

**Product Design and Development**  
**Dr. Inderdeep Singh**  
**Department of Mechanical and Industrial Engineering**  
**Indian Institute of Technology, Roorkee**

**Lecture - 03**  
**Product Policy of an Organization and Selection of a Profitable Product**

[FL]. Welcome to this 3rd lecture on this course on Product Design and Development. As we are aware that we have already finished two series or two lectures already in this week one, on the topic of introduction to the course on Product Design and Development, as well as we have also covered the product life cycle.

As we are aware that in product life cycle we have seen that there are 4 phases or 4 stages, 4 major stages usually (Refer Time: 00:51) you will find product development also as one of the stages. But in general there are 4 stages of product life cycle that is the introduction or the launch, then the growth, the maturity and finally the decline.

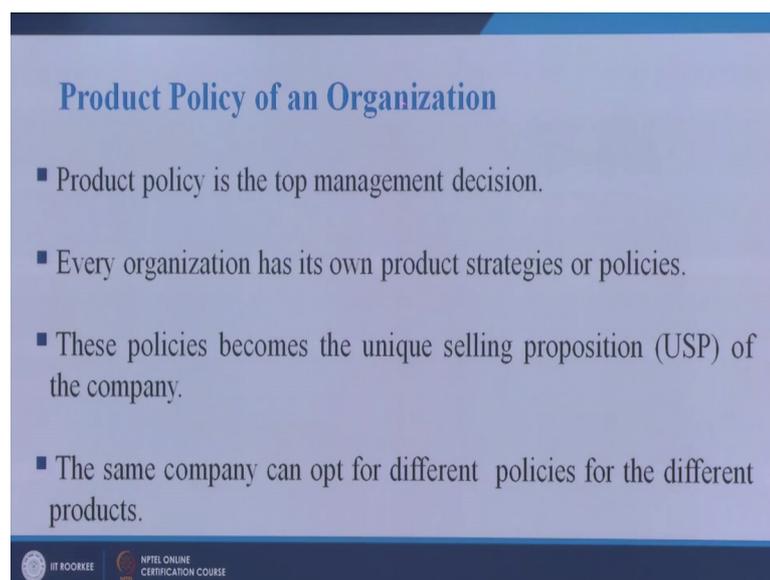
Now, for every product there is a product life cycle and based on the product life cycle the organizations have to take decisions. Now these decisions may vary from withdrawal of the product from the market to redesign a product or to launch a variable product or different type of a product than the already existing product in the market. So, means a company can take different types of decision, they can withdraw the product from the market, they can reinvent or do incremental innovations add some additional functions to the product, or additional feature and launch it as a new product, or they can finally, come up with a completely new product by eliminating this product from the market.

So, different opportunities exist for the company to come up again in the market in order to capture or to maintain the market share or to capture the market share with a different type of a product. Now what should be the policy of an organization in order to be successful related to the product development and design although there will be number of dimensions in which the company can focus and have strategy for being successful, but our topic is limited to product design and development. So, our focus area will be to see what company can do in context of the products it is manufacturing. So, that it can be successful.

We are not going to delve more into the marketing aspects or the financial aspects we are going to delve more into the product design aspects. So, the title of today's lecture as you can see on your screen is product policy of an organization and selection of a profitable product should I say or must I say that there is no thumb rule or no standard process which can help a company to find out a successful product that it should launch and it becomes successful. It is more or less based on the estimates forecast and some need of the people as well as the brand image of the company. So, there are so many combinations of parameters which affect the success of a product, but we will see as we I had told you in the previous 2 sessions that our focus will be to learn more and more techniques that can help us to make systematic decisions or logical decisions.

So, our focus would be to learn skills which can help us to take decisions which are more logical and scientific in nature. In that regard we will cover today SWOT analysis that is strength weaknesses opportunities and threat and we will try to relate it to the product development process. So, with that background let us start with the presentation we will first go through the product policy of an organization and then we will go to the selection of a profitable product. So, first part the today's presentation is divided into 2 major part number one is the product policy of an organization and the part number 2 is the selection of a profitable product.

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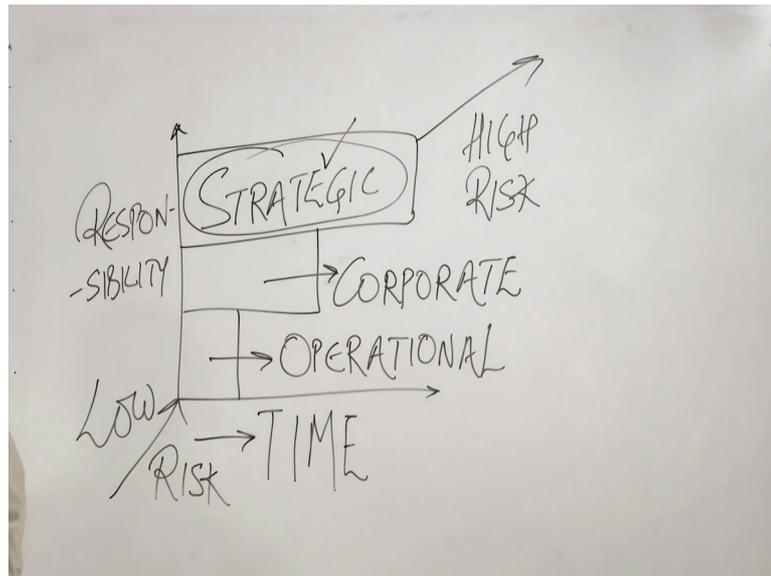
### Product Policy of an Organization

- Product policy is the top management decision.
- Every organization has its own product strategies or policies.
- These policies becomes the unique selling proposition (USP) of the company.
- The same company can opt for different policies for the different products.

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Now, as per the product policy of an organization you can see the product policy is the top management decisions must I tell you that there are 3 levels of decision making or 3 levels of planning in or any organization. So, let me explain this with the help of a diagram.

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So, usually there are 3 levels of planning in any organization. If we take y axis x axis and if on x axis we take time and on x axis we take responsibility maybe we can say responsibility to take decisions, then there are generally 3 levels of planning just I am drawing it for you here and this is and this is high risk.

Now, the first level of planning is the Strategic planning, second level of planning is the Corporate planning and third level of planning is the Operational planning. So, you can see that there are different levels of planning and the risk involved is also different. You can see at the strategic level planning you have high risk, at the operational level planning you have low risk. So, the time dimension also the strategic dimension is a long term decision. So, long term decision mean you may be planning for the next 5 years or the next 10 years whereas, in corporate level planning you maybe planning for the next 3 to 5 years, and in operational level planning you will be planning for the next 1 or 2 years.

So, you can see the very first point this diagram came to my mind in context of the first point that product policy is the top management decision, which means the product

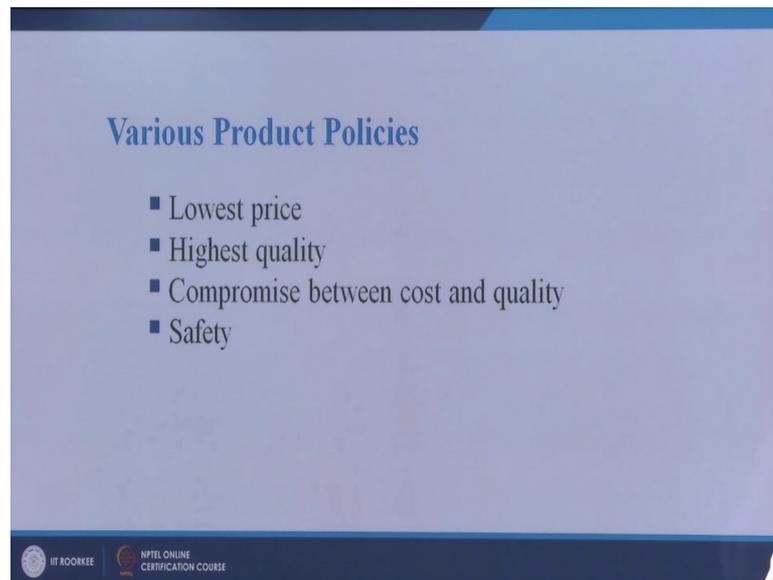
design decision that what type of product the company is going to launch will depend upon the strategic level of management or that we see as the top management decision. This is the top management decision the responsibility regarding that decision lies with the strategic level of management and the risk involved is also higher, because if the product fails the company will fail or you will suffer huge losses which we have may lay at a later stage become difficult to compensate for.

We can see here the point number 1 that the Product policy is the top management decision I have tried to explain with the help of this diagram due to the strategic decision every organization has its own product strategies or policies we will see in the subsequent slide, but what factors govern these strategies and policies each company will have their own policy we will see with some examples that what are the policies of the organizations

Then these policies become the unique selling proposition of the company, the USP of a particular company, now you can see there is a brand maybe a brand of a mobile set I will not name on this public platform as soon as we are come up with a new product there are huge lines outside their stores right from the midnight of the day or the next day when it is to be launched. So, you can understand that people have such confidence in that brand that people line up to buy the product. So, you can see these policies become the USP. If the policy of that company is that the product will be very durable it will be reliable it will have high quality maintenance free service free.

So, with that USP the company has an advantage in the market, the same company can opt for different policies for different products. Now there is an automobile company in India which may probably be selling the costliest car in India, and the cheapest car in India. So, they have different policies in respect of different products. The costliest car the policy will be different and for the cheapest car the policy will be different. These points just to summarize once again let us see the product policy is the top management decision every organization has its own product strategies or policies these policies become the USP of the company and the same company can opt for different policies for different products.

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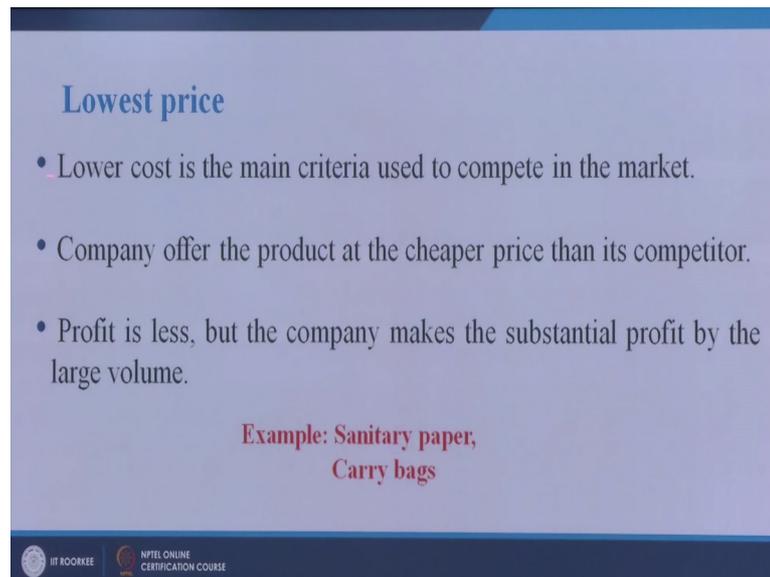


Now, what can be the product policies at least one or 2 examples I have already taken, now one of the polices can be their company will target the Lowest price for that particular product for example, the napkins or the tissue papers that we use the company may make a policy that our product has to be cheapest in the market, but with a certain level of quality or performance. So, the companies focuses lowest price.

Next focus can be Highest quality there can be another company where the target is that quality has to the top class they will not bother much about the cost of the product, but they will only be focusing on the quality of the product, then there can be a third the most of the companies will fall in category number 3 that is Compromise between the cost and the quality.

So, very few companies will fall have this 2 polices, but majority of the companies may have this policy that is compromise between the cost and the quality, and then there can be a product policy of safety all these companies may also have safety as one of their features, but there may be companies which will have safety as their main feature and all other parameters miss these given slightly less weightage as compared to safety for certain specific companies. So, we will see some examples of these policies being followed by different organizations.

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**Lowest price**

- Lower cost is the main criteria used to compete in the market.
- Company offer the product at the cheaper price than its competitor.
- Profit is less, but the company makes the substantial profit by the large volume.

**Example: Sanitary paper,  
Carry bags**

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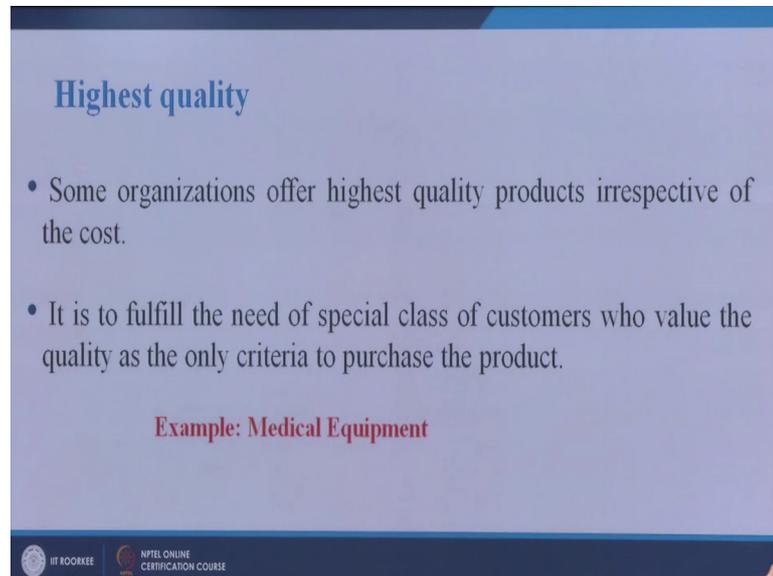
Let us take one by one first is the Lowest price the Lower cost is the main criteria used to compete in the market as I have already explained the company may take this decision that whatever is the existing competition we will come up with a product which we will have the lowest price in the market and we will compete in performance with the competitors. So, that is the first point that is the main criteria that cost is the main criteria and this will become even more relevant will when we move into the next week and we will talk about while you engineering, and there we will see that for keeping the cost constant what else options are available or what other options are available with us in order to the competitive in the market.

From lowest point lowest price point of view first is the lower cost, second is the Company offers the product of an at a cheaper price than it is competitors I have already explained this point then the profit is less, but the company makes the substantial profit by large volume that is example is sanitary paper carry bags. So, companies manufacturing these products may focus on the lower costs. So, the cost maybe low; cost maybe low, but the number or the volume of sales is very high. So, the even a profit made on single volume a single product will multiply by the number of products sold and then that will act to the revenue of the company.

So, their target is that profit per component or per part or per product can be less that they are going to have a huge volume or the target is to manufacture huge volume. So,

that the volume multiplied by the minimal profit adds to the huge revenue. So, that can be the company policy of any organization.

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The slide has a light blue background with a dark blue header and footer. The title 'Highest quality' is in a bold, dark blue font. Below it are two bullet points in a dark blue font. The example 'Example: Medical Equipment' is in a red font. The footer contains two logos: 'IIT ROORKEE' and 'NPTEL ONLINE CERTIFICATION COURSE'.

### Highest quality

- Some organizations offer highest quality products irrespective of the cost.
- It is to fulfill the need of special class of customers who value the quality as the only criteria to purchase the product.

**Example: Medical Equipment**

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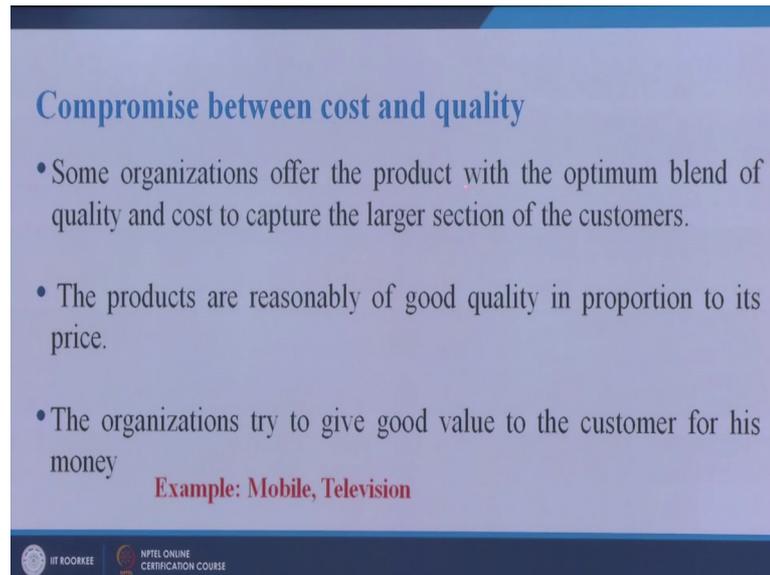
Next is the highest quality you can see some organizations or for highest quality products irrespective of the cost. So, cost is not at all important for these companies though focus primarily on the quality of the product. It is you fulfill the need of a special class of customers who value the quality as the only criteria to purchase the product.

If I ask you may be in an assignment you will give you this problem that you have to write maybe 5 products or the names or brands, where the quality is the most important criteria and cost is maybe secondary or tertiary criteria. So, you can do this as assignment just look around you just focus your attention on the products where the quality is the paramount importance, maybe one industry I can just share with you is the aircraft industry, in aircraft industry cost is nowhere are paramount criteria the most important criteria in aircraft industry is the quality of the product because the human life is involved in aircraft industry, because a airplane has to take off and land and. So, many passengers it is carrying. So, in that case you cannot compromise on the quality of an equipment or part that goes into the manufacturing of the aircraft.

So, that is the example other example is medical equipment again here the human life is involved in medical equipment also. So, the quality has to the top class otherwise there can be a miss happening. So, 2 criteria we have seen first one is the cost has to be lowest

maybe some companies may opt for this policy, than the other companies may go for the highest quality, then what can be then the third criteria the compromise between the 2 the quality and the cost. Let us go the compromise between the cost and the quality some organizations offer the product with the optimum blend of quality and cost to capture the larger section of the customers.

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**Compromise between cost and quality**

- Some organizations offer the product with the optimum blend of quality and cost to capture the larger section of the customers.
- The products are reasonably of good quality in proportion to its price.
- The organizations try to give good value to the customer for his money

**Example: Mobile, Television**

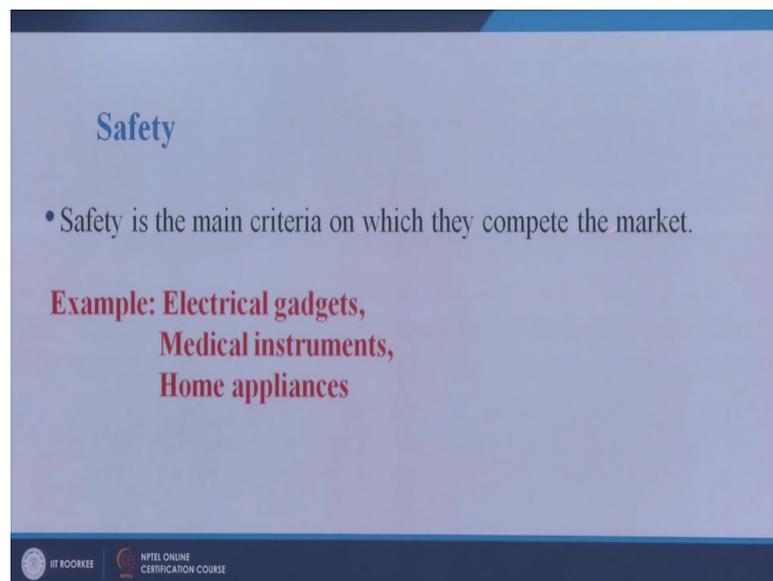
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So, in both the cases you will see low cost maybe large customer base large volume of production high quality very selected customers very specialized customers very specialized type of products, first most of the companies will have a compromise between the cost and the quality any company you see around you maybe your normal day to day life you will see there might major companies focus on this between the cost and the quality. So, the products are reasonably of good quality in proportion to it is price or cost. So, you will not find maybe the jacket I am wearing a reasonably good quality optimum level of cost. So, your it is not cheapest product may not be the cheapest product may not be the best in quality, but it is intermediate so, a compromise between the cost and the quality.

And the last part is the organizations try to give good value to the customer for his money. So, this word value we will see in the next week how to define a value, what is value engineering, and how the compromise between the quality and the cost is achieved using the technique of value engineering. So, 3 types of policies for the companies we

have seen first one is lowest cost, second one is highest quality, and third one is the compromise between the cost and the quality. The last is the safety is a in any case taken care by other 3 criteria other 3 policies also, but many companies will be there which we will only be focusing on quality or sorry the safety.

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A Safety is the main criteria on which they compete in the market. So, the examples can be Electrical gadgets, Medical instruments, and Home appliances. These are the application area where safety may be the most important criteria for designing that product or the most important USP for that product. So, other things are also important cost is important, quality is important, compromise between the cost, and quality is important, but you can say that the major criteria is the safety in this particular case. We have seen the 4 important product policies by various organizations, just to recount what we have already discussed the 4 policies are the lowest cost policy, the highest quality policy, and a compromise between the quality and the cost, and the last fourth one is the safety.

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- Product policy is not only concerned with the product, but also with the functions the product fulfills.
- Products can be classified according to various features, some of which are important in preparing product policies.

Feature	Explanation	Example
Durability	Non-durable Vs. Durable	Hair spray Vs. Automobile
Re-usability	Non- reusable Vs. Reusable	Detergent Vs. Glass bottles
Recyclability	Non-recyclable Vs. Recyclable	Pesticides Vs. Paper
Way of production	Mass production (Standardized) Vs. Craft made goods (Non-standardized)	Light bulb Vs. Craft made furniture

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Let us see another dimension of the product policy now product policy is not only concerned with the product, but also with the functions the product fulfills. So, from the functional point of view we see that the products can be classified according to various features some of which are important in preparing the product policies. Now suppose we are preparing or designing a product or a concept for a product which has to be lowest cost then some of these parameters will help us to design the product accordingly for example; Durability, Reusability, Recyclability and the way of production.

So, suppose the product is let us take an example of a product which is to be customized as per the customer requirement and it has to be features have to be incorporated in that design which are specific to a specific customer and the customer has very high hopes from the quality point of view for example, he wants a car to be manufactured as per his requirement. So, there we can see the way of production it cannot be mass production or standardize it has to be a craft made good for example, craft made furniture I have taken an example of a craft made car. So, you can get your car designed, but it cannot be manufactured by mass production, it can only be manufactured by a craft production, or it can only be manufactured by customized production. Similarly suppose there are sanitary napkins or there are tissue papers or you can say paper bags to be used.

There they have to be produced in mass production because the criteria are lowest cost. So, when the lowest cost has to be achieved you cannot go for craft made goods you will

go for mass production only. So, the initial 4 policies that we have seen lowest cost, highest quality, compromise between cost and quality, and the safety will certainly depend on some of these features. Now let us take these features 1 by 1 and quickly try to understand the policies of various organizations the first one is durability now it can be a non durable product or a durable product example can be hair spray if you buy a hair spray you would like to use it for a month or a 2 years or a 3.

So, you will not like a hair spray to be usable for the next 10 years if you buy it is kind of a consumer good will be disposed of after 2 months 3 may not be that durable whereas, automobile if you buy it has to be very durable. So, that is non durable verses durable this is also one policy that company has to take a decision, whether they want to make a product what would be the durability of that product for example, if a company is manufacturing sox to be worn by customers like us they will not like to select a fiber for that sox which is usable for the next 50 years then a person buys a 5 pair of sox and then for the whole life he will never buy a sox again.

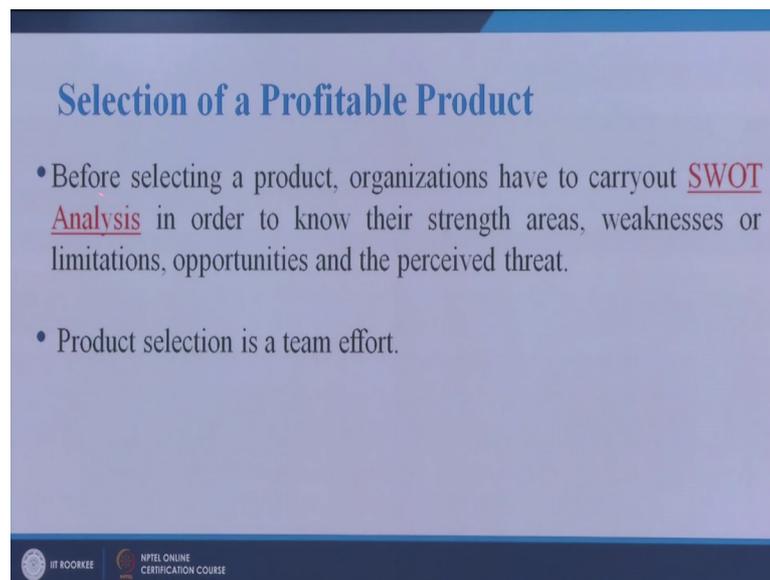
So, the durability is important criteria when the company is framing it are policy regarding it is product they would definitely like to frame a policy. So, that sox will have a durable life of maybe one year or 2 years and after that the sox have to be replaced.

So, that is one criteria second feature can be reusability one of the it is non reusable versus reusable detergent is non reusable because once you use the detergent it is gone and glass bottles are reusable. That is another criteria recyclability is third criteria non recyclable versus recyclable pesticides cannot be recycled again, but the paper can be recycled again similarly way of production it can be mass produced or it can be craft produced for customized as per the requirement.

All these criteria also you can say influences the decision making on part of the company that what type of policy they should follow and the 4 broad guidelines we have seen these are the additional features that the companies usually taking to account when they are designing a product or when they are deciding about the quality the cost and the safety of their products. So, this is all related to the policy that the companies usually frame for coming up with new products or for the designing up of new products or designing a improved version of a old product, all these factors are usually taken care by the company.

Let us see the second part of our presentation today that is how to select a profitable product there is no standard guideline as I had told for ensuring the success of a product, but quickly we will try to learn gain, knowledge, or study about one of the most common technique which any company can adopt for seeing that if they take care of all these points they can have a the logical or informed decision related to the launch of a product or the design of a product.

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The slide features a light blue background with a dark blue header and footer. The title 'Selection of a Profitable Product' is centered in a bold, dark blue font. Below the title, there are two bullet points. The first bullet point discusses the necessity of SWOT Analysis for understanding organizational strengths, weaknesses, opportunities, and threats. The second bullet point states that product selection is a team effort. The footer contains logos for IIT ROORKEE and NPTEL ONLINE CERTIFICATION COURSE.

### Selection of a Profitable Product

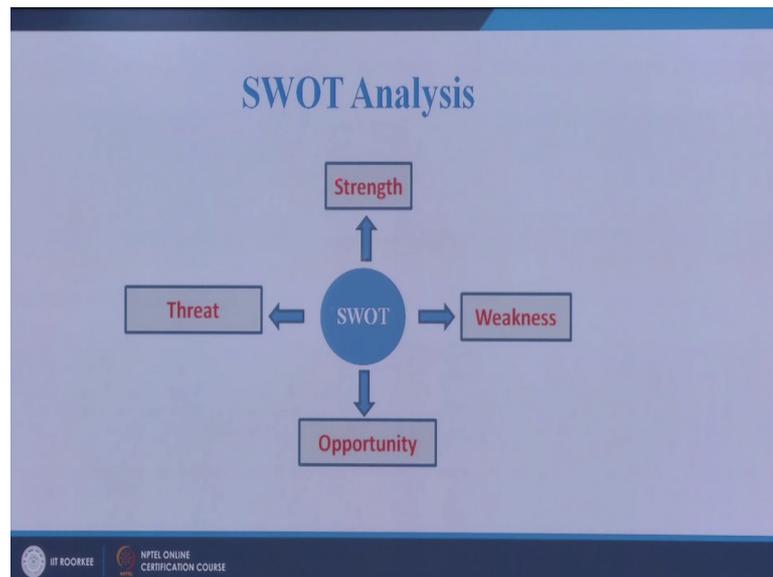
- Before selecting a product, organizations have to carryout SWOT Analysis in order to know their strength areas, weaknesses or limitations, opportunities and the perceived threat.
- Product selection is a team effort.

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Selection of a Profitable Product; Selection of a Profitable Product before selecting a product organizations have to carry out the SWOT Analysis in order to know their strength weaknesses limitations and opportunities and the perceived threats.

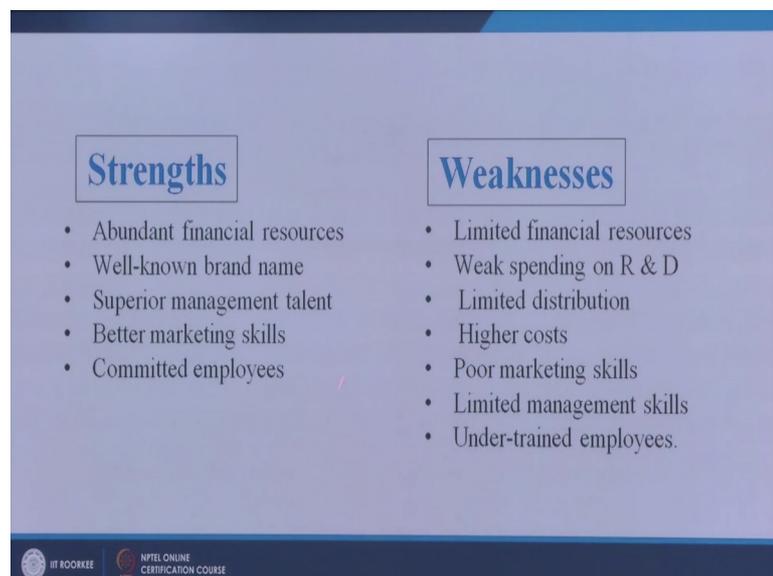
So, always there are threats there is competition there are technological advancements being done by the other companies. So, these are the threats that are there for any company. So, strength weaknesses, limitations, opportunities, and perceived threat are the important things that every company has to take care of the product selection is a team effort. There are a group of individuals who work on a idea and come up with a new product. It is maybe sometime a team effort not sometime most of the time you product development team will be there and the team is responsible for conceptualization and design development of a new product.

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So, this is Strength, Weakness, Opportunity and Threat SWOT.

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Now let us quickly see now from strength point of view the company can have these strengths it can have abundant financial resources, Well-known brand name, Superior management talent, better marketing skills, and committed employees. Now I would ask you as an assignment that you can see that for any successful company you can take any brand name in India an Indian company which has been successful in various business

areas for example, maybe in automobiles maybe in communication sector maybe in household goods take any company which is successful.

And you will find that these are the important characteristics of that successful company that company will have abundant financial resources brand name will be there management talent also will be there marketing you will see they have better marketing strategies as compared to the competitive companies and their employees will be commutative once a person joins that company will always like to withstand or always like to retire also from the same company, but on the other hand you can see there will be companies these are the weaknesses of which lead to failure of certain companies that is limited financial resources weak spending on R and D efforts that is research and development efforts.

So, companies which do a continuous research and development are often successful companies then limited distribution higher cost of their product, poor marketing skills, limited management skills, and under trained employees. These are the characteristic features of the companies which are usually failing in order to capture the market share.

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The slide is divided into two columns. The left column is titled 'Opportunities' and lists four bullet points: 'Rapid market growth', 'Changing customer needs/tastes', 'New uses for product discovered', and 'Sales decline for a substitute product'. The right column is titled 'Threats' and lists four bullet points: 'Entry of foreign competitors', 'Introduction of new substitute products', 'Product life cycle in decline', and 'Economic downturn'. At the bottom of the slide, there are logos for 'IIT ROORKEE' and 'NPTEL ONLINE CERTIFICATION COURSE'.

So, a company can always take maybe a there is a new company which want to become successful they can always do this analysis, that what are our strength, what are our weaknesses, what are the opportunities that exist because the product design and

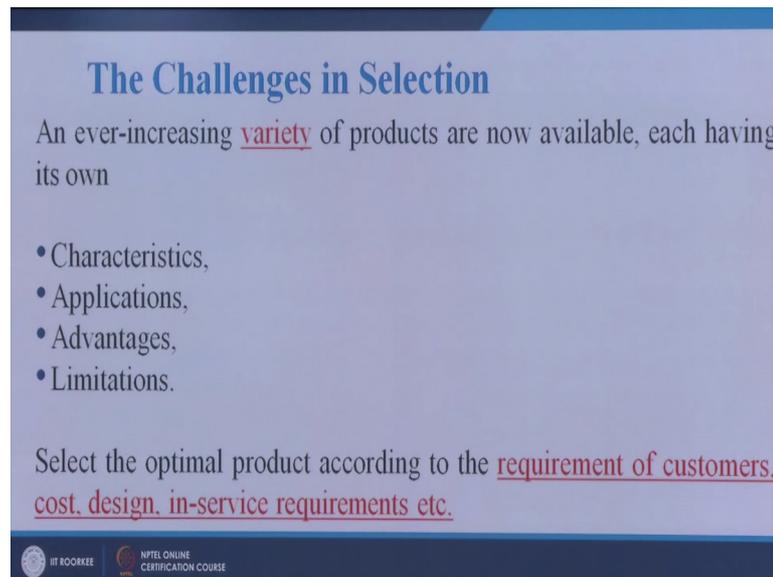
development is only successful when there is a need in the market when there is a demand in the market.

So, from opportunities point of view Rapid market growth, Changing customer needs and taste, New uses for products discovered, and Sales decline for a substitute product. These are the characteristic features or opportunities in nutshell, what is the opportunity that there is a demand in a market or there is a need in a market which is unfulfilled. So, none of the companies has been able to fulfill that particular need of the customers and there is a huge database of the customers or huge volume of the customers, which are in the need of that particular product. If that opportunity can be tapped by any organization and a product which satisfies all the functional requirements of that need is launched in the market the company is definitely going to be successful.

But what are the threats success is always you can say used in a good sense everybody likes to be successful, but always there are threats now what can be the threat in current Indian scenario, Entry of foreign competitors, Introduction of a new substitute products, Product life cycle is in the decline stage, and the Economic downturn. So, usually the threats for any organization can be if they do their analysis SWOT analysis they may feel that the most of the products the company is manufacturing are towards the declining stage in the product life cycle, if you remember we have covered plc in the last lecture in product life cycle you have to very very cautious towards the end of your a maturity curve.

There are number of threats also opportunities also we have already seen in the previous slide strengths and weaknesses. So, any company needs to always do the SWOT analysis in context of their products, otherwise they will not be able to match up with the market requirements or even I can say that they will not even be able to maintain their market share in the a business. So, that is important.

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**The Challenges in Selection**

An ever-increasing variety of products are now available, each having its own

- Characteristics,
- Applications,
- Advantages,
- Limitations.

Select the optimal product according to the requirement of customers, cost, design, in-service requirements etc.

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The Challenge in Selection is basically you can see an ever increasing variety of products are now available each having its own Characteristics, Applications, Advantages, Limitation.

Now, select the optimal product according to the requirement of the customers cost design and in service requirements. Even in general we can see that number of products are there are number of requirements are there which have different characteristics applications advantages limitation select the optimal product according to the requirement. Now this is not the product to select to be selected by the company this is idea to be selected by the company that this is the area in which we are going to put our efforts in order to be successful.

The overall target of today's lecture is to find out or to just develop a strategy to select a profitable product and first part was that what should be the company policy. So, we have shown or we have discussed that there can be different product policies by you know of an company of a company sorry and there can be different methods of selecting a profitable product, out of which we have only seen one that is SWOT that is a company should perform a SWOT analysis of their well being and then come up with their strengths and try to launch a profitable product which will lead to the success of an organization.

So, I stop here in the next lecture we will focus on the product development process and see the various stages of product design. And after that we will cover our next lecture that is a last of this particular week that will be related to the product analysis that if you have a idea how you will make it a successful idea and what are the tools that you need to use during the various stages of the product development process in order to come up with the product which can withstand the pressures of the market.

Thank you.