Managing Change in Organizations Prof. K. B. L. Srivastava Department of Humanities and Social Sciences Indian Institute of Technology, Kharagpur

Lecture – 31 Innovation and Change

So, welcome to the 7th week of this course on Managing Change in Organizations, in the previous weeks as remember, we have discussed the various stages of change management. Starting with how to identify the need for the changes to implementing the change and we discussed all through these stages and the issues that need to be resolved at various stages.

Now in this week, we are going to discuss about some other issues which could be linked with change management. One of the important issues related to the change management is, how we are going to manage innovations, because the moment we talk about change it is related to innovation. Innovation in products, innovation in services, innovation in processes and this innovations in product process services are possible only when we go for some kind of change.

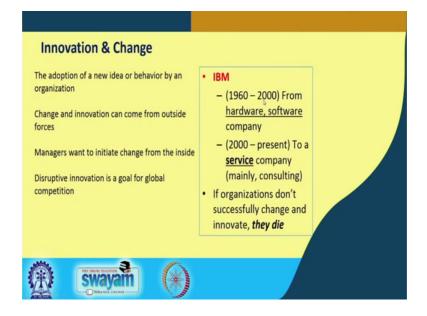
And then we go through all these stages of the change to ensure that, organizations are able to innovate themselves on a continues basis; so, that they are able to remain competitive in the market. And that is why, we are going to discuss about this managing change and how this innovation is linked with management of the change.

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So, what we are going to cover in this volume especially is, especially we will talk about innovation management, what is the role of change in innovation and how we are going to link change and innovation.

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So, to begin with if you look at, the innovation and change. So, what is innovation? Innovation is a basically an outcome of certain processes where you try to develop a new idea or a new behavior in the organization.

So, the moment you say that, you are going to develop a new idea or a new behavior in the organization, you are talking about innovation ok. And change and innovation come both from outside forces, because if they are going to be technological innovation and the products, then you also need to go for these kind of innovations, in order to compete in the market right. And that is, where you are going to initiate certain changes so, that you can innovate.

So, innovation you can say is required for the change and any kind of change include some innovations in product process and services so that you can compete. And sometimes you go for disruptive innovations; disruptive innovations is a different kind of innovation, where you are going to do something, that is very drastic in terms of products and processes or services which is going to provide you some kind of advantage in the market and through which you can compete in a globally competitive market.

Now, with this introduction I am also given here an example of say IBM which was initially a hardware software company, but now it has move to a service company especially into consulting. So, the idea here is that when you are talking about companies, they also keep on changing their domain, their products, their processes and they keep on moving and changing these in order to survive and complete in the market.

So, the example that I have given here of IBM say that, how it has moved from being a hardware and software company to a consulting a servicing company. So, the idea is that, if you do not changed successfully or if you do not implement change successfully in organizations and for that if you are not going to innovate, you are not going to survive tomorrow. So, it is very very important to go for innovations which is linked with the change in order to complete and survive with the market.

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	TESLA MOTORS INC.	USA	Automobile Manufacturers	
2	SALESFORCE.COM INC.	USA	Application Software	
3	REGENERON PHARMACEUTICALS	USA	Biotechnology	
1	INCYTE CORP	USA	Biotechnology	
5	ALEXION PHARMACEUTICALS INC.	USA	Biotechnology	
5	UNDER ARMOUR INC.	USA	Apparel, Accessories & Luxury Goods	
1	MONSTER BEVERAGE CORP	USA	Soft Drinks	
3	UNILEVER INDONESIA TBK PT	IDN	Household Products	
)	VERTEX PHARMACEUTICALS INC.	USA	Biotechnology	
10	BIOMARIN PHARMACEUTICAL INC.	USA	Biotechnology	1000

Now, I am also giving some examples here see, these examples have been taken from the Forbes, 2018 list and this example talks about some of the companies which have been considered as most innovative. Now, if you look at these companies some of them belong to say software, some of them are ready to manufacturing, bio technology, accessories soft drinks say household products.

Now, if you look at this, most of these innovations actually have happened in the area of what you call, the field of biotechnology right, with that is Regeneron or whether it Incyte or Alexion pharmaceuticals or even if you look at Unilever Indonesia were takes or Biomarin Pharmaceuticals. Most of these companies which are in the list of the top 10 companies are related to products which is in the field of biotechnology. Now, if you look at Tesla motors it is still in the top ok.

Now, this another list especially related to different kind of companies where you will find companies like Amazon, where you will find companies like Microsoft, where you will find companies like Google on the list. So, depending upon the requirement different kind of list have been prepared regarding most innovative companies.

Now, if you look at the character of these innovative companies, you will find that the keep on changing, their technology, their products, their services in order to remain competitive. So, the idea is that unless you go for a change, it is not possible for you to go for innovations in your product processes and services. And that is where, it is very

very important for any organizations to go for innovations and for that, they have to go for some kind of change and that is why, in this module we are trying to link change with innovation.

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Innovation requires change. Ch Change triggers that motivate t innovate. Triggers come from b		
External triggers	Internal Triggers	
Customer needs, desires or expectations Competitive offers New technology Changing demographics Economic cycle Geo-political events Environmental change Societal change Industry structural changes Regulation change	Decisions Problems in operations Company growth or decline Leadership and personnel change Changes to inter-organization alliances	

Now, if you look at how we are going to link change and innovations, what we need to discuss is that, how we are going to see that, the forces which are important or which are basically acting as a trigger or a catalyst to go for a change. It means, that when we you are want to go for some kind of innovations it means, that it requires some kind of changes internally and externally and the moment you are talking about changes, it means, that you need to learn what kind of changes you need to bring in right.

So, it is very very important that companies need to invest learning, what need to be changed, what is to be innovated, what kind of innovations that they have to bring in their products, processes and services. And when we are talking about why companies go for innovating products and processes or services there could be number of factors related to organizations within the organization, you can say and also there could be external triggers.

For example, if you look at external triggers there could be change in the customer needs, desires, expectations, there could be competition, there could be change in the technology because your competitors might be offering a different kind of technology and a new technology there would also be change in the demographic pattern of the

population which also requires some kind of adjustments and adaptation to be made by the companies. Then what kind of economic cycle you are going through whether it is a growth phase, maturation phase, then the geo political event also forces you to go for some kind of innovations for example, if a developing country is not getting say up to data state of the technology from a developed country, then the developing countries also forced to go for innovations.

For example, if you look at India as a space program and that the kind of satellites that India have been sending to so, orbit. This is a best examples where, developed countries have not allowed India to have access to the latest technology and then Indian scientists have gone for developing their own technology, indigenous technology and they have been very very successful to put lot of say satellites into their space.

So, geo political events are very very important and that forces you to go for some kind of innovations. Then when there is a change in the environment; especially, the external environment, where political, social, cultural technical environment go for a change, this point we have already discussed earlier also.

Then social changes, when the changes happens in the society in terms of what kind of say products, they look are looking forward to and then industry structure changes; when the changes happens in the structure of the industry itself, if you look at any kind of industries the way they have been doing business, even if business model go for changes and then finally, regulatory changes, regulatory changes which is mean by the national governments and then you need to follow the regulatory changes. And accordingly, you bring about certain changes say for example, most of the companies now have to comply with regulatory changes related goods and services tax in the country right.

So, there could be lot of external triggers and these triggers necessitate some kind of innovations and for that you need to go for some kind of changes. Similarly, if you look at internal triggers are there like the kind of decision making process, that you have the problems related to operations; so, I am not able to produce effectively in terms of quality and efficiencies, there is a company which is either growing or declining both cases, you need to maintain that and if you are declining then you need to see that, what kind of changes to a brought in; in order to ensure that your remain viable and competitive.

Then you also need to bring about change in the leading people, who are leading the change say organizations and also how the organizations are going to relate themselves with other organizations in the similar sector or a different sectors. So, the idea here is that, when we are talking about the triggers of the change, the change come from external and internal forces right and these changes as or a actually act as a catalyst for some kind of innovations that you need to bring, in order to remain competitive right.

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So, moving further; now, what we are going to talk about in change the products and technologies. If we when we are talking about innovations, most of the innovations happens in the area product and technologies and that is where you go for bringing about a change in your product or technology. So, when we are talking about the product changes; it means, that you are going to talking about changes change in the kind of product, that an organization is producing or the services that it is offering to it's clients or customers right.

So, whenever you try to bring about a change in the product and the services; it means, that yes there is a change and this change is because of what? Because if the innovations that is happened and that is how you are able to offer a new a different kind of products and new product or a product with an added features and similarly also you are going to offer a different kind of services new services.

Similarly, another kind of change that happens in the organization means, how we are going to produce certain things; it means, you are talking about the changes in the technology. And when we are going to talk about the changes in technology; it means, you are talking about what is the nature of the production system whether you are using a mechanical system automated system or whether you are using a computer aided system or computer aided design manufacturing or (Refer Time: 11:52) you are going for a mass base production system or a tailor base and if you are going to use a tailor base production system or used in flexible manufacturing systems or not right.

So, these are the two major areas where changes happens which could be related with or linked with the innovation because whenever you are going to bring about a new product or new technology; it means, some innovation has happened in the product and the technology and that is how you have been able to bring about a change right. So, in order to bring about a change in their product and technology, what kind of strategies are used in terms of innovation, that includes exploration, corporation and entrepreneurship.

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So, now we are going to discuss about these three innovation strategies which is related to this and then we will talk about different kind of innovations. So, if you look at different kind of innovations. it means what? Innovation the product it means, either there is a change in the appearance of the product early it was bulky you have (Refer Time: 12:53) it is become more slick now.

Now, if you look at the computers industry, you find that the size of the product keep on changing right or there is change in the performance of the product, which is more productive more efficient. So, if this kind of innovation is happening it means, it is related to product innovation right. Second is process innovation; it means, that you are you have gone for a change in the process through which the product is being conceived, manufactured or disseminated right.

So, for example, if you look at the assembly line. So, whether you have gone for a change in the assembly line whether you have gone for automatic processes to come out with a product. So, there could be process related to say supply change, process related to customer relationship management right. So, all these are all these innovations are you can relate with what you call, process innovation.

Then you have incremental innovations we have already talked about it, it means that you are going to create product and services and then keep on modifying the existing products right. So, in the first case, when we are talking about product innovation; basically, you are talking about a new product. A new process between talk about innovation, incremental innovation, then it is related to a product, a service, a technology where you are going to have added features or you are going to modify either the product, the services of technology to make it more effective and efficient.

Then, we have radical changes what you call the transformational changes and this basically talks about creating new products and services which is going to replace the existing products ok. So, these are the four different kind of innovations.

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Now, we will go back to talk about innovation strategies which is related to exploration, cooperation and entrepreneurship. And all these leads to what you call new product, services and technologies. So, one strategy is related to exploration and exploration takes place through creativity process we will talk about it then, experimentation and then idea incubators.

Then if you look at, co-operation; it means, that you need to develop mechanism based on your structure that how vertically and horizontally people co-ordinate with each other, in order to come out with a new product or services. Then, it is also related to customers and your partners, business partners and then you also go for a innovation, open innovations, new products and services.

Then, entrepreneurship is also related to new products or innovation right. So, in entrepreneurship you have in organizations who come out with new ideas, they are called idea champions, then you have new venture teams, teams which is responsible for new products and services right then, skunkworks those who are responsible for coming out with products and services then, their new venture funds basically, new venture funds who are going to sponsor your idea to come out with a new product and services. So, we will talk about these kind of strategies and how they could be related with new product and services.

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So, if you look at this, it is like this exploration strategies. So, exploration strategies basically related to when you try to explore that, what kind of products and services you required to better serve your customers right. So, creativity is a process through which you come out with a product right. So, through this creativity process, you come then idea that you have and you see that, how it is going to meet needs of the customers or the organizations and what kind of opportunities do you going to offer to their organization right.

Then your idea incubator also; idea incubator is a person basically, where he is going to come out with a new idea and is going to experiment with this new idea with the support of the companies, without any interference from either the companies hierarchy or the politics that is involved. One example that; I have taken here is idea incubator is, in Yahoo, they called it brick house and they get the support of the top management; they do not get the support of the top management, if there is inference from the bureaucracy if the politics probably yahoo will not be able to come out with new ideas or able to develop an experiment with new ideas; so, that they can come out with a new product or services.

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Now, if you look at the creativity, it is very very important to see that, what are the characteristics which creative people have and what are the characteristics which is related to what you call organizations or the department right. If you look at creative individuals these are some of the characteristics ok, they try to think something that is new original right, they know what is the concept they are able to actually visualize, what they want to have and open minded, because they if they think narrowly probably, they will not be able to come out with something that is new ok.

They work independently they do not want to be say dealt by authority. So, they want to see that, this more empowerment, less control from the top management. So, they go for less authority, more independence and they also are more self confident people right. And they are very very curious, they try out new things, experiment new thing ok. Not necessarily related their own field, but any kind of field and they are very very persistent these are the characteristics, they have lot of patience, committed to what they do and they are very focused.

So, these kind of people, actually could be part of what you call an R and D team. So, with their knowledge and skill and these characteristics, they can come out with something that is new right. Similarly, if you look at creative organizations or creative departments, they also certain characteristics in terms of if you look at their structure, they have very open channel of communications ok, they also contact people with

outside and they have the overlapping territories like cross pollination of ideas, across disciplines, across departments right. So, that these ideas come out and they become fertile.

And they also depend upon what you call suggestion systems, brainstorming freewheeling discussions so, that the idea could be materialized into something that could be concrete and work right. Then another important thing is that, they assign nonspecialists to problems because they bring a different kind of perspectives right, eccentricity is allowed means that they allow people to think about on their own without interference from others right. They also hire people who are from outside, but beyond their comfort zone because they can think more creatively right.

And they also have the this policy of decentralization because decentralization gives them in opportunity take certain decisions right, these kind of organizations accept mistakes, reward risk taking behavior of the people and ask them to take challenge. So, supervisors encourage people to take challenge.

Similarly, if you look at some other characteristics like they are more focused to see that what needs to be done; so, they decide and think on the problem on is there going work, it is not going to be nominated by the top management. Similarly, they also need resources so, these kind of organizations provide enough resources, I allocate resources to people in their departments or the organizations, not that is it is going to have a immediate (Refer Time: 20:57) it they look at the long term rewards, that is coming out of this kind of things.

And they also have a reward system which encourage motivate people to take risk and definitely they also provide responsibilities not only in their own area, but also peripheral area so, that they can connect and relate with them. So, when we are talking about exploration, creativity is very very important whether it is related to the individual or the organization, because creativity is a process through innovation comes out So, it is very very important to ensure encourage creativity at the individual and the group level in the organization.

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Moving to this the next part which is relate to cooperation, both internally and externally it is very very important. So, you need to ensure that, how horizontally you can link with each other ok. So, that everybody can contribute together, then you also talk about the co-ordination mechanism that, how people are going to relate their activities with each other.

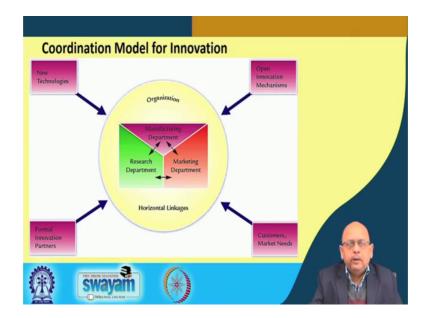
For example say marketing, research R and D people, manufacturing. So, how you can these three departments can coordinate their activities with each other because marketing department can identify, the kind of products that is required, R and D is going to develop the prototype of the product based on the input from the marketing research, then the manufacturing department is supposed to come out with new product, it is going to develop the new product in their say manufacturing facilities right and for that you need to plan; plan well so, that you are able to come out with a new product or services.

So, this internal coordination is very very very much required similarly, you also require external coordination that include your customers, suppliers, partners right. And see whether you are able to go for commercialization of ideas, beyond the organization because it is very very important. For example, if look at P and G, Procter and Gamble; they have gone for patenting their ideas. So, that they can commercialize it at later stage, then like LEGO or Hollywood studios, they also coordinate their activities with customers, partners, suppliers and they go for open source innovation.

So, that they can commercialize the ideas beyond the organization right; and their object example that is given here is like crowdsoucing ok. it is different from crowd crowd funding where crowd funding is where you get funding from different sources and crowdsoucing where you are going to source ideas from anywhere and everywhere right.

So, the idea is coming from different type of people having different kind of knowledge, skill and different kind of backgrounds right; for example, one thing that is developed is known as Threadless 2.0, it is an example of crowdsoucing and that is the best example I can give here, a for external co-ordination like web 2.0 where you are open share participate without any say intervention from others. So, that you can source these ideas from people and then you can make use of this for being innovative in terms of product and services.

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Now, the third days related to what call this, this model is co-ordination model, where if you look at this like we are talking about the new technology are their partners, innovation partners, then you have customers market needs and also the innovation mechanism.

Within the organization, if you look at this, how they are going to relate? It is a manufacture department, R and D department and marketing department; they need to coordinate their activities and the input is coming from different sources from the innovation mechanism, from the new technologies, from the formal innovation partners

are the customer requirements. Based on these inputs at different levels, the organizations going to coordinate and create some kind of linkages among the departments. So, that the organizations going to be innovative.

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Moving further; so, what kind of roles in a the managers and others have in the process right. So, the idea here is that the managers should support entrepreneurial activities and foster idea champions. So, that anybody whose coming about with new idea, it is your job to support him ok. So, and that is why you require energy and efforts so, that you can promote a new ideas, if a person is coming out with a new idea is called an idea champion.

Now, these person need to be supported in terms of sponsorship ok. So, you need to a sponsor so, the role of the sponsors which approve and protect ideas while others are going to challenge the concept. So, any new idea is there, you know that lot of people start resisting that, no it is not going to work, but let there be some people who can think that whether the idea is good or not, you do not evaluate it, let us see whether this idea is going to work it or not.

So, through brain storming, at later stage you can evaluate the idea and see whether it has some viability whether it could be used, whether it can be worked on a experimented on or not. So, the both the managers and sponsors must play a very significant role. So, for innovations coming otherwise it is very very difficult to by innovative and productive. Then you also have new venture teams ok. And this team is responsible to ensure that any idea champion, who is coming out with the new idea goes through the creative process all the support which is required is provided to them; it is very very important.

And then, you have a skunkworks are basically, these are the groups which focused on breakthrough idea right and that is why they are known as skunkworks, they are informal, autonomous, secretive groups that focus on breakthrough ideas, new idea all right.

And then you have new venture funds, you have people who are going to right resources for the new idea, it could come from within the organization, it could come from outside also.



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Moving further, when you are talking about these different roles especially in case of change management; these are the four different roles that have been identified for the managers; especially, when it comes to linking innovation and change. This include in inventor acting as a idea champion or a sponsor or a critic.

So, these four roles are very very important when it comes to change; organizational change specially. Now if you look at inventor, inventory someone who has the idea of something new and he develops and looks into the technical aspects of it ok, but it is not know what to do further right, because he need support and that is where you require

idea champions right. These are the people who believed in the ideas and you can see the benefits of these ideas and they are able to visualize whether this ideas is going to work or not ok, they look at the cost, resources and everything which is required to implement the ideas right.

They also look at support from the top management, financial support and see that if there is an obstacles that could be removed. So, inventor with the help of champion would be able to experiment with this new idea without this it is not possible for the inventors to go further, because he has an idea, he knows what is to be done, but he need support from the management.

And the support from the management come from the champions, the idea champions because they are going to support the idea, they are going to provide the resources, they are going to ensure that the any obstacles which is there on the way to implement or experiment with this new idea is removed. Then they are sponsors ok; the top managers, they are going to sponsor the idea, they are going to see that this idea is going to work right within their organizations and finally, you also have critics ok.

They are going to provide some kind of reality test, to see whether it is really working or not ok. They identify the problems or the shortcomings ok, they also see that whether this idea is going to fit into your system or not, whether it is going to work and so, they identify certain parameters, hardnosed criteria and see that, whether this idea is going to pass those through these criteria to ensure that it is going to work.

So, when we are talking about these roles all these roles are equally important and we need to ensure, that all these roles are taken care. So, that the organization is able to go for some kind of change to bring innovation in the organization.

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Change type	Description	
Organizational Change eading to innovation	Organizational change counts as innovation only if there is a measurable change in output, such as increased productivity or sales.	
Cultural Change eading to innovation	Research has shown that a strong corporate culture can give a company a powerful advantage over its competitors, especially in highly competitive and commodity-like markets. Also the organizational culture is directly linked to the organization's productivity and profitability.	
fechnological Change eading to innovation	Technological product and process innovations comprise implemented technologically new products and processes and significant technological improvements in products and processes.	
Knowledge Assets Change leading to nnovation ¹	The tangible asset or what so called solid asset and the second part is the intangible asset which is mainly based on the intellectual properties, patents, trademarks, goodwill names, and positioning. Also what is available or kept in the brain of the key persons.	
Reengineering leading o innovation	Radical change, top down, new organizational structure	

And that is where we are going to link innovation and the change right. So, what kind of change is related to, what kind of innovation right; for example, organization change which comes to innovation basically, because change happens only if there is a innovation right correct, in terms of increase productivity, sales anything like that. Then cultural changes it also leads to innovation right, if you have a good corporate culture, then it is going to provide you powerful say advantage over your competitors, because in a competitive market it is very very important, that you have a strong culture because this strong culture is related to performance and productivity.

Then technical changes definitely leads to innovation right, we are talk about product and process innovations, when you are going to implement new product and services sorry processes right, then we talk about knowledge assets changes we are going to tangible assets which have been created or solid assets that is created. So, both asset and explicit assets, that is created within the organizations. And these tangible assets could be in form of say intellectual properties patents, trademarks, goodwill's, positioning because all this is an example of what you call the knowledge assets.

So, this knowledge assets, basically is an outcome of innovation right which can bring lot of changes in the organization. Then reengineering, business process reengineering is also leads to innovation because it talks about radical changes or a new structure or new format right and that is where we are going to link innovation and change together.

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And there could be lot of challenges when you go for these kind of innovations to bring about certain changes and then a management has to ensure that the challenges are overcome, it could be related to bureaucratic controls, unwillingness to expose customers to failed ideas right, risk aversion opportunities because it is very very important that employees are able to take risks, then you need to ensure that you are able to implement any kind of change, which leads to innovation properly following all the processes and their stages.

And then you have to focus on processes as well as results both and then you need to ensure there is a support for research R and D activities, marketing intelligences acting as a input for innovation and then how this is executed and whether it is going to be sustainable or not. And then you also require as I told you support from the top management, then you also need to ensure internally that yes your HR policy, structure, team, compensation is aligned with that one and then how we are going to measure it; so, profitability, return on investments, dividends because this is going to show that whether your innovation is really bringing out profit for the organization or not right.

And then what kind of tangible assets you have created in terms of knowledge management, your tacit and explicit knowledge, trade secrets right patents intellectual property that is created. So, what we have discussed here is that, we are trying to link basically, how innovation and change are related with each other and with this we want to conclude this session.

Thank you very much.