Strategic Management - The Competitive Edge

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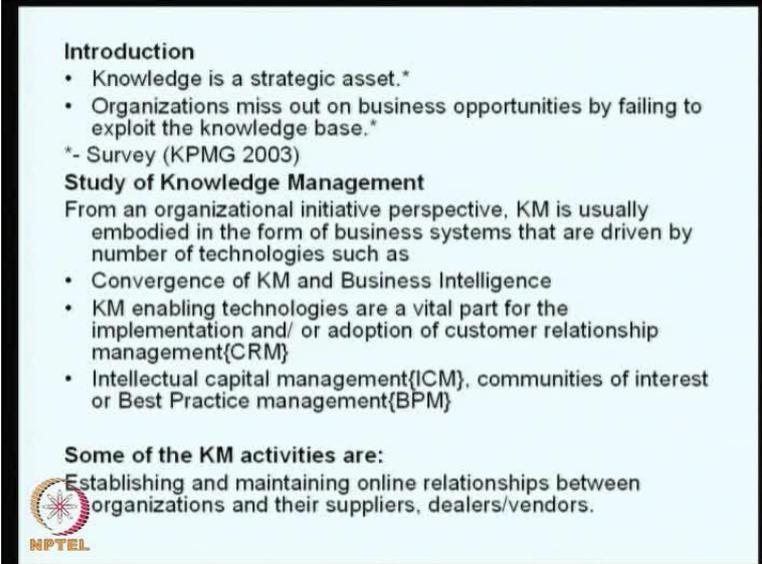**Indian Institute of Science, Bangalore**

Module No. # 06

Lecture No. # 31

Strategic Information Systems-2

So, welcome to this new session. So, we will look at another strategic enabler, in the strategic management process. This is something which is new, relatively new. This is what we are referring to as knowledge management.

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So, how this knowledge management can be useful? So, if you, what is a basic concept here? The basic concept is to view knowledge as a strategic asset.

Lot of knowledge is gained by working on projects. So, if these can be documented and kept in a sharing mode, it can be used by different persons working on different projects, facing the same type of problems. They will be able to come up with a solution.

This is one of the things which this knowledge, when we use it as a strategic asset, can help the organization in. So, organizations miss out on business opportunities by failing to exploit the knowledge base.

This is the, these are the opinions which have come out from a survey of the KPMG done in 2003.

From an organizational perspective, this knowledge management or KM is usually embodied in the form of business systems that are driven by number of technologies such as convergence of KM and business intelligence, KM enabling technologies, which are a vital part for implementation and adoption of customer relationship management, then intellectual capital management, communities of interest or best practice management.

So, all these coming under knowledge management, different types of technologies helping these activities.

So, whether it is business intelligence or whether it is intellectual capital management or it is best practices management, all these coming under the umbrella of knowledge management.

So, some of the activities that this knowledge management encompasses are, establishing and maintaining online relationship between organizations and their suppliers, dealers, vendors. So, this can be very helpful in CRM.

Now, we go to some of the definitions which are given by different people on knowledge management.

This knowledge management as I told you, was, is very, is relatively new. Till the mid 90's, nobody had coined this term. It was in the late 90's, this term knowledge management got coined and is gaining wide acceptance now, in the present scenario.

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Definition	Citation	Year	Unique characteristics
KM is the collection of processes that govern the creation, dissemination and utilization of knowledge	Newman.B	1992	Turns information into a resource by exercising selectivity, imposing order and adding structure in order to
KM is managing the organization's knowledge through the process of creating, structuring, dissemination and applying it to enhance organizational	O'Leary D.E	1998	Disseminates and applies knowledge to enhance organizational performance.
KM allows business process automation and enhances communication and collaboration between internal and external constituents	Suguraman. V	2000	Allows business process automation, enhances communication between internal and external partners.

So, if you look at it, the first person to give a definition for knowledge management was this Newman. According to him, knowledge management is the collection of processes that govern the creation, dissemination and utilization of knowledge.

So, given in the year 1992, what is the unique characteristic of this definition. It turns information into a resource by exercising selectivity, imposing order and adding structure in order to get this, to get the processes going.

The next person to give a definition was this O'Leary in 1998. According to him, knowledge management is managing the organization's knowledge, through the process of creating, structuring, dissemination and applying it to enhance organizational performance.

So, it disseminates and applies knowledge to enhance organizational performance.

So, a little later in 2000, a small slight variation of KM was made by Suguraman and he said KM allows business process automation and enhances communication and collaboration between internal and external constituents.

So, this is, in other words, it gives this process of communication exchange possible, makes this process of communication exchange possible.

So, what are the driving forces of this KM? If you are seeing the present market trends, what is it that we are seeing? We are seeing a market which is moving towards the customer.

So, it is more towards the customer rather than the customer coming towards the market. So, market is really moving towards the customer.

So, it is approaching the customer with number of products, with number of alternatives for a particular scenario.

So, a customer is really having this choice now. That is he is having the alternatives. So, in other words, what we are seeing is what is called, the customer oriented trend. So, the customer wants quick service, the customer wants things to be done fast and in an orderly matter.

So, this customer oriented trends are more towards faster service, because for the customer, time is really mattering. So, he is looking at time, in terms of money. So, there are many customers who are, what you call, who would like to have that self service. They are empowered customers.

So, what is this e-service trend doing? So, this e-service trend is trying to integrate sales and service, customization and integration. So, you are getting so many things done

through the net or through the electronic media. So, there is an increased process visibility which is taking place.

What are the things which we are seeing in the organizational trends? We are, we are seeing outsourcing management. We are seeing the contract manufacturing becoming broad, intensive.

So, this is, you are looking at organizations becoming broad and intensive. So, employee mega trends, we are seeing. You are looking at organizations not shying away from hiring the best and brightest workers.

And, they are going all out, especially in the private sector to keep the talented employees.

So, this is what I was trying to say in the earlier classes. On the one hand, you are seeing change in business landscapes, the change in business landscapes in the Indian scenario, may be working for advantage to some sections of the industries.

But some sections of the industry are also complaining that, they are not getting a level playing field in the whole process. That is, they are not able to compete. This has been the referring of most of the public sectors.

So, the public sectors, they want more autonomy and a level playing field, more similar to the other players in the markets, so that, they can give effective competition to other players in the market.

So, this is where some of this employee mega trends which you are seeing, you find that, they are in a way hurting the public sector, to a certain extent according to them. So, the, they are not able to provide the fat packages, which the private sector is giving to keep talent. So, they find that the talent is really fleeing towards the private sectors.

So, all these, is making them to come on a sticky wicket. So, the public sectors are coming on a sticky wicket, whereas, the private sector is having the freedom to operate, in this type of a business landscape scenario, according to the public sector, they say, we are not getting the level playing field, which they would have loved to get.

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So, they would, what is this enterprise technology trends? Integrated enterprise applications , then they connect the corporation, then multichannel integration. They help you to look at the big picture.

Then, what about this general technology trends? These are the wireless applications, web applications or mobile commerce. Then you have the handheld computing and information appliances.

So, if you come to a city like Bangalore right now, this handheld computing has gone to the extent of fining, that is a traffic points, that is fines for traffic violations are also now being collected by handheld computers by the cops.

So, for the different types of violations that the public may be fined, that is the driver may be fined. The earlier system was to give him a receipt. Now, that the system is slowly going.

You find a cop having a handle computer, immediately he keys in your vehicle number, everything and the type of violation made and the fees, the fine collected for that violation.

So, this is, this is, these are, the on, these are the trends which you are seeing and this can, this data can be retrieved. Suppose you are a driver, who is a habitual offender, then, that is, habitual traffic violator, then, suppose the authorities want to cancel or keep the

licenses of such people under suspension for sometime, this type of knowledge management system can be extremely helpful, because you can retrieve the data by the vehicle numbers itself, how many violations made by this vehicle, how many times the driver has been fined.

So, this can be, what do you call a deterrent for him, making him to follow the traffic rules rather than violate this.

So, these forces drive the need for companies to integrate KM system into their commerce processes.

So, what are these processes trying to do? They are improving the back efficiency, providing greater customer intimacy, then become more flexible to adapt to market changes and then enhance knowledge based decision making.

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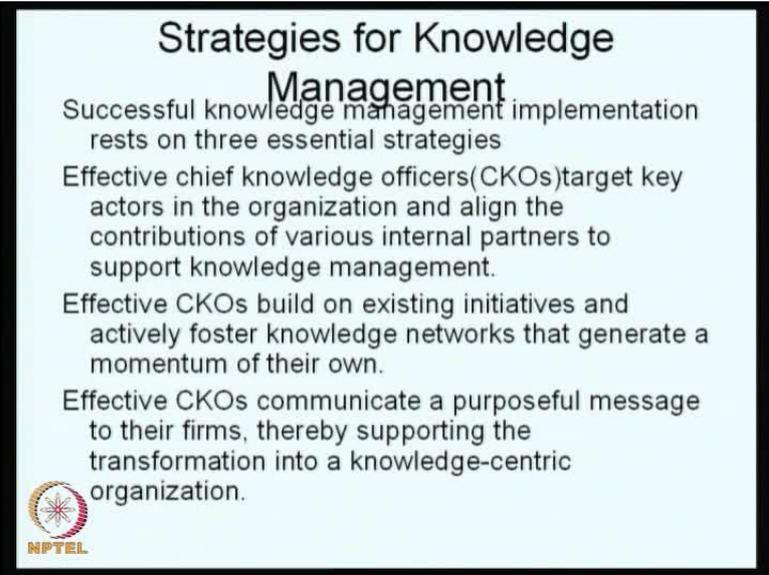
Now, given this type of broad KM framework, how do you formulate a strategy or how do you formulate strategies for this KM or knowledge management?

Successful knowledge management implementation rests on 3 essential strategies. One is organization should make use of a person, who is, who can be, who is called in the present day set up, a chief knowledge officer, CKO in short.

So, they are the key actors in the organization. What is their role? Their role is to align the contributions of various internal partners to support knowledge management. So, they can build on existing initiatives and foster knowledge networks that generate a momentum of their own. They can also help in purposeful communication.

So, by doing these 3 things, they are able to make this organization, where they are working or turn them into a knowledge centric organization. They can turn these organizations into a knowledge centric organization.

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Targeting key actors

Managers should consider the firm as a market of knowledge. Transactions in this knowledge market are driven by 3 main actors:
—Knowledge buyers
—Knowledge sellers
—Knowledge brokers

CKOs see themselves in the role of a knowledge broker and they establish connection between buyers and sellers in order to optimize the firm's knowledge

So, this is the, if you really look at, this CKOs, this is the main function of the CKOs, that is to turn the organization into knowledge centric organization. To do this they target or they will be targeting key actors.

Who are the key actors? The managers in the organization. So, the key actors are the managers in the organization. So, who are these types of managers in the organization? The people who are dealing with transactions.

So, people who are dealing with transactions and they are mainly 3, one is buyer of the knowledge, two is seller of the knowledge, three is the knowledge broker.

So, where does this CKO see himself? The CKO sees himself as a knowledge broker and they establish connection between buyers and sellers, in order to optimize the firm's knowledge.

So, just to, again, re-emphasize the whole role of the CKO. The CKO sees himself as a knowledge broker. A firm has, a knowledge market has got 3 main actors, one is the knowledge buyer, the second is the knowledge seller, third is the knowledge broker. So, the CKO sees himself a knowledge broker.

What is the role of the manager? Manager is involved in all these 3 actions, kindly note. He is the person who may be a knowledge buyer, a knowledge seller and also a knowledge broker, which the CKO sees himself as.

Now, this manager, what should we consider the firm as? The firm, he should consider as a market of knowledge and this market of knowledge has got these 3 main actors.

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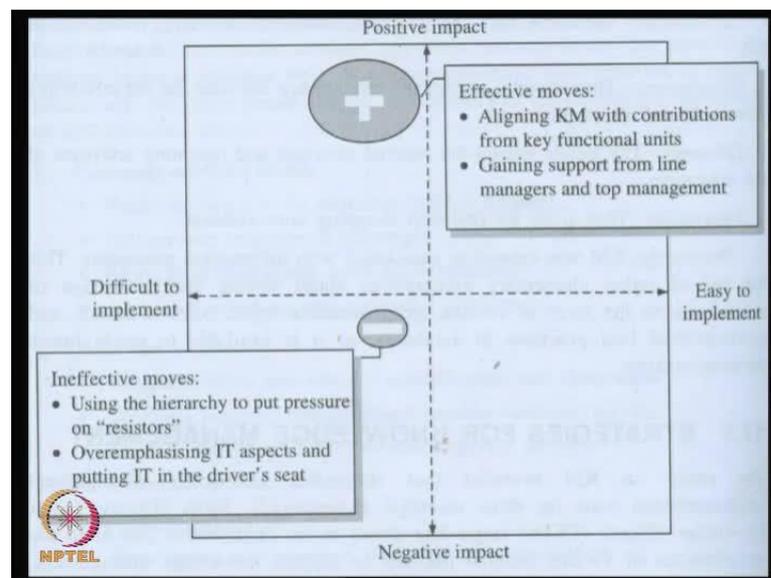
Now, all this can be represented by, the whole process of knowledge management can be represented by a small diagram. One trying to have a positive impact and the other trying to have a negative impact, on the x axis, easy to implement, difficult to implement going to the different quadrants.

So, when you are having a positive impact, you are making effective moves. So, what are the characterizations of these effective moves? How does, how do these effective moves with respect to KM, get characterized?

So, what you are trying to do is aligning KM with contributions from key functional units. Then gaining support from line managers and top management. Kindly note that,

in any activity, if you do not have support from line managers and top management, then, that activity may not really take off. So, is the case with KM.

So, it should have support from line managers and the top management to be implemented smoothly in an organization.

So, what does this ineffective move signify? That is, suppose impediments are sought to be created for implementation of KM. How do they get created?

The hierarchy is used to put pressure on resistors, then overemphasizing IT aspects and putting IT in the driver's seat saying, IT is the main thing in the organization, can have jeopardizing effect on this KM. So, do not overemphasize this IT's role.

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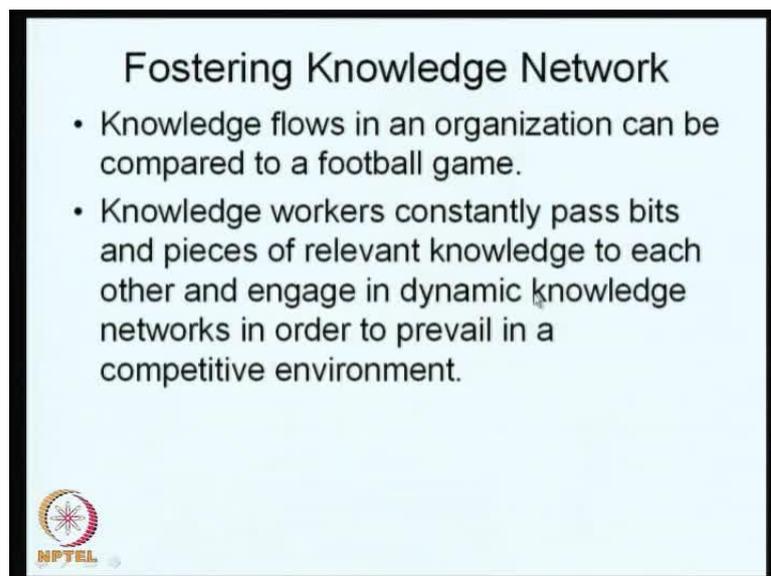
Now, having looked at all these, how do you foster a knowledge network? Similar to a football game, knowledge workers constantly pass bits and pieces of relevant knowledge to each other and engage in dynamic knowledge networks, in order to prevail in a competitive environment. So, this is what I was trying to emphasize in the beginning of this class.

So, whenever you are working on projects, everyday you may become, you may be coming across something new, some new methods of handling a situation, some new methods of solving a particular problem, which you may pass on to your co-workers. All

these, if you are able to keep it, in a pool, you will a have a knowledge network in position, which you can draw upon.

So, if you look at any software organization, this knowledge management is now becoming more and more dominant. You can see that, suppose a new project is coming, they want to go back and find out whether they have solved a similar project with respect to some other organization.

And in what way this organization is different. So, to that extent lot of time and cost savings can be effected through this knowledge management. And that is precisely, the role of this chief knowledge officer.

You, you have a new project coming in and when you have a new project coming in, the team approaches this CKO, to find out whether this type of a problem has been attempted earlier, has been solved.

In other words, he is a repository of all these knowledge. So, he has this knowledge from different managers, in different scenarios or settings and he has it with him and he can tell you whether it has been attempted or not.

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So, in order to have a purposeful message delivered through this KM, so, what is the type of thing which you are looking at KM? This is, this KM, as you could have by now made out, it is a change management initiative.

So, you are trying to change the way an organization is working or persons in the organization are working. So, you are saying that, why do not you help in documenting in some of the things and put it with the CKO.

So, like any other change management initiative, there will be some resistance for this change. So, this resistance has to be overcome and in order to overcome this resistance, you require intensive communication.

So, like every change management initiative, KM also requires intensive communication. So, this is the job of this chief knowledge officer, that is, he must deliver a compelling message in order to gain support from key organizational actors and to build effective knowledge networks.

So, the role of the CKO, the organization looks upon the role of the CKO, as building effective knowledge networks. So, if you build effective knowledge networks, others can really draw from this knowledge network.

So, most of the CKOs, mention internal marketing as their main objectives. So, in order to do this, this CKO has to market to his own colleagues in the organization, all the aspects that we looked at just now.

So, he has to effectively market them. So, this internal marketing, which is one of the important marketing aspects, with respect to an organization, it has to be imbibed by the CKO thoroughly.

So, he has to make effort to see that, this internal marketing, he reaches out to everyone in the organization, they are sold. So, many times I, I have perhaps given you an example.

So, just a few decades back, if you landed up in a government job, it was considered to be very prestigious. People used to ask, 'oh you landed up in a government job'. Now, this, the present onset of liberalization, especially and this competitive scenarios, what have they made.

They have made the government or they have made the government sectors, the sectors in which the government is as inefficient, using wrong practices, all the types of negative impacts or attributes, which you can really look at.

Now, suppose a person is going in for a government job. Many times you hear the refrain, 'did you not get any other opening?', which is very strange. So, just a few decades back you had a scenario, when, if you landed up in a government job you would be praised.

Now, a few decades later, you have a scenario, where you are being asked this type of question. So, that is what, this term quality or efficiency can do to a set up.

You have the private sector boasting of quality, efficiency and more or less a corruption-free type of a network, which the government sectors are not able to really provide the consumer.

So, this is the way, changes have come in, with reference to some of the types of business landscapes in which the country is operating right now. So, this is, this is more due to the competitive landscape which have come in.

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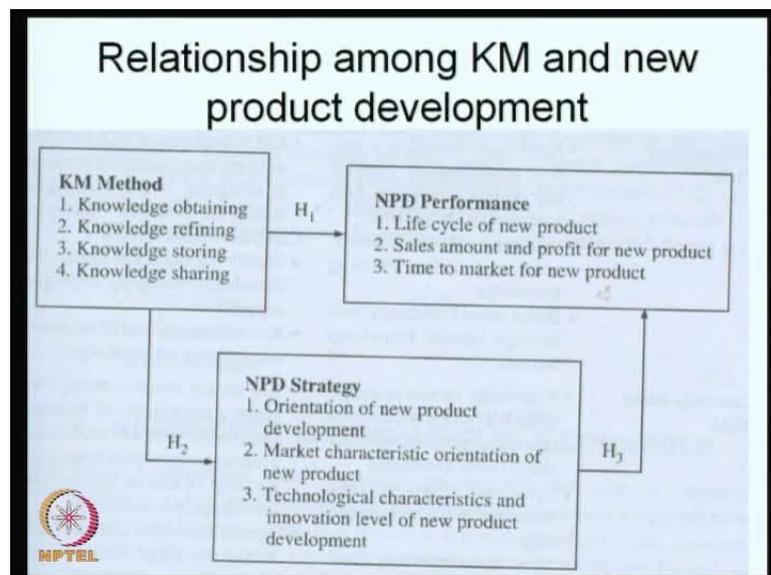
Now, you if you look at the relationship among KM and new product development, all these new product development strategies and the new product development performance, it can be due to KM.

So, you gain knowledge from the market, and when you gain knowledge from the market, you start refining that knowledge, then you start storing that knowledge, then

you start sharing that knowledge. All that gives you, this NPD performance, what we call, the new product development performance.

How can you reduce the time of product development and how can you take it faster to the market? Then, how can you increase the sales and profit for the new product, and what could be the orientation with respect to the markets, with respect to the products and with respect to the technology.

So, this is the type scenario which you are witnessing now, but suffice to say that KM can be a very effective strategic enabler, whether you are using it in an existing organization or whether you are using it in a new organization, for existing projects or for development of new products or for development of new knowledge networks also.

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KMS TYPE	Characteristics	Characteristics
	Knowledge structure dimensions and flows	KM-related staffing, training and reward systems
Fragmented KMS	Knowledge viewed as an object, predominantly simple, explicit and independent knowledge	No designed KM-related positions ,middle managers and project managers initiate adhoc, informal KM
Content-based KMS	Knowledge viewed as an object; both simple and complex knowledge predominantly explicit and independent knowledge	Designated single K-related positions, middle managers and project managers engage in building up formal systems for managing knowledge content
Process-based KMS	Knowledge viewed as a process, predominantly complex and explicit knowledge, both independent and systemic	KM-related units at HQs and subsidiaries, top management involved in designing formal systems to transfer knowledge between
Capability-based	Systematic efforts to create share and utilize new knowledge	Specified and elaborated training in KM

So, all this can be effectively done through this. So, this particular slide gives you some different types of KMS, that is the knowledge management systems tells you, what are the characteristics of these types of KMS.

For example, if you just take a content-based KMS, a KMS knowledge is used as an object, both simple and complex knowledge, predominantly explicit and independent knowledge.

What are the characteristics further designated, single care related positions, that is, middle managers, project managers, they engage in building up formal systems for managing knowledge content.

So, all these, what all I am trying to tell you in this different slides, is given <mark>in this</mark> in this chapter on knowledge management in my book, that is chapter number 12, going from pages 196 down to 207, which I would suggest that, you kindly have a look at that.

So, the type of this particular slide, which I am trying to tell you, that is the key characteristics of KMSs, is in fact, available to you on page number 204 of this book. So, basically the KMS can be classified into 4 different types. One is fragmented, second is content based, third is process based, then fourth is capability based.

<mark>When you look at the content based KMS, when you look at the, we looked at the content based KMS.</mark> When you look at the fragmented KMS, knowledge viewed as an object, predominantly simple, explicit and independent, fragmented and unstructured efforts to store internal knowledge, then spontaneous knowledge flow.

So, this is how the knowledge structure of a fragmented KMS looks like. So, no designated KM related positions are there in the organizations, no specific training in KM, no rewards systems. When you come to content based KMS, you have designated single KM related positions and there is some training in content management, there are some rewards systems.

When you come to process based KMS, knowledge is viewed as a process, predominantly complex and explicit, both independent and systemic. So, systematic efforts are made to identify, share and utilize existing knowledge.

Then direct this lateral knowledge flows between internal knowledge brokers. So, who are the people who might be involved in all these, you have KM related units at head quarters and also subsidiaries. You have top management getting involved in KM. You have specific training KM, given by the knowledge managers or the employee support people.

Then, reward systems are of course, there. Then <mark>suppose you are look,</mark> the next stage is where you look at KMS, as capability based that is knowledge is used as a capability.

So, you are looking at both simple and compiled knowledge, tacit and explicit, then independent and systemic knowledge. So, you are looking at systematic efforts to utilize your new knowledge, then multi - lateral knowledge flows between internal and external knowledge brokers.

So, ((you have)) type of staff, training and rewarding systems, reward systems, you have KM related activities existing throughout the organization. So, you have all the levels of management participating effectively in KM.

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In other words, a learning organization is sought to be created, through integration of internal and external knowledge and capabilities.

So, you have an elaborated training on KM and all these can lead to rewards systems related to learning and innovation, getting effectively implemented. This is what I was trying to say.

So, here is one sector of the economy, especially the private sector, benefiting terrifically from the knowledge management and the public sector, not so effective in benefiting from this knowledge management.

So, this is, this is, these are some of the grouses, which the public sector tends to voice, that is, they are not able to operate freely, the way they would have wanted to give effective competition, they are not able to do this. So, all this comes in this type of set

up, which, in a competitive set up, is very important for you to have this type of systems in position.

So, the KM market, I am reading from the book, how does it look like? The KM market is highly competitive and it has considerable uncertainty and risk, because of the contradictory nature of its enabling technologies and the inherent organizational and cultural difficulties embedded in its applications.

So, there was recently a Merrill Lynch report on this KM. According to this recent Merrill Lynch report, the market for technologies that facilitate KM systems, is expected to appreciate at a 30 percent compounded annual growth rate, having skyrocketed from 97 million dollars in 1999 to over 500 million dollars at the end of 2004.

So, what does this mean? It means that KM is perhaps 95 percent focused on people, processes and culture rather than technology, since the majority of technology growth is in information management. That is business content management and classification systems.

Since the biggest challenges of KM are not technological, but human based or behavioral, because there can be resistors, it is important to conduct a extensive research into how companies can successfully implement knowledge management programs to realize ((Unable to play video from 43:00 to 49:09))