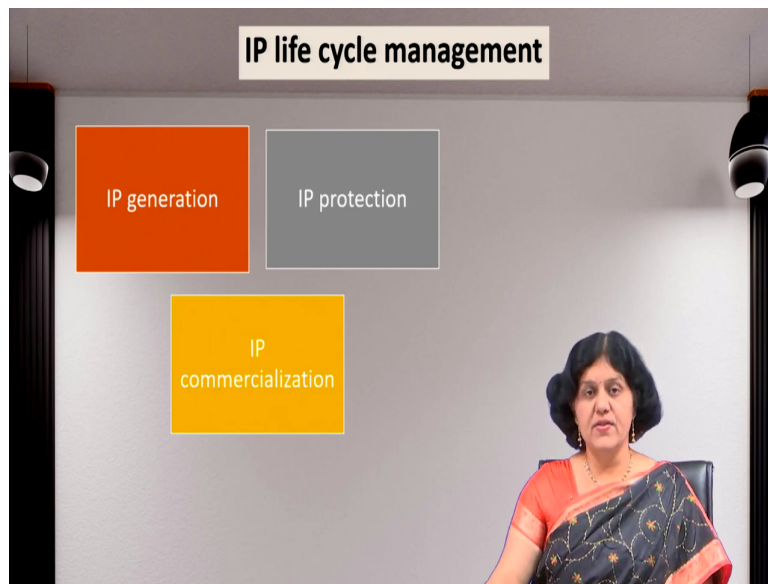


**IP Management and Technology Transfer**  
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**Lecture - 29**  
**IP Life Cycle Management and IP Policy**

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A very warm welcome in fourth module of week 6 of the course, Intellectual Property Management and Technology Transfer titled IP Lifecycle Management. Now, this is the 6th week now and all this earlier weeks we have dedicated on IP management. In next session we will cover IP policy and IP lifecycle relationship or how IP policy will help to manage IP lifecycle management that will be the next session and then we are moving into the technology transfer.

So, today in this session we will just go through already we have gone through the what is management, what is IP management, then we have seen the different types of IP management, then we have understood that why this IP system is there, how it is helping organizations for creating wealth and that is expected that we have already focused on that.

And then we have entered into or we have gone through a few management related concepts and models and framework that we have seen and then we have also seen that how IP analytics is helping in IP management. And we have seen lot of case studies related to this.

So, that we can get the concept very clear with actually that case study with practically how it is going on and we have seen that case study of analytics related crispr when we are talking about a policy we have covered, IIT Bombay policy, IP policy. So, we have gone through that case studies.

Now, here we will try to understand again that how this IP lifecycle management we can do effectively. So, when we are talking about IP lifecycle management, few three I can say is a are the important things or three important buckets are there. One is the IP protection, second is IP creation or IP generation and third is IP commercialization. Now, when we are talking about a IP lifecycle management all these three components are important.

Generally, the scenario is like that now also you can check wherever you are associated we are very good in IP generation and if you see India scenario also, we are very good in IP generation. Now, the percentage of IP protection if you check that reduces actually and if you see commercialization that further reduces and you know probably the statistics of patent filing only if we consider with the 1.4 billion population our we can say the patent filing if we see it is around 50,000 to 60,000.

So, generation is there, but protection percentages are very very low. Why I am confidently saying that generation is very high because now in the second week you have seen that the different types of IP and if you have carefully applied your research whatever going on and if

you have seen the creation whether it is qualifying that particular IP probably you might have realized that yes IP is already there.

But we are not able to identify it or we may not be knowing that or we may not be aware about the procedures or we may have the misconception that the protection is very tedious task and all that issues are there. So, probably because of that these are the few reasons there are many more reasons are there why that percentage is reducing.

But IP generation IP protection and IP commercialization even commercialization which is very important thing when we are talking about the wealth creation only 5 percent, we can say commercialization of IP is observed. So, that percentage is a very low. Now when we say IP lifecycle management, we want to increase this percentage we want to obviously, increase the generation quality IP generation we can say then IP protection percentage should increase.

And we expect that whatever IP is protected 100 percent commercialization is expected. 100 percent commercialization in a sense I will not say that from every IP you will generate some monetary gain will be there not necessary strategic gain will be there. So, either that strategic gain or monetary gain something we should get from that IP generation protection. So, these are the three we can say the important buckets these are the three important points when we are talking about a IP lifecycle management.

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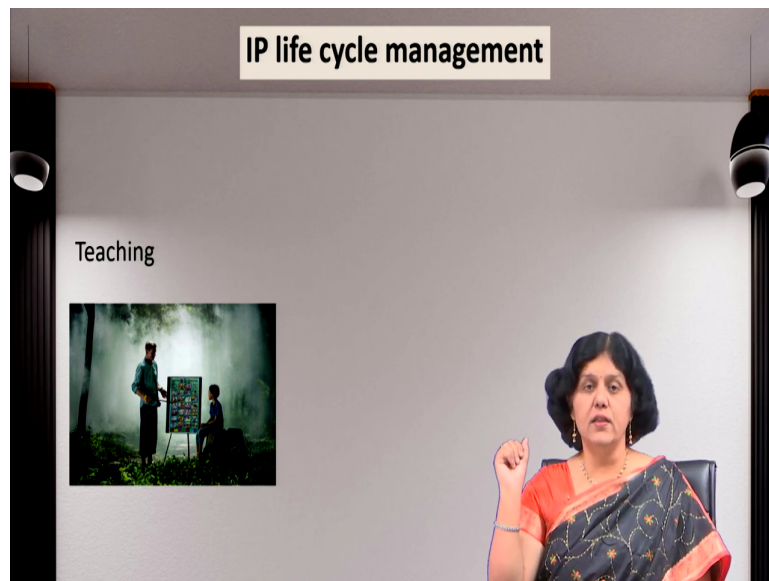
IP generation we have seen that when you see that there is a different types of IPs you can just check here that these eight types of IPs we are always talking about and we are generating that eight types of IPs we know now trademark is for what if I ask you the one-word patent is for what invention innovation trademark is for identity copyright expression ok industrial design the aesthetic look right.

So, you know now that one word is sufficient to give you idea about that particular IP. Now, this eight different types of IPs are there and wherever you are associated or if you are analyzing individual IP creation that also you can follow and just check out any of these IPs are created. If you are a teacher, if you are in a academic system we are generating copyright many times we or rather we are always continuously generating copyright we can say ok.



For all other types of IPs you just check in which area you are working and whether there is a possibility that already you have created and not protected or maybe some idea might be there and you can think about the creation ok that probably you can just study.

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Then we have seen in the earlier session that there is IP creation in academic system and we have taken it as a one example start up example you can just follow accordingly, we have also think that ok you can think about the industry organization and think about the different types of IPs created.

And we have already seen that ok we are in academic institute creating that teaching is main activity and creating the IP.

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Next you can see here research is another activity and we are creating IP out of that then there is a internships.

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We are going for intern so; many students are going for internships their IP is created then collaborative activities are there the IP is created.

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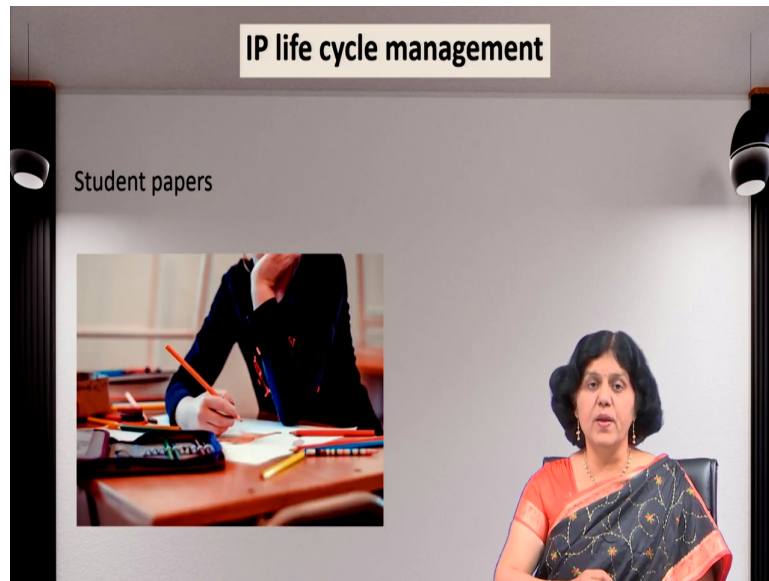
### IP life cycle management

Collaborative activities

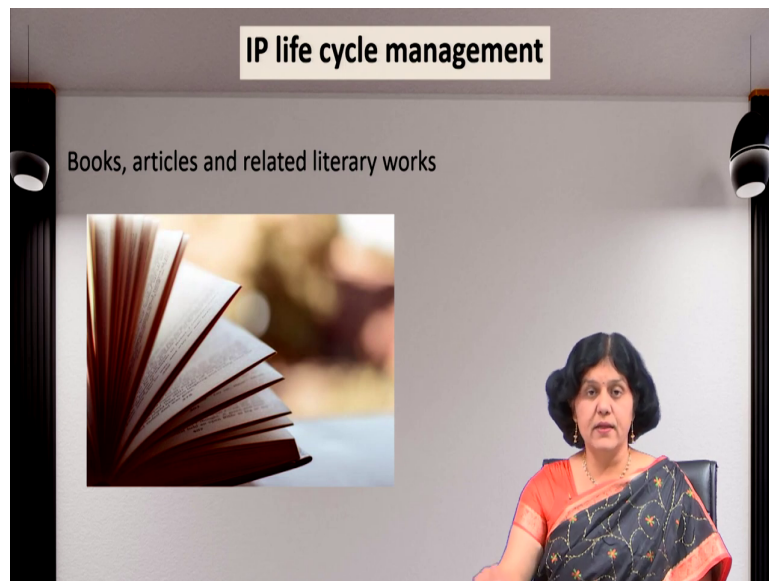


The image shows a woman with dark hair, wearing a red and black saree, seated in front of a presentation screen. The screen displays the title 'IP life cycle management' in a white box at the top. Below the title, the text 'Collaborative activities' is visible. Underneath this text is a photograph of several hands clasped together in a circle over a desk. The desk is cluttered with various office items, including a calculator, a smartphone, a coffee cup, and several papers or documents. The woman is looking directly at the camera with a neutral expression.

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Then there is you can say the papers examination paper development and then students are writing again IPs created then books are there IPs created right.

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Then the extracurricular activity which is there in academic system we have we are lot of extracurricular activities they are also IPs created. So, this is one example we have seen in detail in one of the sessions are there you can just apply that in the you can say the start up or industrial organization or as a individual you can apply that particular yes these are the different kinds of IPs we are creating.

So, we know when we are talking about IP lifecycle management we are talking about generation, protection and commercialization three components are important. As a case study we have taken into consideration academic institute we have listed ok these are the activities then we know the these are the eight types of IPs and then we have to classify that ok. If I am creating some technological development is there, I am creating the patent actually.

So, when you are talking about this creation yes this is the activity and this is the creation so, we are generating. So, IP lifecycle management one leg you can say if you can take a tripod table you can say that one leg is a generation actually. Now, the next step you have to think about is the protection and there are forms, fees that discussion we have done very quickly in week 2 actually.

And we have given you the references of a videos if you want to go into details of that how the that copyright filing is done or how the patent filing is done that references, we have already given you and you can just go through that details to do the protection part. And the next is a commercialization.

Now, that is one thing which is a very very challenging protection I can say it is much easier though if you follow the procedure and if that particular category whatever type of IP you are thinking about that criteria are fulfilled you are developing that particular IP you are protecting IP. But when you are thinking about that commercialization there is like a challenge we can say.

And therefore, next to say two weeks we can say completely dedicated on the technology transfer actually because which is one of the we can say that technology transfer may means that results into the commercialization I can say that statement very clearly technology transfer that is first we can say IPs created then there is a technology transfer and then there is a commercialization ok.

We will go into details of that in coming sessions actually, but we have to understand that we are now creating IP then we are like transferring that technology and after technology is transferred commercialization is there which is a third leg when we are talking about a IP life cycle generation protection and commercialization.



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So, you can just check that ok these are the different activities in that in the academic system. Now, just replace that if you are a startup, you replace that activities may be for example, you are like technology driven start up is there then you can say that you have that project work whatever you have taken into consideration that will be there.

Then you are definitely doing the research obviously, then you are like taking the consultancy from the may be that consultancy services from outside you are kind of hiring may be for your start up or you have that in built knowledge and all it depends on the scenario actually.

So, I am just gauging that thing depending on your specificity which start up is there you just add that points in this particular we can say replace that. This is for academia a few examples

of academic system IP which is created in academic system a few examples are given here there are many more actually.

And in IP policy probably if you have gone through now the document is there in the reading material folder you might have understood that yes there are so many other types of IPs which are created in academic system ok.

So, just if you want to take a pause here you can take a pause you can write down ok I am a individual these are the activities or I am a start up these are the activities and then we can just then you can move further that ok how then we have to manage that complete IP life cycle ok.

So, you can take pause write down this thing and then map it ok this I am creating. So, that is categorizing under patent or I am creating this and this is coming under copyright. So, you just that mapping actually. So, that will be easier for you to move further for the next step that is a commercialization actually ok.

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Now, next step when we are talking that if I want to elaborate on that IP life cycle management, three components we have taken generation protection and a commercialization. Now, here the addition is like a portfolio management. So, you have created list now you know that ok these many patents are there with me these many trademarks are with me these many industrial design is with me I have created lot of copyright ok.

So, whatever you are like list is there that is your IP portfolio and now here the word is like a portfolio management. So, what is happening whatever that IP is created you are managing that ok. So, portfolio management is there then next you can see the valuation. Now, in the emerging areas one of the session we have covered we have given you the little bit idea about what is IP valuation.

And now when we are talking about a IP life cycle management actually the and technology transfer you are going to see what the details? What the how exactly it happens in a few we can say next few sessions we are immediately starting that technology transfer.

But when we are talking about this IP valuation it is coming like when we are commercialization of IP will come at that time what will happen that valuation is like a very important because suppose you are having a startup again then the fundraising if you want to do fundraising for your startup if you are IP assets now you have a list ok.

So, now if you have that list of say 4 total if simple example if we take that one patent is there then one trademark is there definitely it will be there otherwise you do not have a startup we can say. Generally, this is a kind of a scenario I am talking about a technology startup and therefore, one patent and one trademark definitely it is there with you copyright will be definitely with you.

And industrial design one industrial design will be always with you I am confidently saying that I am just assuming that it is a technology product and if technology product is there all these 4 types of IPs are 100 percent there with you ok. So, if I say you have a portfolio of a 4 IP actually that 4 different types and you are with a that 4 IPs now you have to value that thing.

And once you get the valuation of that particular probably it will help you to generate the funds banks are giving loans or you can use the venture capital that the may be pitching and all that activities and during that if you have a IP and you have the valuation of that IP definitely it will help for the commercialization ok.

Next is a competitive we can say competitive assessment that what your competitors are doing. In short actually in the market who are other right that IPs are there I am talking about IPs. So, I am focusing on IP we in the marketing there are when a startup is there so, many other components are coming, but I am just talking about a competitive assessment with

respect to IP only and we have already dealt with IP analytics in one of the session and that definitely helps you to do that competitive assessment.

Definitely that doing that patent analytics you can confidently I can say that you can do a fair idea you can get about the competition in the market. I am just focusing on the technology and therefore, I can say that yes if I do patent analytics, I get clear idea who are the competitors in the market, but nowadays different strategies are there and the IP filing is little bit different.

So, that fair idea of competitive assessment if I want to correct, I can say that fair idea of competition you will definitely get from that competitive assessment and the next is like a strategies strategic decision making. Now, how I can relate it like to your start up or to your academic activity [FL] what kind of strategic decision you can take related to IP you can maybe the decision you may be like you have to start your own start up may be I am just giving you few examples.

So, that you can relate, but you can have in your mind different ideas how you can we can say that commercialization IP will be there. Technology transfer is one of the we can say a promising we can say the way for IP commercialization and what are the different ways of technology transfer and all we will deal with that very soon ok. So, that strategic decision whether and how you will take that decision again?

For every IP that decision will be different because your strength the resources which are available and your passion and what exactly the this the we can say the attributes which are required that will be the right word if you could go through that analysis probably that will help you to decide on the that last point that is a strategic decision making and you have to study or you have to apply it for every IP separately.

So, you can just imagine you have to give the lot of we can say the analysis you have to give the lot of thought process based related to that particular IP and you have to take the decision. So, when we say IP life cycle management in short in a few minutes we are going into the

complex kind of scenario of IP management, but I am just taking a very simple example of IP management here limiting to 4 which is like a very easily I can handled as a individual.

And again, if you take a 4 you have to give a thought process for each IP separately how you can commercialize it ok and you have to take a proper decision regarding that particular IP. So, what we are talking is, IP life cycle management when we are talking we are talking about generation, protection and commercialization.

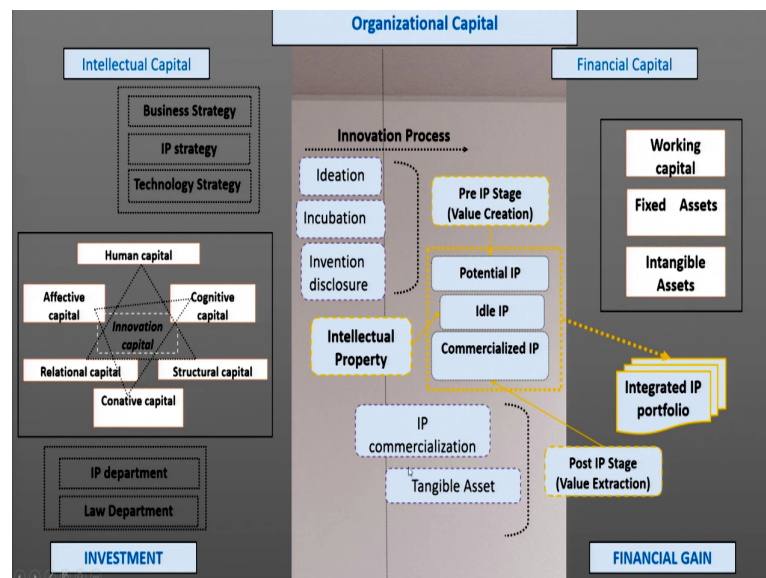
Generation we are very good in that we have to do the mining of that and then we have to protect you have to take decision about the protection again protection is comparatively simple when I am talking about IP commercialization because the forms fees that criteria.

If I follow that it can be easily done and the last part that is commercialization which is a very very challenging their technology transfer will help you and two additional points portfolio management because how your portfolio will grow you have to decide it.

Now, how examples wealth portfolio you know that you are taking shares maybe its just simple example or you just observe how that decision is made to maintain that how the shares are bought and that wealth portfolio is maintained. And there you know lot of like analysis goes behind that particular that portfolio creation same way here when you are creating IP that much analysis will if you do probably this IP portfolio will give you definitely a very good returns actually ok.

And then competitive assessment we have talk enough like you got the idea about that and strategic decision making.

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Now, we will move further and we will just try to understand that the models which are talking actually that in the complexity of IP management we have already seen that, but now I will relate it with the generation, protection and commercialization ok. So, we are like when we are talking about the IP lifecycle management in the system that is in the organizational system you can just check here that there is a; that there is a kind of a that financial capital is there.

Then the intellectual capital is there and under intellectual capital innovation capital is there and then there is the working capital fixed asset intangible asset we have already dealt with that then strategy part we have covered actually that is a business strategy IP strategy and technology strategy whole session we have discussed how exactly it is coming and we have seen that IP department and law department is like seriously involved in all this activity.

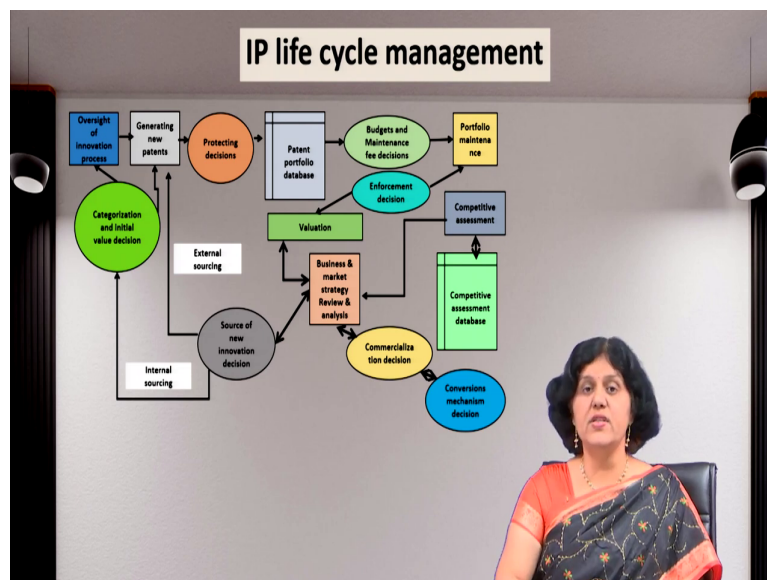
Now, just focus on the middle part that is a innovation process. And in the innovation process you can just check here there is a ideation incubation and the invention disclosure part this is like a generation we have already seen that then we have also talk about the protection and then we have talk about the commercialization here.

So, generation, protection and commercialization this three important we can say the points which are related to IP lifecycle management you can see the complexity in this particular framework that how it is a complex and we just talk about a four IPs. Now, here if organization is there just related like a there is a portfolio of 50,000 patents 60,000 patents three lakh plus trademarks two lakh plus trademarks are there and then the copyright is much more and industrial designs are there.

So, you can just imagine the complexity in the organization when we are talking about a IP lifecycle management actually.



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So, we have understood that ok in this complexity in that framework now just check here when we are talking about the IP lifecycle management with reference to this particular presentation the framework actually, we have seen already the complexity again that competitive intelligence is there, then the creation is there, protection is there and the loop is there.

So, what I want to stress here is like that, that please understand how the IP management is integrated that is very important when we talk about IP lifecycle management that how IP management is integrated the previous framework, we have seen it very clearly gives that integration actually. Now, this framework if you see here, here again how that things are connected and feedback loop is there actually.

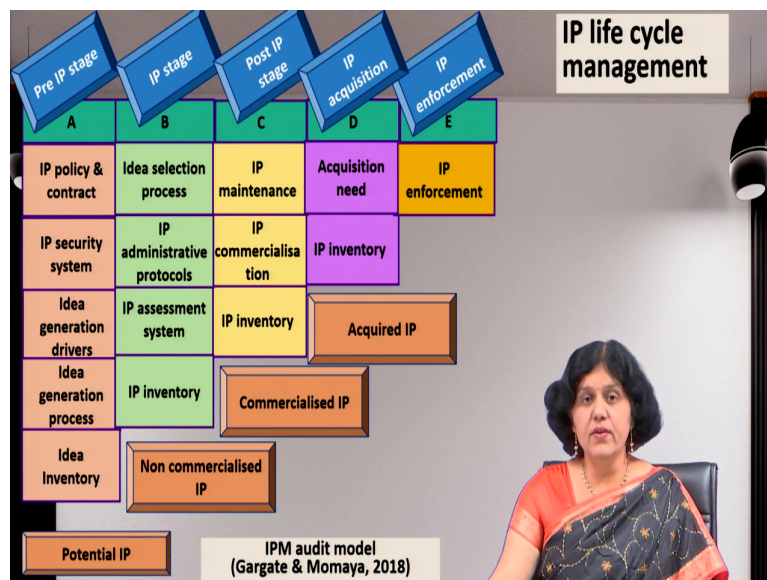
So, it is not a linear process actually if you think that ok innovation is linear now a days it never innovation is not a linear process that loop it is a feedback loop is there and from where it will come, we never know actually in a sense that some ideas come it will go to that R and D again rework is there, again reframe of project and then move on. So, it is a continuous process.

So, complexity is there when we are talking about IP lifecycle management integration is there and it is a continuously evolving process its like a continuously, we can say the dynamic process it is a changing process actually. So, its not like today I am taking a project and yes, I have started I have decided ok it will go in this way it never works in that way because many times mostly if emerging technologies are there that is like a very we can say the changes are much more actually when the emerging technologies there.

If any old established mature technology matured will be the right world if mature technology related IP lifecycle management will be there then probably it is like a less, we can say the dynamic; that means, that much changes may not happen when you are talking about a IP lifecycle that protection decision and then generation related activities.

So, that are not that complex or that challenging when mature technology is there, but if it is a emerging technology there is always like a challenge to manage this IP lifecycle IP lifecycle that generation protection and commercialization ok.

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Now, just move to the next that is a next model we have seen right. So, now in this model if you see now here just check that this three legs we are talking generation protection and the commercialization.

Here you can say that this three are there right this three you can just clearly say and within that generation then sub processes are there and then the acquisition IP acquisition and IP enforcement which is again the very very important only generation only protection only commercialization is not like we can say work you have done all this thing.

But if you are not doing enforcement probably you will lose your market share because enforcement is a very very important and acquisition, I will not go in detail of that actually

because there is like different views. So, sometimes we will say that acquisition may kill the competition second time we can say that IP acquisition may help in further development.

So, I will not go into details of that, but that acquisition is a very important we can say one of the I can say the strategy in IP lifecycle management ok means IP lifecycle when we are doing actually its management is going on acquisition is one of we can say the important strategy and it is effectively used by the organizations actually ok.

So, now what we have seen that these are the eight types of IPs we know that patent trade mark, then we know these three legs generation, protection and commercialization then we have added into that competitive assessment and portfolio management very important, then we have focused on the organizational that IP management framework actually how it is like integrated and how innovation management and IP management is so, related.

Then we have focused on the again the feedback loop is there and the complexity of that IP management, then we are focusing on this model where we are seeing that ok this 15 processes are there it looks very streamlined, but again you have to understand that it is very integrated giving a different we can say the inventories and as it is like a little bits we can say the compare in comparison to earlier we can say the framework it is streamlined.

So, probably it management becomes very easy ok now I will focus on IP policy only you can say in this way when you see and apply this particular model when you are dealing with IP that development IP cell development or IP management processes development in the organization you can say no I can just focus on protection related thing or I will just focus on IP commercialization.

Acquisition and enforcement will come much later actually when we have a good portfolio and or if many times in the process may happen that you have a very strong one IP at that time yes IP enforcement from the starting it becomes very important actually.

So, we have to understand means, what is first what is last we may not able to do that it keeps on changing depending on the your focus actually your startup, your technology, your

outcome of the IP and all these factors are very important, but much more we can say the streamline scenario is there.

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And then when we talk about now if I want to put it again, I will just say that ok protection generation and commercialization is there and I will add into this acquisition and enforcement actually. And yes, it is possible enforcement is now comparatively earlier scenario if you see in the in India and current scenario definitely we have a better we can say the system we can say comparatively not that is full promising.

I will say definite means I am very responsibly making this statement that enforcement is little bit its very challenging actually, but scenario is much more promising now I can say ok, but this five now factors its generation when IP life cycle we started with a three. But now we

are ending it with the five actually that this five components are very very important actually when we are talking about the IP life cycle management.

So, do not get like a that thing that ok it will go as a linear process I will do first this then I will do this and then I will do this. So, do not think in this way when we are talking about IP life cycle everything it will go parallel ok idea generation is going on at that time only, we have to think about the application.

Application is going on at that time we have to think about the technology transfer. Technology transfer is going on at that time only we have to think about the next step that is how it will go into the market that is a commercialization. So, its like a when we are talking about this its really a cycle and its like a continuously going on.

And again, I make a make a very important thing like a very important we have to if you are dealing with a mature technology, IP life cycle management is much more comparatively manageable ah; obviously, in other case also manageable, but it is little bit you have to we can say if emerging technologies then you have to be very alert actually because continuously it is evolving ok.

So, that difference is there I hope you understand this difference you can just take example of a telecommunication or maybe use of some sensor related automobile industries you are using sensors and then artificial intelligence and big data. So, all this integration if it is going on how challenging or how much IP it will be created.

You take a cement industry actually how much challenge will be there considering IP I guess this two example mature technology and emerging technology and then IP life cycle management probably that will give you clear idea that how the complexities and the attention is like much more required when we are talking about the emerging technologies.

So, it is like we have to be wherever area in whichever area you are working just check how you can use this learning actually for the your management of that IP ok and if you have any queries maybe you can write down in the discussion forum and we can deal with that ok.

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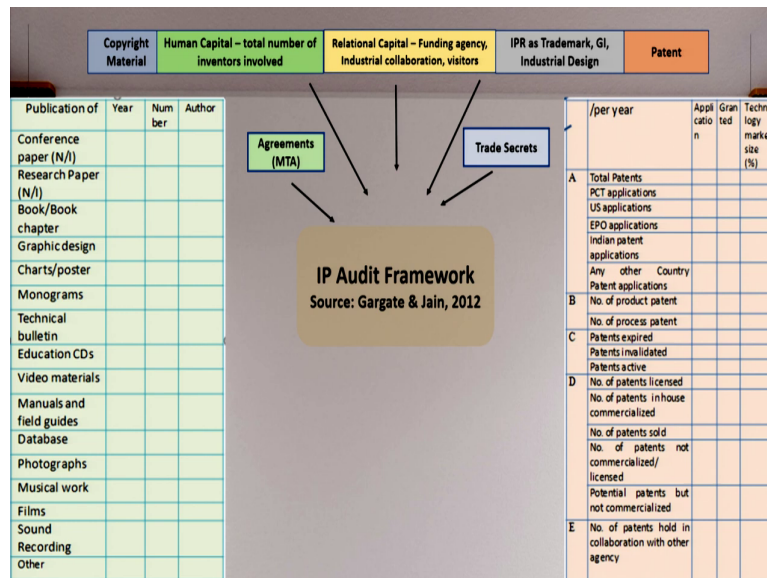


Now, this IP audit framework actually we have seen. I guess we are when we are talking about a IP life cycle management if you use this framework that will give you pretty well idea where you are standing now where you have to go next and it is a very basic actually customizable very basic framework nothing very say complex or nothing or nothing very kind of we can say the special is there in this framework I can say that thing you have to just write down the IP created.

And then you will get the score actually that what is my IP that I the score we can say the credence what is that credence IP credence what is that you can easily calculate yourself there.

We have dedicated one session already and you can just check the framework once again here.

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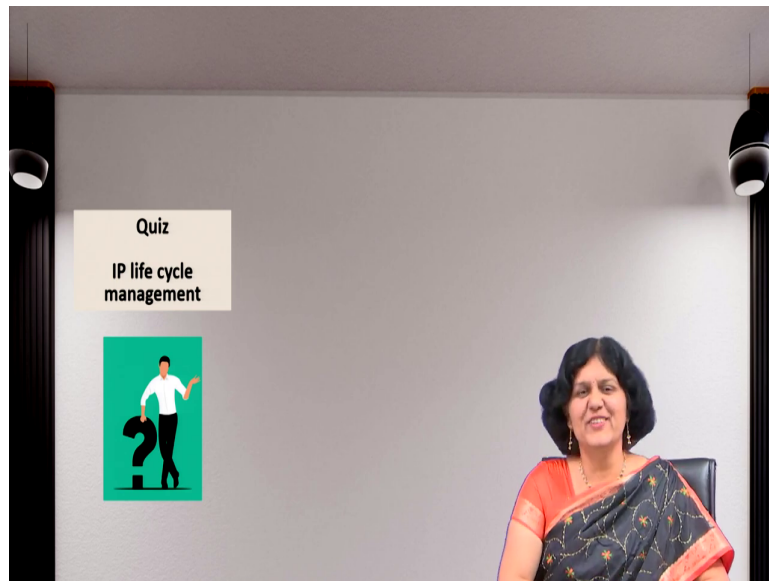
So, this is the framework actually and here you can just check that the there is a like a patent you can just add about the patent information, then copyright information, then you can add about the human capital relation capital and trademark GI if it is there industrial design GI I doubt, but if it is in academic institute or if it is a kind of the kind of a individual doing this auditing.

Then I guess GI may not be there if it is like a IP life cycle management of any state is going on probably I will say that at that time Gy GI will come into the picture actually because we do auditing of a state we do auditing of the country IP auditing of the country.



So, at that time GI will definitely come into the picture. So, this is the framework which you can use and you can bring or brought that the actually credence actually that what is my score of IP ok.

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Now, you just check now that to summarize I can say that here we have understood types of IPs you know that thing then only you are going to manage that then you know that what is like a three legs actually then we have added two points that is generation protection commercialization and then we have say acquisition and enforcement is very important.

And then you have now in your hand that models the framework is there and with the help of that IP audit framework you can easily calculate credence actually now the quiz time and

therefore, what I am expecting you just calculate the IP credence of your own organization or you can take a if you do not want to disclose that you can take any example ideal example.

And then you can just calculate that and you can write down in the comment box yes the credence is coming like this number actually. So, you can just get idea that ok academic institute is having this much credence; obviously, you should know the IP generated in that particular system then only you can calculate it because you we have to know we should know that how many patents how many copy writes how many trademarks and all the details must be there.

So, just try out with your own organization or you can just try out with the maybe some the sample example and all that and just check out that credence and now apply the these models for a management that how you can apply this learning and how that credence whatever that number unit is coming how you can increase it in next 1 year or in next 2 years what will be the planning.

So, if you could do effectively that particular thing definitely, we can say that we will increase generation definitely, but we will increase that commercialization rate also that is very important because that is the main aim of IP ok.

So, I hope you will do that calculation and write down in the comment box and if you feel that no you are not able to do that or you need some help you just write down in the discussion forum and we will talk about it ok. So, with this we are coming to the end of this session see you in the next session.

Thank you.