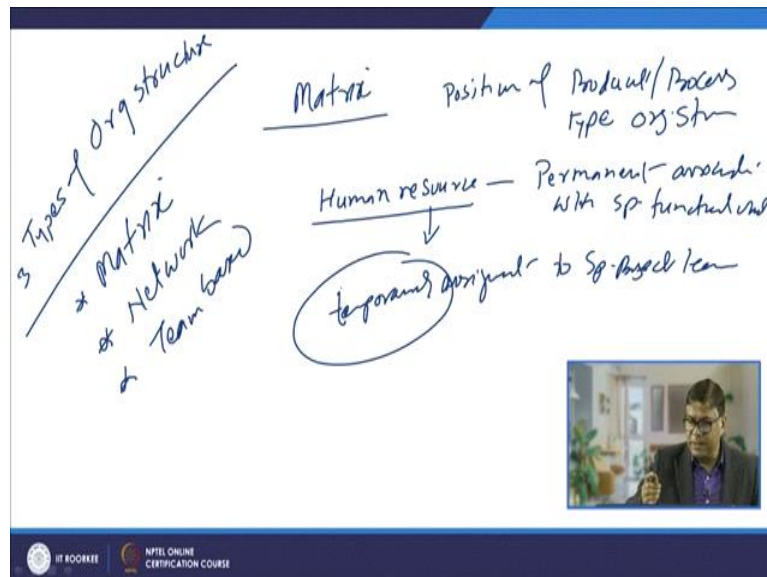


Principles of Industrial Engineering
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Lecture no. 10
Organizational Structures & Culture

Hello, I welcome you all in this presentation related to the subject Principles of Industrial Engineering. And in this presentation primarily we will be talking about the three types of the organizational structures and the organizational culture. So, as far as these three types of the organizational structures, their names are like the matrix organizational structure, networked organizational structure and the team based organizational structures.

And we will be talking about what is the kind of structures, their features and the advantages and the limitations associated with these structures. Thereafter we will talk about the organizational culture and how development of a healthy organizational culture can help in getting the better output and what are the different features if the organizational culture is really good and positive.

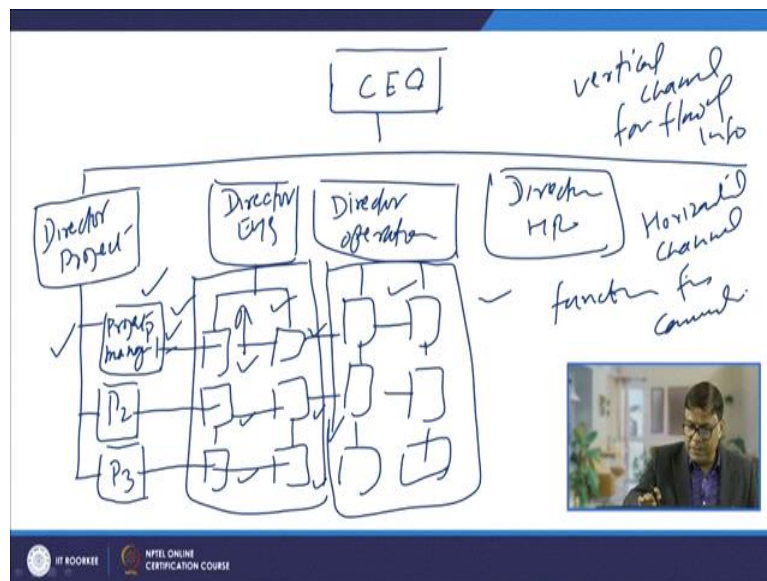
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So, starting with the organizational structures, the three types of the organizational structure will be talking about. One is the matrix, another is the network type and third is the team based. So what are their features and how do they look like that is what we will be talking about. So, as far as the matrix organizational structure is concerned, in the matrix originally structure this combines the positives or the good points of the process and product, product and process type organizational structures.

So, it includes or involves the advantages of both. In this one the human resource is associated with a particular functional unit, human resource associated with the particular functional unit that position is permanent, permanent association with a specific functional unit, but the human resource is assigned that temporarily, temporarily assignment is given to the specific project teams. So, the human resource is assigned to the different project teams to undertake the different jobs for a smooth execution of the work. So, this assignment of the work is temporary, specific to the project.

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If we see the typical structure of such kind of the organizational structure then at the top and there is a CEO or you can see the top level person like president, vice president, CEO. And thereafter we have the different another top level structure layer where we have like say that director projects. So, this kind of structure is most to suit more suitable for the product, project based organizational, organizations or the companies.

So, here basically it is based on the sharing of the facilities and resources associated with the different functional units for the different projects that is in the core of this is structure. So, like say the director engineering, then director operations, the director HR. So, like this there are the different functional groups and the, their will be the different project managers, project managers, project manager 1 for say P1 project likewise P2 project, project manager for P2 project, project manager for P3 project likewise.

So, there may be number of project managers. So, they will be responsible for design development, marketing, production, quality control, each and every aspect related with the

project will be the responsibility of the particular project manager. So, the different resources associated with the different functional groups will be utilised for the different projects. So, these are the different specialties associated with the different functional groups.

So, these facilities will be shared for each of the projects. So, this you can say as a vertical structure and here these will be used by the different project managers for the different projects. So, there will be two types of the communication channel, one is vertical which is associated with a particular functional group and then another is horizontal where project managers will be communicating with their different functional groups for smooth flow of the work through the different functions like this.

So, there will be a vertical as well as horizontal communication channels. So, like this unit is about to the engineering function, this is about the operation function and likewise there can be the different functions and all these functions or specialties will be available for us as per the requirement for that different projects. So, if we see this structure here, there is the existence of the vertical channels for flow of information, for flow of information at the same time, there will be the communication channels are also there in horizontal measure.


So, there is a horizontal channels also present for communication. So, the project managers will be interacting with that different functional groups for a smooth flow of their work and get the desired output. So, here the responsibility for successful completion of the project is of the project manager, where he has to collaborate, cooperate with that different functionalities. So, that is, what is there in typical matrix organizational structure?

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Advantages

- * Each project independent Policy & Procedure in line with vision of org
- * Rapid response to change reqd
- * Rapid resolving conflict
- * Function act as support for different project
- * Key people are shared to deal with complex work
- * Reducing Cost of project
- * Authority & responsibility are shared
- * Reducing inter level function

Balance of Cost, Time & Performance



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So, what are the advantages of this kind of the structure? Here, each project, now each project can have or will have the independent policies and procedures, obviously in line of the reason, mission of the organization. So, each project is independent in terms of the policies and the procedures. So, whenever there is any need of any input or need of changing for the betterment of the project or for giving the better response to the customers.

This kind of, in this case, since there is one project manager for each project. So, he is in position to give the better response through the different functional groups. So, here the rapid response to the change needed or if any issue is there that can be addressed easily. So, rapid resolution of conflicts. However, due to the multi-directional flow of the information, there is an increased possibility for the conflict in this kind of the organizational structure.

In this case the different functional groups or the different functions act. So, each function acts or the different functions which are there they will act as support for different projects. So, the functional groups are there as a support function for the different projects, so that the resources can be shared and better utilised. So, the key people experts are shared especially, to deal with complex problems.

Then, there is a need of, so when the people are shared, to deal with the different jobs and also to deal with the complex problems, it helps in reducing cost of project. So, this is very attractive feature. In this case, since, there is a project manager under the work is done through the different functional groups. So, in this case the authority and responsibility are shared and when the authorities and responsibilities are shared, this helps in reducing the stress level of the workers of the employees are related with particular organization.

Then here, it also offers another good benefit like a good balance of cost, time and the performance of organizational structure. So, when the functional groups provide the support and the key people are shared that offers in running the different projects very efficiently at low cost.

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Disadvantages

- * Multi-dimensional flow of information
- * Dual report
- * Ambiguity of role/responsibility
- * Conflicts betⁿ Project manager / functional mgr
- * Close watch of balance of power/authority P/F
- * Changing priorities as per functional group req^t
- * People feel that they don't have any control over
- * Org. Politics, situation

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On the other hand, apart from these benefits, there are few this advantages also associated with this kind of the organizational structures and that is primarily related with the multi-dimensional or multi-directional flow of information. Because each worker associated with the particular functional group will be reporting to his boss as well as he will also be reporting to the project manager.

So, the two dimensional flow or we can say the existence of the dual reporting is both these are actually the very troublesome aspects because it leads to the ambiguity, in terms of the role, responsibilities. So, there will always be some kind of the confusion workers are also confused like who is more important and who is to be reported. And so, they are, they feel very difficult in this situation, about their performance like who will be writing about their performance of what kind of the performance report will be there.

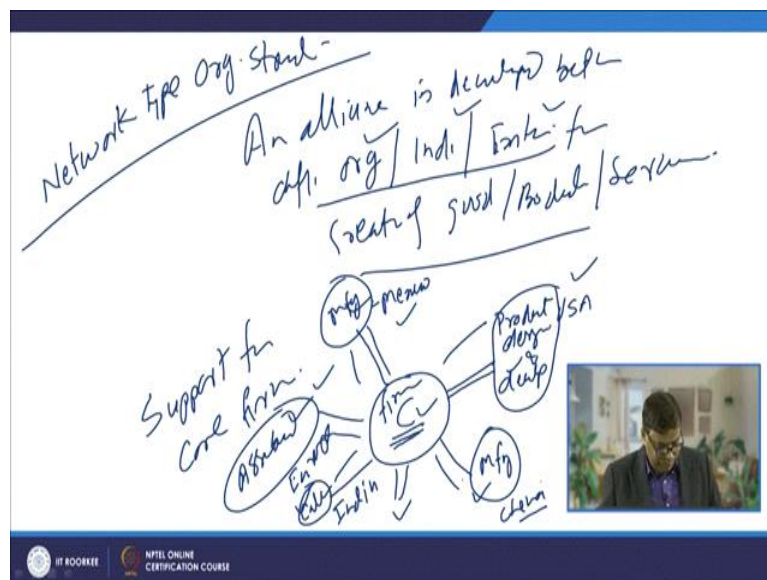
So, they are not sure about their destiny or their professional growth. So, the dual reporting is also a problem ambiguity in the role and this leads to the conflicts between the project managers as well as the functional managers, there is a. So, there is a possibility for the conflict and that is why there is a need of the close watch of balance of powers or the authority between the product and the functional managers.

Then how much importance is given? Because same functional group may be working, sub providing the support to the different projects. So, there can be the bias with regard to the kind of support or priority to be given to the different projects as for the interest of the functional groups. So, the changing priorities as per the functional group needs. So, as per the

thinking process within the functional group, there can be the bias or the different priorities in this kind of the structure for the different projects, which may not be a very healthy situation for the growth of organization.

Then we have the people in multi-directional flow of the information, the people feel that, people feel that they do not have any control, have any control over the situation. So, this is also like a demoralising kind of thing where people are not really happy with the situation and in this case there will be like the organizational politics prevails significantly. So, apart from having the very many advantages related with metrics organizational structure, there are many disadvantages also.

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Then we have the network type organizational structure. A network type of organizational structure is like in this case an alliance is created, alliance is developed between the different organizations, industries or enterprises for creation of goods, products and services. So, these in this kind of the structure, the organizations industries and the enterprises maybe having that different expertise located in the different geographical locations, but they will have to cooperate, collaborate with each other so that they can work for the betterment of organization.

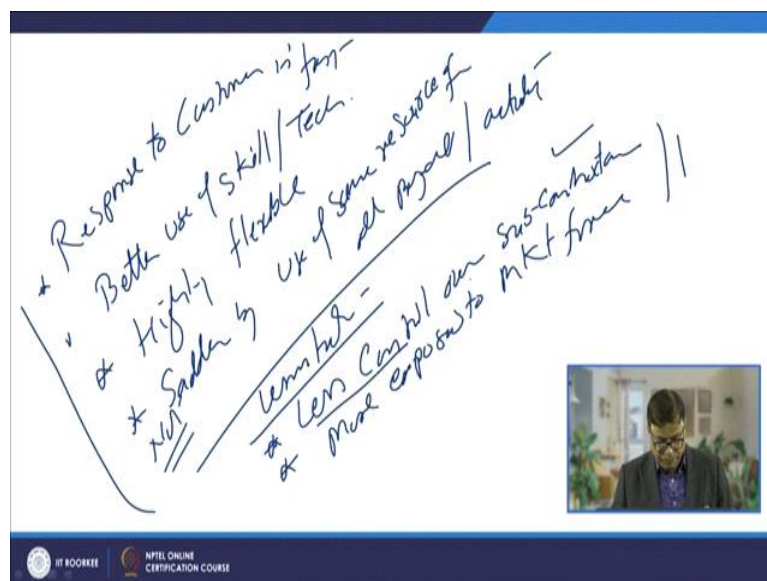
So, in this case here all these organizations who are being aligned or their support is being taken they are developed. So, here all these providing the support for the core firm. So, there is one core firm like this and it will be getting the support from the enterprises organizations

all around. So, they will be like subcontractor kind of thing or providing the support different ways to a particular core industry or organization.

So, here, for example, the product is designed, product is designed and developed in USA. Then the product manufacturing is done in China of the, some of the parts, some of the parts manufacture in say, the Mexico. Then these parts are moved and they are assembled somewhere, say in Europe. Then for marketing and sales, the call centre for the company may be located in India. So, like this company needs all these the services, support functions for smooth running of the organization.

So, they may be getting the support from the, these functional groups located at the different location. So, there will be one core industry or organization and around that, the different network of the different enterprises organizations is established. So, that it can develop or produce the goods and services for the customers. So, this is how it is done. So, here there is a core firm and all around that the different organizational structures are aligned, so that they can provide the support.

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In this case, the good part is that the response to the customers is fast and the liabilities associated with this are very limited, better use of skills wherever it is there, wherever we can produce the goods easily we will like to produce their only, wherever the design and development can be done efficiently the job will be done there only. So, we will identify the kind of the functions and the resources on the industries who can provide the support. And

accordingly we will be in position for better use of skill and technology as per the availability.

If we want to shift on some of the, for some of the functions from one industry or enterprise to another, that kind of flexibility is also there. So, this kind of the structure is highly flexible, better or fast response. Here, in this case, it is not necessary to use the resources which are available for all projects. We can diversify, we can identify more resources and which also can be used for the improved the production or to come out with the better goods and the services.

So, this is not actually settled by the use of the same resource. It does not compel us to use the same resource for all projects or the kind of the activities in which the organization is involved. So, these are a few plus points. As far as the negative aspects are concerned related with this structure is like in this case, this kind of the structure is less. So, limitation wise less control over sub-contractors. So, this is one disadvantage related with this kind of the structure or network type of the structure, this is more exposure, more exposed to the market forces.

So, the kind of the volatility with this kind of the structure is very high less control over the kind of the enterprises organizations or the sub-contractors who are providing the support to the core form that is there in this case. So let us control over the subcontractors or the other organizations who are providing the support to the, this kind of the organizational to the core company.

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Team based structure:

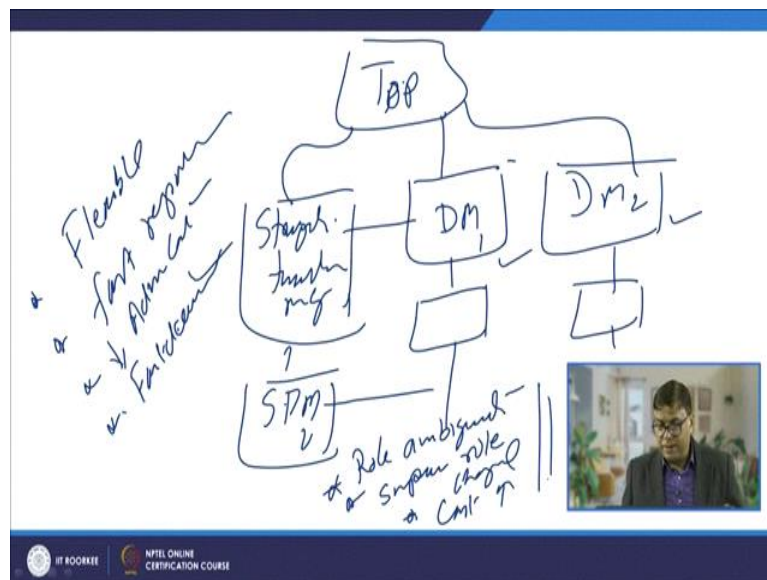
- * work team developed around the project/job
- * wide control of span
- * No close control/supervision of work
- * Decentralized with little or no formalization
- * Divisional structure

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Now, the third type is the team based organizational structure, team based structure. So, here the different work teams are developed, work teams developed around the project or the job, so this is one thing. In this case we have much wider control of span and there is no close control or supervision of the workers, the teams work independently or the people work independently in this kind of the structure and it is basically the decentralised.

So, the decisions are taken at the different levels with little or no, with little or no formalization. And so, this kind of the structure is normally found in case within the divisional structures, divisional organizational structures.

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If we see the typical design of this kind of the structure here at the top, we have CEO or the president and then there is a strategic functional manager, one strategic functional manager, two and likewise and these will be interacting with the different the department managers. One department manages, two functional, the functional manager one, the functional manager two and then there will be the further hieratical things in each of the functions and they will be interacting. So, these are basically the kind of the strategic managers and there will be different the teams and they will be interacting for the different projects.

In this case, the good part is that it this kind of the structure is very flexible. It offers a fast response to the situations, need of change and the quick decision making, less administrative cost and the fast decision making. But at the same time there are few limitations that is about the role ambiguity because it is similar to the metrics structure. Here the role ambiguity is one of the problem and the role supervisors or the workers role keep on changing and then the

cost of the interpersonal training is, interpersonal training cost is high in this kind of the structures.

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The whiteboard contains the following handwritten text:

- Org. Culture
- Healthy & Positive Culture
 - Respect for work/opinion
 - Personal/Professional growth
 - Shared values
 - Open communication

A small video inset shows a man in a suit speaking.

At the bottom, there are logos for IIT ROORKEE and NPTEL ONLINE CERTIFICATION COURSE.

As far as the organizational culture is concerned, organizational culture is concerned it is always good to have the healthy and the positive culture within the organization. So that the people respect each other, there is a respect for work and opinion of others. At the same time, it also provides a support in number of ways like people are aware of their personnel and the professional growth. There is like the shared value system and the open communication you will feel free to interact and give the opinion.

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The whiteboard contains the following handwritten text:

- Enjoy work
- Cohesion with work/mgmt/org
- Enduring productivity/creativity
- Mutual respect
- High retention
- Welcom. org. opinion
- ↓ Abs. ↓ Injuries ↓ Healthcare cost

A small video inset shows a man in a suit speaking.

At the bottom, there are logos for IIT ROORKEE and NPTEL ONLINE CERTIFICATION COURSE.

When such kind of the things are present, it helps in coming out with so many benefits like employ enjoy the working, employ enjoy the working and there is a cohesiveness, cohesiveness with the other workers, management and for organizational efforts. The work for the enhancement productivity, more effective utilisation of the resources. Then there is a mutual respect, people like to work for the organization.

So, there is high retention within the organization and the difference of opinion is appreciated like the welcome the difference of opinion, there is a less absenteeism, less injuries and the less health care cost. So the people are happy, they like to work for realising the goal of the organization, there is more coherency, increased productivity, increased creativity within the organization.

So, development of the good organizational culture helps the employee and the workers in a number of ways. Now, here I will summarise this presentation. In this presentation basically I have talked about the three types of organizational structure and what is the importance of having very healthy and the good organizational culture. Thank you for your attention.