



I C E X

INTELLECTUAL CAPITAL EXCHANGE

Knowledge Exchange Partnership™ for Global IT Organizations

Building Collaborative, Knowledge-Based Communities

**Infosys Case Study
January 15, 2002
Tucson, AZ**



SNAPSHOT

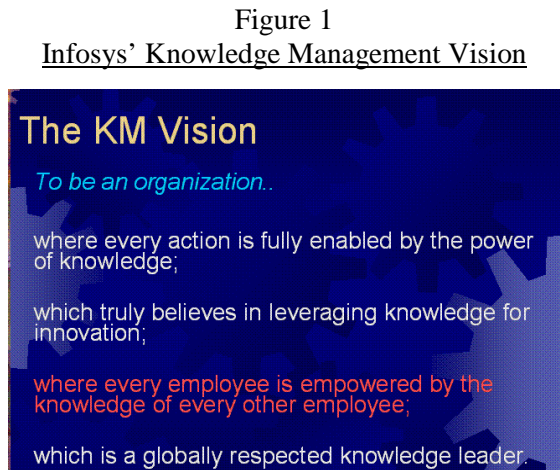
- ❖ Infosys’ **integrated knowledge management strategy** includes a framework for knowledge management, an organization-wide initiative, a steering committee, and a defined deployment architecture.
- ❖ Infosys has a **corporate-funded, central knowledge management group** of about eight people that oversees content management processes, manages the technology infrastructure, and helps to champion the knowledge management system.
- ❖ Infosys’ **KShop portal** includes access to content/information and experts, links to key workflow applications, and subscription and customization capabilities. It is intended to be the Web entry point for every Infosys employee.
- ❖ Some of Infosys’ **mechanisms for knowledge management promotion** include a branding strategy and communications campaign, Knowledge Currency Unit scheme, Knowledge Summits, mementos, activity reporting, and status updates.
- ❖ To **measure the results** of its knowledge management program Infosys looks at metrics such as return on capital employed, economic value added, and efficiency. Knowledge management benefit is also assessed through surveys and anecdotal information.

BACKGROUND

Infosys is a leading consulting and software services firm based in India, partnering with clients for technology-led business transformation. The company is listed on the NASDAQ and is SEI-CMM level 5 certified. It has over 10,500 employees and more than 300 clients. Infosys’ vision is “We will be a globally respected corporation that provides best-of-breed business solutions, leveraging technology, delivered by best-in-class people.” This case study looks at Infosys’ knowledge management journey and how the company has developed a robust, usable, and highly effective knowledge management system that is an integral part of the company’s processes and culture.

INFOSYS KNOWLEDGE MANAGEMENT VISION & OBJECTIVES

Infosys defines knowledge management as **“People, process and technology directed towards the harvest and reuse of organizational knowledge,”** or *How can the organization update and use its knowledge more effectively?* The company believes that all organizational learning can be leveraged in delivering business advantage to the customer and that every Infosys employee should have the full backing of the organization’s learning behind them. Infosys’ **knowledge management motto is “Learn Once, Use Anywhere!”** Figure 1 outlines Infosys’ knowledge management vision.





Infosys' **key objectives and drivers for knowledge management** include:

- ❖ Better Quality – taking best practices from small pockets in the organization and institutionalizing it throughout the organization.
- ❖ Better Revenue Productivity (reuse, cycle time reduction, virtual teamwork) – enabling the company's global delivery model and dispersed teams.
- ❖ Reduced Risk – diversify into new technologies, domains, geographical areas, services, resource interchangeability.
- ❖ Greater Market Awareness
- ❖ Higher Revenue Growth
- ❖ Increased Customer Satisfaction

EVOLUTION OF KNOWLEDGE MANAGEMENT AT INFOSYS

Knowledge management has long been an area of interest and activity at Infosys. The company's earliest knowledge management efforts included a **Body of Knowledge** that was developed in 1992. Employees created a central library by documenting (on paper) their experiences and learnings. Since there were only 300 Infosys employees at that time, a paper-based library was sufficient to meet people's needs. In 1995 Infosys launched a company-wide email system and a **technical bulletin board**. The bulletin board was a dynamic, knowledge-sharing forum where employees could post queries and offer/receive responses. Although the forum had no owner—and there was no imperative to participate—it was still very active. Typically, a posted question would receive one or more responses within minutes. By 1997 Infosys had put most of its information on a **companywide intranet**, called Sparsh. Figure 2 provides a summary timeline of key knowledge management activities within the Infosys.

Figure 2
Knowledge Management Activities at Infosys



In 1999 Infosys decided it was time to create a **more formal knowledge management system**. The company was growing at 100% per annum and there was great diversity within the organization; it was no longer possible to rely on informal knowledge sharing mechanisms. Among the tools developed were a directory of experts and a People Knowledge Map. The company also decided to launch a **formal, organization-wide knowledge management initiative** to support and enable ongoing knowledge management efforts. Today, Infosys

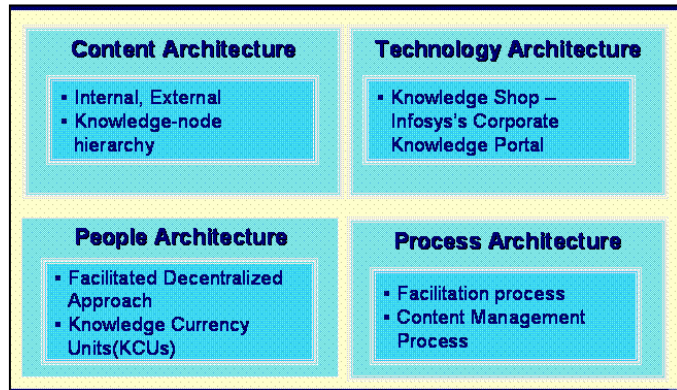
has a sophisticated, Web-based corporate portal, called the KShop portal. The portal includes access to content/information and experts, links to key workflow applications, and subscription and customization capabilities



INFOSYS KNOWLEDGE MANAGEMENT STRATEGY

Infosys’ **integrated knowledge management strategy includes four key components**: staged conceptual framework for knowledge management, organization-wide initiative, steering committee to give direction, knowledge management deployment architecture. These components ensure a holistic approach to development and deployment of the knowledge management strategy. The conceptual framework for knowledge management includes an Infosys developed Knowledge Management Maturity (KMM) model, extrapolated from the Software Engineering Institute’s CMM model (Capability Maturity Model). The organization-wide initiative ensures a high profile for the project, while the steering committee (which includes the CEO, CIO, and other functional directors) helps to drive knowledge management throughout the organization and oversees progress. Finally, the knowledge management deployment architecture, depicted in Figure 3, defines the content, people, process, and technology architectures.

Figure 3
Infosys Knowledge Management
Deployment Architecture



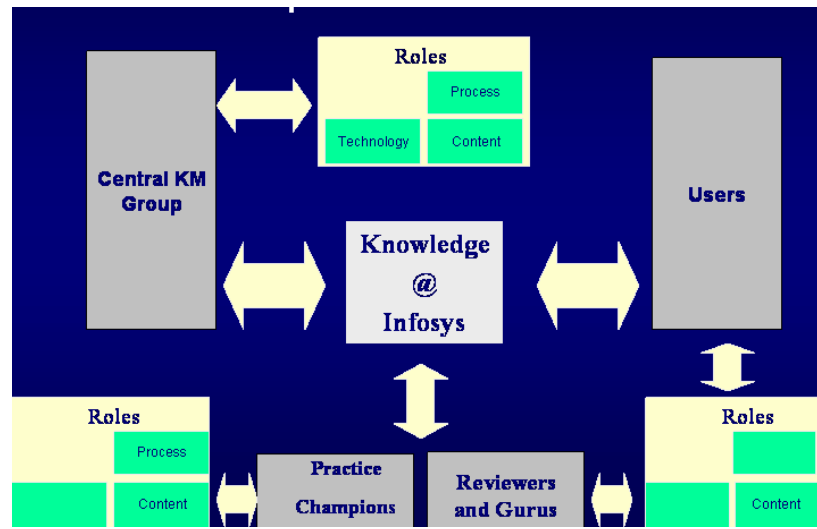
Knowledge Management Deployment Architecture

An important part of Infosys’ knowledge management strategy is the underlying design of the **content, people, process, technology architectures**. For each area, the company has developed detailed specifications and roles/processes.

The **content architecture identifies types of content** within two major categories—internal and external. Internal content includes: Industry specific Knowledge Assets, Body of Knowledge (BoK), Project Snapshot Documents, Internal White Papers and Reports, Reusable Artifacts, Discussion Groups, Chat Sessions, and Internal FAQs. External content includes: Glossary of Business and Technical Terms, Technology Summaries, Online Journals and Books, External White Papers and Reports, Technology and Business News, and External FAQs. A **content management process** ensures that content is captured from all sources, and reviewed and edited prior to final publication, as well as, oversees maintenance and promotes reuse.

The **people architecture** is based on a “facilitated” approach, combining localized knowledge champions with a **central knowledge management group**. The central group, funded by corporate overhead costs, has about 8 people, and provides editorial oversight and develops processes. Other responsibilities for this central group include technology infrastructure management (design and development, ensuring reliability, availability, performance, security) and some content management functions (maintenance, facilitation). **Practice champions** are situated per geographical unit and work part-time. Practice champions are not subject matter experts (SMEs), but rather evangelists who promote and support knowledge management within the business. There are also SMEs for each area. Figure 4, on the next page, shows the various roles and responsibilities defined in the people architecture.

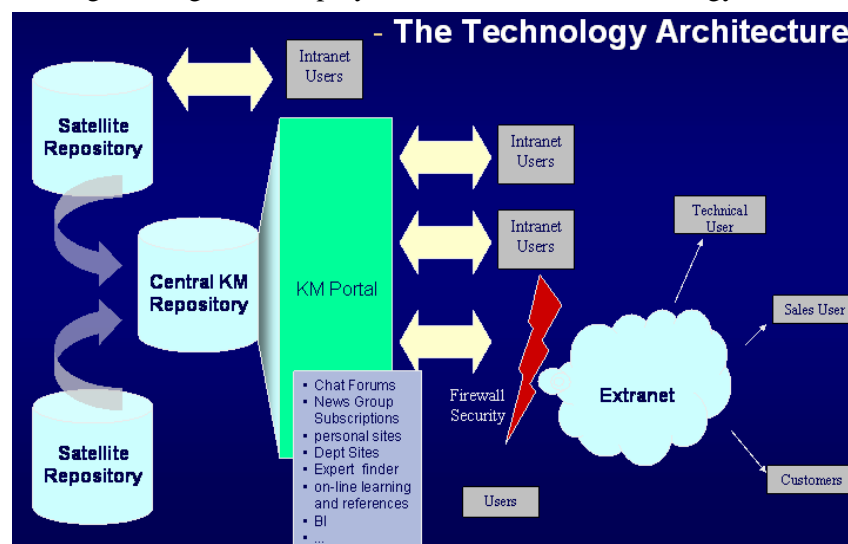
Figure 4
Knowledge Management Deployment Architecture: People Architecture



The **process architecture** outlines **key processes** required to support, enable, and measure ongoing knowledge sharing activities and results. It includes: processes to facilitate knowledge sharing and reuse (process redesign); a process to ensure content quality and currency (content review and editing, composite KCU rating); a process for KM effectiveness measures (KM Performance Indicators, KM surveys); and a process for KM benefits measurement (KM Performance Indicators, KM Feedback Processes).

The **technology architecture**, shown in Figure 5, ensures that all **content is driven to a central repository** and available to internal and authorized external users. Infosys recognizes that moving to a central knowledge management repository happens gradually over time as user acceptance grows, so for now the company is allowing business units to maintain their proprietary repositories. However, such external repositories must go through a small registration process which allows the central repository to recognize the external ones.

Figure 5
Knowledge Management Deployment Architecture: Technology Architecture

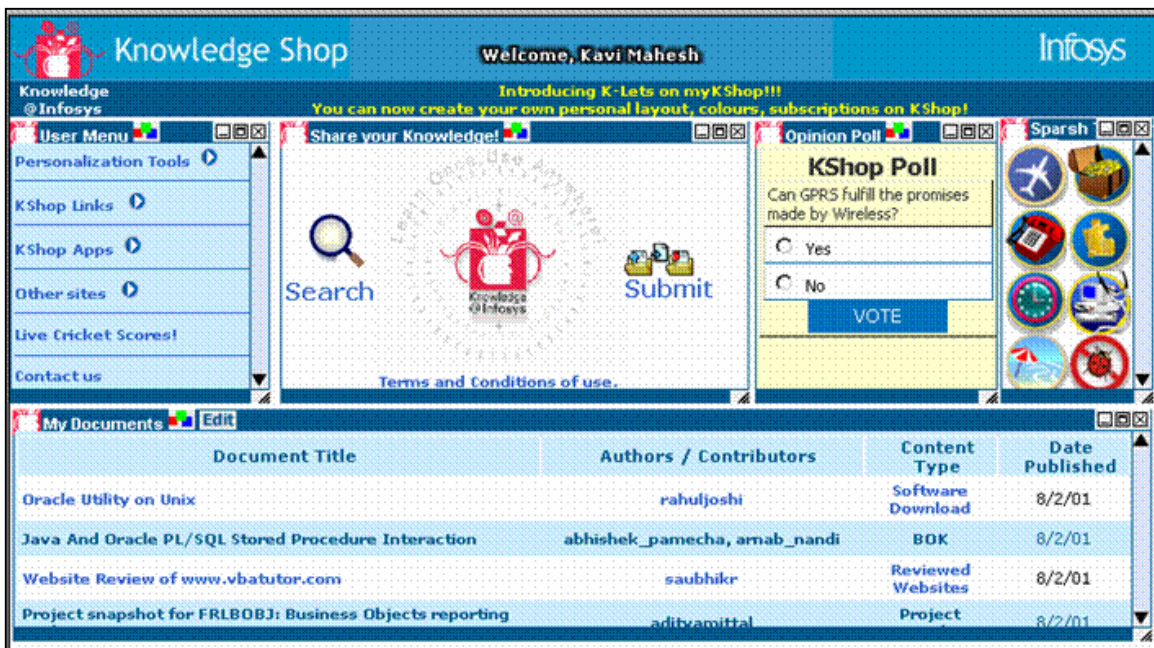




The KShop Portal

The **KShop portal** is Infosys’ Web-based corporate portal which includes access to content/information and experts, links to key workflow applications, and subscription and customization capabilities. It is intended to be the Web entry point for every Infosys employee. KShop content is segmented based on the content architecture and **each content type has its own home page**. A content rating system, based on the Knowledge Currency Unit, provides a measure of quality for content in the KShop repository. A **subscription capability** allows users to subscribe to specific types of content and receive email notification on new content. **Customization features** enable users to customize their home page to show only the topics in which they are interested. A People Knowledge Map serves as the company “**yellow pages**” for expertise, listing employees by skills. Figure 6 depicts the KShop portal home page.

Figure 6
KShop Portal Home Page



The **People-Knowledge Map**, developed in 1999 is an expert locator—a company “yellow pages” for finding people. Self-proclaimed experts list themselves in the directory and classify their level of skill/expertise according to a knowledge hierarchy which comprises four levels and 1200+ topics. Since the **credibility of this system is critical** it only includes people who are willing to participate—i.e., people willing to share their knowledge—and not those who are experts but who do not have the time or inclination to take part.

Employees wishing to register must go through a minimal screening process to confirm that they actually possess the skills they list, but the process is primarily based on a **self policing model**. While Infosys acknowledges that self-proclamation can entail certain challenges (i.e., overstating one’s knowledge), the company has found there is a natural mechanism that ensures people do not exaggerate. Because the directory is constantly used by employees to locate experts for help with projects and other client deliverables, anyone who falsely advertises their abilities will quickly be found out. In reality, **the issue of sharing information is a bigger challenge than employees misstating their skill level**.



CREATING A KNOWLEDGE SHARING CULTURE AT INFOSYS

Infosys' success in making knowledge management an integral part of the company's processes and culture comes from a well-planned knowledge management strategy, and ongoing promotion and support. At Infosys, **knowledge management is recognized as a corporate priority** and has a high profile within the organization. Moreover, a strong marketing and communications campaign and Knowledge Currency Unit scheme help to maintain program visibility and sustain employee enthusiasm. Although the knowledge management program is driven through a top-down effort, Infosys has used the **pilot approach to demonstrate value** to employees and then get business unit buy-in based on results.

The **Knowledge Currency Unit (KCU)** scheme, a key factor in promoting and incentivizing knowledge sharing at Infosys, serves four purposes: **visibility, reward, rating system, level of activity**. The KCU is a composite measure of the quality of a KShop document, and is based on the number of times the document has been viewed by users and users' ratings of that document. When a document is first submitted to the repository, a SME reviews it and assigns it a certain number of points. Over time, as users look at the document they can also assign points. The composite KCU is updated nightly.

The **incentive for a user** to take the time to rate a document is that they also earn one KCU for doing so, and employees may cash in KCUs for local currency (Indian Rupees). While the actual monetary value may be nominal, it is the principle that counts. Another important promotion mechanism is a **KCU scoreboard**, shown in Figure 7, which lists top employee KCU scorers, creating significant visibility for those employees that participate and contribute most. Finally, each employee can view their own KCU score via a private **activity reporting screen**.

Figure 7
KCU Scoreboard – Top Scorers



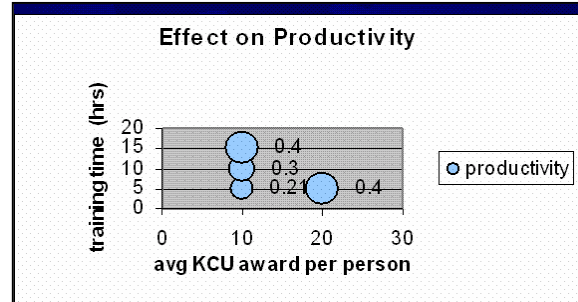
Other **mechanisms for promoting knowledge management** within Infosys include a formal logo and branding campaign, periodic knowledge summits, mementos (e.g., mugs, t-shirts), and status updates at forums and other events. A line on the timesheet allows employees to report time spent on knowledge sharing activities.



MEASURING KNOWLEDGE MANAGEMENT BENEFIT

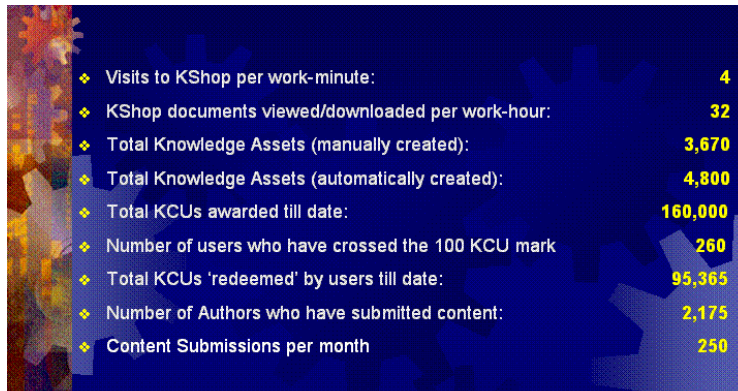
At Infosys, measuring results from the knowledge management effort is tackled on three fronts: metrics, surveys, anecdotal information. **Quantitative metrics** help the company map knowledge management results into traditional project and company measures such as productivity, defect rate, and schedule adherence. For example, Infosys has been able to show that projects with employees that have more KCUs also have a better success rate (see Figure 8).

Figure 8
Measuring KM Impact on Project Performance



Infosys tracks **return on capital employed, economic value added, annual training cost per employee, and efficiency.** While the company believes these are valuable measures—and has seen improvements in each area since implementing a formal knowledge management program—it does acknowledge that knowledge management is only one attributable factor in such results. Figure 9 shows some additional measures that Infosys tracks.

Figure 9
State of the Knowledge Management Initiative



Infosys also conducts **employee surveys** to assess overall acceptance of knowledge management within the organization, and to track specific measures for its KShop portal. In results from recent surveys, more than 99% of respondents said they believe knowledge management is essential for the company and 79% said the knowledge sharing environment in the company encourages the documentation of knowledge for future use. In addition, 87% of those surveyed said that whenever possible they tried to reuse existing organizational knowledge rather than start from scratch and 75% felt that when needed they were easily able to tap organizational knowledge in their work. Finally, 70% of survey respondents felt that good knowledge-sharing practices had helped in delivering tangible benefit to customers, more than 80% believed that their team's quality of work and productivity had improved, and 73% said they saved more than 1 person-day in the last six months by using the existing knowledge architecture.



CRITICAL SUCCESS FACTORS & LESSONS LEARNED FROM INFOSYS

V. P. Kochikar, Principal Knowledge Manager at Infosys, shared some of the key factors and lessons learned that Infosys has identified as critical to the development and success of its knowledge management system.

- ❖ Separate the hype from the reality quickly. Hype can be a help and a hindrance. It helps to have a term to rally people around.
- ❖ Get moral and resource commitment and support from top management.
- ❖ Strike the right balance between people-oriented and repository-oriented approaches (e.g., How much context can we capture? How amenable are we to technology-based approaches? What investment are we looking at?).
- ❖ KM need not be expensive!
- ❖ Strike the right balance between centralization and de-centralization (e.g., can we justify dedicated resources, what guarantees are expected?) Accommodate all positions!
- ❖ Get buy-in across, but focus on high-payoff areas.
- ❖ Be Visible! Get and celebrate small victories.
- ❖ “Walk the Talk” soon – Pilot.
- ❖ Be hard-nosed about “KM” products and services
- ❖ Understand the implementation life cycle
 - Infrastructure
 - Basic content
 - Awareness
 - Usage
 - Growth
 - “Take-off”
- ❖ Manage expectations well.
- ❖ Understand and manage knowledge management as a change process.