



## **Chapter 4**

# **Knowledge Management System: A Case Study of RDCIS Laboratories**

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*Knowledge Management System, with its database consisting of details of equipment capability, test methods, references and expertise of individuals is introduced in RDCIS laboratories through existing wide spread LAN on windows NT platform. Being a R&D organisation, both codification and personalisation strategies were adopted carefully to reuse and share the knowledge efficiently. This involves capturing of inherent knowledge and storing it in a web based hyperlinked information system so that it can be retrieved whenever and wherever needed. A two layer K M platform, based on Distributed interNetApplications of Microsoft has been designed and implemented successfully for this purpose. Significant improvement has been noticed in effective utilisation of equipment potential through systematic approach of knowledge sharing beside continuous enrichment of data bank.*

## **INTRODUCTION**

In today's fast changing global market, success is no longer tied to the traditional inputs of labour, capital or land. The new critical resource is inside the minds of employees known as **Knowledge**. The concept of knowledge management is essentially to capture the inherent learning locked inside human brain and convert it to explicit knowledge,<sup>1</sup> which can be reused in future easily.

The Research & Development Centre for Iron and Steel (RDCIS), a corporate R&D unit of Steel Authority of India Limited (SAIL), is equipped with more than 350 advanced scientific and analytical equipment with 5 pilot facilities under 15 major laboratories. These equipment encompasses the entire spectrum of diagnostic and research tools, from testing of raw materials to finished steel products. RDCIS is a pioneer in selecting, developing, adapting and implementing cost-effective iron and steel making technologies. The research activities at RDCIS are broadly divided into four technology areas such as Iron, Steel, Product and Automation. All these areas share laboratory equipment and facilities which are diverse in nature for carrying out experiments. Therefore, it calls for an appropriate Knowledge Management System (KMS) for maximising utilisation of these equipment and retaining the knowledge & expertise gained in a systematic manner so that it would benefit the organisation in the long run.

## **FOUNDATION OF KNOWLEDGE MANAGEMENT SYSTEM**

The main purpose of KMS in RDCIS was to codify, store and disseminate information about laboratory equipment facilities and support sharing of knowledge resources in respective fields which have been built through years of R & D experience. Both codification and personalisation<sup>2</sup> strategies were adopted in designing the basic structure of KMS. In codification strategy the knowledge or information is codified using standard document preparation software and stored in databases, where it can be accessed and used easily by anyone in the organisation, whereas in personalisation strategy, the knowledge is closely tied to the person who developed it and is shared mainly through direct person-to-person contacts. Merits and demerits of these strategies were carefully examined before designing the KMS model and has been accomplished through a sequence of activities which encompasses:

- Identification / selection of laboratory equipment
- Building of knowledge database in respective areas
- Procedure for data capture and packaging
- Selection of methodology for sharing and transfer of data
- Building of KM platform and services
- Measurement of success and failure of KMS

### **Identification / Selection of Laboratory Equipment**

Laboratory equipment were identified by considering the nature of research activities pursued at RDCIS. These were classified under six major categories such as characterisation of raw material, iron and steel making technology, testing

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