

**NPTEL**  
**NPTEL ONLINE CERTIFICATION COURSE**

**Course**  
**On**

**Human Resource Development**

**by**  
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**Lecture 49: Intellectual Capital Management**  
**(Contd.)**

Okay, so welcome to the next session of intellectual capital management.

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**Session 4**

**Valuation of Intellectual Capital**  
**Assets**

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And you remember we talked about that how we are going to measure and then we talked about the various models in session 3 as well as session 4. And then we see that how various researchers are using different kind of indices starting with the technology broker then we have Febis model, then we have used other models like how we are going to use economic value you

did model to understand the organizational performance and how we are going to use market while you did that.

How much values added when it comes to measuring market value of an organization. Since it is inception and then how some companies is physically are used weighted average methods to calculate the intellectual capital right. Now when it comes to identifying various capital and various assets we must understand what are the various assets, different kind of assets that could be measured right.

So in here what we are going to try to understand is that what are the different kind of assets that we have and how we are going to measure it right. So to start with first of all we discuss about various type of assets okay, and then what are the evaluations that is used, evaluation methods that is used for these kind of assets. Because when you are talking about understanding, measuring and creating intellectual capital assets using different capital.

So basically these capitals could be identified into three different kind of assets right. As you remember we talked about intangible assets that is one part which is qualitative. Then we talked about tangible assets which could be quantitative. Basically that is other one to identify the financial measures okay. And that is reflected in your book value that you can see through your balance sheets right.

Then there is another kind of assets that which is invisible, because these kind of assets are usually not known, you need to explore these assets also okay. So when it comes to identifying various kind of assets that is to be valued, it includes three kind of assets that is tangible assets okay.

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## Types of assets

- Tangible assets
- Intangible assets
- Invisible assets <sup>4</sup>



First which I have already talked about okay, then we have intangible assets second, and you know the difference between tangible and intangible assets, so we will discuss about it okay. Tangible is more financial measures, and intangible is non-financial measures. And you know that some of the models talk about that you need to include both tangible and intangible assets okay.

Because tangible assets talk about book value, while intangible assets talk about the market value. But in addition to this tangible and intangible assets we have one more kind of asset which is invisible assets which is different from the two, but it could be also put into the category of intangible assets, but it is little different right. Now you know that assets professional you must understand what are the different kind of assets that a company has.

You may do not have a much a role when it comes to understanding tangible assets, because it is clear okay. But when it comes to exploring, understanding and improving intangible and invisible assets as are professionals you have major role to play. And that is where we want to plan certain interventions to ensure that the index of intellectual capital improves, because it does not only depend upon tangible assets.

So what we are going to discuss here is that these three type of assets one by one, what does it include and how we are going to measure and value them right.

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## Intangible assets

- ▶ Have a relatively unlimited capacity
- ▶ Can be used as in-house, by renting (in licences and franchises), or selling as brands
- ▶ Intellectual capital is intellectual material-knowledge, information, intellectual property, experience can be put to use to create wealth (Thomas Stewart)
- ▶ *Include features such as intellectual property, trade marks, patents, company reputation, and networks, and databases*



So moving up, first of all we will talk about the first kind of asset that is tangible assets. Tangible assets we understand okay. These are basically fixed and current assets like land, equipments, stocks, debtors, bank deposits everything which could be measured financially right. So that is basically a property of the organization okay. So organization has different kind of assets okay, maybe bank deposits, what is the property that it has in terms of lands, equipments, stocks okay.

So all kind of things can be, I mean are going to create an asset provided you are going to quantify them into monetary. So you will be able to calculate the value of tangible assets right. And it is easy because it can be done through traditional accounting measures right. For example, if you look at the balance sheet you can find out the value of different kind of deposits assets tangible assets actually right.

Now you know that, if you look at the balance sheet of the companies which shows assets and liabilities, and if you look at the left hand column, you can see what is the various tangible assets that the company has right. So understanding and evaluating or measuring tangible assets not but difficult because the value can be calculated easily and if you sum it up probably you will be able to create the tangible assets for the company or you will be able to identify provided you have all these intangible sorry tangible assets and you are able to measure them using certain financial measures right.

True accounting procedures which shows the assets and liabilities right so that is the first part that is what we call tangible assets now what is more important for an organization is not

tangible assets which shows the book value of the company what is more important is the intangible assets because not many organizations have made attempt to reflect it on the balance sheet of the organizations right. Now few Indian companies have started apart from another company in developed countries.

So if you look at the second part that is intangible assets that is more important for the organizations because it helps you create better value for intellectual capital and that is how it is going to help you to improve your index of intellectual capital right so when your going to talk about intangible assets it includes what okay it could include everything okay it could include your different kind of capital it could be related to your relationship customers social processes social capital that could be also related to various kind of activities which are mixed in this okay.

So all of them could be a part of what you call intangible assets okay like renting in licenses in franchise so your because if you are going to be an agreement with an organizations for lenience franchises you have created so that is though it could be a strategic move in the part of the organization to create value for them but it also has a value or selling I mean your allow allowing other companies to use your brands.

For example McDonald and other company no you have the franchise in India or KFC's so what you are doing your adopting certain process that is created by them and selling in their names right so that you can create a value for the organization in the end grow right, so these kind of assets are known as intangible assets right so if you look at intellectual capital is intellectual material knowledge basically which is not which is very difficult to measure using certain quantitative measures right like information what is then intellectual property of the organization in terms of products and these kind of things or experiences that people have okay.

So because this is going to creative well it is not only the equipment or the process in these kind of things that is going to create value for the organization but basically the competencies of the people what kind of intellectual properties is created what is your say effort that you made through RND in creating products and process which is going to help you to create wealth so all this is part of what you call intellectual capital right.

It includes like intellectual property trademarks, patents, reputation networks even data bases so if you remember you talked about various components of intellectual capital which creates

market value right I am not talking about book value so everything that is associated with intellectual capital in terms of human capital so you can use various syntaxes and organizational and inter structural capital costumer or relationship capital and then social capital.


All of them could be a part of what you call intellectual capital intellectual assets intangible assets okay so when we are talking about intangible assets the idea is to create the market value for the organization while tangible assets create book value for the organization I hope that it is clear to you the difference between intangible to and tangible assets.

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**Capabilities (invisible assets)**

- Very difficult to value
- Have limited capacity in the short term, but relatively unlimited capacity in the long term (as learning and skill updating necessitated by change)
- *Include features such as skills of individual and groups, organizational routines, and interactions through which company resources are coordinated, successful teamwork, supportive organizational culture, and trust between management, employees, strategic partners, allies*



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Now 3<sup>rd</sup> part that you are going to discuss is invisible assets okay most of the cases organizations do not focus up on invisible assets which may be very important right so when we are going to talk about capabilities of the people the experiences what is there in their mind especially right the tacit knowledge that could be a part of a decolan tangible assets okay which might be put to us create a value for their organize right, now one problem that we see with most of the

intellectual capital majors that they are going to rely mostly on either book value of the company to start with that is traditional major or they are going to rely more on intelligent assets to create more intellectual capital index.

But most of these intellectual capital indexes become part of what you call intelligent assets now part of this should also be included as part of this intellectual capital exercise when you are going to create index you also need to create these invisible assets right something says the tacit knowledge is with the people as in their minds which is not explicit in the form of say in an explicit form say documents, papers, videos or whatever it is right people are capabilities of the organization which is hidden from the way because sometimes it is not known okay may be a part of what you call individual assets okay and they have been an attempt to include these kind of assets as well to be a part but you called market value okay.

So when you are going to talk about capabilities which could be called an individual assets okay that we have been discussing about it the problem with this says that how we are going to assign value to these invisible assets right, for example whatever knowledge is there in my mind okay as the individual kindly be quantified okay you can quantify the value of a book that is written by me right that where talk is book is this much, so you can evaluate but whatever knowledge the asset knowledge which is not been explicitly created.

It is very difficult to assign value to these kind of organization right, so and that is why it is very difficult to value second point is related to is that it has limited capacity in the short term but unlimited capacity in the long run in the phase that the knowledge and skill that people have are how this knowledge and experience and skill is used by people to bring about changes okay in the organization in the performance, that is the invisible asset because it is very difficult to measure these invisible assets.

So related to say experience insight intuition okay the tacit knowledge that is there with the people okay, so this is one problem because in the long term it is very difficult to measure it in the short term you can say but this is the basis of your knowledge and this is the kind of knowledge that you have once it is made explicit right otherwise it is very difficult okay, for example it includes the skills of the individuals the process is the interactions that goes on through various resources.

How to pull coordinate their activities okay how successful team works right and then what kind of culture organization has what is the level of trust that you have okay, however manage your say employees your strategy partners allies these kinds of things because it is not very easy to measure of the quantified value of these assets right.

For example how you are going to say measure the value of culture of their organization because it is very, very qualitative right though you can name them okay that this organization has a good culture or strong culture it has a marketable culture I started trivial culture provide it and looking at some of the indicators like RND number of patents in copyright that is dis created right so you can say that yes this is a organization which is the entrepreneurial culture right, and if you take then the cognition is doing well then you can say that yes companies as created the market culture.

Simply if the companies very residences system in process is you can say that it has get culture right, so in that way you can identify the kind of culture in organization has whether it has a market culture and democratic culture or entrepreneurial culture but the problem lies here is that however going to quantify them to create a value for their organization okay so what you are going to do you are going to rate them you can say okay in trivial culture is the best culture that organization should have.

So it should have more value then you can say market culture is also good because it helps you to capture markets here increase your performance in these kinds of things similarly the worst is burro culture because it ends your systems and process to work smoothly and effectively right or getting so what I want it to tell you so measuring culture skill and experiences in size and intuitions of the people is very difficult to qualitatively okay, may be in that fault terms you will not be able to understand the value of these things but probably these are the things which make up an organization along them and it does create a value for the organization okay.

So this, these things have been created through a process and now they have become a part of the capabilities of the organization okay.

For example, if you are created interpret culture and organization right, so you are going to create a capability for the organization which is going to be high on innovation right, so this is going to be directly linked with the innovative capability of the organization right, so

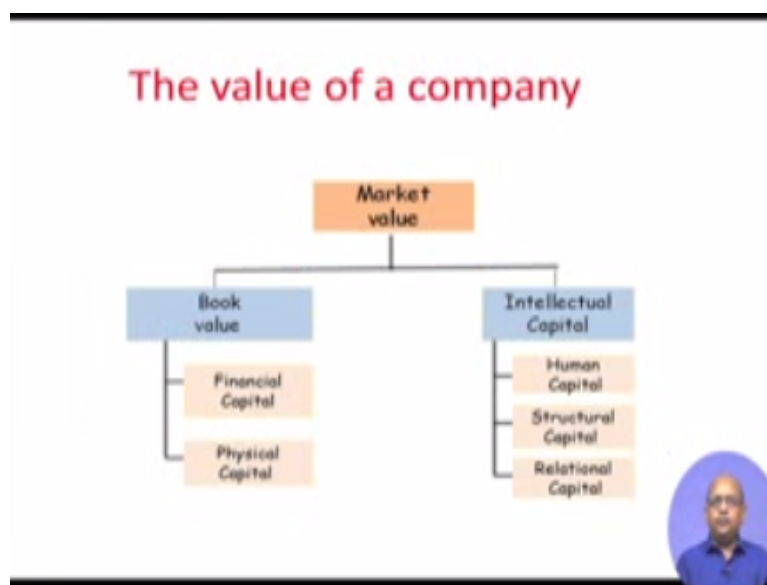


interpretation culture, innovative capability that is how you are going to look into it the relationship right, but this is asset which cannot be quantified a measured and mandatory terms.

Provided you develop certain measures which is going to help you to do it okay, and that is where while you are using certain traditional accounting measures to measure the tangible assets are you are using certain skills to measure intangible assets you also try to consider incorporate invisible assets that what kind of capabilities have been created by the organization to create or add value to the system in the organization for improve performance, right, okay.

So that is what capability means so we have discussed three kind of assets that is tangible intangible and invisible assets so moving further what we are going to discuss is that how we are going to look at it, so you remember we talked about asset knowledge okay, which is, which cannot copied or substituted okay, but it is a most important that look forward because you are going to see that your competencies are not lived by these kind of things right. So capabilities are invisible assets so the most important thing for the organization right.

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Now when we are going to say look at the market value I think I have already talked about this concept that market value is a combination of both book value as well as intellectual capital right, intellectual capital include we have already talked about human capital, structural capital and relational capital while when we are going to discuss about the book value we basically measure the value of financial, capital and also the physical capital, okay.

So you can measure the value of land equipment which is a physical capital you can see that how much money you have okay, in your stocks, deposits and these kind of things okay, so that becomes your physical, so financial capital and I have already discussed about that how we are going to measure the value of intellectual capital by quantifying different kind of capital that you have measuring them okay, and if you remember we have already talked about the process of measuring intellectual capital and creating intellectual capital index so the process goes something like this.

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**The value of a company**


- **The Market Value** of a Company consists of the current value of all commodities and securities. It's the result of the synergy of two elements: Book Value and Intellectual Capital.

**A. Book Value** is the value of a corporate asset according to accounting records:

1. Financial Capital, such as bonds, shares, long-term loans;
2. Physical capital, such as machineries, buildings, lands.

**B. Intellectual Capital:**

1. Human Capital: HR and Company capacities of creating value and innovation,
  - such as *Competencies, capabilities, leadership*
2. Structural Capital, to support HR activities,
  - such as *Systems, processes, technology,...*
3. Relational Capital, the value of the relationship with the stakeholders,
  - such as *Brand, customers relationship, suppliers,...*



First of all when you want to measure intellectual capital first of all you have to identify and you need to integrate also both the book value which is reflected through balance sheet and you also need to look at the market value okay. Now I am not going to be concerned with this book value but I am going to be both concerned with market value, because market value consist of both intangible and invisible assets and it is very important when you are going to measure intellectual capital index okay, for an organization you are going to create it.

So the first stage is that identify various indicators of intellectual capital which would be related to your human capital organizational or infrastructural capital then it could be related to customer or relationship capital and finally you have social capital. So these are the four measure

indicators that has been used now under each of these capital you have to identify what are the various indicators that you are going to use 1,2,3, right, okay.

Similarly for each of these capital you are going to see what are the various indicators of this, second stage you are going to measure it you can measure it qualitatively or quantitatively you can use questionnaires, survey, observations or if you have financial measures to show you can use it right, measure of indicators these indicators which belong to various type of capitals that you have okay, and they could fall under either an intangible assets or tangible assets or invisible assets right, so that you have to keep it in mind.

Now once you have measured these capital then third stage you are going to quantify the value in monetary terms what is the value of each of this and then for the stage we are going to add that to create intellectual capital index right so that is how you go about it and if you are going to include both through this becomes your intellectual capital of the organization okay.

So if when you are going to look at the total value of organization it does not include only the market value the intellectual capital but it also include the book value of the organization which is going to see that what is the total value and this value could be related to three things as I talked about it, it could be tangible it could be intangible or it could be undividable which basically nothing else but the capabilities of the organization as well as people both include individual capabilities in terms of it starts its knowledge and organization capabilities.

for example let us see innovative capability okay so this is how we are going to look at that value of a company okay and if the value of the company as such which include both book value as well as market value and including all kind of assets right tangible intangible asset in result, you are going to create index for the organization and see whether this index is going up or not. And that is how you are going to create the value for the company which is to be measured.

So the value of a company basically that is the market value basically include both the current value of all commodities and securities okay it include both your book value and intellectual capital which creates market value then what book value is financial capital and physical capital as I have told you right like bond shares long term loans physical capital and machineries building and lands then you are going to measure intellectual capital okay like human capital or

competencies get for creating innovation competencies capabilities and leadership then a structural capital systems processes technology culture this kind of things processes.

Then you have relational capital the value of relationship with stake holders customers and this kind of things so the branding customer relationship and this kind of things so what I am trying to tell you that when you are going to create the total value of the organization you need to include both the book value as well as intellectual capital okay.

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### SOURCES OF VALUE

- Brands, names, logo's and devices
- Innovation, tacit knowledge and know-how
- Internal processes and procedures; business methods and systems
- Joint venture, distribution and licensing arrangements
- Customer, supplier and investor relationships



So you will be able to better understand that then how come to about the various what are the various sources of the value okay through information of the brand, names, logo's devices that you are going to use okay what is the innovation tacit knowledge and know how the company and the people right internal process is business process systems because they are going to provide though information about the value right how much in joint ventures distributions and licensing arrangements you have which is easy to quantified.

But there are certain thing which is very difficult to quantify which is more qualitative in approach like relationship with the customers suppliers investors because this relation is being going to bring business to you right because if you have good relationship with the customers you will have repeat customers okay if you have good relationship with the suppliers you get things on credit they would supply s better quality material right.

If you have good relationship in investor they have been get in good retain on the stocks right then probably they would go on this thing more and more, so that is how you create a value for different kind of things that you have in terms of capital in the organization right.

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**List of intellectual capital items**

Business Knowledge	Employee Efficiency	Intellectual Property
Corporate Reputation	Employee Skills	Intellectual Resources
Competitive Intelligence	Employee Value	KM
Corporate Learning	Knowledge Assets	Expert Networks
Corporate University	Expert Teams	Knowledge Management
Cultural Diversity	Knowledge Sharing	Human Assets
Customer Capital	Knowledge Stock	Human Capital
Customer Knowledge	Management Quality	Human Value
Economic Value Added	IC	Organizational Culture
Employee Expertize	Information Systems	Organizational Learning
Employee know-how	Relational Capital	Intellectual assets
Employee Knowledge	Intellectual Capital	Structural capital
Employee Know-how	Intellectual material	Superior Knowle



Now if you look at some of the items that could be part of intellectual capital which may belong to different kind of indexes whether it is related to book value or market value okay for example first category is related to knowledge part right intelligent learning you have corporate university or a cultural diversity even cultural diversity could be used as a strength which creates value the customer capital his knowledge how much economic value has been added in terms of performance of the organization okay what is the knowledge and skill base of the people in the organization right.

What is the knowledge and skill base okay and the first column second column is basically related to if you look at the efficiency level okay what is the value of the employees okay so you also need to calculate the value of the employees in a counting terms right that for example if you know that what is the physical value of a equipment okay. Suppose you have version that the value of this machine is 10000Rs. Say for example and you also have an individual with his knowledge set of knowledge skill in competencies so can you quantify it and create a value for human resources okay and there is a whole field which is known as human resources accounting, which basically try to use accounting measures, traditional accounting measures to find out the

value of human resources and then you can put a price tag there is the value of the employees, 2000, 5000, 10000 depending upon the knowledge and the skill based that employee as right.

It depends up on what kind of assets he has in terms of the knowledge, skills and experience okay, whether you have expertise, whether people share their knowledge what is the stock of knowledge could be identified with the apprise that is there in the data bases. In terms whether you have been able to balance your knowledge in a better way or not, whether you have knowledge based system to actually transform it into equisetic knowledge or not.

So if you look at the data base analysis systems you can find out what is analysis stock. Then you look at the intellectual capital kind of different kind of capital that you have, and in the 3<sup>rd</sup> column you can see intellectual property, resources, knowledge managing system right, human capital while you use culture learning these kinds of things. So if you look at this list intellectual capital it will give an idea about the various items that could be measured to create an index right.

Which could be belong to either of these 3 kind of capital okay that is human capital, relationship capital, structural capital and intellectual property that is created and customer relationship capital and also social capital. For example culture is part of social capital right, so if you look at theses list of intellectual capital items belonging to this different kind of capital and they are going to form assets. Some of them could be tangible assets, some of them could be in tangible assets, and some of them could be invisible assets.

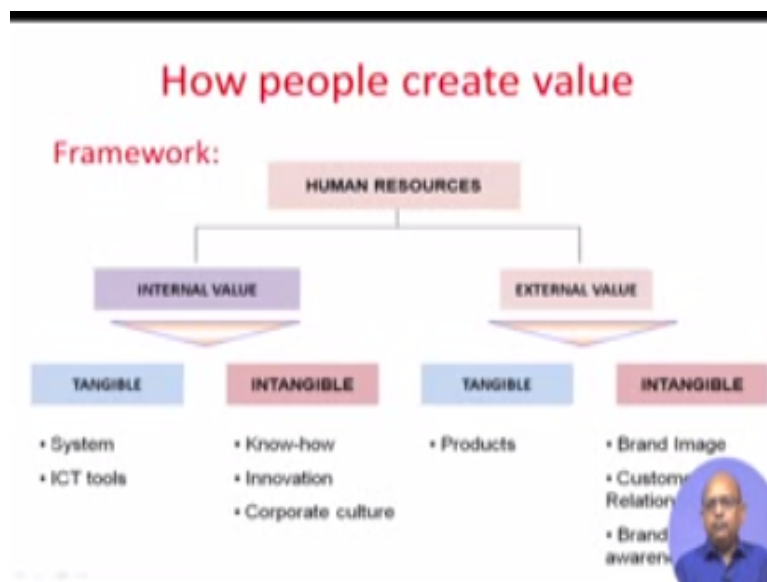
So you are going to use both, on the 1 side they could be classified as one of the assets and on the other side they could also be classified, so you need to, in the second stage if you remember we talked about once you identify the list of items which is going to be a part of intellectual capital, inversely the blinding to an organization in the context of your organization you need to identify what are the various form of intellectual capital that you have.

So you need to create a exhaustive list of items for your organization and once you have created this exhaustive list of items for your organization and the next stage we are going to see that you classify them into different assets, different type of capital and the you develop a measure of these items, to indicate various kind of capital that you had. Once you have measured it the 3<sup>rd</sup>

stage you are going to quantify the value in monetary terms and then final stage of 4<sup>th</sup> stage you ask them to add it up to create an index.

So this could be used as an indicator to tell you the total number of various type of capital that could be used.

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This is actually another important thing that I wanted to talk about which is related to value creation process that how people create value in the process right. So if you look at this so human resources is most important assets for any organization okay and this is basically an intangible assets not tangible assets because you are going to create not only value for the organization but for everything else okay.

If you look at this it, it talks about two kind of value that is created internally and externally right. Internally means that you are going to create systems tools and what could be intangible in

terms of culture, similarly you also create external value in terms of products and process in systems right and what could be in tangible in terms of brand, customer relationship, brand awareness.

So why I am discussing that the value of him the role of HR is importantly erased that we will try to relate when it comes to measuring developing induces are measuring and quantifying them that is chart we have various important role because everything in the organization depends upon the kind of people that you are in terms of knowledge competitors these kind of things because it is people who create value in the organization not must be.

And people will create value internally externally through tangible process provided they have the competitors okay that is required for me to do and it is the responsibility of the HR managers to see through various incentives that people are able to high that competitors to create value for the organization either in tangible terms or in tangible terms right and that is m0ore important and that is why we are protecting this framework here.

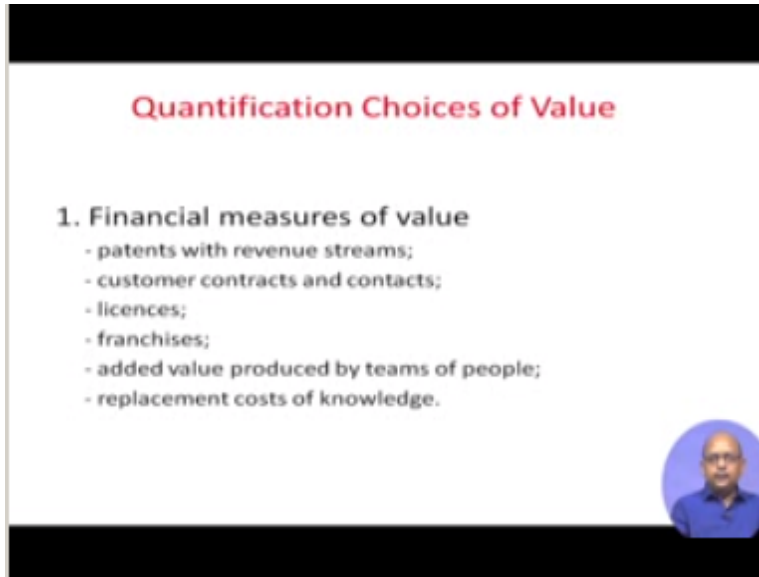
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And then what are the various dimensions that is used for measuring this okay it could be quality in terms of time okay in terms of quantity right in terms of cost so these are the four measures for example if you see that change in the time in terms of the value of k quantitative measures when we are using certain financial measures you are using cost approach right you can also use quantitative approach as well so these are the four different kind of measures that could be used.




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**Quantification Choices of Value**

**1. Financial measures of value**

- patents with revenue streams;
- customer contracts and contacts;
- licences;
- franchises;
- added value produced by teams of people;
- replacement costs of knowledge.



And then how you are going to quantify that is another important area that you are going to discussed for example if your financial measures of values that is good enough there is no problem I mean there is no question asked how many patents you have which is creating revenue that is one way to get while or how customer contracts and these general contracts are creating values right.

So you can go for these kind of usual measures like the number of licenses that you have created that franchises that you have that values that you have formed because all this is going to this is added value produced the group of people so the people are very important in the entire process right then you look at the replacement cost of the people so all this is basically related financial measure.

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## Quantification Choices of Value

### 2. Bottom-line contributory figures:

- volume of sales;
- number of customers;
- productivity measures;
- measures of innovation;
- efficiency measures;
- ratios.

Cont



Now we can also go for see that how they have been change in the performs or not okay because if they are going to add value it must reflect in the bottom line of organization in terms of increasing sales more customers right more profit better revenue right more copyrights right trade secrets we are going to more efficient terms of quality cost and this kind of things so these are the bottom line figures you improve ratios financial ratios so the idea here is that you it is not enough to add value but you have to see that how this value creation process which is added value is going to be linked with the performances of the origination and you are using this criteria to go for these kind of things right.

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## Challenges for HR

- Reporting of intangible/invisible assets is spasmodic and difficult
- Need to convince internal and external stakeholders
- Developing metrics and reporting mechanisms for intellectual capital

*There is need for HRD professionals to ensure the development of a strategic role, to clarify their functional role, develop the new skills required .... and more clearly state their value and contribution to organizational success.*

Then what challenges that HR people have here as we have been talking about this like you have to say that how you are going to report intangible and invisible assets because it is very difficult input process and then you have to convert internal and external stakeholders about the need and then you have to develop matrix and the reporting mechanism okay.

So the HRD professional have to ensure the development of the strategic role what is their function in the process how they are going to feel new experiences and developed and how it is going to create value for the organization right so that all and that is how you are going to create value for the origination okay so there are some questions that could be used for this.

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### Some Questions related to IC measure

- What intellectual capital indicators would managers find useful?
- What intellectual capital indicators do managers currently use?
- What do managers perceive to be the barriers to the application and development of indicators?
- How would managers use intellectual capital indicators for internal management purposes?
- How would managers use intellectual capital indicators for external reporting purposes?
- What do managers see as the potential for cross-company and cross-industry intellectual capital indicator comparability?

What are the basic intellectual capital indicators which you are going to find useful because not all of them could be useful so you are going when you are going select when you select a level and the intellectual measure okay how you are using currently okay how perceive what are the barriers that you think in the development of indicators how you going to use it internally as well as externally both for managing systems and culture processors right both internal reporting as well external reporting because external reporting not many companies are using intellectual capital indicators as a part of their right.

So these are some of the questions that you have and then you have to see that whether you are able to compare the intellectual capital of your organization with other organization provided you have used to same kind of measures okay and the levels are same then it possible for doing it so these are some of the questions which is related to measure the intellectual capital thank you very much.