

**IP Management and Technology Transfer**  
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**Lecture - 11**  
**Emerging Areas of IP and Open Innovation**

A very warm welcome in module 1 of week 3 of the course, Intellectual Property Management and Technology Transferred, titled Emerging Areas of IP and Open Innovation. Now, we know now by this time that a basic concepts about intellectual property, we are now aware about that little glimpses that why IPM is necessary, that we have seen.

We now know the different types of IP that there are 8 types of IPs, then we have also understood that how IP and economy as economy are related and now, we will focus on ok what are the different areas which are emerging in IP. When we are talking about a intellectual property management and technology transform, these are the we can say that these are the emerging areas of IP.

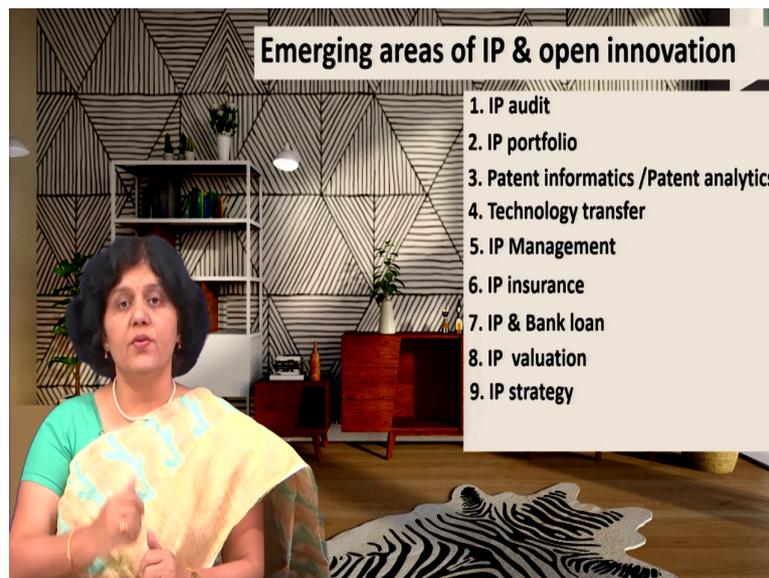
I am talking it in we can say that in Indian context because if we see the other developed nations and their organizations, probably this terminology of emerging areas of IP may not be applicable to IP management and technology transfer because this is something very efficiently managed or they are probably I can say that much more at advanced stage of IP management.

But in India we can say and I can say this confidently that our Indian organizations are still learning this IP management ok because the case studies which I have conducted, I can clearly see in the big gap, it been the especially I have done my studies in electrical engineering sector and I have seen that there is a big gap between the organizations from India and organizations from the developed nations.

So, I can confidently say that yes there is a big gap in IP management considering this two we can say the types of organization Indian and the which are from the developed nations.

So, but along with this IP management and technology transfer there are few emerging areas we will just go into that and a few probably we will have to go into the details and we will go accordingly into the next sessions next modules we will cover that particular thing. So, let us start. So, what are the that modules you can see here there are you can check IP audit is there

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Then there is a you can say that IP portfolio is there then you can see patent informatics is there then you can check here that there is a technology transfer IP management IP insurance IP and bank loan then there is a valuation and then there is a IP strategy. Now, when we can look into this particular types actually that ok IP audit IP portfolio patent informatics and all that thing what we will do now we will go into the individual that is what is IP audit what is IP portfolio we will try to understand that particular thing.

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So, now when we are talking about this IP audit you can just check that what exactly it is IP audit when we are talking. Now, what happen that when we are talking about a intellectual property management it is a one of the system one of the we can say the part of the organization and when we are going to do the analysis or when we have to check whether our IP system is perfectly managed or not ok.

IP system is perfectly managed or not this is our IP management system, but again this IP management system whether it is going correctly or not ok. So, for that we will use a technique that is a IP auditing and there what we will check we will do the check on the processes and the performances.

So, you can say that ok this is the systematic review of the all different types of intellectual properties then related IP agreements whatever may be there and then the complete portfolio we can say that we are going to systematically review that particular thing.

So, we will also check the performance of each process whatever it is related to IP management and then we will use this particular understanding that how exactly we can do the management of particular IP how we can take a decisions related to the that access of that particular IP and how we are going to utilize that particular IP effectively.

So, we will go into details of this IP audit in a new next modules actually. So, that and also we will share a few case studies. So, that you yourself can use the IP audit framework which we will share for the analysis of the IP system may be of your organization may be of your lab or may be if you are a individual creating IP may be your start up you can utilize that particular thing ok.

So, we can say that this IP audit is made to that is a what are the best practices related to IP management probably you can identify if that IP system is following that and if it is not up to that level it will help IP auditing will help you to implement that particular best practices ok. So, this is about IP audit details we will see in the upcoming module.

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Let us move further and we can just focus on the IP portfolio. Now, when you see this IP portfolio, we have heard about a wealth portfolio probably. So, where what exactly whatever your assets may be related to that maybe if you are investing in stocks or something like that you just have a complete record of that particular thing.

Now, here when we are talking about a intellectual property you can see here that whatever different types of IPs are owned by organization or a start up or an individual we can have a complete data about that particular thing. And we can do the we can say that understand that ok this is my IP portfolio and then you can take decisions related to management of that IP portfolio.

This management of IP portfolio is another separate area and it is a very we can say the interesting area to get or to get the revenues from that particular to get to get the revenues

from that IP portfolio this it is effectively used by organization. Let us move further and we can just check about the next area you can say that patent informatics or patent analytics.

Now, this patent informatics or analytics what exactly it happened here that we collect some data probably we use means various resources, but you can say that this data collection may be from specific like area whatever you have decided related to that particular domain related to that particular problem objective whatever it may be we will collect the data.

Then we will use; obviously, the resources like various different patent databases, patent databases and along with there are other resources whatever are available. Because when we are doing the patent analytics, we are not only dependent on a patent database, but other resources where you will get the data like maybe research publications and all that also we probably have to go through.

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Because we get little more information from that particular resources also so, all this data is collected and then this data is analyzed ok. So, that is what particularly the patent informatics is we have dedicated one we can say the module that how this patent analytics will work and also, we have shared with you the case studies that how this patent analytics is used for the IP management. So, we have shared with you some case studies regarding this and this effective use that how exactly patent informatics works ok. So, that one module is already scheduled in upcoming sessions.

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Let us move further and we can just focus on the technology transfer and we have a title of our course itself is IPM and technology transfer. So, what happens in technology transfer actually that technology as name suggest technology is transferred from one, we can say

owner we can say to another. So, that may be individual entity whatever it may be and it is expected that whenever this technology is transferred that will be further developed.

So, that is expected whenever we are talking about technology transfer, we are expecting further development of that particular technology and then there are different ways of technology transfer. Furthermore, concepts related to technology transfer there are different agreements we have to execute when we are doing the technology transfer all this you will see in upcoming sessions ok.

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Now, let us move further and we just focus on IP management. Again, you know that this is a title of the course is IP management and technology transfer and we are obviously, now going into the details further about the what is IP management what is IP management system, what

are the different models for that IP management then how this IP management activities are conducted in the organization.

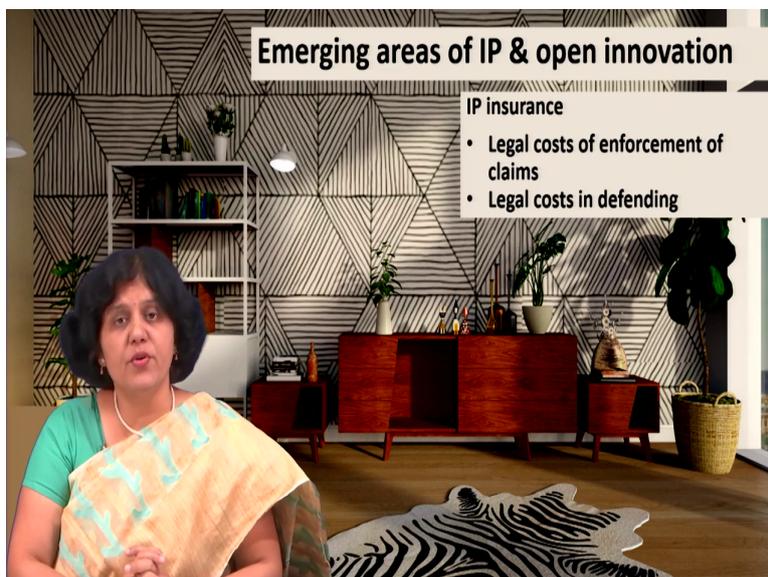
How I can check my IP management is going perfectly or how I can if there are any mistakes if there are any errors if it is not up to the mark what are that hygiene procedures to according to that management, we say that hygiene procedures are there how we can follow that particular thing.

So, that all we are going to in the next upcoming sessions we are going into details about that particular thing. So, that what happened that suppose you are individual also and working in a lab maybe you have a few patents, but you can start with that as a starting patent and then you can if you manage your research activity probably your IP portfolio will be rich in a short time if you use effectively the IP management techniques.

Or if you are a academic organization when you will use this IP management techniques probably your IP portfolio of a academic organization wherever you are associated where wherever you are associated probably it will flourish and obviously, that will help you in rankings and all ok.

So, this is the exactly what happens in IP management is we are taking the life cycle of that IP right from its inception to final commercialization we are trying to control that particular thing we are trying to manage that particular thing. So, we will go in a details about this particular thing in a upcoming modules.

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Now, we will move further and a few interesting areas like a IP insurance now you can see here we have heard about a vehicle insurance, shop insurance or we have that personal we can say the insurance is there and all that thing what about IP insurance. The quickly I can just say that there are legal costs associated with a enforcement of claims with any unfortunate event offer and you enter into the litigation the cost of litigation is very high.

And therefore, to manage that probably you will require a fund and probably IP insurance if you have done that will help you to manage that particular expenses which you have to do for that particular litigation or maybe sometimes there is a requirement for a defending your particular invention you will require that arrangement the expenses for that particular thing obviously, it is a legal expenses.

So, whatever that legal expenses will be there that will be taken care by this IP insurance and yes in India we have a companies which are giving the IP insurance this is we will not go in details of that it is a again the another interesting big we can say the area for the that emerging area of that IP ok.

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Now, let us move further and we will just check about the IP and bank loans. So, you say ok IP and bank loan how it is connected whether we can get a loan from bank based on that IP yes, it is correct you can get the loan against your IP may be patent, may be trademark, whatever it may be and you will keep it as a collateral you can mortgage that particular thing and you can get the funds.

And that funds you can utilize for maybe if you are a startup this will be a good source for fundraising or if you are developing your product is develop you are in a manufacturing stage

and you require fund then you can use that particular fund by giving IP as a collateral ok. So, we will not go in details of that we will, but we should know that yes against IP you can get the loan.

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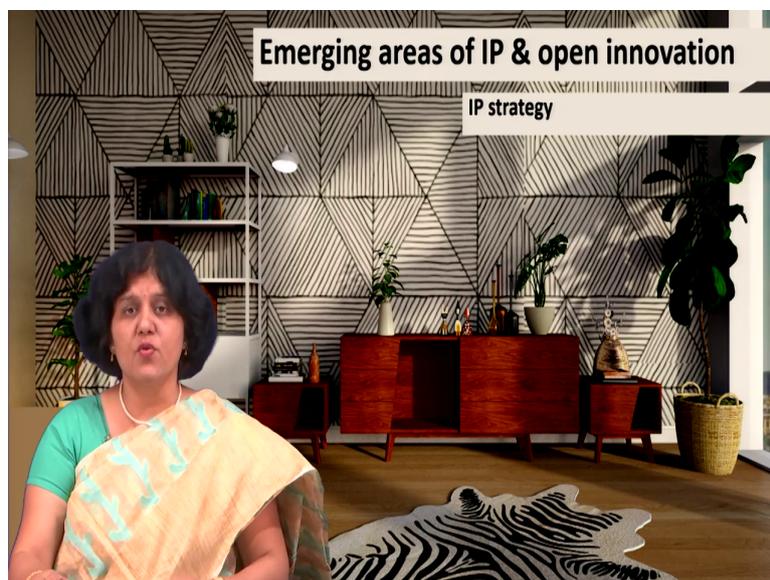


Now, next is like a IP valuation. So, we just seen that ok have we have got the idea ok [FL] you can get the loan against IP what is the valuation how the value is decided of that particular IP.

So, there is a different domain actually this is a very important domain you can say very interesting domain where valuation of IP is it may be any type of IP there are eight types of IPs probably trade secret is like a obviously, as a secret secretly probably that we have to value that definitely that will be valued. And accordingly, the trade secret transfers happens with non-disclosure agreement and all.

So, we will not go in details of that we, but we should understand that yes IP valuation is the important domain with techniques of that IP valuation we can value the IP against which then maybe during acquisition merger you can use that particular valuation you require during insolvency you may require bankruptcy insolvency maybe during the fundraising already have seen and then there are various reasons at that time you will require the doing that particular IP valuation and yes there are techniques available ok.

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Now, understanding the last like IP strategy so, we know that ok IP management is there definitely there is a IP strategy also because simple right from IP filing up to portfolio management up to the acquisition mergers commercialization of IP everywhere we require the strategy and that particular IP strategy then if unfortunate event happened then there is a litigation. So, how to handle that litigation related to IP. So, there are also strategies.

So, whole this whatever the strategy part is there related to IP again this is a another we can say the three or four credit subject you can say just like a valuation if we go into details of that that is also you can say that either two or three credit subject it will be.

So, that much we can say the content or that much we can say the activities are happening in this particular domains actually a very sub-domains you can say of the intellectual property and we can take a means here we are not going into details of IP strategy, but we are just getting ok these are the emerging areas.

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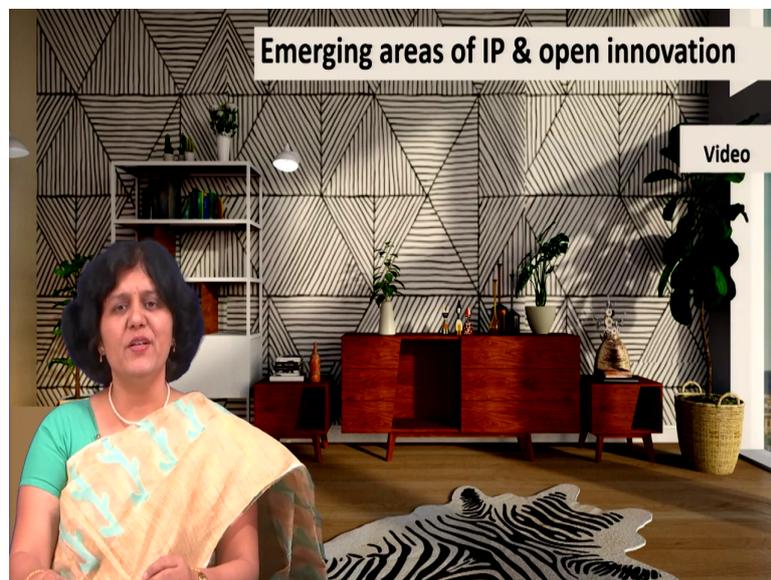


So, if I want to summarize that particular thing you can say that there is a IP audit you can say then there is a IP portfolio, then there is a patent informatics or pate informatics or patent

analytics is there, then there is a technology transfer then you can say there is a IP management, IP insurance then IP bank loan then IP valuation is there and a IP strategy ok.

So, these are the emerging areas and we are focusing means in upcoming sessions we have focused on IP auditing, we have also given you idea about the patent informatics then; obviously, technology transfer and IP management we are going into details of that particular then we will give little bit we can say the little bit idea about other emerging area wherever it is possible ok. So, this is all that is a emerging areas.

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Now, let us take a break and watch a small video here and relax ok enjoy this video.

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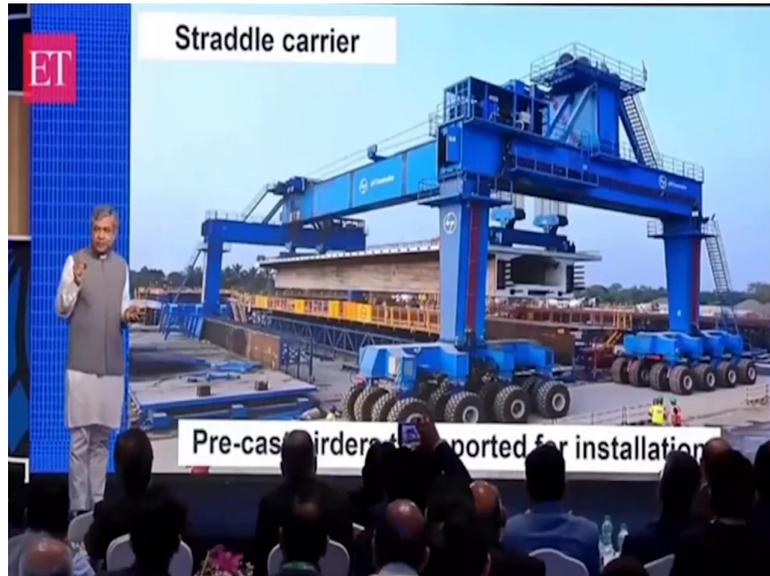
I will come to the bullet train friends, very complex design very complex piece of engineering very complex project, but the progress is phenomenal. Progress is phenomenal by now we have completed 149 kilometers of pillars recently Japanese very senior people came from the Japanese prime minister's office and they were surprised at the pace and quality of the work and some of the innovations that we have done in this construction project.

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This full span casting yard the Japanese actually said that they would like to replicate this kind of thing in their construction technologies. Huge machines most of these machines first machine we learned from outside, but then all the machines we build designed in the country.

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Large construction large very very large totally new way of working again prime minister said that do not look at this project as a construction project think of this project as a project which changes the way of working in the country that is the way that is the target is set before us.

Hm hm.

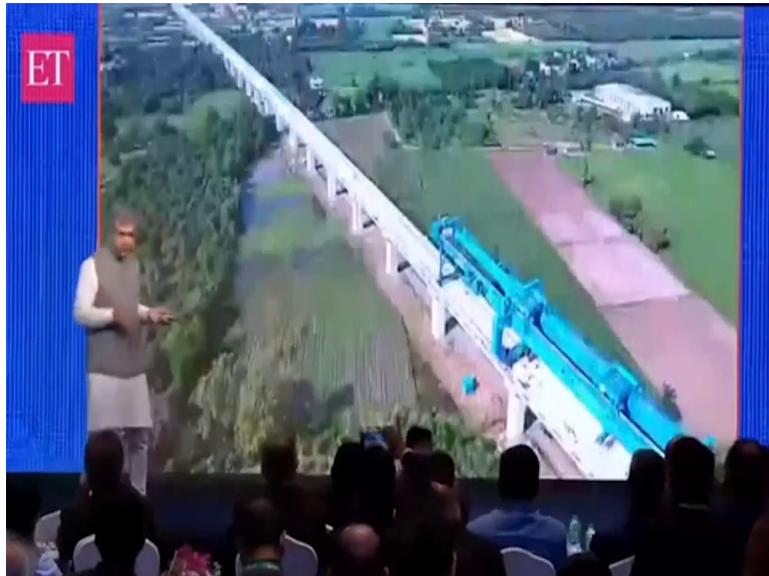
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This entire construction process like once the pillars are done then this large machine picks up a girder each of the girder is like 1,100 tons, 1,100 tons picks it up puts it on this transporter this is the transporter 216 wheels it has. Then this transporter goes ahead it will go up to here then this launching gantry this launching gantry will pick it up and put it on the gap between these two pillars.

So, it is a very rapid construction very fast paced construction and since the country did not have this kind of India never had this kind of technology.

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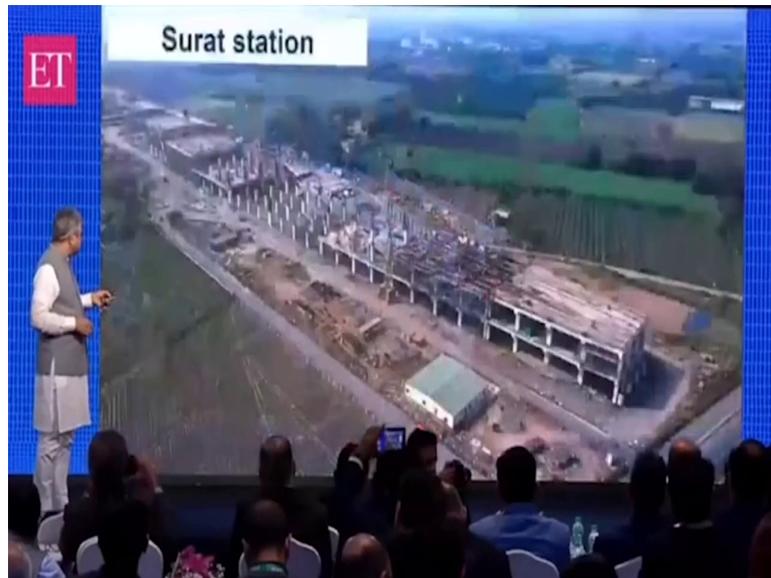
With this project this new construction technology has become part of our part of our  
playbook.

Hm hm.

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Stations, bridges on the rivers everything is going on at a very very torrid pace.

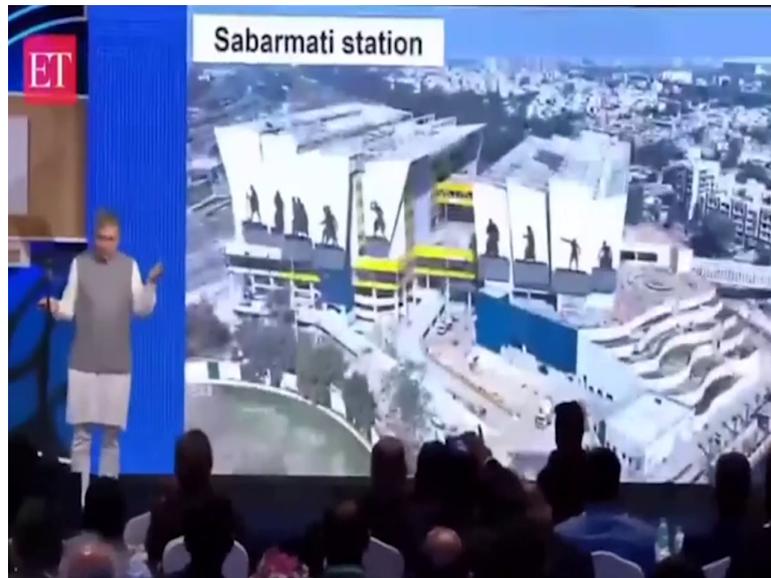
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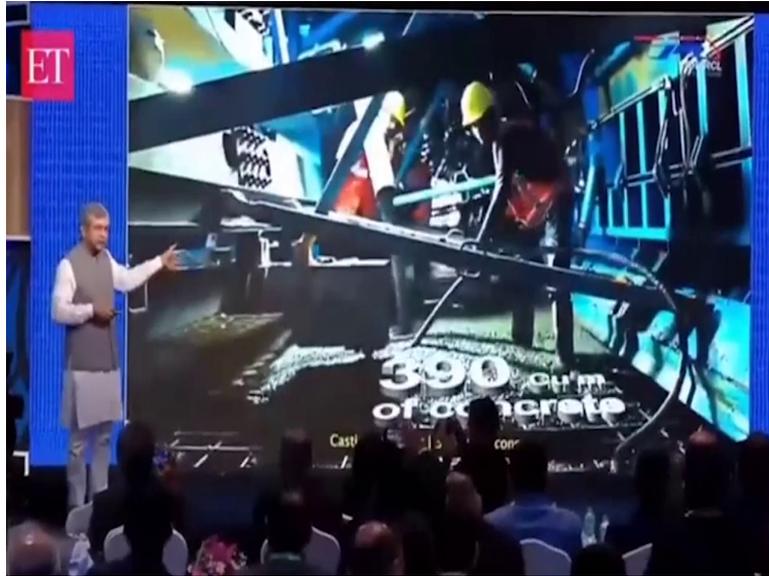
Anand station Sabarmati station this is almost now 80 percent completed small video clip of construction activities large girders.

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Now good thing is many of these girder casting structures.

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Which we initially imported now these innovations have happened in places like Rajkot places like Surat places like Sriperumbudur.

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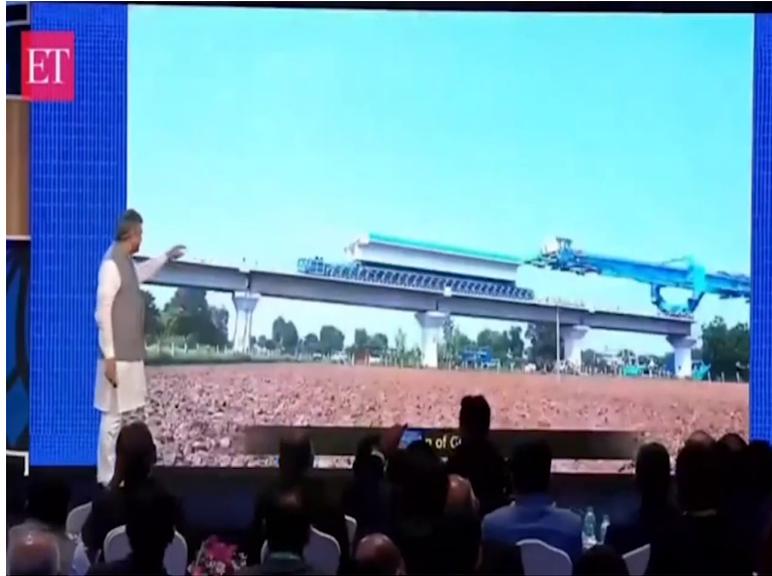
And today these people have started getting export orders for the casting equipment already we have within a short period.

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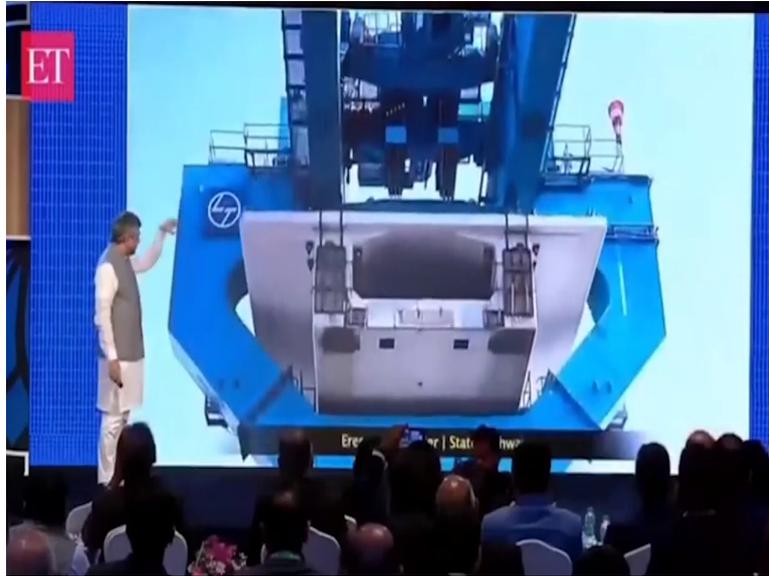


We have exported about some 80 odd consignment of these equipment this is phenomenal I mean look at this construction activity I feel so, proud of it.

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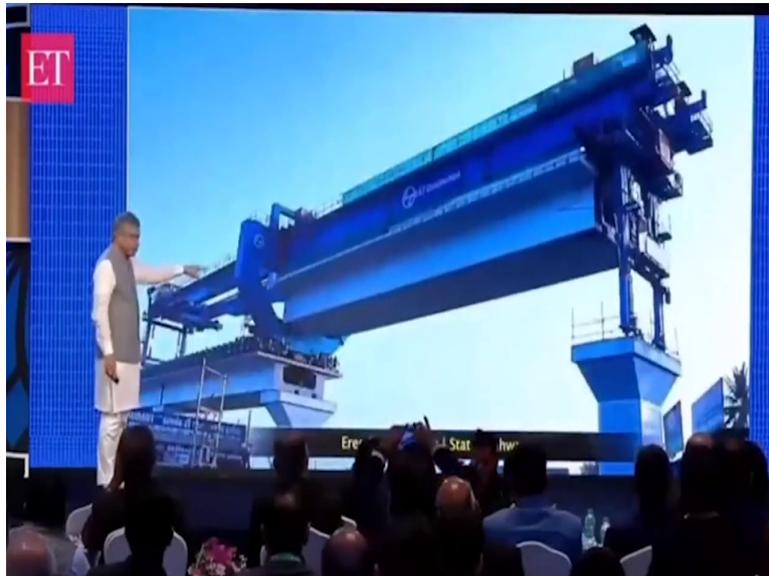


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This is the transporter going up there the launching girder fix it up.

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While there is traffic moving down below without any hassle coolly this it is fun I invite all of you to go and see this site works at its phenomenal you will feel so, proud of what our engineers are doing what the vision of prime minister has given to us. I hope you enjoyed the video and now what we will do that we move towards a open innovation actually.

So, we have seen ok these are the IP emerging areas and then there is a protection and because of that ownership is created and some particular person is owning that for particular creation actually. And then there are different types of IP and all now we will move towards a open innovation which is little bit different where the means innovation where the ownership is like a little bit we can say the rules related or arrangements related to the ownership are relaxed or it is like not that stringent like in the IP we will go into details of that.

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Now, when we are talking about a innovation we know that there are two types of innovation open innovation and there is a closed innovation. Now we will try to understand the concept about this open innovation and closed innovation and then we will go into details about the open innovation.

Now, what is the meaning of that open innovation actually when we are talking about innovation, we are creating something new it may be a business model development or it may be pure R and D activity where, some product process related technical development is done whatever it may be.

So, what is going to happen when we are doing the innovation something new is created and; obviously, that will give us a competitive advantage ok; now when it is giving you the competitive advantage probably, we feel that it should be kept closed or it should be known to

only me because I have created that particular thing that security wise or that feeling of protection tends to take us towards a closed innovation.

But when we see the current scenario where technology is developing very fast at that time if you choose this closed innovation, there are some disadvantages. Now, what are the disadvantages that if technology is developing in a fast way or fast mode and if we could not match with that pace probably, we will be the loser actually.

Now how we can catch up with that speed then for that we have to take help of others. And if we take a help of others; obviously, some sharing will be there some kind of a we can say the collaborative activity will be there and through that collaborative activity; obviously, we are creating something.

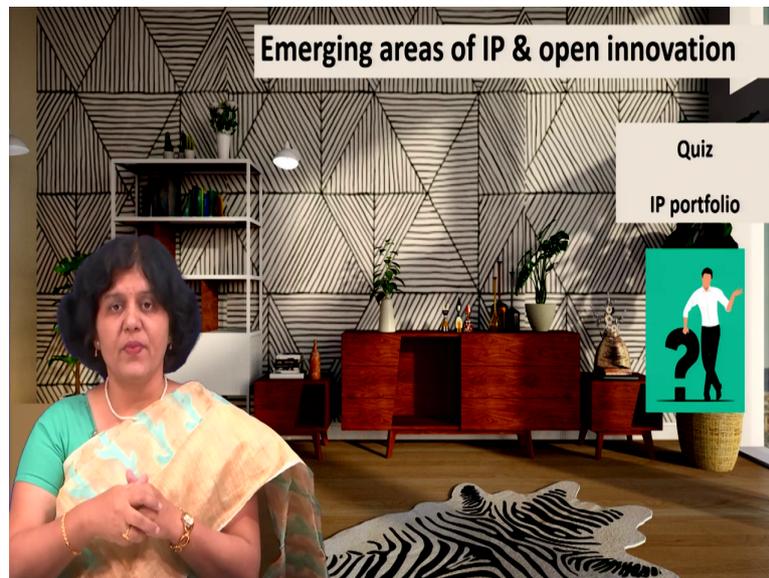
So, advantage is that in short time we are coming up with the solution, but the disadvantage in one sense is like a you are opening it now there are different ways to control that particular thing, but when you are not controlling alone and some other parties are involved in that then it becomes a open innovation ok. So, closed innovation and open innovation in close it is completely closed it is like a in my whole control if it is a open something is like a make it is like a open to other party.

Now one more thing when we talk about open innovation it is not necessary that it is completely open there can be a different levels of open innovation means maybe 50 percent open 50 percent close or 30 percent open 70 percent close and then there are different ways for the open innovation. Different ways with which we can do the technology sharing and there are that ways actually.

So, we will go into details of that maybe in the few minutes that what are the different ways by which we can do the open innovation, but this is the concept open innovation and closed innovation in closed innovation everything is kept close. And in open innovation few things probably we will open it or maybe 50 percent open it or sometimes it is 100 percent open. So,

it is depending on the objective of that particular project that will determine whether you will go for that closed innovation or open innovation ok.

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With this we are coming to the end of the session. So, last point that is a quiz time. So, I would like you to write down about what do you understand by IP portfolio in your you can write in your conceptual understanding I am looking towards it may not be like correct wording and all just what do you understand by IP portfolio put it into the comment box. And let us see what is your understanding about that particular word. So, with this we are coming to the end of the session see you in the next session.

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**Emerging areas of IP & open innovation**

References :

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Logos: Swayam, NPTEL, IIT Bombay

Thank you.