disability.

5. **Functionality** – KM systems are developed to support and enhance knowledge-intensive processes, tasks or projects of creation, construction, identification, capturing, acquisition, selection, valuation, organization, linking, protection, structuring, formalization, visualization, transfer, transformation, distribution, retention, maintenance, refinement, revision, evolution, accessing, retrieval and last but not least, the application of knowledge.

6. **Infrastructure** – KMS require some infrastructure to enable the system to function. This may include facilities, equipment, repositories, instruments, tools, templates, software, networks and hardware.

7. **Continuous improvement** – A KMS should be regularly reviewed to ensure that it is meeting the objectives identified in the strategy and requirements.

Based on above points, the Knowledge System Architectural Model will be architected as given below:
Figure 6: The Knowledge System Architectural Model (KSAM)\textsuperscript{2}

Figure 7: Knowledge components\textsuperscript{3}


People, Process and Technology all three are the key component for successful knowledge management. All components have its own role and if any component is absence, organisation will not get the result. To keep these things in mind, researcher has tried to give a model for dairy industries Gujarat.

7.3 Suggested model

After study the data received from different employees from dairy industries Gujarat, researcher had identified some features which are necessitating for knowledge management system. These features are given below:

- Web-based Open System
- Retention of knowledge when employees leave
- Thesaurus, categories, keyword cloud and metadata navigator
- OCR
- Watermark for identification
- Generate new format wizard
- Mobile interface
- Automatic cataloging
- Web services
- Open Meetings integration
- HTML Editor, users can edit information
- Forum and Wiki
- Barcode system
- Better treatment of tables
- Multilingual support
- Unicode compliant
- Web links
- Full-text search
- File attachments
- Auto-saving
- Backup and restore
- Extensions (i.e. "plugins")
- Cross-platform (Linux, Windows, MacOS X)
- Report generation
- Option to comment
- Q&A section
- Feedback and suggestions

As per the features given above and available data, the knowledge management system should be distributed in some phases such as planning phase, designing phase, test phase and implementation phase.
Phase I : Planning phase

In first phase, the clear-cut planning for KM should be defined. What are the objectives for implementation of KM and which KM module will suitable for existing system. The vision for a KM initiative and the scope of the project should define in this phase. In this phase, knowledge assets audit, a draft KM framework and a detail plan for implementation should be defined.

Phase II : Designing phase

In second phase of designing KMS, the functional design of four major aspects of KM will design, which aspects are knowledge acquisition, knowledge process, knowledge transfer and knowledge network. For better implementation of KMS, there is need for identification of each aspect separately and clearly. The KMS model divided in following four models, which is given below:
Figure 8: Knowledge Acquisition Model

Figure 9: Knowledge Sharing Model

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Figure 10: Knowledge Transfer Model

<table>
<thead>
<tr>
<th>Expertise Level of Receiver</th>
<th>Knowledge Transfer Methods</th>
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| Beginner                    | • Formal education and training  
                              | • Knowledge Elicitation Interviews, Distillation and Knowledge Capture  
                              | • Mentoring  
                              | • Apprenticeships  
                              | • Simulation and Serious games  
                              | • Instant Messaging |
| Practitioner                | • Peer Assists  
                              | • Communities of Practice  
                              | • Job transfer  
                              | • Knowledge Elicitation Interviews  
                              | • Storytelling, Wikis, Blogs  
                              | • Instant Messaging |
| Expertise                   | • Challenge via inquiry by others (who are often from a different practice area)  
                              | • Research papers and conferences  
                              | • Application of their knowledge in different or new environments and contexts  
                              | • Introduction of new technology |

Phase III: Testing phase

The third phase is testing of KMS. The KMS model is a combination of above mentioned four important sub-models. In this phase there is testing of individual KM elements for a single business issue. The component of draft KM framework can be tested in the proof of concept exercises, and the whole framework will be tested. The failure of any one model affects the whole KM system. So that there is need for testing and evaluation of the model and necessary changes after testing the model should considered in final implementation.

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**Phase IV : Implementation phase**

The fourth phase is effective implementation of KMS. After successfully implementation of KMS in organization, there is need of time to time upgradation in activities. The most important phase after implementing KMS, is a taking regular feedback and applying the suggestion in to the system. After compiling above models, the KMS for dairy industries in Gujarat will became clearer, which is given in next page.
Figure 12: Knowledge Management System for the Dairy Industries in Gujarat

As per the model given above, it is very important to identify responsibility and work of knowledge manager who will run, monitor and maintain the knowledge management system. Knowledge manager is an administrator of the system and he has rights for modification in variables in the system. The system would be self-sustain and for the self-sustain
model of KM, the system will interactive and responsive. There must be a provision for feedback system and the structure of feedback will designed for each module of KMS like acquisition, sharing, transfer and network. Also feedback form should be divided in a manner to suitable for in different user categories such as labour, technician, marketing, personal management employees, manager, staff, officers, scientist etc. Knowledge manager will receive the feedback from different user categories and after implementing the suggestions/feedback of users, knowledge manager will inform the changes to the users using email or other communication tools and if the suggestions are not applicable, knowledge manager will inform the justification of the same. There will also provision for opinion of KMS, whether the system is beneficiary to the users or it requires some improvements. There should be a provision of noting the benefits of the KMS to users.

7.4 Knowledge Management System Software

As the model suggested above, the KMS will run by software which work as Knowledge Repository, and will also provide facility of search, folder navigation, classification of knowledge and other services for KM. The software should have feature of Web Self-Service. It should accessible through web page by specific command given by the users. As per the users command, the web-server script access the database and will
provide the search result on users screen. The administrator of the system is CKO and he can able to perform administrative task such as - managing knowledge base, organize enterprise server, provide immediate responses, handle and assist support requests, collaborate on documents and content and quickly online help with the available tool.

Library and Information Science personnel may perform the duty as a CKO in very well manner as having direct relation with explicit information handling of the employees, and on the another part they may be instrumental and influential so as the tacit part of the knowledge seeker i.e. employee. For effective role playing as a CKO they may conduct a reference interview in a structured and regular format to assess the actual and anticipated need of the user which may be very important and worthy inputs for K-Base.

7.5 Scope for the further research

This study opens up new grounds for further research. Further studies can address the following issues to have more insights on the subject:

Further, studies can extend to other dairy industry sectors such as supply/production sector (milk producers), processing sector (milk processing and product manufacturing plants) and marketing sector (demand-supply sector).
Similarly, further research on areas such as Genetics & Breeding, Feeding & Nutrition, Animal Health Care, KMS for Dairy Federations in India, Dairy Cooperatives, Government Agencies and Research Projects.

References:


