Knowledge Management
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Lecture 07
KM Cycle (Contd..)

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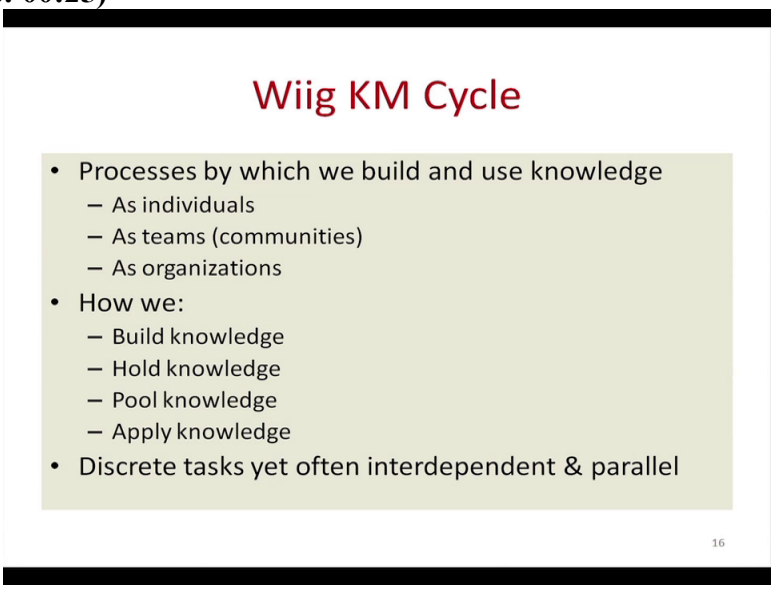

Okay, so, now we are going to discuss another model or what you call another model or cycle which is developed by Wiig. W i i g. And this Wiig model basically talks about two different issues, one the level at which the knowledge is built and used. And the second is that what is the process of managing knowledge in the organization?

So, he talks about certain processes by which knowledge is used and built at different levels for example led at the individual level, at the team level, at the organisation level. Now look at how we are going to build and use knowledge at the individual level. How we will build or use knowledge at the individual level?

When we build and knowledge at the individual level, we can go through the manuals, guide lines, we can go through the books. And that is how we get some explicit knowledge at the individual level, right. But when we interact with other people like experts in the field, that is where, we try to get more tacit knowledge which is available with others.

So, in as individuals we build both, tacit knowledge and explicit knowledge ok which is available either in codified form or personally by interacting and relating with others. And that is where we are using both strategy that is codification strategy and personalization strategy. When

I am using personalized strategy, it means I am interacting and relating picture, other people and collaborating with others ok, so that I can build and use knowledge.

Next is at the team level, now when it comes to team we have to see that team are going to be effective and working well. So, how teams are going to build and use knowledge? Say for an example there is project team which is a cross functional team. Cross functional means that the people working in the team are from different functional areas, having expertise in different functional areas.

Say, for example, one is from IT, the other one from R and D field, the other one is from marketing field and the other one is from product team. So, all these four people are working in a particular team related to particular project. Now, when they are going to work in their project, okay as a team, all of them are going to pool their resources and knowledge.

So, what happens? You have to be an effective team people so that people are ready to share their knowledge with each other. So, you need to first look at the group dynamic practice like the group is very cohesive, friendly to each other, have dialogs, interact and relate with each other. And everybody in the group is participating in the activities.

And the group is again going to build knowledge by following best practices, benchmarks. And they can go for communities of practices which are more standardised in nature. Now at the organization level, how organizations build and use knowledge? Organization creates knowledge base, which you are going to provide them complete advantage and add value to the system like they have trademarks, patterns, copyrights.

These are organization form of knowledge of practices which is not related or rested with the individual or the groups. But it is property of the capital of that organization. So, that is why we say it is organizational capital. So, the knowledge can be built and used at the individual level, at the group level and also at the organization level.

Now, the next question is related to the process that is how you will build and use knowledge. There are four processes that he talks about is building knowledge, holding knowledge, pooling knowledge and applying knowledge. And if you look at these processes these are more or less similar to what other theorist have talked about like Zack model or Bocowitz model,

They also talked about similar things but using a different concepts. And then, we have to see that how the discrete task like building knowledge, holding knowledge, pooling and applying knowledge. Though they appear to be discrete in nature, but they are independent and interdependent and take place parallel with each other.

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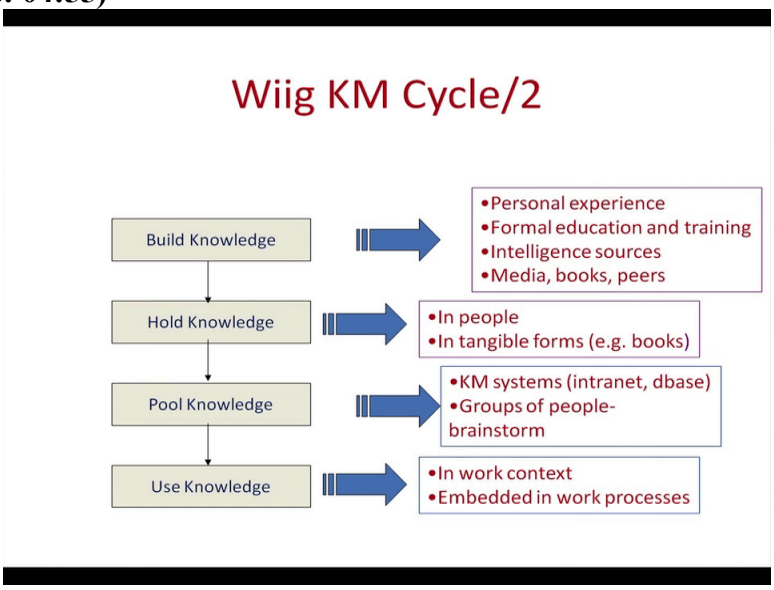

Now let us see, what this knowledge talks about. Look at this. How you go about building knowledge, holding knowledge, pooling knowledge as well as using knowledge, now, when I am saying that building knowledge, so how you will build knowledge, whether it is at the individual level or at the group level or at the organisation level.

We build knowledge based on our personal experiences, through our education, learning and training experiences, from the intelligence sources, from the experts who are there in the field or from the documented knowledge which is available with media, books or our colleagues, okay. Now once we build knowledge we move to the next stage that is holding knowledge, okay.

So, the knowledge, where the knowledge is, either it is available in intangible forms or tangible forms. So if it is available in tangible forms, that is, it resides with the people. And then or residing with the people in a documented form that is in a tangible form. So, the knowledge could be there either with the people or in the books or documented form.

So, what kind of knowledge resides with the people? That is tacit knowledge form and what is available in tangible form is more explicit form of knowledge. Now, we move to the next stage that is pooled knowledge. How you are going to pool this knowledge, whether it is available in tacit form or in explicit form. For that there are two things, okay.

Softer approach as well as harder approach, so you are going to develop a knowledge management system and make use of IT systems like intranet, database system okay which is the part of the KM system. Or you have people coming out together brainstorming about certain things, okay and then, you are generating knowledge.

Say for example, a company wants to introduce a new product in the market ok, which will have a different kind of features. So, people have certain ideas, so what the company will do? They will call experts ok, who are subject matter experts. They would sit together; they would go for brainstorming, okay. So, group of people brainstorm and they come out with ideas, okay related to new products.

So, this new knowledge created which could be used and utlised by the organization. Now, when it comes to brainstorming, what actually happens in brainstorming is that once the brainstorming starts; and the idea of brainstorming is to generate ideas at the first place. So, it is expected that each and every person will come out with an idea in the group.

And you continue generating ideas unless each and every person gets exhausted with the idea, okay. And that is actually a unique thing related to brainstorming. In brainstorming, you do not hold or stop a person from giving the ideas irrespective of fact that whether the idea is good or bad, whether it hold any value or it does not hold any value.

So, in a brainstorming session, people are allowed to freely generate ideas to the extent possible that they get exhausted, okay. Once all the ideas are generated by the people related to particular issue, then, the next stage what you do? All the people again sit together and start evaluating the all the ideas one by one.

So, they identify certain ideas which could be useful, certain ideas are discarded at this stage. And then again go for brainstorming and they found find out certain ideas which could be used by the organisation for the use. And through this brainstorming sessions, you can generate wonderful ideas which could be used by the organisation to create new product and systems okay.

And that is basically coming out with tacit knowledge and it could be transformed into explicit form or the knowledge that is available in explicit form that could be distributed and accessed

using knowledge management system where you have Intranet and database, right. Then the next thing is that how you are going to make use of knowledge, okay. That is use of knowledge okay.

So, where you are going to use knowledge? Like when you are going to work in the organisation, whatever knowledge that you have learnt, okay either in tacit form or explicit form that you are going to make use of it. That is where the skill set of that people to apply knowledge is very, very important. We say that knowledge related to action, no, it is not the correct word.

Knowledge leads to action provided the person is able to apply the knowledge in a particular context and is supported by other factors like resources, management and other things, okay. So, use of knowledge is possible only in a work context only when you are allowed to make use of it. And you are in a position to see that the knowledge is relevant in a particular context where you want to make use of it to do a productive work.

And lot of knowledge that is already in the work processes, you learn out of it also. And once you learn and then again make reuse it of that knowledge. The second part is basically related to reuse, use and reuse of knowledge that is basically related to this cycle.

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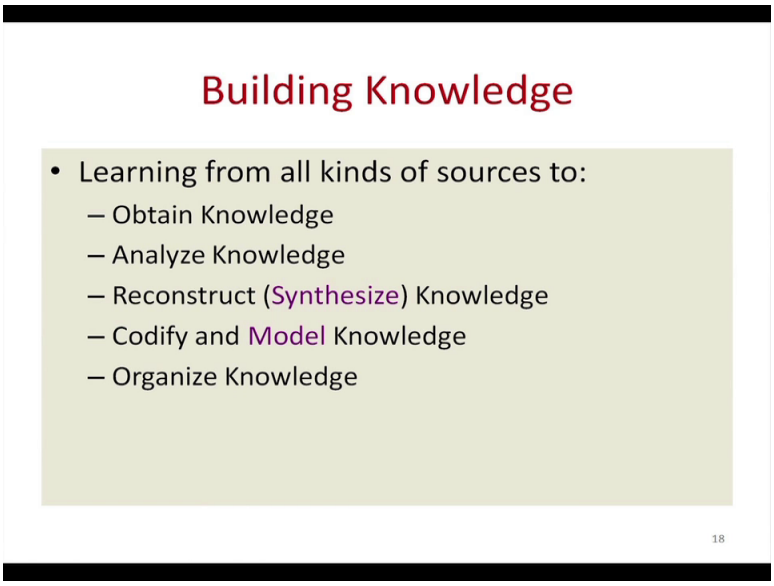

Now let us discuss each and every concept the he talks about like the first concept or the first process he talks is about is Building knowledge. So how you build knowledge? Building knowledge is that how you get ideas from where you learn. That is learning from different sources, it could be books, it could be videos, it could be from the people, okay.

So, you learn it from tangible and intangible sources or both. What you get, knowledge. So, once you learn from them, then you try to see that whether the knowledge is useful for you or not. So, you analyse the knowledge; whether the knowledge that you have gained either through tangible sources or intangible sources whether it is good and whether you can make use of it or not.

And based on your analysis of the kind of knowledge that you have receive, the next stages is that you are going to synthesise it. When you are going to synthesise, it basically that is reconstructing. Reconstructing is that you are going to reconstruct or synthesise it depending upon your requirement and context so that it is going to be useful for you.

For example if you read a book and you find certain useful things. And suppose you are going to do some research, so, you are going to reconstruct those things which are going to be useful for you and your research. You are not going to whatever you have read in the book directly apply but you are going to see whether there is a context for it or not, whether it is relevant in your case.

And then you see that in what way you can apply that knowledge which you have learnt from you for doing your research, right. So, that is where you are going to reconstruct or synthesize the knowledge. See another case you are going to offer new product, okay. So, you have knowledge about the different product from different sources.

You try to get what kind of product you should offer. And then, whatever knowledge that you have gathered from different sources, you analyse that and that become the basis for creating a new product. How you are going to analyse it, reconstruct all the knowledge depending upon your requirement, your use and then accordingly, you try to develop a new product. That is based on synthesis of existing knowledge that you have gone through so far.

Was the synthesis takes place or reconstruction happens, then again, you going to codify it, okay. Codify means that you are going to make it explicit, okay. You are going to talk about steps and processes through which this knowledge can be used you, okay. So, that is basically related what you call moving from contextual state to a more operational stage, that how to go about it right.

And then, you model it, it means that you develop it a testable model, to see that whether this knowledge can be applied successfully in a particular context or not, okay. Once you are sure

that, okay you have modeled this, then, we move to the next stage. That is you have made it so that other can also make use of it. So, apply it in a different context, okay.

And that is how we are talking about building knowledge; that is the first part. Second: holding knowledge. This basically talks about, that I have already told you, where the knowledge is, what is the source of the knowledge? Okay. It could be in the people's mind, it could be in the books ok or you can have a computerized knowledge like search engines Google or others, okay.

So, different form of knowledge whether it is tacit knowledge or whether it is explicit knowledge it is available in different places, okay with the people or in documented form ok. So, once you learn it or once you get it from whatever sources you are using, okay whether tacit or explicit, whether it is available in tacit or explicit form what you do? You try to internalize it.

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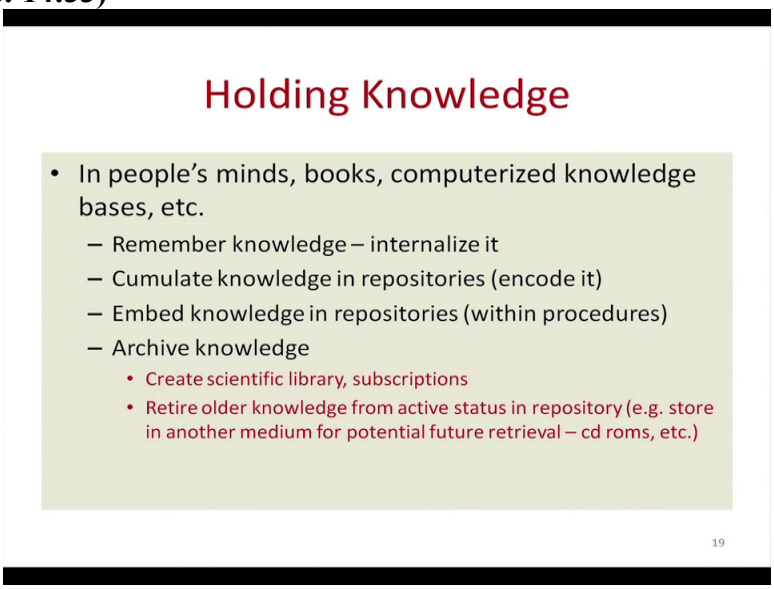

But what do you mean by internalising knowledge? It means that you see whether this knowledge is going to be useful and how you are going to make use of it in your context. So, internalising is learning it and then applying it in your context, okay. For example, I tell you that okay this is how you going to drive a car. And I will give you all the knowledge related to this and I will give you manual and guidelines that is this is how the car is driven.

This is a more theoretical knowledge, okay. But when you actually drive a car what you do? You learn ok, using the knowledge base that already you have, you applied in your particular context when you drive and then based on your learning then you internalise certain things, that okay this is how I am going make use of this knowledge to do certain things.

Then that is where that you actually internalize takes place, okay. You have to know who; what are the different functions of different equipments that is fitted with the car. And, how to make use of it? But internalisation takes place only when you are going to apply them in your contexts, when you are going to use. Not others. And that is where the internalisation takes place.

Then, once internalization takes place, then, it is encoded by you, okay, either in tacit form or explicit form okay, right. So, you cumulate knowledge and repositories that is how knowledge, the internalise knowledge that is available with you. Either you retain it in a tacit form or you can document it in explicit form. So, that is encoded by you, okay.

And then, this included knowledge whether that is available in tacit form and explicit form is in the repository. The only problem in the repository is that how you are going to deposit knowledge or have knowledge which is available in tacit form. For that what you need you is, you have to document the tacit knowledge. Say, for example, you are using certain processes to perform a work and you have become an expert in that.

Once you make zero error and achieve significant quality standards. Now, once you have learnt this process, it is with you. You know how to do it. You have encoded it well. And it is available in tacit form. Then, how to make use of that in explicit form? So, what you can do? You can share your experiences with others; okay those who are going to perform similar work.

So, that is tacit to tacit. Again encoding taking place in tacit form; next, you can document the entire process based on your learning experiences which could be used by others as a knowledge space to perform similar tasks ok. If you are going to document that process in explicit form, then, it is going to be made available to others. And they can go in the repositories and they can make use it.

It is basically related to the processes, right. Then, these processes are archived in the knowledge server or knowledge centre. It could be like libraries okay or you have repositories ok, it could be in any form. That is how it is going to be stored, CD ROMs, videos okay and then you have place to keep. Like this, you have a central library where you have all the videos, audios, okay, libraries.

You can also have IT enable systems so that it is available in digitised form ok. So, it is very important to have archives knowledge. If you are going from, moving from physical form to

digital form, it is always better to hold knowledge in digital form because it is cost effective. It takes less space and it is easy to use compare to having holding knowledge in a physical space.

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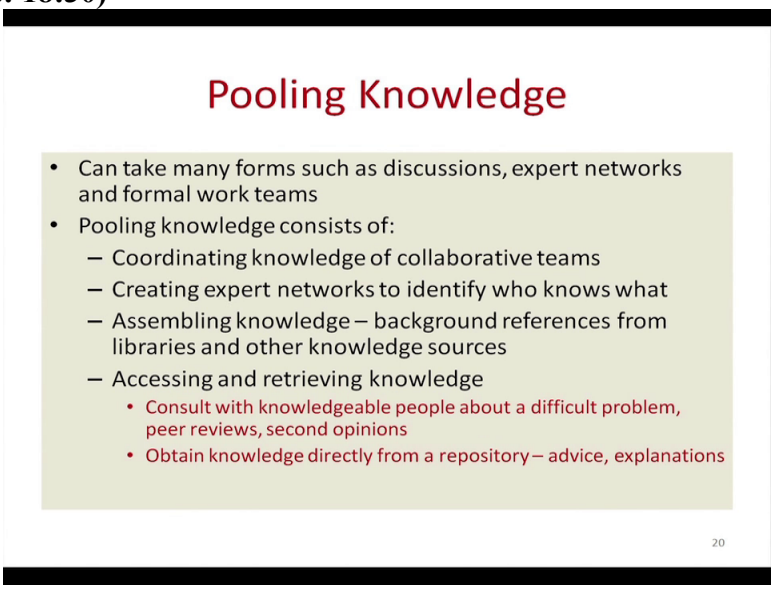

Second part, then, we are moving to pooling knowledge, okay. How you pool knowledge, pooling knowledge is basically very, very important when you are trying to come out with a tacit knowledge, right. So, how you are going to pool tacit knowledge? That is the through discussion and dialogues with other persons, building network with experts or having work team where people are going to share knowledge with each other.

And there are different ways through which you can pool knowledge with each other. That is you have a team which is going to collaborate with each other and everybody is going to share the knowledge, okay. So, that everybody is going to co-ordinate knowledge, okay within each other and among different teams.

You have different team which are going to collaborate with each other, within the team and between the teams and then whatever knowledge is generated in one team is also shared by the other team. The coordination of knowledge between collaborative teams means that each team which is working on different aspect is going to share learning experiences with other team and there is a person who is going to see that this coordination happens.

Across teams with respect to kind of knowledge and experiences that is generated out of it which could be used by the organisation. And then it could be documented and it is used okay. And then you can also create expert network who knows what okay. So, you create subject matter experts.

So, if you are looking for a particular kind of knowledge, okay this is the experts where you can go, okay.

And this you can go also create a network of experts and these experts through this network's can also share their experiences, their learning with each other. Then, the third one is Assembling knowledge. How you are going to assemble, collect this knowledge, okay. That is from different sources tangible and intangible. It could be libraries; it could be documents, videos or anything like that.

Next is accessing and retrieving knowledge. How you are going to assess and retrieve knowledge, okay? Accessing knowledge, when it comes to accessing, tacit knowledge it is very, very important because it is not possible to see the kind of knowledge that is available with other people, okay in tacit form. Then, how you are going to assess it, okay?

So, in order to assess the kind of knowledge that is available with other people, you need to look at expert evaluation, peers, go for second opinion. I will give you an example. Say, you have certain problem, physical problem and you go to a doctor and consult him. Based on his learning and experiences, you are been diagnosed, okay that you have this problem.

What next? Are you going to follow the prescription by the doctor? In critical cases what happens? You go for a second opinion. Why you go for a second opinion, because you are not sure about the kind of knowledge that he has and based on that whatever prescription he has given, okay. So, you go for a second opinion. You also go for a peer reviews okay.

This is what the doctor says, what should I do, and then he suggests certain things, okay. So, you are going to consult knowledgeable people when there is a critical problem, okay. You go for peer reviews, you go for second opinion. And then, you based on this cumulative knowledge you decide what needs to be done, right.

Then, you also get knowledge from the directions. Suppose you have a certain critical problem, medical critical problem. So, you look for the sources okay. So, if these kinds of problem are there what kind of medicines or what kind of prescriptions are given. So, you also look at both the sources. That is tacit sources as well as explicit sources.

Say for example, you have a problem. And some medicine is given by the doctor I am not sure whether he has given a good medicine or not. So, what I will do, I will search the Google for this

particular medicine look into the characteristics, symptoms, what are the side effects with the medicine that is given to me, it is going to work for me or not.

Once I am sure, this is okay and then second information that I am getting in explicit form, from the documented form, is really helpful to decide whether I am going for or not, okay. So, the second opinion could be either in tacit form or explicit form, okay. So, based on this information then, you are going to see whether you are going to make use of it or not, right. So, this is the second part that is related to pooling knowledge.

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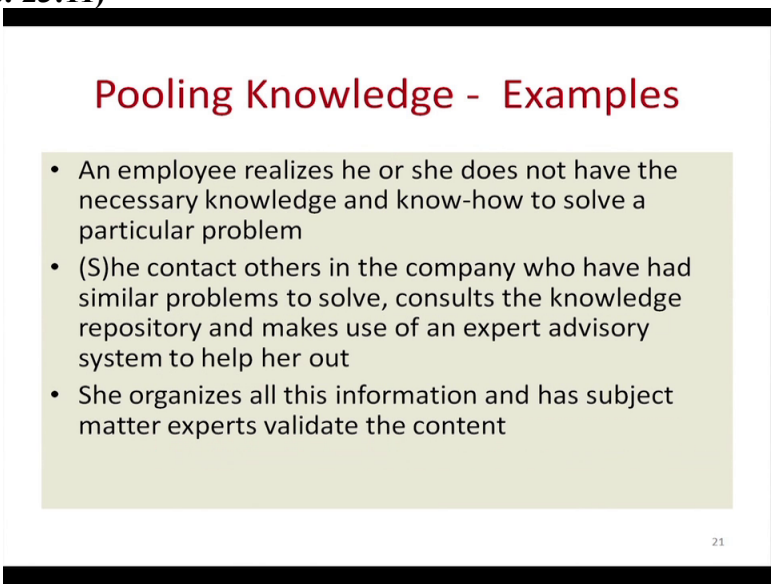

Now, let me give another example. Say there is an employee who says that he does not have the necessary knowledge and he does not know the process to solve a particular problem. I give an example there was a case in a company shop floor where particular belt was being broken. So, when they were repairing it, it was already broken, okay.

The person who was working on that particular belt was not sure how to repair it and what to do so that this problem is fixed, okay. So, what he will do? He will contact others in the company who had similar problem and he will ask other people whether you have similar problem, how did you solve it, okay. He will look for the repositories; he will look for manuals and guidelines.

Or he will look for an expert, who is going to help you and how he is going to fix that problem. In this case, I will tell you what will happen. That the person went to an expert, who have done similar work in the past and he had very good knowledge about it. And he told him that okay this

is how you should go about it, this is because the belt is breaking very frequently, it means it is not the fault of the belt, there is some problem in the machine or it is not working properly.

There is a fault that you need to identify, once this fault is repaired or fixed properly, you will not have this kind of problem. So, whatever information that person has gathered from the experts, peer reviews, second opinion, experts then he is going to make use of all these knowledge and he pools all this knowledge and that is what pooling is.

So, he pools all these knowledge and then he is going to validate it in the particular context, right. And he is going to see that whatever content is organised out of this information is going to useful for him or not. And then he is going to make use of this knowledge to fix this problem or see whether it happens or not okay.

When it comes to pooling the knowledge, you gather information from various resources and test in the particular context whether it is going to be useful or not. So, this is related to pooling of knowledge.

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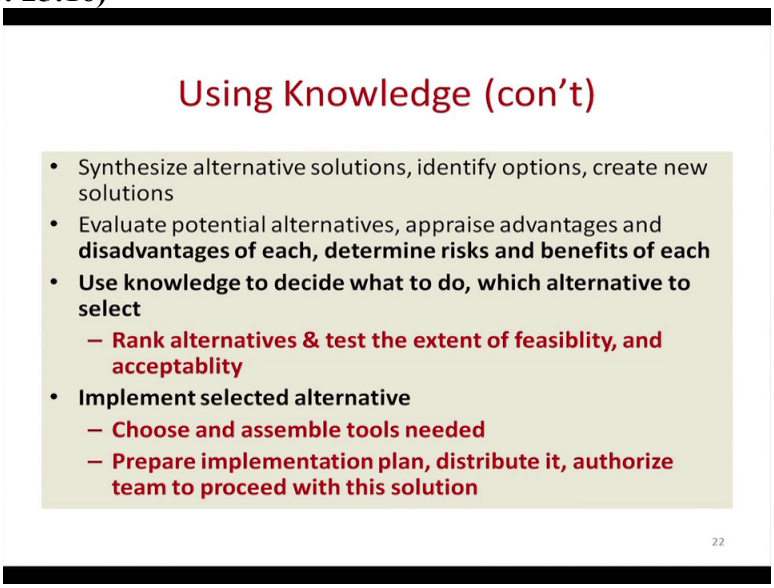

Then the last part of this cycle is using knowledge. Once you have synthesized, alternative solutions, you are identified options, okay and then, you create new solutions, okay. So, what you do, you evaluate potential alternatives, advantages and disadvantages. So, you come out with revised options so I suppose if I go for this what will happen.

Suppose you have a critical problem, illness problem and doctor has suggested you, okay these are the various options for you to take. Then, you decide which option to see, so, what you do?

You look at that advantages and disadvantages of each option, okay. Suppose you have a problem, so doctor is suggesting whether you take medicine or whether you to go for operations.

There, suppose, I am taking simple example so what should you do? So, look at the drawbacks as well as advantages of taking medicines or drawbacks and advantages of operations, going for operations, which one is; and then you also associate risk and benefits associated with each of the options. And then, you go for it, okay.

So, you use your knowledge to decide what to do. In this case, you gather all kind of information from different sources, pool it and see, what is the best option for you? In that particular case. So, you rank alternatives and extent of feasibility and acceptability. Feasibility and acceptability is very, very important, okay in this case.

Because you see that it is feasible and viable to go for this kind of thing or not, what will happen because you are not sure what could be the outcome, okay. And then, whether it is acceptable or not. That is also need to be seen, okay. So, once you have identified and make sure that whether it is going to be acceptable or not. Then, you choose particular alternative okay, based on the pooling that you have done, okay.

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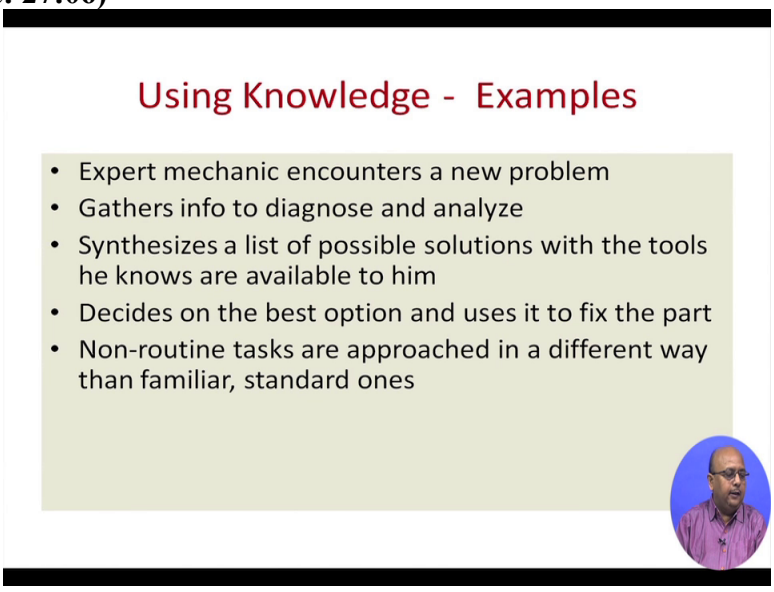

See another example that I am giving using knowledge like each mechanic encounters new problem. Expert mechanic encounters new problem. So, he gathers information through the dialogue and tries to analyse the information. He synthesizes the list of possible solution that

could be used with the tools. Then, he decides the best option and then you try to fix the problem, okay.

For example I was giving that conveyor belt if it is breaking, so he tried to get this information from different sources. And then, he try to see that how it could be fixed, so that there is no problem. But when you are solving non routine problem, then it is very, very different compared to solving familiar to standard problems, okay.

In case of familiar, standard problem what happens? You have a straight forward rule or formula which could be used to fix the problem. So, if there is a particular fault what you do, you know that how to diagnose it or to repair it, okay. But, in case, when you are not able to identify what the problem is then, it becomes very, very different.

This is what you call non routine task because in that case if there is a fault, you are not able to identify why this fault is happening. There is no fixed straight jacketed approach that is available to you. In that case, you use heuristics or apply different ways and means through which could it could be done. That is what is using knowledge is, okay.

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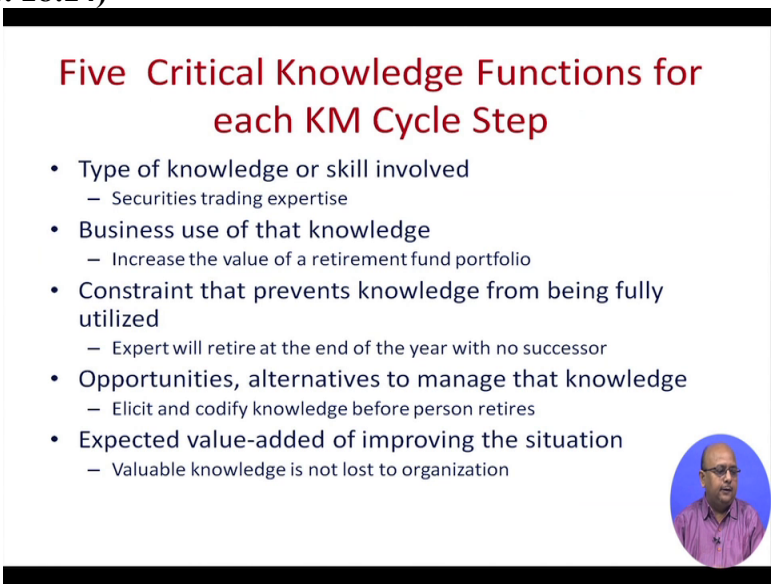

Now, there are 5 critical knowledge functions for each KM cycle, right. For example, type of knowledge and skill that is involved for security studying expertise, different kind of knowledge okay, this not only explicit but more tacit. Then, the business use of that knowledge, okay, now how you are going to increase the value of retirement portfolio?

This is the example that is taken here, okay. Suppose, you are earning money then, how you are going to, when to use the retirement portfolio, okay so that when you retire, you are going to live a good, decent life. Then, what are the constraints that remained for being fully utilised. Because if the experts leave, then, what will happen?

How you are going to make use of the knowledge that is available with them, okay. But in some cases what happens? You reemploy them. But how long you can go on reemploying them, to get their services? So, what you need to do is, you need to develop and make sure that successors of experts are developed by you.

You need to look at these issues as well and then you have to see that what are the opportunities and alternatives are there to manage the knowledge ok. How you are going to elicit and encode knowledge. So, whatever knowledge that person has, is it possible to have it in explicit form so that even if the person retires the knowledge is with you, okay.

And then and what is the expected value added to improve the situation, okay. And make sure that any valuable knowledge which rests with the organisation is not lost, okay. So, you need to retain talented people, who are having experience and knowledge. And that is where it is going to create more value, value addition.

So, we talked about talent management and retention and these are basically done to retain the knowledge base of the company, right. And these are the critical functions.

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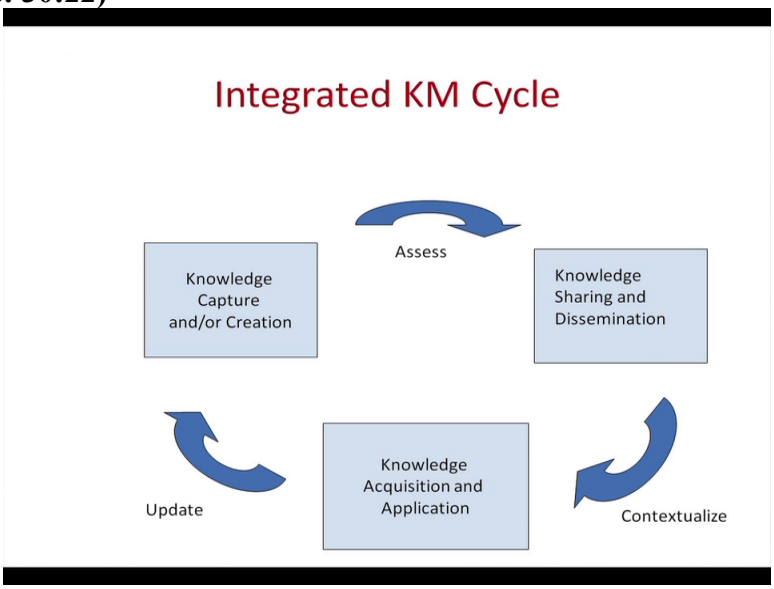

Now I am trying to integrate all the models that we have discussed. So, the first model talks about knowledge capture, okay. And then, knowledge sharing and dissemination and then, you finally we have acquisition and application. And you need to assess knowledge capturing, creation and knowledge sharing and dissemination. Then you have to contextualize it, whether you are able to make use of it or not.

And finally, you need to update on a regular basis so that your knowledge capturing creation process is continued. So, it is in a cycle, okay. So, keep on creating new knowledge capturing new knowledge, assess them, okay. You share and disseminate using IT systems, okay and then you keep on applying new knowledge and make use of it in a relevant context. And you go for updating knowledge base whether it is tacit or explicit okay, thank you.