

Organizational Design Change and Transformation
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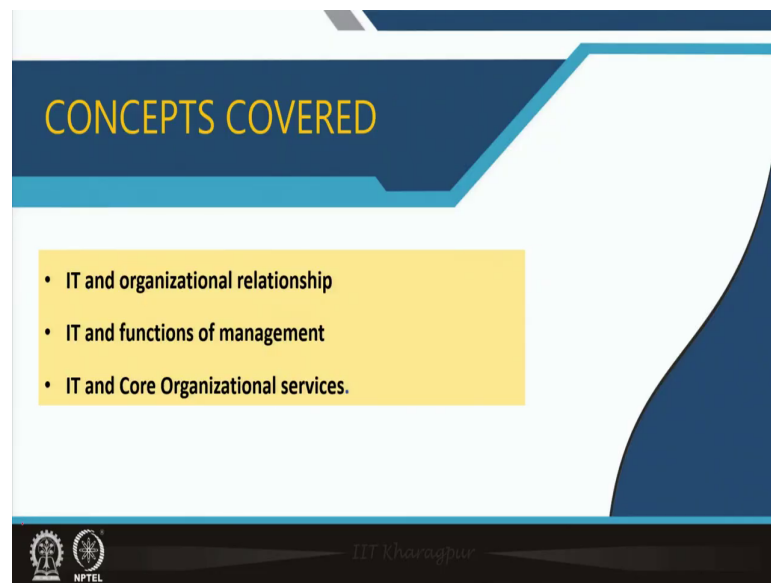
Module - 09
Lecture - 45
IT in Management and Organization

Welcome to the last lecture of this module, where in this module we are talking about technology, technology theories and organization design. Then we were talking about you know knowledge management and we are again talking about you know IT information technology and systems.

In the previous lecture we you know critically you know started to understand this information technology and information system, how it is been used in the organizations. We also developed more understanding about what are the you know critical elements and then pillars for information technology in a workplaces.

And of course, we spent certain time on understanding the challenges and the benefits associated with the information technology in a workplace. Now, in today's lecture what we are essentially going to discuss about it at, we are going to look at the you know relationship between the information technology and the organization. And we are going to also look at how this information technology is related to the management functions, critical management functions.

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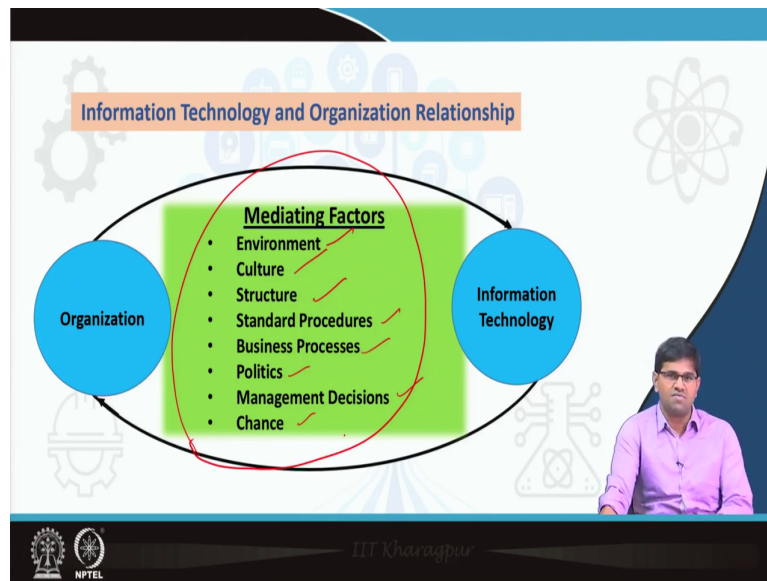
CONCEPTS COVERED

- IT and organizational relationship
- IT and functions of management
- IT and Core Organizational services.

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And of course, we will also discuss about you know IT and the core organizational services. So, this is what we are primarily going to discuss in today's lecture. Since now we wanted to look at you know how this information technology become more relevant in the you know organization relationship ok.

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Let us go further and then understand. So, this you know a diagram actually gives you an understanding about how these two things, one is about information technology and organizations are connected. So, when you talk about how this you know if you look at you know this organizations influence the type of technology and technology also try to you know become part of the organization as well.

You look at this relationship, but now what we are going to discuss in detail is that we are going to discuss about these mediating factors, how does these factors actually facilitates this relationship between this information technology and the organizational goals and values and the performance right. So, the very critical aspect we will discuss about in detail about environment, general business environment, general you know external environment as well.

Then we talk about the specifically organization culture, how does the organization culture plays a role in terms of you know organizational performance and the usage of a technology, then how does an organization structure going to get benefited or how does it give a room for us to use the technology.

And of course, you will talk about certain SOP Standard Operating Procedures, how the business processes facilitates this relationship and then you know talk about the organizational politics and management decision and the chance meaning we will discuss in detail about the change as well, how does this actually have this link this relationship between organization and information technology.

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Information Technology and Organization Relationship

Environment:

Information technology has played a crucial role in spreading out products, goods, and services across countries.

Online shopping, we shop many products from home. With the help of internet, any company can sell its products worldwide and e-banking made the instant payment process. Through communication technology producer can communicate with the buyer in a very easy way. These are used to place orders for goods and services.

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Let us go in detail and you know look at from each of these you know mediating factors. Let us start with the environment. So, we all know that you know information technology has

played a very critical role in terms of you know spreading out the products, goods and services across countries and across you know the world as well right.

So, information technology has actually played a very critical role in terms of you know all these aspects of you know product development you know goods and services and trending into the usage of the larger people. Maybe probably if you look at these the general environment how this technology is been demanded by the organization.

Let us talk about the online shopping right. So, we started to we enjoyed this experience of shopping sitting at home or you know wherever you are right with a just on your smartphone you have the applications installed where you are able to you know buy whatever you like right you know ranging from various type of a products we use.

So, with the help of the internet and the technology company is able to sell its products worldwide and you know e-banking made it instant payment process. For example, we are all talking about you know UPI based you know enabled services where we are talking about you know e-banking and e-transactions we do instant payment processes happening and of course, this communication technology producers can communicate with the buyer in very easy way and they are used to place their orders for goods and services.

Now, if you look at you know this general environment around which actually makes that ok. So, how these organizations are you know getting benefited or use this technology right when because especially the advent of technology and then internet penetrations and smart phone penetrations among the larger masses, which made that you know companies are eventually using the technology a organizations using the technology for their business and core business operations.

You know buying or placing the you know advertisements connecting selling their products getting the input or feedbacks when the customers or anything by many kind of a things. So, this general environmental also created that yes organizations are started to use these technologies extensively for various other activities of organization ok.

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The slide is titled "Information Technology and Organization Relationship". It features a yellow text box with the following content:

Organizational Culture:
Many researches conducted examining the relationships between information technologies and values, beliefs, and norms belonging to a particular group of individuals. Since working on the factors that determine the consequences of the adoption and use of information technologies, researchers have focused on people's beliefs, values, assumptions, and codes of conduct in an organization.

Another approach suggest that information technologies and organizational culture can interact with each other to produce various results of adoption and effective use of information technologies.

Handwritten notes in red ink on the right side of the slide include: "Technology Adoption" in a box, "Org. Culture" in a circle, and "Promotion" written below. A presenter in a purple shirt is visible in the bottom right corner of the slide frame. The slide also includes logos for IIT Kharagpur and NPTEL at the bottom.

Now, comes the organization culture. So, many organizations you know many research have conducted research to examine the relationship between you know information technologies and when we are talking about the organization culture where we are talking about values, beliefs and norms belonging to a particular group of individual's right.

When they do the research, they understood that you know working on the factors that determine the consequences of adoption and the use of information technologies. So, because we will talk about this technology right if you remember in the previous lecture also, I talked about you know technology adoption. So, this is very critical. So, unless now let us talk about a situations you know let us talk about a situation of a on the onset of a COVID-19 pandemic.

So, there were organizations those employees were not those techy tech savvy or that not. So, promoting about you know use of you know use of technology so extensively. Now, you see

that you know organization culture is very critical right whether organization culture in terms of you know values, beliefs and systems or a norms you have is it a promoting the you know technological usage or sometimes certain organization culture are very prohibitive you know do not appreciate or do not wanted to quickly change or use the technology or embrace the new technology.

So, organization culture understanding the organization culture is very critical to, so, that you will be able to you know make sure that you know you are your employees are able to you know use adopt or use this information technologies for their organizations. Now, imagine that you know you are in an organization let us say I am talking about a boss level.

So, they decided ok having a introducing a new system or a technology based tracking system is very critical for a business success ok, but my employees my organization culture is not. So, that you know they it is not going to allow people are not adapting or embarrassing the new technology and then what does happen?

Here you see the challenge of you know people are not using it when they do not use the technology as you said there are benefit, but you know you cannot realize the benefit unless otherwise your organization employees able to adopt the technology so well. So, understanding this organization culture plays a very critical role you know.

Because this you know understanding the beliefs norms and the shared values in an organizations and the code of conducting organization that has lot of implications and relationship with respect to kind of a technology people use. And how quickly people use all that it becomes very important when we are talking about you know organization culture.

So, another approach suggest that you know information technologies and organization culture can interact with each other to produce various results of adoption and effective use of information technologies. So, what essentially what we are trying to say here is that organization culture plays a very very critical role in seeing that how effectively my employees are the users of the technology will adopt this technology.

So, understanding the culture interaction of this culture and the technology is very critical. So, that you will be able to effectively make sure that you know the technology can be successfully implemented and then adopted by the workforces in the organizations.

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Information Technology and Organization Relationship

Organizational Structure :

It is fact that organizations of today's have become considerably information-based and benefit from information technologies intensively in their activities and processes has made also the changes in their organizational structures mandatory.

Accordingly, the effects of information technologies on organizational structure are varied on the basis of differentiation, centralization, and standardization/formalization, which are the three main components of organizational structure

Structure
Accommodate
Formalize
TA

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Then comes the organization structures. So, just finishing the organization culture we are coming for a structure right. So, in fact, you know organization of today's have become considerably information based because you know and you know benefits from the information technologies, they are extensively using these informations and information technologies for their day to day activities and also process also made also changes in their organization structures a mandatory.

Because now as I said this technology has become an inevitable component or I would say it is an integral component of an organizations. So, when organizations extensively use the

information and information technologies, so extensively then they cannot deny the fact that they have to alter or change the way they are you know carrying out or designing their structure.

So, it has to accommodate to see that how this technology is going to demand certain change in the structure organization has to you know make those changes in order to take the you know benefit out of this usage of technologies in information systems. So, you know for example, the effect of information technologies and organizational structure are large.

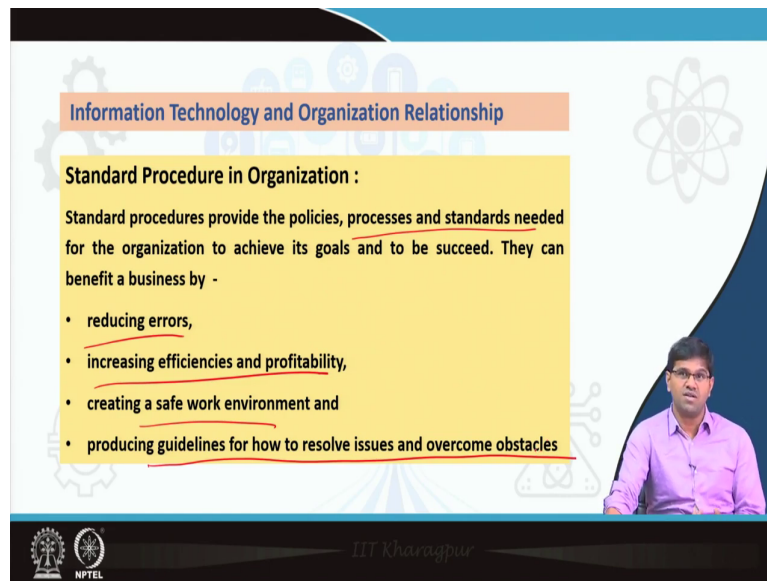
You know based on the differentiation or centralization whether you wanted to make a you know decision decentralized or a centralize centralized decision making or versus you know standardized highly standardized or low standardization or highly formalized low formalized all these three components main components where the information technologies will have an impact on the organizational structure right.

Let us say for example, information technology can be. So, effectively use that you know it can allow you to you know decentralize the decision making process, but at the same time you know people are the one level above you or people at the top are able to you know use the technology and supervise or monitor you right.

So, these technologies are extensively used in the you know structural changes or how the structure can also observe the technologies for the benefit of the organization. So, organization structure is very critical in two ways; one is to accommodate the technology part of you know organizational structure, then your structure should also facilitate the technology and technology penetration and technology adoption in the organizations.

So, structure becomes so critical first structure has to change itself to accommodate the technology then comes you have to create a structure that are actually facilitating better technology adoption it is a technology adoption TA I am referring to a technology adoptions in a workplace. So, that you are effectively going to get benefit out of these what are the technology you are going to use ok.

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The slide features a title bar at the top with the text "Information Technology and Organization Relationship". Below this is a large yellow rectangular box containing the following text: "Standard Procedure in Organization : Standard procedures provide the policies, processes and standards needed for the organization to achieve its goals and to be succeed. They can benefit a business by -". This is followed by a bulleted list: "• reducing errors,", "• increasing efficiencies and profitability,", "• creating a safe work environment and", "• producing guidelines for how to resolve issues and overcome obstacles". The text in the yellow box is underlined. To the right of the yellow box, a small inset video shows a man in a purple shirt speaking. The slide also includes logos for IIT Kharagpur and NPTEL at the bottom.

Then comes next one is a standard procedure in organizations. So, standard you know procedure is nothing but it is kind of an SOP on you know policies and processes and standards needed for an organization to meet their goals and needs are right and then, so that they can succeed.

So, they can benefit by you know they can get benefited by using the technology to reduce the errors, increasing the efficiency and profitability and creating safe work environment and producing guidelines to how to resolve issues and overcome obstacles. So, now the on this standard procedure also this technology has lot of implication as I was talking about certain benefits. So, how these standard procedures will also get benefited when of the you know using the technology.

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Information Technology and Organization Relationship

Business Process:

A business process is a series of tasks or a set of activities performed by a group of employees or stakeholders to achieve an organizational goal. The processes are performed by people or systems in a structured manner to attain a pre-defined objective. Efficient and streamlined execution of business processes directly contributes to the success of business operations and growth. It is of various types –

- Core processes
- Support processes
- Management processes

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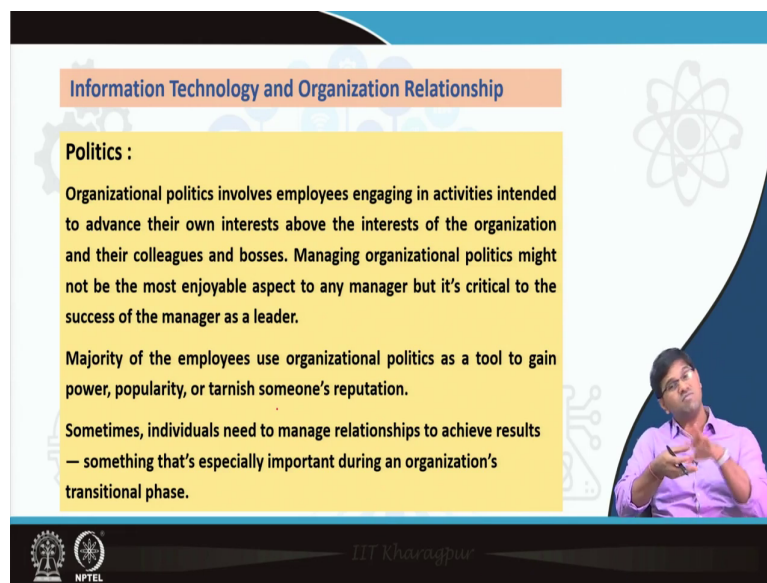
Then comes the business process. So, what is this business process? Business process is nothing but you know it is a series this is you know series of task or activities performed by employees or a stakeholders to achieve an organizational goal right.

So, we have a goal to achieve this goal we carry out 1, 2, 3, 4 is the set of activities and a series of activities lined up to ensure that you know we are able to reach the goal. The process are performed by the people are in the systems in a structured manner to attain a predefined objective.

So; obviously, we are talking about an objective in a goal of an organizations and what are we really interested now we are wanted to ensure whether this process can be efficient and you know steam line and better executed to meet the success of the business operations.

So, organizations are started to use a technology to carrying out this multiple task to efficiently and effectively and you know with an error free and you know wherever possible they are talking about you know creating you know automations using the technologies in a business processes. It can be you know core processes or a support process or a management processes in all these processes you will be able to see that you know the relevance of technology on this.

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The slide features a title bar at the top with the text "Information Technology and Organization Relationship". Below this, a yellow box contains the heading "Politics :" followed by three paragraphs of text. To the right of the text is a small image of a man in a purple shirt speaking. The slide also includes logos for IIT Kharagpur and NPTEL at the bottom.

Information Technology and Organization Relationship

Politics :

Organizational politics involves employees engaging in activities intended to advance their own interests above the interests of the organization and their colleagues and bosses. Managing organizational politics might not be the most enjoyable aspect to any manager but it's critical to the success of the manager as a leader.

Majority of the employees use organizational politics as a tool to gain power, popularity, or tarnish someone's reputation.

Sometimes, individuals need to manage relationships to achieve results — something that's especially important during an organization's transitional phase.

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So, then you know next we talking about you know organizational politics. See generally what do we see is an organizational politics is wherein it is a process where you know employees engage in activities to advance once you know to create advantages for ones interest are that is where you know organizational politics are generally talked about you know with an interest of organization and their colleagues and bosses.

So, managing organization politics might not be most enjoyable for many managers, but it is critical for a manager and a leader because you always find that you know organization politics exist in an organization setup. So, managing that is also you know very important role of a manager to you know be successful.

So, majority of the employees use this organization politics as a you know tool to gain power popularity and you know maybe you can put down somebody else as well. So, now, so when we talk about why are we even talking about organization politics when we are talking about you know technology.

Now, you see that you know organization politics plays a role in terms of you know usage of technology or at the same time technology can also be used to manage this organizational politics.

So, people always because the technology gives me an better access to information's and ensure that you know how things have been you know carried out and ensure that the process have been closely monitored and informations are accessed sought and where technologies I will going to help you to manage this organizational politics as well.

And other side organization politics might also play a role in kind of a technology they allow are the level of technology been used in the organization setup as well. So, it is a kind of a two sides where organization politics can be managed for technologies and organization politics will play a role in the level of you know technology been adopted or used in an organizational setup.

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The slide is titled "Information Technology and Organization Relationship". It features a yellow box with the heading "Management Decisions :" and a definition of decision making. Below the definition, three categories are listed: Strategic decisions, Tactical decisions, and Operational decisions. To the right of the slide, there are handwritten red notes: "Technology", "IS", "Best", and "Analytics". A presenter in a purple shirt is visible in the bottom right corner of the slide frame. The slide also includes the IIT Kharagpur and NPTEL logos at the bottom.

Information Technology and Organization Relationship

Management Decisions :

Decision making can be defined as selecting between alternative courses of action. Management decision making concerns the choices faced by managers within their duties in the organization. Making decisions is an important aspect of planning. Decision making can also be classified into three categories based on the level at which they occur:

- Strategic decisions ✓
- Tactical decisions ✓
- Operational decisions ✓

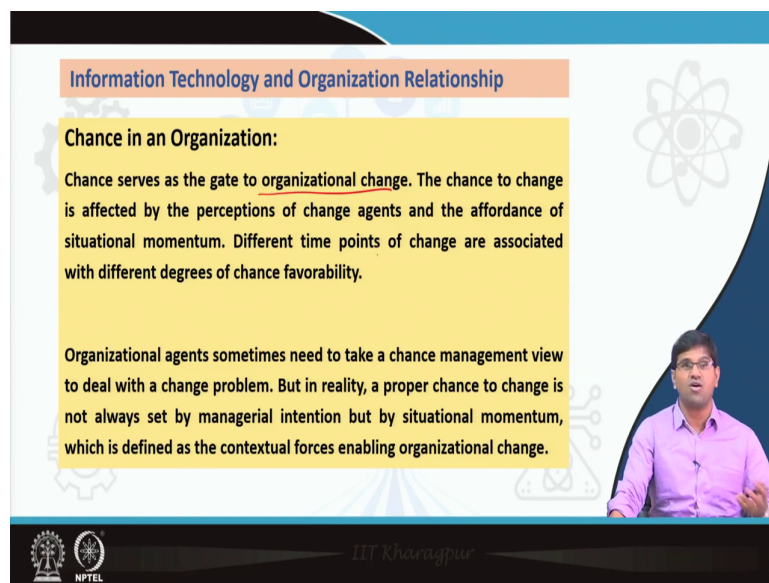
Handwritten notes: Technology, IS, Best, Analytics

Then comes the management decisions. So, management decision when we talk about a decision making which is always defined as you know selecting the best from the alternative courses available. So, the decision making becomes very critical in any organizational setup because that is the basis for the all planning activities right. The decision has to be made and can we choose a best alternative decision.

Here you see you know technology has been very extensively used or even you know information systems are used to make a better decisions right. We are talking about evaluating the lot of alternatives when you know humanly not possible to have comparing against so many alternative choices whereas, my technology or information system can help me. For example, analytics can be used in evaluating these alternate choices and choosing the best possible best suitable alternatives among the all choices we had.

So, technologies can be used in a decision making situations in the workplaces. These decisions can be either a strategic decision what kind of a business we have to do. Are we going to expand differentiate diversify can be a strategic decision or can be a tactical decisions or even in a day to day operational decisions. All these decisions where technology can be extensively used under the same time this kind of a decision might also influence what type of a technology company can go for and use it ok.

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The slide is titled "Information Technology and Organization Relationship". It features a yellow text box with the following content:

Chance in an Organization:
Chance serves as the gate to organizational change. The chance to change is affected by the perceptions of change agents and the affordance of situational momentum. Different time points of change are associated with different degrees of chance favorability.

Organizational agents sometimes need to take a chance management view to deal with a change problem. But in reality, a proper chance to change is not always set by managerial intention but by situational momentum, which is defined as the contextual forces enabling organizational change.

The slide also includes a small image of a presenter in a pink shirt on the right side. At the bottom, there are logos for IIT Kharagpur and NPTEL.

Then comes a chance in an organization when we say chance you know the chance actually serves you know as a gate to a bring an organizational change you know. So, when you talk about a chance to change is affected by the perception of the change agent we are talking about employees are a change agents or the leaders are a change agents and affordances of situational momentum.

When we talk about this you know change we are always you know looking at you know organization has to always get ready for a change you know because change becomes inevitable and how organizations are ready for this change and you know organizational agents sometimes due to you know take a chance.

You know chance management view to deal with this you know change problems you know because a proper chance to change is not always set by the managerial intention, but by the situational momentum maybe sometimes contextual factors an organizational change might demand you to make this necessary changes.

Now, if you look at you know technology itself you know enforcing organization to go for a several changes right. let us say you know it can replace large section of employees or probably it can you know create you know maybe automate many processes and then if you look at these two examples you know replace people like the machineries then automate several processes, then it also makes a considerable amount of you know kind of a differences in kind of a business you operate or the way you are functioning.

When these changes are happening organization has to you know embarrass the change how are they going to manage this change becomes a critical aspect in a technology. So, technology are enforcing an organization to go for a change and the same time the general business environment will also you know enforce an organization to change and adopt technology use technology to handle it right.

For example, previously in a simple example is that you know in an organizational setup attendants were taken manually right you go sign in and out time you know all that. Now, if you look at the biometric we are talking about biometrics scanning you know flash card.

So, you have you know extensively started to use technologies even just starting from a simple example right. So, that enforces you to you know manage it well effectively. So, where this certain external factors are change and better practices also might enforce you to adopt the technology and use a technology for a better organizational functions ok.

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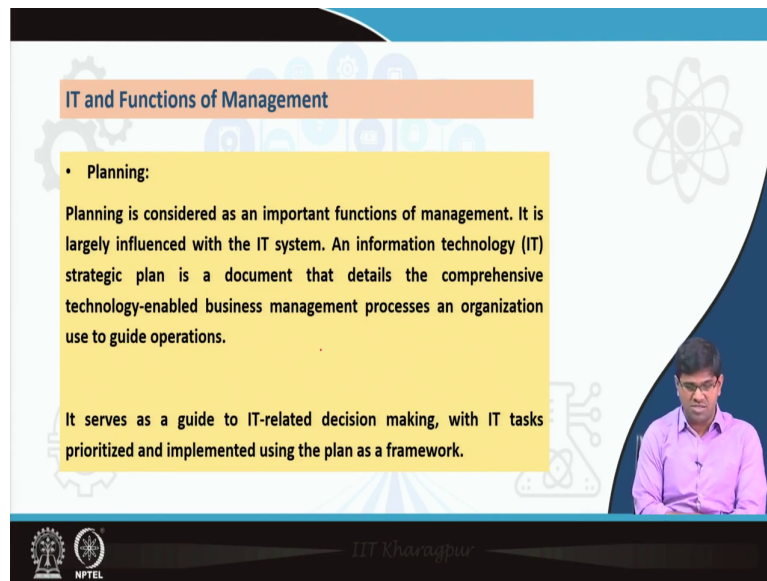
IT and Functions of Management

IT includes many of the key functions of management, such as

- Planning,
- Staffing,
- Organizing,
- Directing
- Budgeting and control,
- There are also unique functions to IT, such as software development, change management & network planning

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IT and Functions of Management

- **Planning:**
Planning is considered as an important functions of management. It is largely influenced with the IT system. An information technology (IT) strategic plan is a document that details the comprehensive technology-enabled business management processes an organization use to guide operations.

It serves as a guide to IT-related decision making, with IT tasks prioritized and implemented using the plan as a framework.

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Now, first we discussed about the relations of the mediating factors between an organizational and an information technology.

Now, we are going to the second part of this today's lecture it is about information system and the functions of management. So, this functions of management if you remember you know people who studied this a principles of management or basic management courses you would have learnt about these are the critical functions of any management or a manager per se you know planning staffing organizing directing budgeting and controlling these are all critical management functions.

So, now how does this IT is also having this managerial functions how it has been related right. So, there are also unique functions to IT such as software development change management and network planning. So, we are going to see how this you know information

technology also includes these functions of management ok there also a planning. Planning is always considered as an important functions of a management you know it is also largely influenced with an IT system.

So, let us say information technology strategic plan is a you know let us say talk about the information technology strategic plan. This itself document the details the comprehensive technology enabled business processes an organization use to guide the operations right. So, now let us say as an organization I am going to use technology.

Now, this IT related now this also involves a planning process now you need to understand and determine what type of a technology you are going to use, what level of technology how much of you know hardware infrastructure you know infrastructure I should create. So, even information technology has this is the planning phase where you know it serves as a guide to make IT related decision making with respect to what are the task to be prioritized implemented using a you know plan of you know framework as well.

So, in IT system when we are determining the technology and it also it also a planning phase you know determining the type of technology the extent of you know hardware, you know software, servers or the adequate infrastructure requirement then the execution development of an applications and all that you know becomes a planning phase.

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The slide features a title bar at the top with the text "IT and Functions of Management". Below this is a yellow text box containing the following content:

- Staffing:
Information Technology plays a fundamental role in the operations of business and hiring the right people for the right position in the organization.
Hiring professionals for organizations starts with a proven strategy—one that aligns the technology team with business requirements and meets performance goals. Whether for artificial intelligence development or IT systems support, we need a recruiting partner that will deliver talent with the right skills, expertise, and cultural fit to succeed in the organization.

To the right of the text box, there is a hand-drawn diagram in red ink. It consists of a circle at the top containing the letters "ATS", with a funnel shape extending downwards from the circle. The slide also includes a small inset image of a man in a purple shirt in the bottom right corner and logos for IIT Kharagpur and NPTEL at the bottom.

Then comes the staffing: So, information technology and if you look at you know information technology two is one is looking at from how this information technology plays a role in the staffing activities of an organization and also information technology might also demand staffing for them right; because as I wanted to carry out and manage this information technology activity, then I need you know people to roll then.

But now if you look at the how technology helps in you know staffing the organization. So, a technologies are you know extensively used to identify the right candidate now you see technology are able to you know filter out we say application tracking system it is called ATS. So, what does it do? It does the funneling activity.

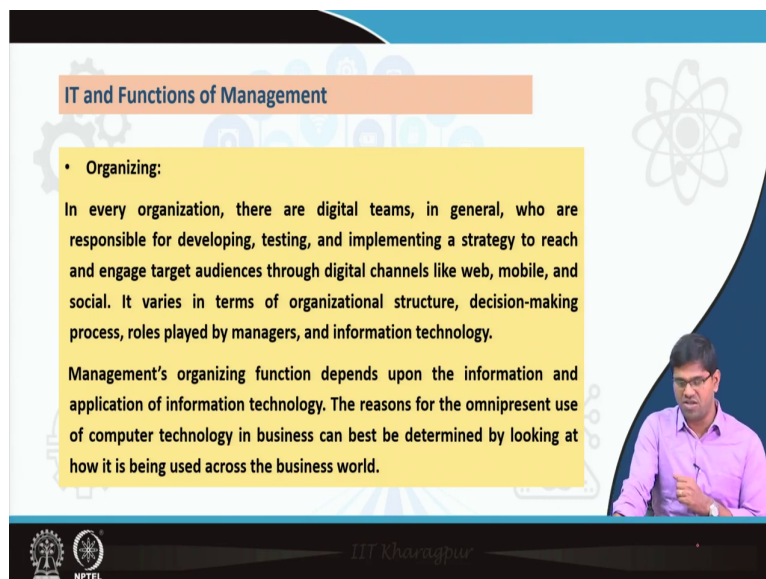
So, as so many people apply then this automated system helps to map the skills of the applicant with the current requirement in the job it you know narrows down only the least

number of candidates who are suitable who will fit for my the particular job, which offer we I have currently now the vacancy we have now.

So, now this you know technology staffing functions IT technology actually uses these you know artificial intelligence where we now say you know A enabled you know interview process are happening we did a recruitment partner that.

Then comes similarly for a IT also you need the staffing right as I was said you know as the technology has to be managed now we need to go for you know partnering to see I ok how do I identify right person with a skill and expertise. So, it is also you know IT also has certain functions of a staffing.

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IT and Functions of Management

- **Organizing:**
In every organization, there are digital teams, in general, who are responsible for developing, testing, and implementing a strategy to reach and engage target audiences through digital channels like web, mobile, and social. It varies in terms of organizational structure, decision-making process, roles played by managers, and information technology.
Management's organizing function depends upon the information and application of information technology. The reasons for the omnipresent use of computer technology in business can best be determined by looking at how it is being used across the business world.

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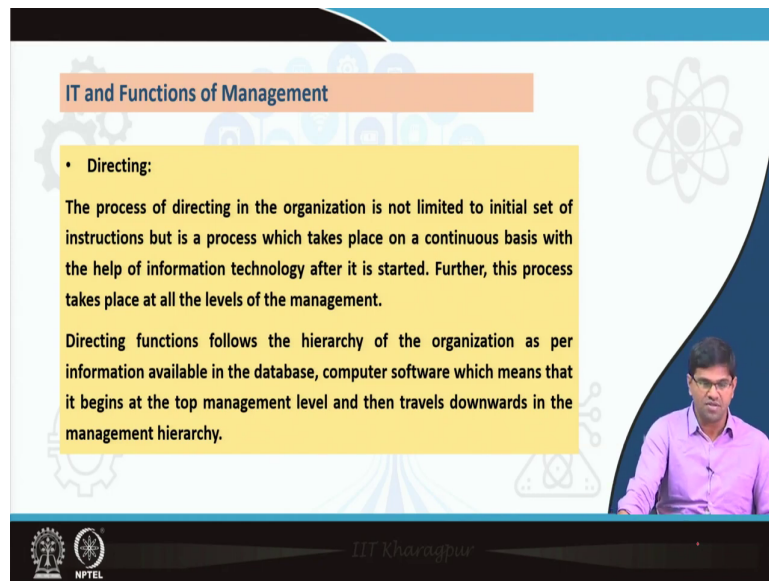
Then comes the organization. In every organization now you are started to see that you know there are digital teams are available. So, what do they do? Digital teams who are responsible for you know developing, testing and implementing a strategy to use and engage target audiences through digital channels like you know web or an applications or a social media handles where you know these digital teams are playing this role of you know connecting to these you know your audiences in any of these firms.

Either through a websites or through an applications or through the social media handles you know it also varies in terms of you know type of an organization structure you have decision making process or roles played by the managers and the information technology.

The management's organization functions depend upon an informations and application of information technology. Now, if you look at you know these organize you know how are you going to organize your execute this you know business activities or a goals then this organization organizing is become very critical where we see this extensively the technologies.

And also, the informations been effectively used for this you know technique important function of the managers where organizations where they use this you know technologies far doing this you know organizing functions of a manager where you know technologies are helpful and then informations are predominantly very critical for this function of a management of organizing.

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IT and Functions of Management

- **Directing:**
The process of directing in the organization is not limited to initial set of instructions but is a process which takes place on a continuous basis with the help of information technology after it is started. Further, this process takes place at all the levels of the management.

Directing functions follows the hierarchy of the organization as per information available in the database, computer software which means that it begins at the top management level and then travels downwards in the management hierarchy.

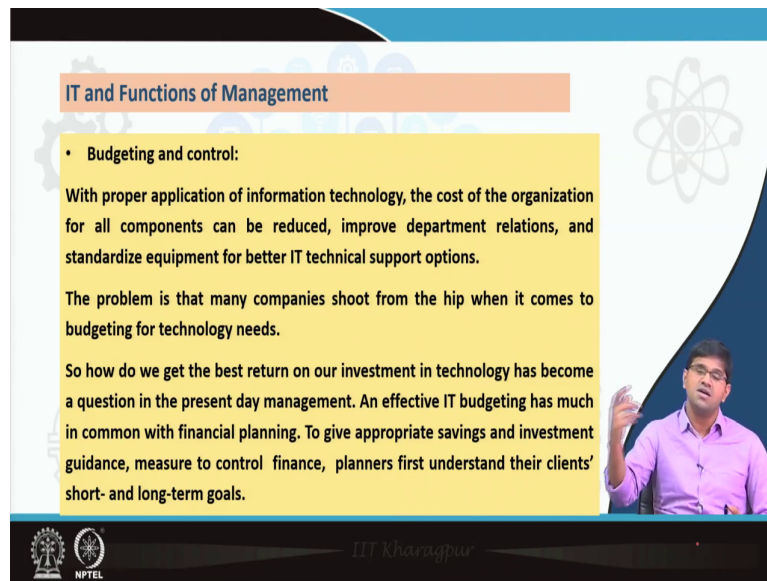
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Then comes the directing: So, here the process of directing an organization is not just limited to the initial set of instructions, but is also process which takes place on a continuous basis with the help of an information technology. Now, you see that you know the directing you know talking about you know proper you know observations and then giving feedback.

Now, information technology are effectively used to see that you know whether these particular activities are going out smoothly is there any deviations, is there a deviations can you know flag them and say that you know where do they go wrong how do they go wrong.

So, now information technologies are effectively used in these activities where they are able to you know use the technology to monitor right and then also give you know effective feedback on the specific aspects of this organizational functions of management ok.

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IT and Functions of Management

- **Budgeting and control:**
With proper application of information technology, the cost of the organization for all components can be reduced, improve department relations, and standardize equipment for better IT technical support options.
The problem is that many companies shoot from the hip when it comes to budgeting for technology needs.
So how do we get the best return on our investment in technology has become a question in the present day management. An effective IT budgeting has much in common with financial planning. To give appropriate savings and investment guidance, measure to control finance, planners first understand their clients' short- and long-term goals.

The slide features a yellow background for the text, a blue header, and a video inset of a man in a purple shirt speaking. Logos for IIT Kharagpur and NPTEL are visible at the bottom.

Then comes budgeting and control: So, with the proper application of information technology where cost of the organization for all components can be reduced right because you know let us say you know information technology are able to help you to see effectively utilize the resource or use the resource and optimal use of the resource.

Now, information technology can tell you ok how far the resources are used when do you really need the resources you know it can save you know cost on you know unnecessarily have buying the raw materials and holding cost and the fixed cost at the same time you know it can also help you to tell you what is the best possible way to you know use or utilize the resources more effectively.

So, information technologies are actually you know helping a organization to cause its control in various mean at the same time if you look at on the other side. So, the budgeting and

control where when you wanted to buy you know hardware and you know other IT infrastructure devices also and also becomes an very critical role how much of budgeting you need to required how much you need to set up this you know come and create this adequate infrastructure for a technology that I would use in an organizations.

So, where you know to give organization has to do this financial planning to understand how much is the requirement to create this you know financial of this IT infrastructure in an workplaces. And of course, we are also looking at you know organizations also looking at how they can effectively use the technologies to you know create more savings and you know help an organization the investment guidance measure or control the finance and understand the customers or clients short term and long term goals.

So, technologies are able to use you know for example, information processing analytics you know their use is you know artificial intelligent machine learning to look at ok what is the trend predict certain outcomes when the prices are likely to go up how when my customer demands are going go up what is the short term long term all this where this information technologies are effectively used in the budgeting and control functions of management.

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The slide is titled "Information technologies in Core Organizational Services". It features a yellow box containing a bulleted list of three types of technology. To the right of the text is a small image of a man in a purple shirt. The slide also includes logos for IIT Kharagpur and NPTEL at the bottom.

- **Intensive technology**
Focuses the efforts of many people with special expertise on the needs of clients or stakeholders.
- **Mediating technology**
Links together parties seeking a mutually beneficial exchange of organizational values.
- **Sustainable technology**
Functions like mass production, where a client is passed from point to point for various aspects of service delivery are effectively carried out in a sustainable manner.

Now, we are coming to the last part of the lecture where we talking about information technologies in core organizational services. Now, I am just looking at into the three ways; one is a intensive technology. So, intensive technologies focuses the effort of many people who are expertise on the needs of the client or a stakeholder.

So, where I use you know technologies so intensively to with a special expertise on the needs to meet the specific needs of the customers or a clients are a specific stakeholder that is an intensive technology I use it with a special expertise to address the needs of the clients or a customers are probably a (Refer Time: 29:21) and stakeholder.

Then comes the mediating technologies you know it actually links to whether parties seeking a mutual beneficial exchange of organizational values where it actually plays as a role to you know technology play a playing a role as a linking you know multiple people on the

connecting multiple people to you know mutually exchange the organization values and realize the benefits at the both the side.

Then the another type of technology we are talking about is sustainable technology. So, for example, technology has been used in a mass productions where the you know client is passed from one point to other point various aspects of delivery we all that you know where we are talking about a sustainable technology.

Where, we are talking about how we effectively used in the mass production the automation of the processes or the conversion of the input to the output, where we are talking about all these where core you know organizational services where technologies has been used, ok. So, now we have almost ended this particular module.

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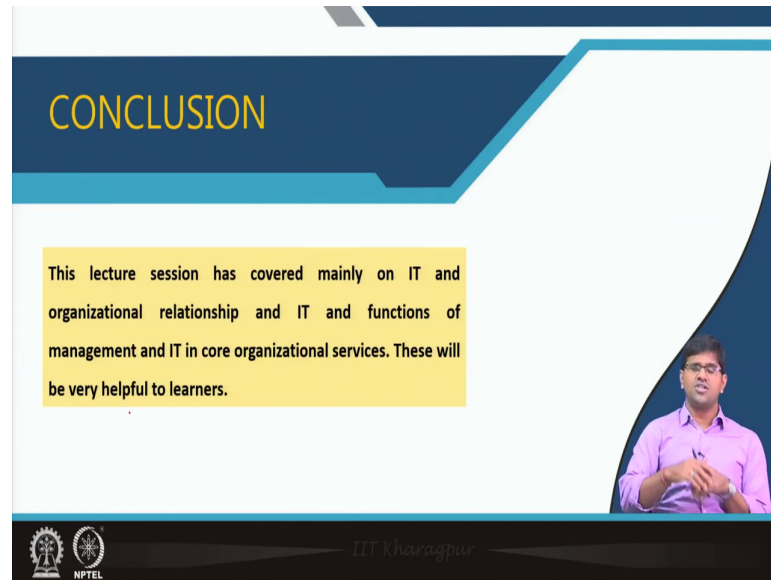
REFERENCES

- Rothaermel, F.T. (2013). *Strategic Management: Concepts and Cases*, McGraw Hill/Irwin
- Mahancy, D. et al. (1998). *International Business*, Longman.
- Hannan, M.T. and Freeman, J. (1989). *Organizations and Social Structure*, in *Organizational Ecology*, Cambridge, Havard U. Press
- Stephen P. Robbins, P.S., Coulter, M., and Langton, N. (2005). *Management*, Eighth Canadian Edition. Pearson Education Canada Inc.
- Jones, G.R. (2013). *Organizational Theory, Design and Change*, Pearson Education, England
- Luthans, F. (2011). *Organizational Behavior: An Evidence-based Approach*, Published by McGraw-Hill/Irwin, Twelfth edition, New York.
- Robbins, S.P., Judge T.A. and Vohra, N. (2018). *Organizational Behavior*, Eighteenth edition, Pearson Education India

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I am just going to cover now recap on what did we discuss today.

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The slide features a dark blue header with the word "CONCLUSION" in yellow. Below the header is a large white area with a yellow text box containing the following text: "This lecture session has covered mainly on IT and organizational relationship and IT and functions of management and IT in core organizational services. These will be very helpful to learners." In the bottom right corner, there is a small video inset of a man in a pink shirt speaking. At the bottom of the slide, there are logos for IIT Kharagpur and NPTEL.

Today in the lecture we what did we discuss up you know we started with how this information technology and organizations are connected and we discussed in detail about various mediating factors are ranging from environmental how organizational structure, culture you know believe values and norms and we also talked about organizational politics how all these are critical factors for you know use of a technology and also how does it impact organization to going for the technology also.

And we also discussed about how this information technology and functions of management are related you know starting from you know planning, organizing, you know controlling,

directing, budgeting and staffing as well. We discussed about how these information technologies are related to all these functions of management in two sides.

So, one is about for the information technology systems and there are also from how does it actually helping an organization to carry out this critical functions of the management. Then we also discussed about how this information technology is being used in core organizational processes like you know internship technology or linking technology or you know sustainable technologies.

So, with this we are concluding this module the key takeaway or the insights for the learners on this particular module is that we are talking about how technology becomes so critical and you know important part of an organization.

And then how this technology disruptions or a technologies usage in an workplace have an impact on the kind of organizational design and structure I should make and it has created this module definitely would have created more awareness about a critical aspects of you know knowledge management you know IT and a information system and you know technology and different theories of technologies.

So, that this will give you a better understanding about how do I have to design my organization and structure as you would have learned in the first a part of this course. So, thank you so much and we all look to look forward to see you all in the subsequent modules.

Thank you.