

“Tomorrow is closer than you think.”

- Peter Drucker

***If you are not competing with knowledge
you are not competing to win.***

- J.M. Nimitz

Knowledge Engineering and Management - A vital strategy for survival and growth

Every organisation has to pay more and more attention to Knowledge Engineering and Management - KEM. The knowledge content of products, services and social activities in general is steadily growing. Scholars and observers from diverse perspectives, sociology, economics and management science, agree that ***managing knowledge is a fundamental driver of organizational progress*** in the modern business environment.

Tom Stewart of The Fortune Magazine recently put it rightly, *“The quintessential raw material of the Industrial Revolution were oil and steel. Well, more than 50% of the cost of extracting petroleum from the earth is now information gathering and information processing. As for steel... big producers used to need three or four man-hours of labour to make a ton of steel. Now steelmaking, using sophisticated computers, requires only 45 man-minutes of labour per ton. The intellectual component has grown and the physical component shrunk.... If steel was the quintessential product of industrialism, the talismanic product of the Information Age is the microchip. The value of the chips produced today exceeds the value of the steel produced. What makes them valuable? Certainly not their physical component. Chips are made mainly from Silicon, that is, from sand, and not much of it. The value is mainly in the design of the chip, and the design of the complex machines that make it. Its chief ingredient is knowledge. Add to all this up and you come to a simple conclusion: more and more of what we buy and sell is knowledge. Knowledge is the principal raw material. Knowledge is come to be recognized as a valuable asset.”*

Knowledge engineering and management is a management imperative in today's global knowledge economy. Companies have to compete on the basis of their knowledge. A company's ability to acquire knowledge and put it to use is crucial for survival and growth. No wonder, more and more companies are taking to Knowledge Engineering and Management (KEM) that offers a strategic and most sustainable competitive advantage. KEM has become a hot topic in business because of its prospects for dramatic improvement in organizational effectiveness. Clearly, KEM has taken the centre stage in corporate strategic planning.

As Peter Drucker put it, ***“Knowledge is and will be the basic economic resource.”*** In simple words, the key function of management is to engineer and manage knowledge. Management must encourage new knowledge to come forward. Everyone's knowledge must be tapped. Knowledge that one doesn't understand must be managed and people must be encouraged to learn. It is important to make every employee understand his/her knowledge role. Companies must prepare ground for successful implementation of KEM by training employees in KEM skills and practices.

Knowledge Engineering and Management requires special training to translate knowledge into tangible competitive advantages.

There is no sustainable advantage other than what a firm knows, how it can utilize what it knows and how fast it can learn something new! Globalization of the economy has put terrific pressure on firms for increased adaptability innovation and process speed. There is a growing awareness of the value of specialized knowledge as embedded in organizational processes and routines, in coping with the breakneck pressures of globalization. No wonder we have positions created in corporates vice president-intellectual capital, Direction-KEM, Chief knowledge Officer, etc. Leading companies all over the world are heavily investing in KEM.

The next society will be a knowledge society. Knowledge will be its key resource, and knowledge workers will be the dominant group in its workforce.

Its three main characteristics will be:

- Borderlessness, because knowledge travels even more effortlessly than money.
- Upward mobility, available to everyone through easily acquired formal education.
- The potential for failure as well as success. Anyone can acquire the “means of production”, ie, the knowledge required for the job, but not everyone can win.

Together, those three characteristics will make the knowledge society a highly competitive one, for organisations and individuals alike. Information technology, although only one of many new features of the next society, is already having one hugely important effect: it is allowing knowledge to spread near-instantly, and making it accessible to everyone. Given the ease and speed at which information travels, every institution in the knowledge society—not only businesses, but also schools, universities, hospitals and increasingly government agencies too—has to be globally competitive, even though most organisations will continue to be local in their activities and in their markets. This is because the Internet will keep customers everywhere informed on what is available anywhere in the world, and at what price.

Knowledge technologists are likely to become the dominant social—and perhaps also political—force over the next decades

This new knowledge economy will rely heavily on knowledge workers. At present, this term is widely used to describe people with considerable theoretical knowledge and learning: doctors, lawyers, teachers, accountants, chemical engineers. But the most striking growth will be in “knowledge technologists”: computer technicians, software designers, analysts in clinical labs, manufacturing technologists, paralegals. These people are as much manual workers as they are knowledge workers; in fact, they usually spend far more time working with their hands than with their brains. But their manual work is based on a substantial amount of theoretical knowledge which can be acquired only through formal education, not through an apprenticeship. They are not, as a rule, much better paid than traditional skilled workers, but they see themselves as “professionals”. Just as unskilled manual workers in manufacturing were the dominant social and political force in the 20th century, knowledge technologists are likely to become the dominant social—and perhaps also political—force over the next decades.

India is rapidly emerging as Knowledge-based super power.

The very meaning of the word 'Bharat' is 'the one engrossed in knowledge' ('Bha' means 'knowledge' and 'rat' means 'engrossed') India has always been a Knowledge-based society. We even evolved a unique topology of knowledge and explored the all frontiers of the spirituality of the universe. Indian seers and thinkers reached to the summit of thought. They were essentially knowledge workers. Time has come to regain the knowledge leadership for the nation. - Nani. A. Palkhivala

No wonder, India has emerged as a potent force in knowledge-driven economies of today. Significantly, the Prime Minister of India announced formation of 'National Knowledge Commission' under the chairmanship of Shri. Sam Pitroda. Yet India as a KEM-based economy has a long way to go. Sadly, educational institutions in India prepare students in academic knowledge and those who acquire functional knowledge do not understand the management of their knowledge. Now one will survive, grow and prosper only on the power and strength of one's knowledge.

Managing knowledge as a vital competitive advantage is a clear business imperative today. No wonder all companies all over the world have launched KEMS - Knowledge Management Systems as a survival, sustainability and growth strategy in today's globalised world.

Knowledge Management is emerging as an important career option. Individuals and companies must know KEM. Knowledge workers are the highest paid in the industry. One must learn the

science, skills, crafts, tools and techniques of KEM. KEM has become necessary for every individual, company and nation. One has to face the competition on the strength of one's knowledge. Now people work more and more with their knowledge. Investment in KEM is now a core investment and top management concern in every leading company.

Given the information explosion on the wings of technological development, every new developments occur so rapidly that every seven years, as experts confirm 50% of information in the world becomes obsolete. With this knowledge too depreciates! One must learn to upgrade one's knowledge and manage it. What is not properly managed cannot be utilized properly and cannot be converted into a winning resource. One must build and enrich one's knowledge assets. This has to be done scientifically and methodically for sharpening it as a competitive advantage.

And given the information explosion on the wings of technological development, every new developments occur so rapidly that every seven years, as experts confirm 50% of information in the world becomes obsolete. Knowledge too depreciates!

Stanford economist, Romer (1990), published the first quantitatively rigorous treatment of how the use of knowledge affects economic growth. Management guru, Peter Drucker (1993), provided a historical perspective of how recent economic changes could be framed within a business context.

The dynamics of the modern marketplace provide a premium to those that are able to *utilize their intellectual assets* effectively and efficiently. These companies will be the survivors of tomorrow. The question to ask them is—what and how can one develop effective knowledge management and learning systems? Is success derived from technology, from process systems, from employees, from leadership? The simple answer is from all. *Managing knowledge and learning is very much a holistic challenge*. It is as much a challenge of managing the parts as it is of managing the whole, simultaneously and seamlessly. KEM helps in building survival defences for the organization.

Organizations will have to become learning organization with emphasis on KEM to create a motivated and energized work environment that supports the continuous creation, collection, use and reuse of both personal and organization knowledge in the pursuit of business success. Central to this equation are two fundamental assets: People (whose knowledge resides in skills, expertise, experience, intuition, etc) and organization (whose knowledge is embedded within its culture, processes and systems) How well these assets can be capitalized on defines the extent of competitive advantage that extent of competitive advantage that may be built. The prices of acquiring and using such assets (which are often referred to as generative assets) is what we have come to refer to as KEM.

One must learn to upgrade one's knowledge and manage it. What is not properly managed cannot be utilized properly and cannot be converted into a winning resource. One must build and enrich one's knowledge assets. This has to be done scientifically and methodically for sharpening it as a competitive advantage.

- Prakash Almeida , Director,
KnowledgeFountain

(From the resources of Indian Institute of Knowledge Engineering & Management, a division of KnowledgeFountain.)