Product and Brand Management
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Lecture: 32
Product Innovation - 1

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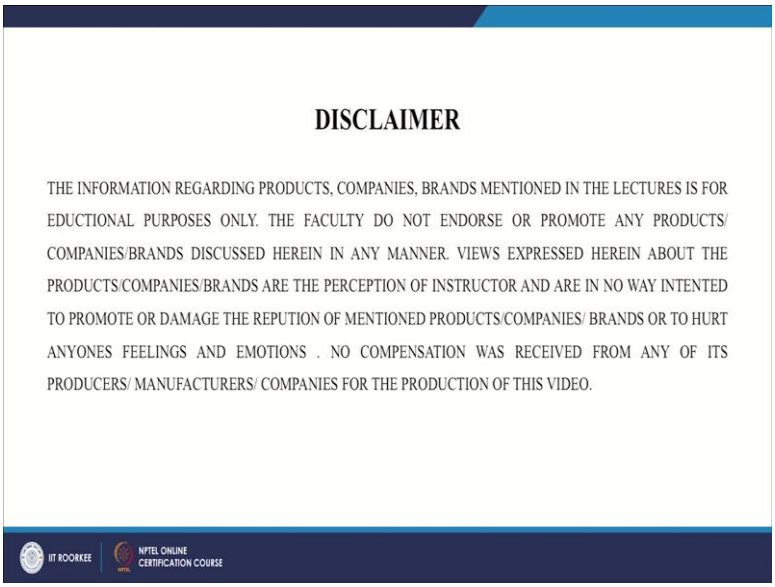

Welcome back to yet another session of Product and Brand Management. We have passed a stage wherein we tried to develop an understanding towards design thinking. At this stage, I would suggest that you try to recollect the fundamentals, which we have discussed and then try to put up all those fundamentals into the elements of design thinking which we have talked about. Because I am sure by this time you would have started noticing the replicable changes instigated by processes or product designs or overall, for example, you would have started noticing what kind of sitting habits you have generated because of the comfort you are getting in your chairs nowadays, the ergonomics and those kinds of things, and from where has it come.

All these kinds of correlations or integration, you have started noticing by this time. So, after this let us start building up our thought process around innovation. It is an interconnected element of whatever we have been discussing up till now, but let us focus on this because this has to be marked, and this has to be noticed. The ultimate objective is that all of you with varied experiences and varied objectives in life, but definitely oriented towards marketing and product and brand management, would like to know, where you have a scope of developing innovation, putting up innovation in due course of time in your practical lives.

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What is innovation? Innovation can be seen with the perspective of a new idea, device or method, the act or process of introducing new ideas, devices or methods. It can be an idea or the act of processing or developing further developing a new idea. It is invention plus commercialization if you will look at it in totality, although, invention is a larger term with reference to innovation.

The invention is a fundamental term, and I will not take you into the hierarchy of how to look at invention or innovation. We are just focusing on innovation, which can be seen as a process that combines discovering an opportunity, blueprinting an idea in order to seize that opportunity and implementing that idea to achieve results.

Three elements; Process that combines discovering an opportunity, looking at something within with a perspective, where you can put up your knowledge, where you can contribute and definitely, there is a business motive as well while blueprinting that idea and implementing that idea to achieve the results and definitely putting it up into a business model.

There are several dimensions to innovation because we must choose a point of concentration, although, in product and brand management, I should not be wandering too much away from the discussion of the product. But you have realized that, while we are talking about the product, it is not just the form and structure we are talking about. We are talking about the complementarity of services with the products and the processes and the supplies, everything,

because everything is interdependent and that is why dimensions have to be looked upon with specific concentration on products.

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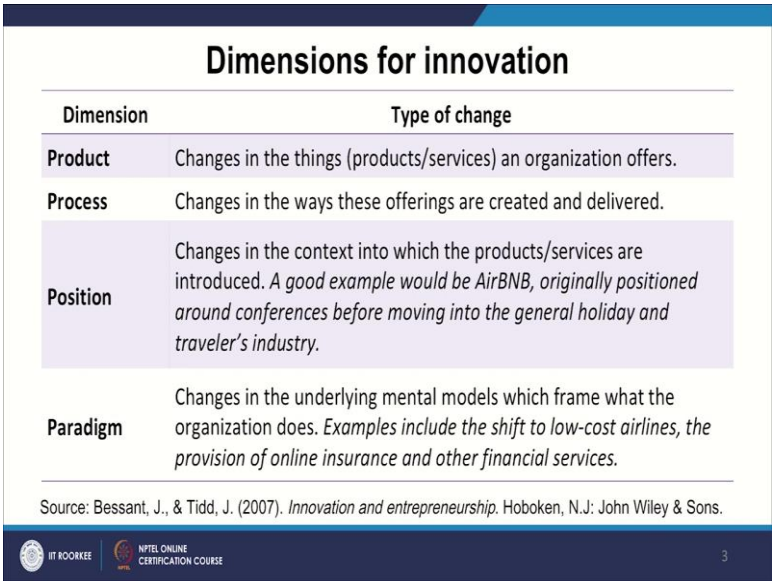

One of the main dimensions. Changes in things, products or services an organization offers can be referred to as a dimension of innovation. Process, changes in the ways these offerings are created and delivered. Methods, methodologies, positioning or position, changes in the context into which the products and services are introduced. See, a good example would be Airbnb. Originally positioned around conferences before moving into the general holiday and traveler's industry.

Paradigm, which is related to changes in the underlying mental models, which frame what an organization does. Examples include the shift to low-cost airlines, the provision of online insurance and other financial services and so on. So, these are the dimensional aspects of innovation.

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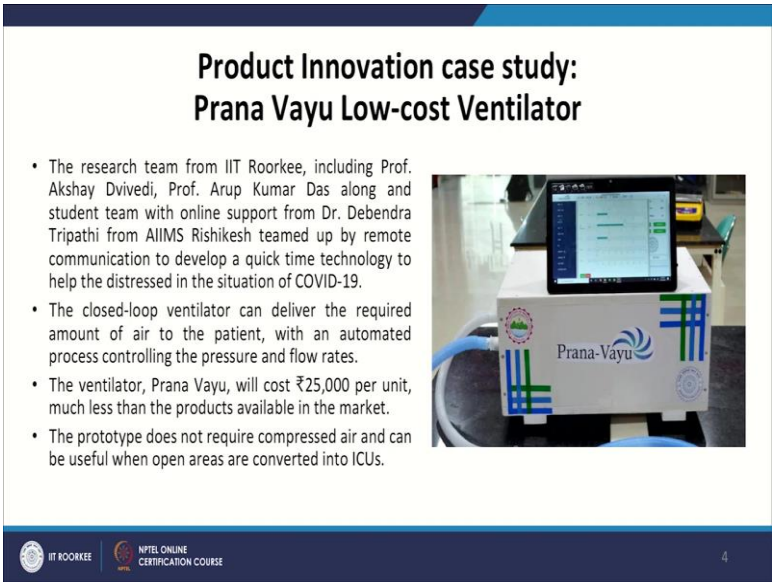

And now, I will be giving you a wonderful example, which was invented, developed at IIT Roorkee, the institution where I am standing. One of the greatest institutions in the world, and one of the oldest institutions in several countries. And this year, we are celebrating 175 years of its existence. 25th of November was Foundation Day and today when I am recording this session for you, it is the 27th of November.

The whole of this year up till 24th November 2022, would be our hundred and seventy-fifth year. So, there are several innovations which are being propelled in this great technological institution, one of the most prominent innovations which came up during COVID-19 within a very short span of time is Prana Vayu. This is a low-cost ventilator and how important ventilators are. We have all passed through the trauma and turmoil of COVID-19.

There is no need for us to discuss, how badly we required ventilators at one part of the time that too at a very, very low cost. See the research team from IIT Roorkee including Professor Akshay Dvivedi, and Professor Arup Kumar Das, along with the student team with online support from Dr Debendra Tripathi from the All India Institute of Medical Sciences, Rishikesh, teamed up by remote communication to develop a quick time technology to help the distressed in the situation of COVID-19.

The closed-loop ventilator can deliver the required amount of air to the patient with an automated process controlling the pressure and flow rates. The ventilator Prana Vayu is called Prana Vayu, the source of life air, which propels life and saves lives. Prana Vayu will cost 25,000 rupees only per unit.

Which is much less than many times the per-day cost of putting up a patient on a ventilator. That is what innovation is and that is where empathy comes in when we talked about that and design thinking. That is the whole objective of taking things to people when they require them in whichever way they require at a price they require. And looking at the sustainability elements and every element which we have discussed up till now. The prototype does not require compressed air and can be useful when open areas are converted into ICUs. And it has lots of portability aspects associated with that itself. Wonderful innovation. I congratulate the team.

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For marketing process innovation there is a case study of L'Oreal. L'Oreal is a French cosmetics company with a strong foothold in the cosmetics industry all over the world. We know that one way in which cosmetic companies market their products is by having exhibitions where people get sample makeup as well as other cosmetics for free. In order to reach a wider customer base in this digital world, L'Oreal developed an app called the L'Oreal makeup genius. This app allows users to do a digital makeover and by doing so, they were able to sample the best makeups that suited their skin tones. Lenskart website, if you remember you just go there, you can try the glasses on their website. There are several other different kinds of wonderful innovations which are going on in terms of process development.

When you go to the manufacturing site, I talked about Patanjali, integrated plants and plants which have gone to zero waste systems basically and utilizing all the raw material in one form or the other. Then, let us focus on types of innovation.

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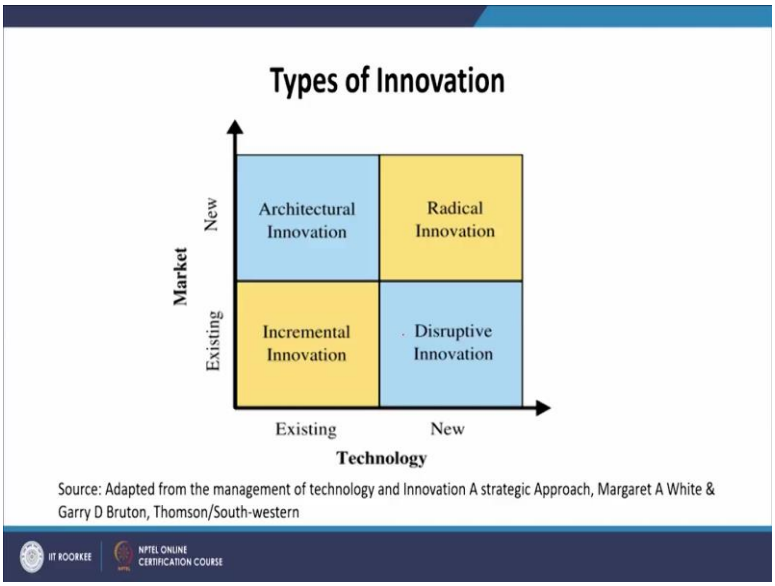

On one axis you have the market and on the other, you have the technology. I have repeatedly suggested that the two-dimensional planes and quadrants are guides for us to know where we stand. So, a matrix structure, wherein the market can be new with technology. It can be thought of as Radical innovation, or fundamental innovation. And on the other side existing both ways that technology is existing and market is existing, it is called incremental innovation.

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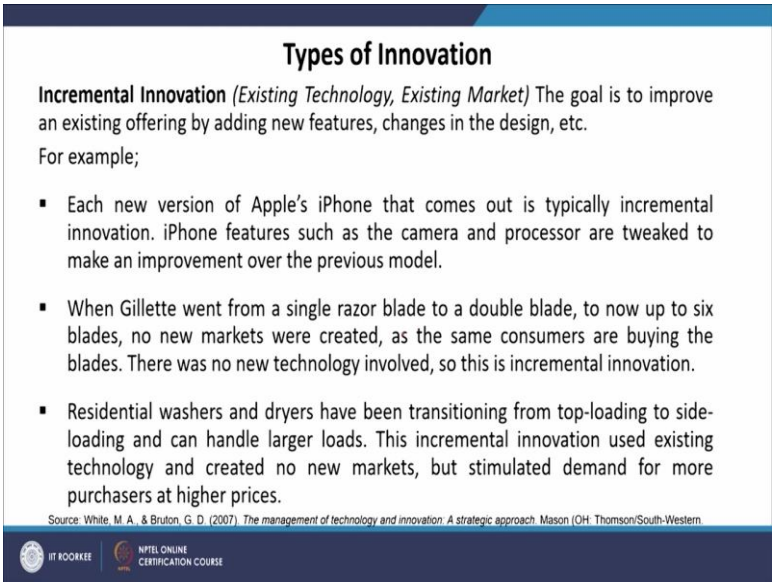

Let us talk about these things in a bit of detail. Incremental innovation is when it is an existing technology in an existing market. The goal is to improve an existing offering by adding new features, changes in the design and so on. For example, each new version of Apple's iPhone that comes out is an incremental innovation. Although many times you would realize that the features which have been added are fundamental nature or radical nature, both ways.

But again, the point is, that device which is being produced is incrementally going forward with add-ons and several considerations in terms of putting something new in front of the customer. Gillette went from a single razor blade to a double blade to now to six blades, and then they came back to Gillette guard, when Procter and Gamble took over in India, as far as the Gillette operation goes.

Here is an example where innovation is not supposed to be always go up, one plus one. Innovation can also be when you put up something in a newer form and reduce the features. So, we talked about this earlier as well wherein we were mentioning, we were discussing positioning washers and dryers that have been transitioning from top loading to side loading and can handle larger loads as well.

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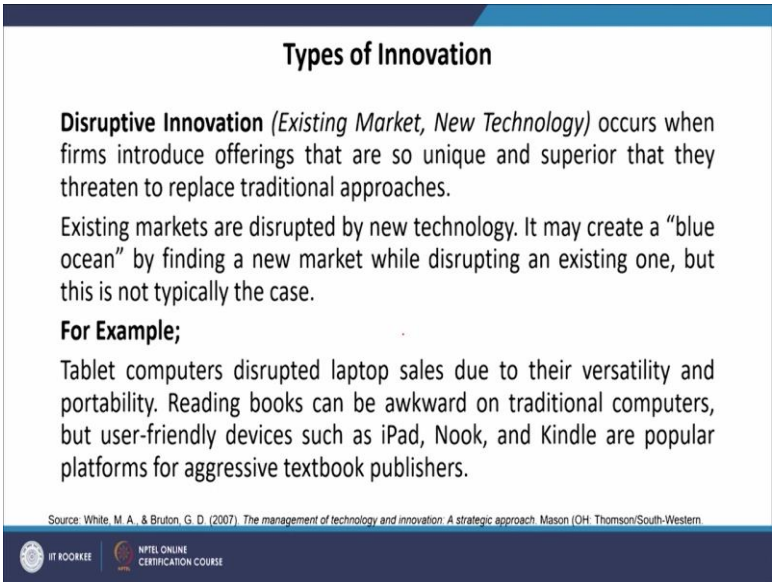

Disruptive Innovation is the existing market and new technology. It occurs when firms introduce offerings that are so unique and superior that they threaten to replace traditional approaches or let us say, this can be seen as that traditional approaches are not so acceptable by people in a growing pattern. That means the acceptability of those approaches is getting matured or stabilized in due course of time.

And it can be in terms of, for example, traditional processes or materials associated with the construction of houses. Although, we have yet to decide whether it is good or bad. For example, in Himalayan areas hilly areas in India, I have noticed that there are modern methodologies and processes, including material, which is being used for the construction of houses, which does not seem to be so healthy for the environment and the area and also in terms of the local weather. The earlier procedures, have been found to be more pro-environment as well as people.

Somehow, people never wanted those processes to exist, that material to be used anymore. So, that is where we have to think in terms of innovating upon the usage. Rather than letting those processes go off which traditionally have been valuable. I will be coming back to this very important element in my last session in this sequence of design thinking innovation and new product development, wherein I will be talking about product innovation through low-cost procedures, just wait till that time. Existing markets are disrupted by new technology, it may create a blue ocean by finding a new market while disrupting an existing one, but this is not typically the case.

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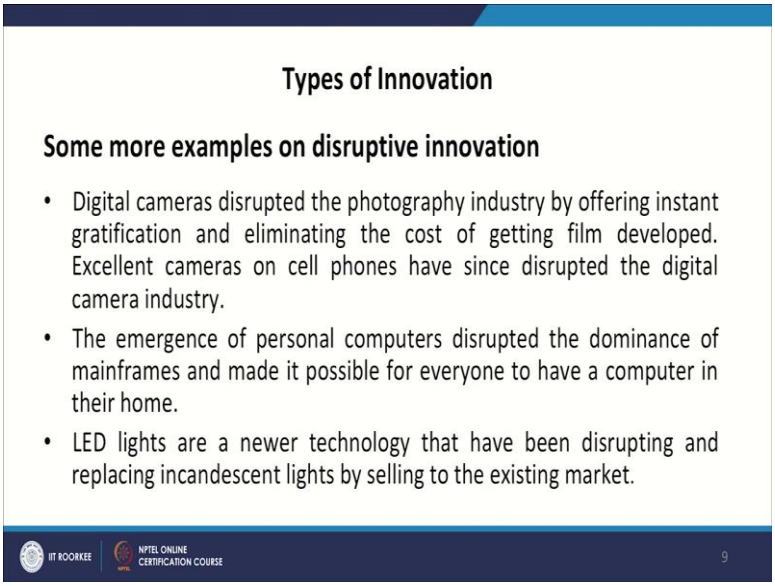

Then comes in some more examples of disruptive innovation digital cameras, personal computers, a very famous example LED lights, we all know we are all using that. So, that is again a disruptive innovation.

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Then comes Architectural Innovation, when existing technology is in a new market. Now, it occurs when new products or services use existing technology to create new markets and or new consumers that did not purchase that item before. The smartwatch used existing cell phone technology and has been repackaged into a watch now. So, there are several kinds of changes which are going on. Firms alter the architecture of the product to create a new

product that opens up sales to new markets, digital ecosystem propellers like Amazon use the innovation strategy to enter new markets and so on. And a recent example of this, which is done by Amazon is that they recently entered into the medical care field as well. A good one.

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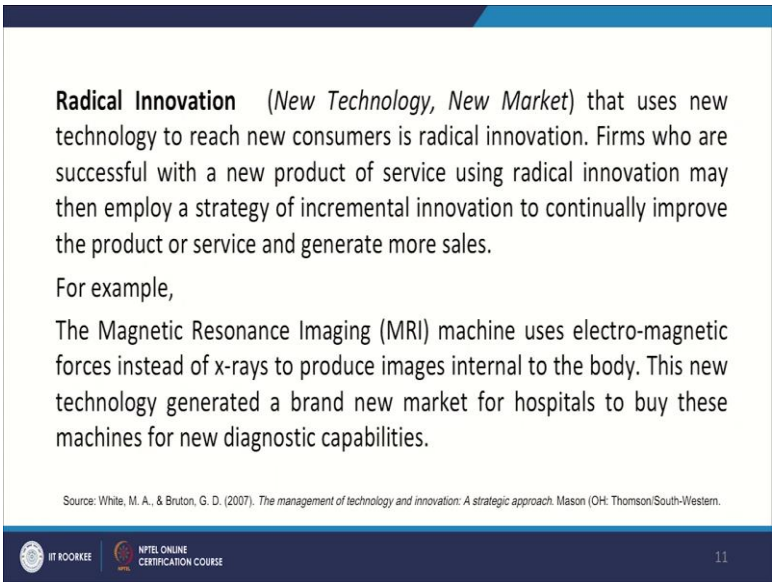

Now, let us go for Radical innovation, where new technologies are in a new market. That uses a radical innovation perspective and uses new technology to reach new consumers in a fundamental way. I am not saying at the base way changing things fundamentally, probably, in terms of paradigm firms who are successful with a new product or service using radical innovation may then employ a strategy of incremental innovation to continually improve the product or service and generate more sales.

It will move up the ladder in due course of time and that is where we come to know that the quadrants might change depending on how the market would grow and it stabilizes. So, the product would change as far as the quadrant position, which we have just discussed. Magnetic resonance imaging (MRI) machines use electromagnetic forces instead of X-rays. X-rays produce images internal to the body and so on and they are in medical science. You would realize that there are thousands and thousands of radical innovations which have come up thanks to our technology-enabled experts all around the world.

I definitely commend the IIT students for their technology orientation and learning and knowledge and the faculty which has developed such kind of processes, who have contributed a lot in the field of software, electronics, mechanical, material science, and whatnot? And for example, in this place, we have several departments, and several labs

working day in and day out on such kinds of things which are capable of changing medical science forever.

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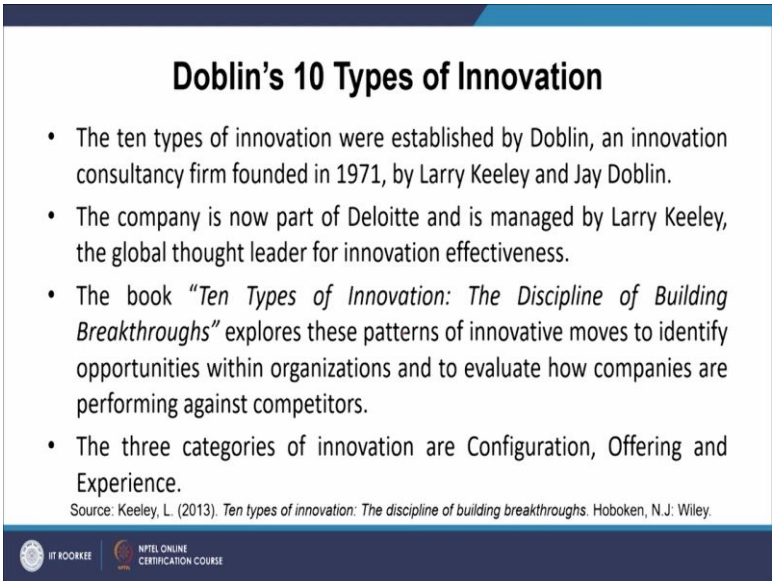

Doblin's 10 types of innovations. There are several other types of innovations which may come your way. But here again, the text to which we are referring is categorizing innovations into 10 types largely, and the 10 types of innovation were established by Doblin, an innovation consultancy firm founded in 1971 by Larry Keeley and Jay Doblin.

The company is now part of Deloitte and is managed by Larry Keeley, the global thought leader for innovative effectiveness. There is a book, Ten types of innovation, the discipline of building breakthroughs. So, it is an interesting read, go for that, and you would learn a lot. There are three categories, which evolve during the text. You go through the three categories of innovation which are related to configuration, offering, and experience. And now, when we say that there are 10 types.

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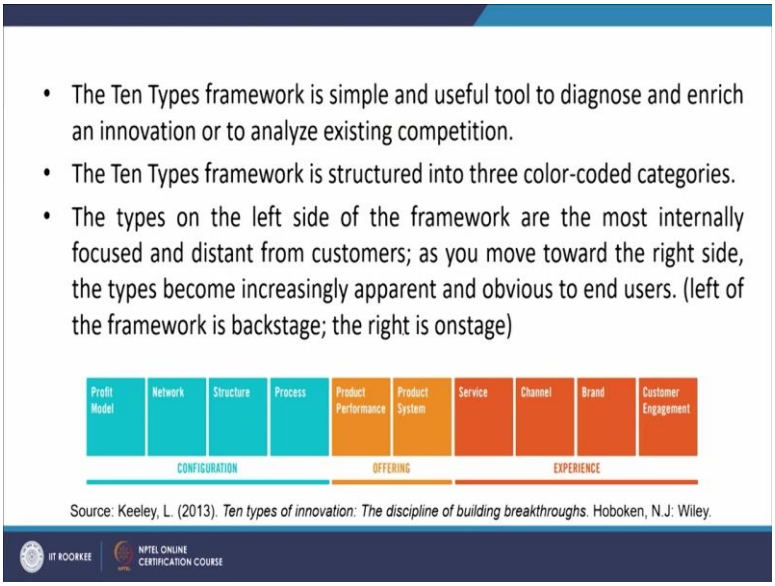

Let me take you briefly through that. These 10 types of framework is a simple and useful tool to diagnose and enrich an innovation or to analyze the existing competition. It is structured into three colour-coded categories in this slide in front of you. The types on the left side of the framework are the most internally focused and distant from customers, although they are very much integrated with the customer and are integrated with the other categories as well, which we will realize in just a short while from now.

Just look at it as a scale wherein, four elements focus on configuration. Two of them focus on offering and four focus on the experience. Let us think of configuration very briefly. While looking at the configuration, wherein Profit model, Network, Structure and Processes are the mainstay.

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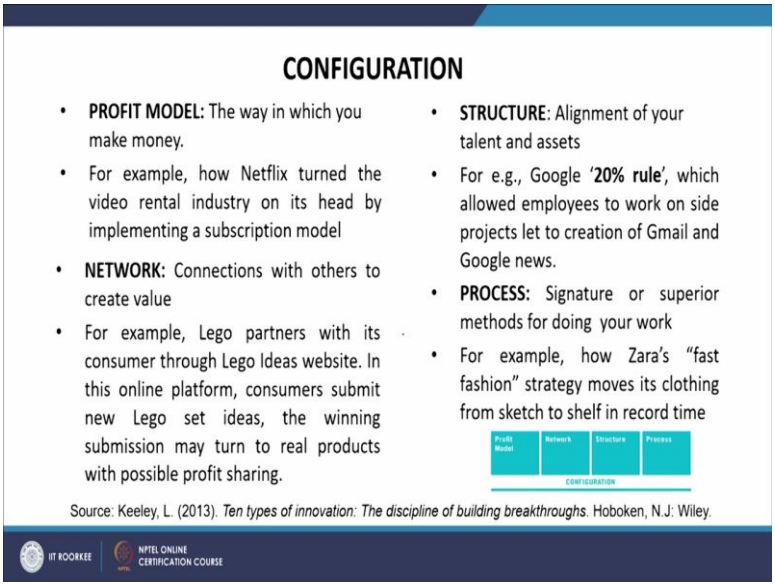

The profit model is the way in which you make money. And I have been telling you that the design thinking perspective, the product management perspective, the innovation perspective has to have a business model and a revenue model all through. For example, how Netflix turned the video rental industry by implementing a subscription model and today they are going much ahead. They are using lots of AI and lots of programming in that.

In Network, connections are made with others to create value, starting from your team to the customer, to everyone involved. For example, Lego partners with its consumers through the Lego Ideas website in the online platform, and consumers submit new Lego set ideas. The winning submission may turn into real products with possible profit sharing.

The structure is the alignment of your talent and assets and in Process, the signature or superior methods for doing your work means should not be imitable. For example, how Zara's fast fashion strategy moves its clothing from sketch to shelf in record time. So, that is their ability basically. And then there are several examples.

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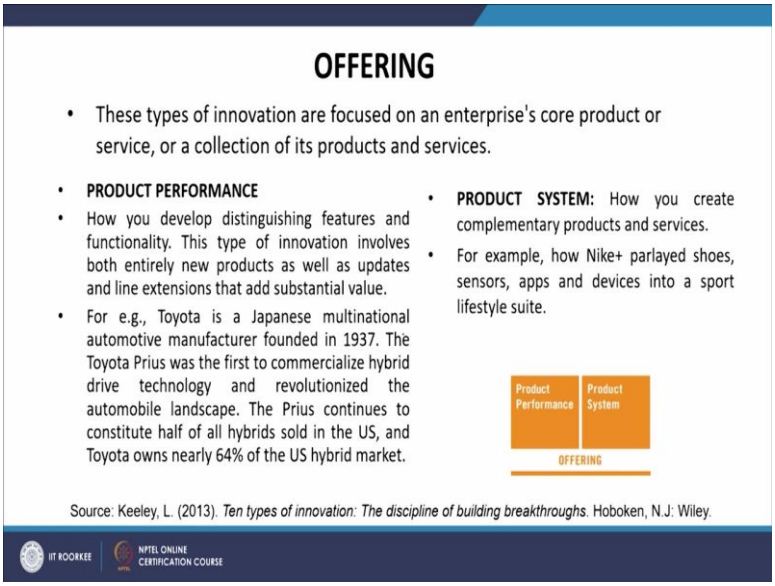

Offering, as far as the component of the offering goes, you have two elements product performance and product system. When we talk of product performance, Toyota is one of the most famous examples. There are books on Toyota's way of manufacturing and so on and Toyota's performance and so on. And several other products are there in this world. But this is a famous example. Toyota is a Japanese multinational automotive manufacturer founded in 1937. We all know that. The Toyota Prius was the first to commercialize hybrid drive technology and revolutionize the automotive landscape.

Then, when we are talking of product systems, how Nike Plus parlayed shoes, sensors, apps and devices into a sports lifestyle suite. So, they combined these aspects into as far as reaching their customers and serving them to the best of their abilities.

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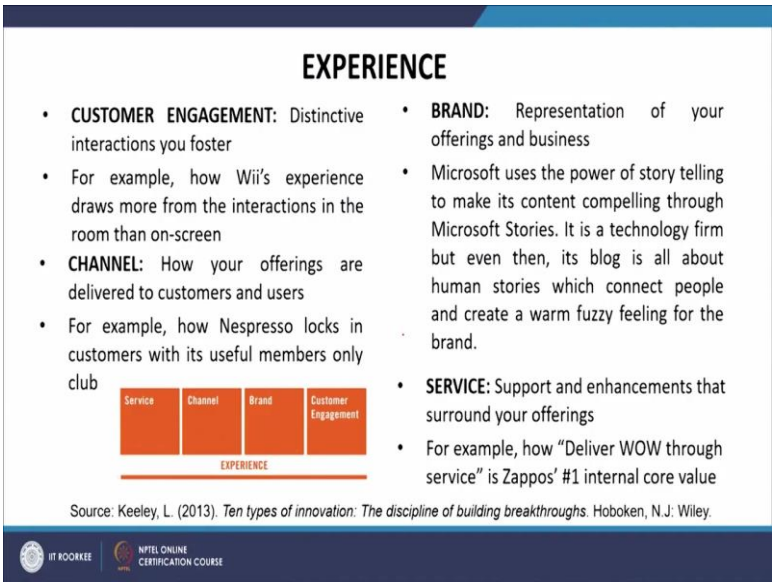

In experience, we have customer engagement, channel, brands and service as the four elements there. Customer engagement, for example, how Wii's experience draws more from the interactions in the room than on screen. And channel for example, how Nespresso locks in customers when it is a useful members-only club, and this is not a limited list. In every category, I am just pointing out some of the examples which have done well so you can just go on and surf books, and literature on websites. And you would realize that there is a whole lot of structure around what we are discussing. There might be several overlaps in the examples which would be justifying one element more than the other element. But this is what we have to learn. We have to find the elements and then find the integration between them.

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Now, let us look at the overview of product innovation. The primary objectives of product innovation are to create value, obtain a competitive advantage, and achieve long-term success through the development and commercialization of new products and services. The principal drivers of product innovation are customers markets, stakeholders and the other constituents in the business environment. Product Innovation, the focus is on meeting customers' needs and expectations as they evolve.

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It includes several essential aspects. Examining the need for new products, processes and services, determining the proper direction and fit for new products, establishing the

appropriate Game Plan for the entire management system for developing and commercializing new products, and selecting new product opportunities for investments and here you will realize that innovation is taking us towards a discussion of new product development at the end.

That is how things are. You start from fundamentals go to design thinking come to innovation and automatically you will start thinking in terms of newer products and that is how newer products have come our way all through. Just stare at your mobile phone once again, and you will realize that enhancing the organizational capabilities to create successful new products, creating the new product and executing the new product development program at the end of the day, and that was what I was trying to say.

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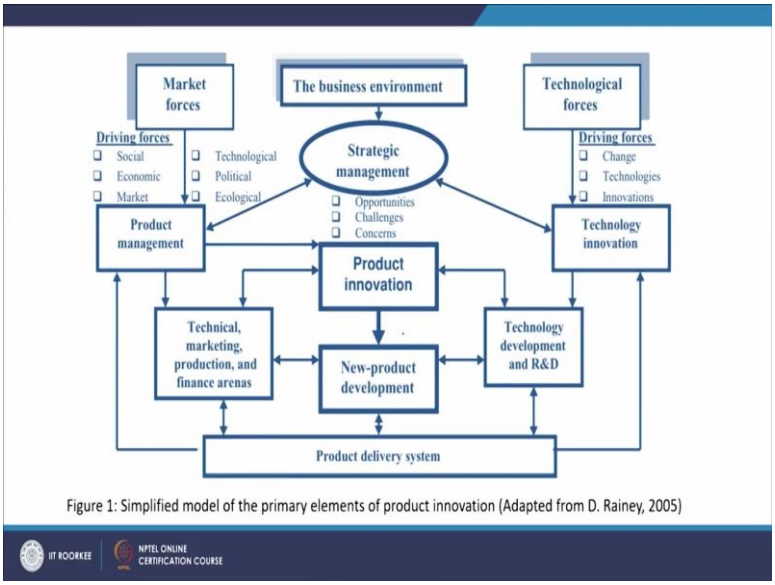

Now, let us look at this composite simple, complicated-looking figure. It is very simple though, and that is why it is called the simplified model of primary elements of product innovation. I will spend a few minutes on this figure just to draw your attention towards the fact that product innovation is at the core or we are looking at product innovation with its concentricity.

Now, if you will look at the two-way directions, which are coming to and emanating from product innovation going towards technical marketing production and finance arenas and on the other side, technology development and research and development and product innovation lead to new product development and the relationship between again the preceding two boxes and the new product.

This figure talks about the importance of product innovation, and new product development along with a focus on process, marketing positioning or paradigm and product which we have talked about till now. Now, if you just elaborate on this discussion, it comes towards product delivery systems then would take you to an entirety of product management and technology innovation.

That means it will derive things towards the next stage of taking you to, where, you can imagine how product management is being influenced by product innovation and how technology innovation is emanating through all this. How product innovation is becoming an input for further technology innovation. And then product management and technology innovation are related to strategic management which is an organizational-level perspective.

And why not, that organizational level perspective can also be seen with the perspective of an entire industry, because many times you have a very less number of players in the whole of the industry. For example microprocessors, microchips or let us say design thinking organizations or let us say design organizations, there is a large number today, but at the core, and in integrated marketing communication, there are 2-3 groups only, only from where the whole of the situation is emanating.

And if we will look at that industry, we would realize that, whether you are looking at strategic management, it represents industry-based strategic management rather than organizational strategic management. So, depending on how many people are there involved or how many organizations are involved in one particular industry structure and then there are aspects of market forces, technological forces and the business environment, which is actually connected to or influencing this whole structure. Just go through this and start enumerating the linkages with the perspective of examples. which you can observe or choose one narrative and one product. For example, one of your favourite automotive or let us say one of your favourite innovative courses, which you would have observed in due course of time in some institution or some university or let us say anything, which has attracted you in recent times in terms of being a product for example, if you have witnessed a unique usage of a drone, just look at that and start putting up that example taking it in a flow as far as the structure goes. You would realize that one simple thing which you would have observed has a correlation with almost all the elements and that has the ability to drive whole lot of structure in itself.

That is, what is the power of design thinking and innovation. I will be coming back to you with lots of insights on innovation and then immediately traversing through the thoughts or I will be taking your thoughts immediately after that towards new product development, wherein, we will be talking about several kinds of examples because ultimately the objective is that by the end of this discussion on product management and before we go towards brand and brand management and branding and those kinds of things, you somehow reach a situation wherein your thought process takes you towards observations related to where in you feel like developing something new, either in the form of a product, process or usage. I will be coming back to you with yet another discussion on innovation. Till then. Goodbye.