INTELLECTUAL PROPERTY PORTFOLIO MANAGEMENT

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Welcome friends, we are talking of IP portfolio. And as usual, we are talking of size of our portfolio, the value creation from our portfolio. And we also discussed value in terms of impact, value in terms of the income generated, value in terms of goodwill you are creating, value in terms of ability to get better business negotiation, ability to get more funding for your enterprise. Sometime it happens in all this value creation activity, we only focus on the size of our portfolio and when we are creating large size, we may find various IPs which are not adding any value to our portfolio or in a very simple way, I can say that there may be lot of wasteful activities, wasteful assets without contributing any value related to our portfolio.

So, identifying those wasteful IP activities, minimizing, avoiding those activities that is very very important. You may have a smart portfolio, but you should not have a bulky portfolio which is not giving any output. So, therefore, a very new concept which is coming from the field of manufacturing, that we are trying to integrate in this portfolio management and we are going to discuss in this particular session about lean IP management that minimizing the wasteful activities in our portfolio. Now, in this particular session, we will see that how lean principles may be applied to our IP management activities.

what are the principles, elements of implementing the idea of lean into IP management, then we will see the intersection of intellectual property rights and the concept of lean manufacturing. So, first we need to understand that the concept of lean is started from this company very popular known as Toyota from Japan. which is having two very important aspects maximizing the value and this maximization of value is possible in multiple ways. But Toyota proposed the maximization of value by minimizing the waste. The simplest way of understanding the value is whether you are able to generate more income

from your products from your services etcetera. So, may be somebody can say I will increase the price and by higher price I will generate more value that is one very simple answer everybody can give one way. Second way is I will reduce the cost. Now, because of reducing the cost my profitability will increase I will not increase the price earlier my price was 10 rupees cost was 7 rupees.

So, for increasing the profit I increase the price to 11 rupees. So, here my profit was 3 rupees this increase to 4 rupees if my price is 11 rupees there can be other approach also. that I reduce the cost from 7 to 6 and that is also resulting me the same level of profit. Generally, organizations find difficult to increase the price because there are market forces, competitors are there and accordingly you have to follow the law of demand and supply, you need to see the competitive forces also. So, generally

If your product is very much protected by IP, in that case, you can certainly increase the price as per the market capabilities, purchasing power of the market. But if you are not having those kind of IP protections for your products, increasing the price on your own unilaterally is very very difficult. So, how to increase the value, how to increase the profitability, reducing the cost, that is, always possible you can think of how to reduce the cost and for reducing the cost the formula which is given by Toyota is that minimizing the waste. You need to identify entire process where you are generating the waste try to minimize those waste and that will continuously improve

your operational efficiency and through operational efficiency maximization you will be able to maximize the value generated for you. So, this is how this whole idea of lean is started from this Toyota and they are pioneers in identifying the different types of waste. Toyota has identified 8 different types of waste. Most of these wastes are related to production and industrial engineering activities, but we will see during this course of discussion that how this concept of waste minimization is intersecting with our IPR discussions. So, when we are talking to IP management, these principles provide a structured approach to efficiently identifying, protecting and leveraging our IP assets.

So, rather going for wasteful IP creation, we will see that how we use our limited resources. For example, a limited resource is money. Now, if I have a particular R and D budget, out of that R and D budget, I need to use that budget only in those activities which are value adding activities, if I spend my budget in those activities which are not going to add value to my IP portfolio, this is against the idea of lean principles. So, this is just one simple example that how IP management can intersect with lean activities.

In detail, if I see how lean principles apply to IP management, when I am talking of lean principles, lean is focusing on value and waste is which is non-value. So, that is simple definition to identify the waste in a process you are doing various activities. For example, for example let me say just to give you a very simple example I know this example may not be very correct we are doing a lot of prior art survey when we are doing IP filing, IP creation.

Now, somebody may say that doing this prior art survey is not adding any value to my IP creation process. We need to do prior art survey only of last let us say 2 years or 3 years. Rather going for IP survey or prior art survey of 20 years or 30 years, we should restrict our prior art to last 5 years which will save a lot of efforts in doing the large amount of prior art survey. This will be one example that how we can think of minimizing the waste of time, resources and our IP filing process may become more efficient. Just one example.

Now, therefore, the first principle which we will be talking about lean in IP is value identification. Lean IP management begins with identifying the value of IP within the organization. Whether this entire IP is adding any value to my organization or not, particularly this question is very very important for startups. Many startups I have seen personally they are not going for any kind of IP protection and the major reason they are not doing any kind of IP protection because they do not see any value in doing the IP protection. It may be the other argument can be it may be because of lack of awareness because those who understand IP they feel that IP is always going to add value to your organization.

But large number of startups in our country are not doing any kind of IP protection because of they do not see they do not perceive any value coming from IP. So, first important thing is we need to see whether IP is adding any value to my organization or not. So, I am not saying any generic statement every type of IP whether whether copyright, whether design, whether patent, etc. So, we need to see that if I am going to protect this particular IP, whether it is, for example, I am IT Roorkee and if I go for any GI protection, how this GI protection will add value to my organization?

Should I go, should I keep this IP in my IP portfolio or not? That is a question and that is the first important thing in lean principles which is applied to IP management. This involves understanding which IP assets contribute most significantly to the company's competitive advantage, revenue generation or innovation ecosystem by focusing

resources on protecting and leveraging high value IP. For example, out of all the IPs which Coca-Cola has, the trade secret of their basic syrup that is the most valued IP for Coca-Cola. For all the IPs which McDonald's have, the trademark McDonald's is the most valued IP.

All these IITs, IIMs for them also the most valued IP is the copyrights which they are create by the way of research papers, books etc. So, every organization has. some very high value IP, low value IP, no value IP. So, you need to focus your resources on protecting and leveraging high value IP. If you are company like Apple for you most important IP may be

Generally for large number of organizations they consider high value IP is patent but there are good number of researches available which suggest that even trademark is more important IP, more valued IP in terms of economic value of the IPs. So, first important is identification of high value IPs and focusing your resources on those high value IPs. Second is waste reduction. Whenever even in a layman's language you talk of principles of lean management, immediately the thought which comes to your mind that is waste minimization. Lean means waste minimization.

So, when I say waste minimization as in the case of manufacturing for example, one of the waste may be over processing when we are doing manufacturing activity over processing is one type of waste. Within the plant if you are moving frequently from one location to another location that is another type of waste. So, there are multiple type of waste in any manufacturing activity even sometime too much of specification that is also a waste. So, waste is possible in multiple ways for example, as I was giving the case of prior art writing a detailed prior art same thing again and again from the published literature in terms of journal papers and from the patent databases also.

that is kind of a waste of prior art writing. If you know that some technology is there, writing it only from one particular source that is sufficient. Generally, we see that students, researchers, inventors, they write multiple sources for same point that is a kind of a waste. So, waste in IP management can arise from various sources. So,

For example, unnecessary duplication of efforts, inefficient processes, ineffective use of resources, etc. Lean IP management aims to minimize these waste by streamlining IP related activities, eliminating non-value added tasks, optimizing resource allocation and this will help you in reducing the cost, faster time to market and increased competitiveness. And let me also tell you that in many cases, many organizations I have

seen, their filing to grant ratio is skewed, not only skewed, highly skewed. You are filing too many applications, but granting is very very low. Why?

Because you have written so much of wasteful things in your application, which is creating more confusion. So, your application patent application IP application should be smart focusing to the point so that the examiner controller can understand your application better way and this is more efficient resource will be less resource users will be less you will get faster grant of your applications. And in this way the entire efficiency of IP system can be improved. So, waste reduction is very very important and generally I see that a lot of waste is there. It is considered to be a technical field.

So, the outsider is not able to comment. about the kind of waste you are generating. So, those who are inside the system it is their responsibility that they know they understand what type of waste they are producing and try to minimize the waste in terms of entire IP ecosystem. Another very important principle of lean is continuous improvement. Continuous improvement in the Japanese way is also known as Kaizen.

So, continuous improvement kaizen is a core activity of our lean philosophy and in the context of IP management, this means continually seeking to enhance the efficiency and effectiveness of our IP related processes. For example, continuous improvement in IP creation activities. How our organization has become more innovative? That is one way of understanding the continuous improvement. Let us say at IIT Roorkee in year 2010 we are getting let us say 100 applications.

We got 100 applications for IP filing in 2010 and in 2024 we got 500 applications. So, this is one way you can understand that you are continuously moving. And obviously, you have all intermediate data also from 2011 to 2023 that how from 100 to 120 then from 220 to 200 and then slowly slowly every year you are continuously increasing and your IP filing or creation IP activities are getting better results. How your filing to grant ratio which was let us say 5 percent in 2010 and it has become let us say 30 percent.

in 2024. This is another measure of continuous improvement. So, you may find the rate of technology commercialization was just 2 percent in 2010 and this 2 percent has increased to 20 percent in 2024. So, continuous improvement in entire IP management activity is also another important aspect of incorporating lean in our IP portfolio management.

Then customer focus, the concept of value which we are talking that is always seen with reference of customers that what customer is giving importance, what customer wants that is value What is not needed by the customer, what is not required by the customer, that is non-value for us. So, keeping a customer focus. So, in the process of IP management, we should know that who will be the target customer for this particular technology. Whether it will be used by mobile industry, whether it will be used by laptops, whether it will be used by the desktops or so on.

And accordingly, considering that customer focus, we need to develop the industrial application of our IPs. So, that is also a very important part of our integrating of lean into the IP management systems. Another important principle is empowerment and collaboration. When we are talking of lean in our organizations, one department is following the lean principles.

But if other department is not following the lean principles, whatever benefits we are deriving from first department will be offset by the second departments because they do not understand the importance of all these waste minimization, value addition, etcetera, etcetera. So, the real implementation of lean efficiency effectiveness is only possible when we have empowerment and collaboration. So, working in totality that is a very very important aspect that is needed. So, lean organizations they empower their employees at all levels from top to frontline executives and they identify address their inefficiencies

continuous training and development are very much required so that their inefficiencies can be properly addressed and that way in a empowered collaborative manner you are able to take best of the potential of your team members. Otherwise if they are not properly empowered whatever potential they have you will not be able to use that potential for the benefit of your organization. The other principle is visual management and transparency. In manufacturing organizations, for our effective management, visual management and transparency means this is more in terms of defects, in terms of inventory that how inventory is collected at different stages.

Now, when I am talking of IP, so, in IP management, visualizing the IP portfolio, the clarity, the transparency, the what type of IPs you have, out of that IPs, which IP is more valuable, which IP is less valuable, all that need to be proper visibility, including the patents, trademarks, copyrights, etc. Then, with the clear visibility, if you know that your portfolio has so many things with you, then probably you can have better utilization of your IP assets. If those IP assets are stacked one after the other and you are not able to see

what is there with you, maybe you will be only use what you are able to see. So, it is important that

It is not a physical way of arranging but you should have a system where everything is available on a single screen so that you have a clear idea about your portfolio and then you will be able to have more value realization from your IP portfolio. So, after understanding all these things now if I say implementing of lean in IP portfolio three very important elements which we can now summarize that only a patent for an invention that has relevance to a market adds value to the firm. This is one important you can say outcome of this discussion. That patent which is adding value to the firm that is to be kept in your IP portfolio because of the race to increase your size.

do not try to create, there are a lot of question mark on various organizations, educational institutions that they try to create patents which are actually not should be there, but still unfortunately it happens. A patent for an invention that will never be used by the market is a liability that wastes company's resources and value subtracting patent. So, that is the meaning as I just explaining that if I create a patent which I know that it is not going to be used by the commercial organizations. So, it is like a wasteful activity. And third is a value added patent can be defined as any patent that a potential buyer would be willing to pay for.

So, actually you need to see your patent or your IP from the perspective of the buyer, from the perspective of the customer that whether you will be willing to pay for this particular IP or not. If you are willing to pay for that particular IP, you can say that it is a value adding IP. So, that is a kind of a litmus test that we need to be in other side of the discussion and see whether we are myself going to pay for that particular IP or not. And with this we are able to understand that there is a proper intersection between IPR and lean practices because you can very well increase the efficiency effectiveness of your IP systems because it is involving integrating the principles of IPR protection

with lean manufacturing methodologies to optimize process, enhance the efficiency and also at the same time safeguarding our innovations. So, your lean process and IPR, if we follow this system that this is lean, this is IP ecosystem. when there is a proper interactions intersection it will help you in increasing the efficiency. So, what we want that over a period of time this should go in this way that more and more your IP ecosystem should follow the principles of lean activities. So, there are different types of

actually initiatives through which organizations can harness these IPR activities with the help of various lean initiatives.

For example, securing the innovative processes. So, how to secure innovative process we know that different types of patents are possible on process improvements. So, we need to see that identify and secure unique processes everywhere earlier we used to be taught more about product patents. But process patents methodologies etcetera are also equally important. So, you need to see that how

Only those things because of which you are able to eliminate the waste and you have done something very innovative in your process that itself can be one issue of IPR. If for example, the meaning is if I am company A and I am company B. Now, company A is consuming let us say x kilowatt unit. x kilowatt unit for 1 ton of processing of raw material. And this company B is using let us say x minus delta kilowatt energy for same 1 ton of R M processing. because of my process innovations I am able to consume less energy and able to produce the similar kind of output this is my innovations in processing.

So, this innovation in processing itself can be protected that is one type of activity where your whatever you are doing in lean all have scope of IP protections. streamlining patent filing and management. We discuss the role of various entities in your patent filing right from patent application, prior art and other things. Everywhere it is possible that there may be a lot of wastage of time, lot of wastage of manpower, lot of wastage of monetary resources also. So,

a very efficient patent management system. And in this case, now organizations have started using various softwares also which can help in efficiently streamlining your patent filing and management system. Trading and awareness we also discussed that you need to empower your teams and empowerment of your teams is possible through training and awareness activities. Cross functional collaboration is part of collaborative activities where IP teams can understand the practical aspects of those teams which are in the field who are executing and

those teams which are actually in the field of execution they can give their new inputs to IP teams on which various type of IP filings are possible. Then continuous improvement we already discussed that how IPR can drive your activities related to continuous improvement where we are looking to improve every aspect of our IP ecosystem continuously incremental innovation are possible. Then as now we have understood that

there is a close interaction between lean and IPR. So, with this we want to improve our protection also and process efficiency.

If you start focusing too many too much on efficiency you may lose because you will think that okay this is not adding value, this is not adding value. So, many of your innovations you will not protect under IPR regime and maybe you will find that you have become very very efficient but at the end of the day you see that out of 50 applications, 50 innovations, you are protecting only 5. So, there has to be a balance between protection and efficiency.

Sometime we become obsessed only on one side. So, the whole idea is that We need to see that resources should be used efficiently but at the same time you also need to see that you have to protect most of your innovations so that your competitors do not take advantage of your work. So, with this we come to end of this particular session where we saw very interesting thing that how the concepts of waste minimization are possible in IP management, IP portfolio management. Thank you very much.