

Innovation, Business Models and Entrepreneurship
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Lecture - 31
Management of Innovation: Creation of IPR-I

Welcome friends, so far in this course we have discussed various aspects of innovation. We discussed how to market innovation, we discussed how to build business models on your innovation, how to diffuse innovation, how to scale up your innovation.

But there are always possibilities that you innovate and somebody else may take the benefit of it. You put your minds in getting new ideas developing prototypes, developing business models on those ideas, but people beyond your reach, they take your benefit and therefore, now we are going to discuss about very popular terms, which are known as intellectual property rights. We all must have heard about a term known as patent, which is one type of intellectual property right.

So, in this session and in this week, we will discuss various types of intellectual property rights, how to create those rights what are the myths related to these things, and how to leverage, how to create wealth with the help of your intellectual property.

So, in this session we first start with 3 very common terms which are available in our academic discussion. And soon you will also understand that though these terms look similar, but there are differences in these terms, and these are intellectual capital intellectual assets and intellectual property.

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Setting the Stage

- Intellectual Capital
- Intellectual Assets
- Intellectual Property

Agriculture

↓

Manufacturing

↓

Knowledge

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And we see that how we move from intellectual capital to intellectual assets, and then finally, we create intellectual property based on those assets. Now, the very first term which is intellectual capital, earlier we used to talk whenever we discuss anything related to intellectual, it means patents only, but slowly and slowly we all have realized that we are moving from a different kind of environment of wealth creation, which was initially linked to your land, which was mostly agriculture, then your plant and machinery came into picture and you started creating wealth using manufacturing facilities.

Nowadays we see we create wealth because of our knowledge. In India particularly we know that large contribution of the development of Indian economy is coming from the IT sector, and IT sector is a very vibrant example of knowledge dominant industry. So, slowly and slowly not only in India, but globally we see that we are moving to knowledge based economy, knowledge has become the most important tool for wealth creation, and therefore, we start talking of these terms intellectual capital intellectual assets and intellectual property. Because the word intellectual means the power of your mind, and power of your mind is also representing a form of property.

Earlier the meaning of property was considered with only the tangible assets, but nowadays in the present circumstances we consider intangible assets are also equally powerful. And therefore, we are going to discuss intellectual capital intellectual assets

and intellectual properties as the important form of the knowledge dominant economic development.

So now the first important term which is available to us that is intellectual capital.

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The slide features the title "Intellectual Capital" in a large, bold font. To its right, there is a handwritten red note: "= Value of firm - proceeds of tan assets". Below the title, there are two bullet points. The first bullet point is circled in red and reads: "Sum total of all knowledge in an enterprise, as it resides in the minds of its employees, which can be leveraged to create wealth." The second bullet point reads: "In the broadest sense, IC is what is left of an enterprise after it has been stripped off all its tangible assets, such as land, building, machinery, inventory and cash." At the bottom of the slide, there are logos for "IIT ROORKEE" and "NPTEL ONLINE CERTIFICATION COURSE", along with the number "3" in the bottom right corner.

Now, intellectual capital is the sum total of all knowledge available in the organization. Whatever complete knowledge set is available in an organization, that is known as intellectual capital.

So, the knowledge resides where is what is the place where knowledge resides, the knowledge resides within the minds of your employees. Your employees they are the storehouse of the knowledge and as an organization I need to leverage this knowledge to create wealth. So, that is very important part for any organization, and therefore, you can relate this discussion to concepts like TQM to concepts like worker's participation in management, to concepts like empowering your employees so that the knowledge which is residing in the minds of your employees can be leveraged to create wealth. So, that is the simple idea about this concept of intellectual capital.

We need to recognize the first important thing is, we need to recognize that all employees in my organization, they are keeping some kind of knowledge. And therefore, we need to leverage that knowledge for the benefit of the organization. So, this is the first important

thing in intellectual capital, that it is the sum total of all the knowledge which is there in the organization.

Now, to express this concept of intellectual capital in simple words, you can understand that intellectual capital is what is left of an enterprise after it has been stripped off all its tangible assets such as land building machinery inventory and cash. So, intellectual capital is equal to value of firm minus the sale proceeds or the proceeds of tangible assets.

So now, I have a company and I want to sell that company to somebody else. Now the value of the company which I expect is let us say 1000 [FL] rupees, and out of 1000 [FL] rupees, the cost of land plant machinery, and the raw material which is there the finish material, which is there the working process material, which is there or cash available in the accounts receivable, that all accounts for 500 [FL] rupees. The value of the firm is 1000 [FL] rupees, 500 [FL] rupees is the value of all these tangible assets. So, the value of intellectual capital is 500 [FL] rupees.

Now, you see more and more such type of transition are happening. Because this is very important for all the young entrepreneurs to understand, we are developing a new startup, we take this startup to a particular level, and then we want to exit from that startup and when we are leaving that startup, when we are exiting from this startup. So, we are actually selling that startup to some bigger organization and when we are selling that that start up to a bigger organization, this is what the value of the firm.

And in this case normally because these startups are it based startups, so, you will not have much physical or tangible assets. You will not have land machinery and other kind of inventory and cash etcetera. So, most of the value in normal cases it can have a significant proportion of tangible assets.


But nowadays in the current scenario, the valuation of startups is mostly because of their intellectual capital. So, traditional organizations we can say to some extent, that the component of out of these to the intellectual component and the tangible part of the valuation of the firm, the proportion of tangible part was more, but nowadays as we are moving into knowledge based economy, and in the current scenario of startups, you will find you will see examples all around us that these examples are full of intellectual capital valuation.

So, the tangible part is much less and non-tangible part intangible part is much higher. So, therefore, the intellectual capital becomes very, very important that how much intellectual capital and organization possess.

So, what it includes intellectual capital it includes knowledge and skills of employees.

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Intellectual Capital

- Includes Knowledge and skills of employees;
- The processes, ideas, designs, inventions and technologies utilized by the firm; and
- The relationship firm has developed with both customers and suppliers. 
- Includes software, business methods, manuals, reports, publications and databases.

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So, your employees are skill full, they are knowledgeable in a particular technology so, that is the first important source of your intellectual capital. Then the processes ideas, designs, inventions, technologies used by the organization that is another important component of your intellectual capital.

Now, other important thing of intellectual capital, and for some of the organization, this becomes a very important part of their valuation. The relationship organization has developed with it is customers on one side, and it is suppliers on the other side. So, that relationship because the kind of relationship, firm develops that is very, very important, because your success is always dependent on your relations with your vendors and your customers.

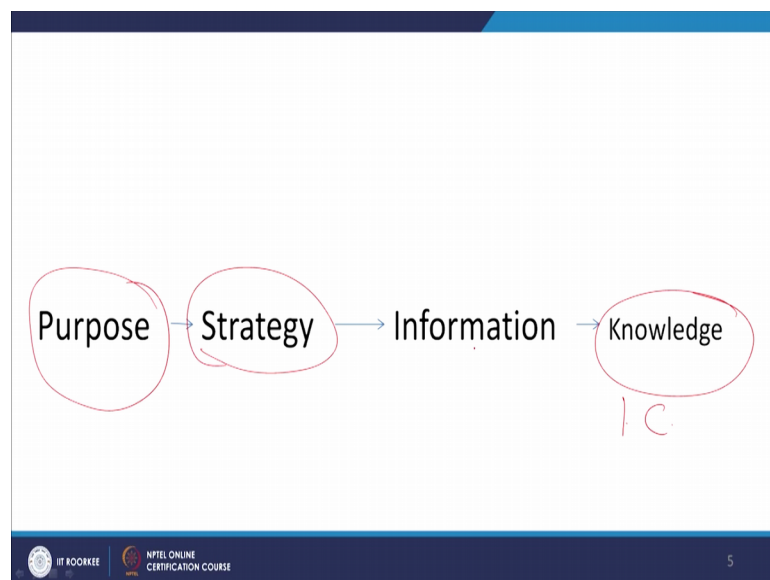
Nowadays the environment is so complex that no organization can say that I am successful because of me alone, rather the success is always attributed to team. And in this case team includes your suppliers, and your customers so, therefore, what type of relationship, the firm has developed over a period of time with suppliers and customers.

That is also a very important source of intellectual capital. And this gives a lot of valuation to the organizations.

Then it also includes the software's, business methods, the manuals, the reports, the publications and databases available with the organization. So, all these things are the components, elements of your intellectual capital. So, that is one very important thing because this is going to give you the value of the organization. More intellectual capital you possess, higher the value you will have of your organization.

Now, how this intellectual capital is created? The process of creation is very important.

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Because if you see I have some knowledge, I am in IIT I have some knowledge that how to teach in a class. And I have a very high ranking teacher in the organization, and all the students love my classes. But this knowledge that how to teach how to teach effectively to a class of 100 students may become totally irrelevant may become totally irrelevant for a manufacturing organization where I need to supervise at the shop floor level.

So, the intellectual capital of one organization may not be having any kind of value to other organization. So, point is that the intellectual capital is directly related to the purpose and strategy of the organization. Otherwise, I may have lot of information, and then it may become a kind of noise, because if it is not matching with the requirement of

my organization, if it is not matching with the strategy of my organization. So, whatever information I possess that is a kind of noise information noise I can say.

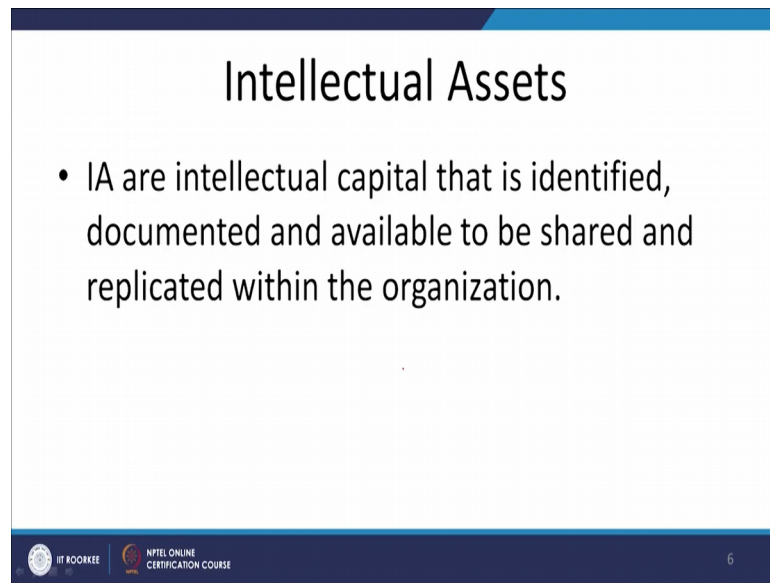
But if that information is matching with the purpose with the strategy, then this information becomes knowledge, and this knowledge is your intellectual capital. Otherwise we all may have different kind of information; if I am in a factory, which is producing turbines, now if I know lot of things about game of cricket, if I know lot of data about football.

So, my company which is producing turbines, and I have lot of statistics available with me I remember all the records of Sachin Tendulkar, I remember all the records of Bran Lara, I remember all the records of Virat Kohli, but that is information noise as far as my company is concerned. So, whether, but if I am in a sports company if I have into sports so, same information becomes the knowledge.

So, I need to see that whether the information which is available with the employees. This is in line with the strategy and purpose of the organization, then only this formation becomes intellectual capital otherwise it will not. Therefore, intellectual capital is very much inform a specific, and not only information is specific this is organizationally specific. The intellectual capital of one organization which is very high intellectual capital for this organization may not have any value for a different organization. So, you need to understand that your knowledge your information is matching with the strategy and very objective of the organization or not.

Then we come to the second important term that is intellectual assets.

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Intellectual Assets

- IA are intellectual capital that is identified, documented and available to be shared and replicated within the organization.

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Now intellectual assets is related to intellectual capital. As we discussed, that intellectual capital is something the knowledge which is in the minds of the employees.

Now, you know every evening your employees are leaving the organization, they are going to their houses, they are going to their place of stay, and next morning they come back. Now there is always a risk associated, whether a particular employee will come tomorrow or not, if he or she comes then that capital is coming back to your organization. But if that employee does not come back next morning so, that capital is not coming back to your organization.

So, therefore, we need to convert intellectual capital into intellectual assets so that the leaving of employee or sometimes even you can fire some employee, if the employee is not fitting into the schemes of your organization, employee is not behaving in the order of your organization, then you may need to fire some employees, and in this case if that employee is fired if that employee is leaving the organization on his own, in both the cases you will lose intellectual capital.

So now we need to think that how to develop assets on that intellectual capital. So, what we are saying that intellectual assets are intellectual capital that is identified documented and available to be shared and replicated within the organization. The important thing is that whatever capital is available with individuals, now you start creating documents of those capital you are developing reports you are developing manuals, you are trying to

create those manuals so that it can be shared, it can be distributed to other employees, employees of other units of your organization.

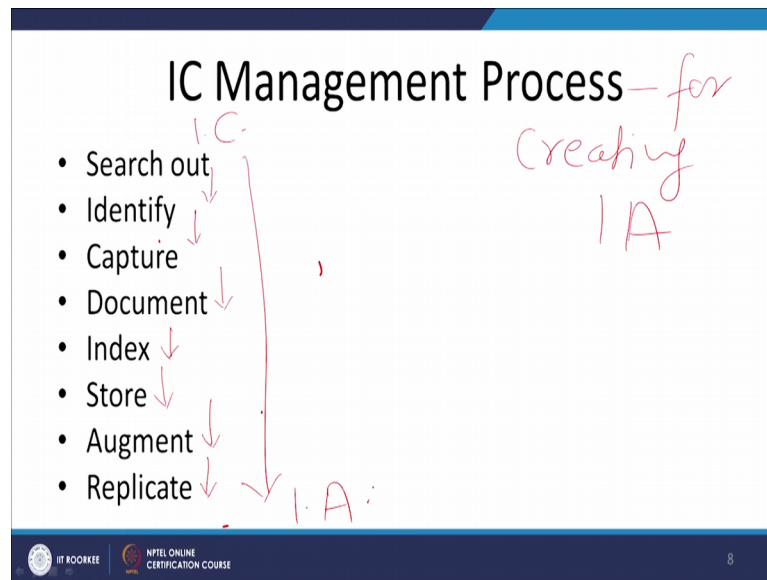
So, that you can actually take benefit, even if employee is not with you in that case the capital remains with you. So, therefore, the intellectual capital becomes intellectual assets, when you are documenting it when you are replicating it when you are sharing that document with the other employees. So, you are starting leveraging the capital so, that is intellectual assets

Now, because as I just mentioned, the organization does not own any employee employees do come on their will and employees can leave on their will. So, no organization unless until you follow the system of bonded labors, which is not possible in the present environment. So, no organization can say that I own my employees. So, employees are free birds, they may come, they may go.

But the organization does own the intellectual assets, they create why a part of the organization. So, whatever knowledge is skill these employees have developed, whatever capital these employees have developed as part of your organization, organization certainly has a right on that capital. And therefore, the concept of intellectual assets came into picture.

Now, what is the process of creation of intellectual assets? So, we call it as intellectual capital management process.

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So, that for creating intellectual assets, with the help of this process we are creating intellectual assets.

Now, first thing is search out, you search that what type of knowledge what type of information is available with employees. So, that is the first step is scanning of your employees minds. So, you have well defined tools that how do we deploy this kind of scanning tools.

Once you have scanned, you have identified that what knowledge is available, what type of information is available, maybe for an example that your marketing guy of your company, that marketing guy has knowledge he has huge database of various customers which he or she has developed over a period of time. And in that database that employee knows that what are the typical behavioral issues with different customers.

Like, for an example, I am a marketing manager of company like lumix, which is making illumination solutions for various automobile manufacturers. Now I am supplying my products to Maruti, I am supplying to TATA motors, I am supplying to Hyundai, and in those companies I interact with a particular purchase manager.

Now, these purchase managers or the requirements of the companies something are well defined, but something are not properly spelt out. You know with your experience that, what are the expectations of these customers. So, this type of knowledge is available

with that marketing manager. So, you need to identify that how to document, how to capture this knowledge which is available with this marketing manager.

So, that is the identification that yes there is a special knowledge special information available with this marketing manager regarding typical behavioral issues of various purchase managers of different different organization. And then you start capturing those knowledge you create templates; you create some kinds of forms, where these employees write about various information which is available with them.

Then you properly document them so that it create it becomes a kind of manual or something like that so, that is the documentation process. Once you have documented because different types of knowledge for one particular issue that the behavior of your important customer. So, different marketing managers may be handling different customers, and they all will give their inputs with respect to this idea about the behavioral issues of your important customers.

So, then you make one index so that it is easy to search for that database, and then you store that so that it is available at a common location, from where all your other employees can retrieve this knowledge, now it has become the knowledge. So, other employees which is which can use this available document. So, you store it in your normally, earlier we used to have files, which are kept confidentially in the central repository of the organization. But nowadays because of internet because of it solutions available in the organizations, we keep all these type of documents at our server for easy access across the organization.

Then we keep augmenting, we keep improving those documents with more and more knowledge, regularly coming into that and we try to make a replication we try to leverage this intellectual asset for the creation of more wealth out of it. So, that is the replication if some knowledge is available from some of the marketing manager so, we try to replicate those processes, we try to create more such type of examples so that we have more and more successful cases with us. So, that is the process of replication or that is the process of increasing the number of your customers.

So, these are different steps, in the process of intellectual capital management process, and finally, when we are doing all these things we are converting actually our intellectual capital into intellectual assets. So, here it is intellectual capital, and finally, when you are

replicating it becomes intellectual assets. So, that is a very simple process, but it is important that we should have a very regular system of converting our intellectual capital into an intellectual assets. Because if a potential employee if one employee which is possessing huge amount of information, because all employees I believe they have huge amount of potential.

So, if any employee is leaving the organization without helping us in creating the intellectual assets. So, that is a big loss for the organization. That much capital we are losing, and as a pure businessman as a student of business management, we should be very, very careful that we should always add one our capital, never lose the capital. So, therefore, it is very important that we should be able to develop intellectual assets regularly from our intellectual capital.

Then the third important type of term is intellectual property. Now intellectual property is something which you have protected. You created, you have intellectual capital, intellectual capital is now converted into intellectual assets, but anybody can take your asset.

So now you want somebody to guard your assets so, that is the purpose of protection. So, when we are protecting our intellectual assets, that is intellectual property.

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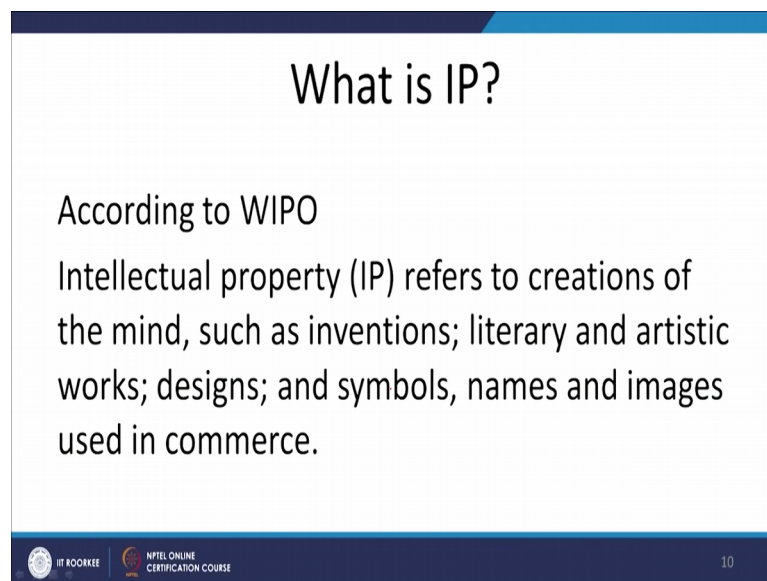
Intellectual Property

- WHAT YOU PROTECTED.
- IP is intellectual assets that are protected under applicable laws.

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So, intellectual property is intellectual assets that are protected under applicable laws. So, different governments, different countries, they have different rules regulations under which we protect our intellectual assets. As I mentioned in the beginning of this session, patent is a very popular type of intellectual property right, and we all use that word very commonly or you can say as a synonym of intellectual property right. If you talk to layman so for that layman, IPR and patents can be used interchangeably. But we will see that there are various other types of intellectual property rights.

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The slide features a white background with a blue header and footer. The title 'What is IP?' is centered in a large, bold, black font. Below the title, the text 'According to WIPO' is followed by a definition of Intellectual Property (IP) in a standard black font. The footer contains logos for IIT Roorkee and NPTEL Online Certification Course, along with the page number 10.

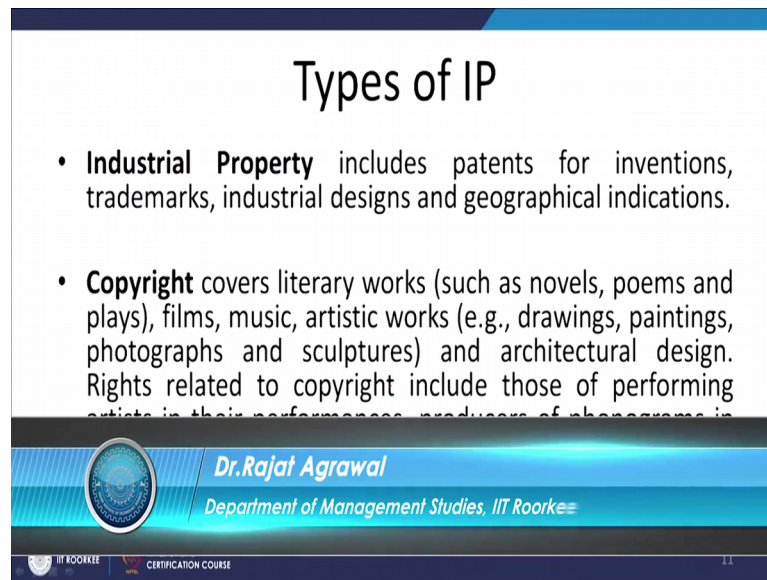
What is IP?

According to WIPO
Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce.

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According to WIPO, which is world intellectual property organization and according to them, intellectual property refers to creations of the mind such as inventions, literary and artistic works, designs, symbols, names, images used in business. So, that is intellectual property as defined by the global body which is governing the research development, and all activities related to intellectual property domain, that is WIPO.

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The slide is titled "Types of IP" and contains two bullet points. The first bullet point is "Industrial Property" which includes patents for inventions, trademarks, industrial designs and geographical indications. The second bullet point is "Copyright" which covers literary works (such as novels, poems and plays), films, music, artistic works (e.g., drawings, paintings, photographs and sculptures) and architectural design. It also mentions that rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and performers in their recordings. The slide footer includes the IIT Roorkee logo, the name "Dr. Rajat Agrawal", and the text "Department of Management Studies, IIT Roorkee".

Types of IP

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So, in our next sessions, we will discuss in more detail that what are the different types of IP, there are 2 important types industrial property and copyrights, which we will discuss in detail in next to next session where we are going to discuss only types of IPR. So, with this we come to end of this session.

Thank you very much.