Business Development from Start to Scale
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Week - 12
Business Development Case Studies
Lecture - 56
A Pharma Transformation

Hi friends, welcome to the NPTEL course Business Development from Start to Scale. We are in week 12 or final week focusing on the theme of business development case studies. These are unique case studies which will let us know the joyous challenges opportunities and also the turbulences of business development. This week's topic is a pharma transformation. This is the 56th in the series of lectures that we have had.

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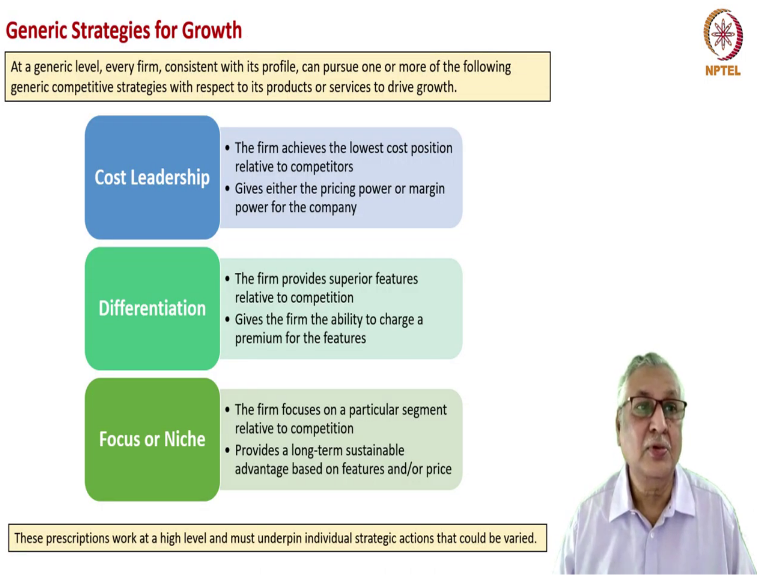

There are three generic strategies for growth and it is worthwhile remembering them again. At a generic level every firm consistent with its profile should pursue one or more of the following generic competitive strategies. And this must be pursued with respect to the products or services to drive growth.

Cost leadership is the first strategy the in this strategy the firm achieves the lowest cost position relative to competitors. Cost leadership gives either the pricing power or margin power for the company differentiation is the next strategy. In this strategy, the firm provides superior features relative to competition. It gives the firm the ability to charge a premium for the features. The third strategy is focus or niche.

Under this strategy, the firm focuses on a particular segment to provide certain unique capabilities and features for the competition. This provides a long-term sustainable advantage based on such features and or price. These generic strategies do not happen by chance.

These strategies have to be carefully thought of based on the strengths and weaknesses of the company, the opportunities and threats it faces and will require an integrated functioning of the organization to optimize the value chain towards the generic competitive strategy that is chosen.

These prescriptions work at a high level and must underpin individual strategic actions that could be varied in respect of each firm.

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Strategic business transformation is one of the important drivers of successful business development. Business transformation in any company will keep happening from the time a Greenfield project is established and it has several facets. The first important aspect is product renewal. Every competitive firm develops and has to develop brand new product platforms every few years.

Manufacturing renewal is the next most important aspect of strategic business transformation. Every competitive firm modernizes and or expands capacities every few years.

The product renewal and manufacturing renewal together help a firm become competitive. Every competitive firm must simultaneously also rejuvenate channels every few years and that provides the requisite marketing boost. What do we mean by channels? The distribution setup, the retail setup and the value chain reaching up to the consumers.

Every competitive firm must undertake related or unrelated diversification every few years. A firm cannot stand still with the kind of products it developed a few years ago. The technology is changing, the consumer needs are changing, the company has to remain ahead of the company. Therefore, diversification is the fourth important aspect of strategic business transformation. Digitalization is (Refer Time: 03:48) great importance.

Every competitive firm will be integrating digital technologies in all its value chain operations. Disruption is something which is going to impact several firms. Every firm and industry must incorporate disruptive technologies that set an entirely new direction for the company.

We have discussed how renewable energy is setting a new direction for the company, how green hydrogen is setting a new direction for the new energy aspect itself, how electrification is setting a new direction for the automobile industry, how digitalization is setting a new direction for the people in distribution industry.

So, there are many ways and many areas that help a company to renew itself through disruption. Business disruption at times leads to the requirement for business turnaround. Most firms oftentimes get into tough business situations that require major turnarounds. What does this turnaround mean? Turnaround means your performance has declined both in terms of revenue and profit.

And it requires enormous effort to make the business reach its previous heights or at least scale something which is viable. And why does poor decline happen? We have seen in the case of declining industries, why industries decline, why firms decline? Basically, again in terms of product and manufacturing capabilities and marketing capabilities which are found wanting.

You also have business handovers. When operations and or environment become extremely difficult, business handovers become inevitable. We looked at it from the point of view of mergers and acquisitions. And the other hand which is providing support to the mergers and acquisitions is the selling hand which does not want to have the business because of its incapacity, incapability or unwillingness to handle the business anymore.

Then you have business exits when operations and or environment become totally unmanageable. Business handovers become inevitable. When environment is extremely difficult and management of the company also becomes extremely difficult. People tend to hand over the business to more competent hands.

However, when the environment is completely untenable in terms of business fundamentals and the management capability is completely found wanting, then there is no option other than exiting the business. These strategic transformations require completely different approaches on the part of corporate leaders.

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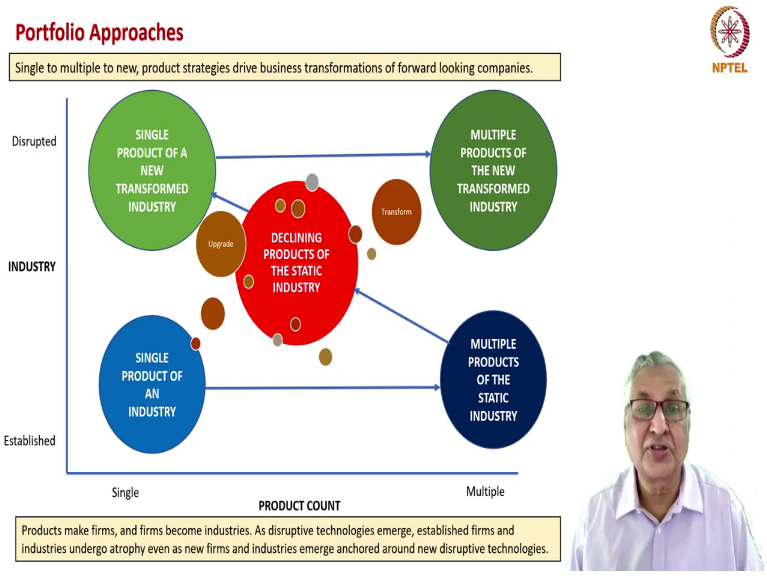

Let us look at the concept of portfolio. Single to multiple to new product strategies drive business transformations of forward-looking company. I firmly believe for one that product strategy is critical to corporate success. In fact, I have written a book also on product strategy being vital for corporate success based on concepts and cases from the Indian automobile industry.

So, that is the importance of this particular theme. Let us plot on x-axis the product count of a firm and on the y-axis the nature of the industry. Obviously, this is a hypothetical case. When you have a single product and you operate in an established industry, you can be classified as a single product of an industry type. That is your product focus is one of having only one product and within an industry that is established. What is the logical move from there?

You would try to have multiple products of the same static industry with time you will keep increasing the product count. But that by itself does not suffice because the established industry is become static, stagnant or even getting disrupted by newer technologies or newer business models. What would then happen? These multiple products of the static industry start becoming declining products for the static industry.

Then you have to either upgrade or transform yourself and that does not happen all through the portfolio. It does not happen all across the portfolio. You have to have that single nucleus which will start transforming your product portfolio. So, you get into a single product of a new transformed industry. So, again you are back to the single product count concept, but in a completely different manner of using disruptive technology.

Once you have that you again move to having multiple products of the new transformed industry and this movement continues. So, products make firms make industries. As disruptive technologies emerge established firms and industries undergo atrophy that is they become shrunk even as new firms and industries emerge anchored around new disruptive technologies.

This is the process of continuous development, redevelopment and at times even demise of certain portions of the industry and product portfolio is one of the most critical aspects of this life cycle development of the whole industry.

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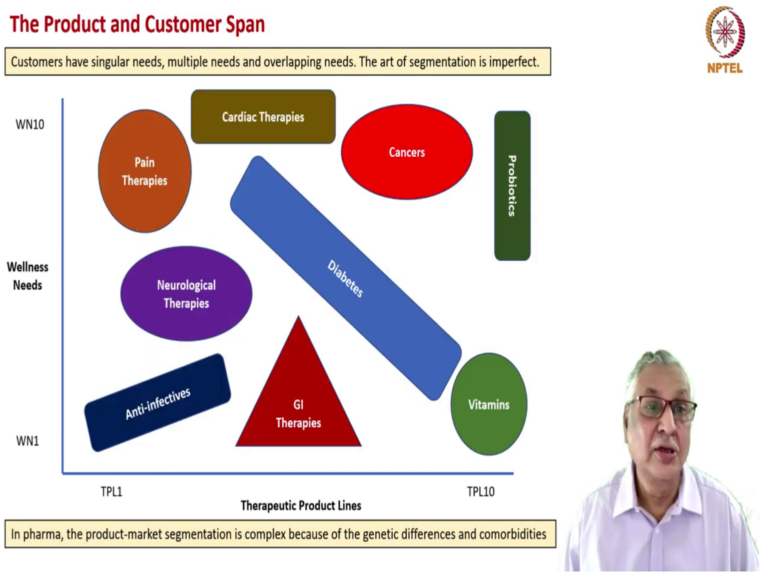

There is a span related to the customers. There is also a span related to the product portfolio. Let us look at a pharmaceutical industry example. As you know diseases are of several types and correspondingly you have therapeutic requirements or therapeutic choices of different types. Therefore, you can think of the pharmaceutical industry being open to multiple therapeutic lines that is called TPL1 that is therapeutic line 1 to therapeutic line 10.

You also have the wellness needs of the patient population. The wellness needs could be acute, could be chronic that is the disease has to be cured intensively within a short period of time because it is an infection kind of disease or it could be a chronic disease which requires continued administration of medicines and in between there could be several other co-morbidities.

This set of wellness needs can be classified as WN1 to WN10. You can position different therapeutic categories with the attendant patient needs in terms of these rectangles, triangles, oval circles that I have demonstrated here. Anti-infectives is an highly focused therapeutic area which works on one particular wellness need of curing the infection.

You have neurological therapies which are broader and have multiple wellness needs. The person is not immobilized, but the person is handicapped in terms of having the neurological deficits that needs to be corrected. Then again you have gastrointestinal therapies which are again intensive therapies, but also are extensive therapies.

So, you have a different kind of approach in terms of product patient combination. Pain therapies are again concentrated therapy line, but the wellness needs could be very acute. Cardiac therapies again chronic diseases more extended. Cancers on the top of the mind for urgent attention as well as for very specific wellness paradigm. Then you have probiotics and vitamins which help the individuals become better individuals whether the disease is there or not.

In pharmaceutical industry the product market segmentation is indeed complex because of the genetic differences of the people and also the co-morbidities which different people suffer.

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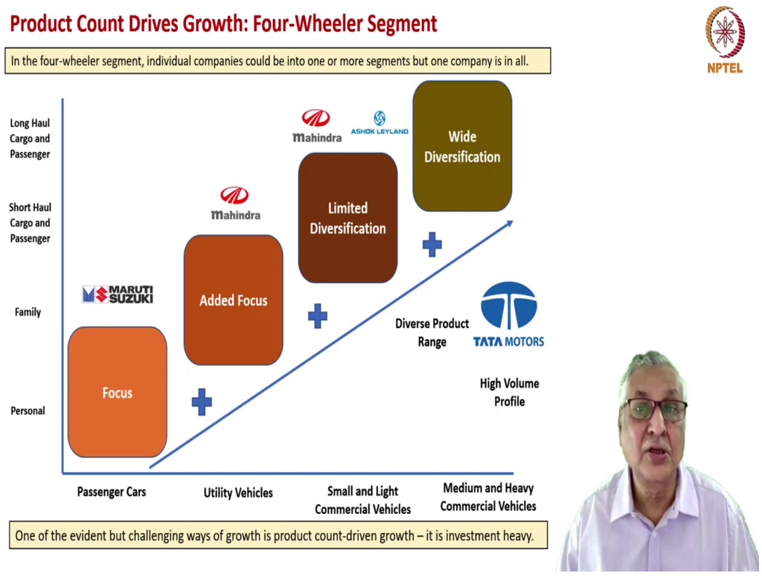

Let us look at how product count drives growth. Take an example of the four wheeler segment. You can look at four different categories in the four wheeler segment. Passenger cars, utility vehicles, small and light commercial vehicles and medium heavy commercial vehicles.

But as we have seen in the previous lectures, we cannot look at a market in terms of the product. We have to look at the purpose of the product that is the customer need. Then you can look at the categorization as personal, family, short haul, cargo and passenger and long haul, cargo and passenger. So, different products serve different usage segments. In the passenger car segments, Maruti Suzuki came onto the scene with complete focus in that area.

Then it added focus by bringing in utility vehicles and it moved up the value chain. Mahindra and Mahindra was a specialist in the utility vehicles and then it moved up adding limited diversification through trucks. And in some cases, it also tried to dabble in different kinds of passenger cars not too much success. So, it moved from utility vehicles to small and light commercial vehicles.

Then you had Ashok Leyland coming in with medium and heavy commercial vehicles, but also it moved downward towards light commercial vehicles with its those range of vehicles. So, a company which was well positioned in long haul cargo and passenger segment moved into another usage segment which is short haul cargo and passenger. But there has been one company which is Tata Motors which was present and continues to be present in all the product portfolio requirements.

And it offered diverse product range with high volumes across the usage segments with different types of products. Passenger cars, utility vehicles, small and light commercial vehicles, medium and heavy commercial vehicles. One of the evident, but challenging ways of growth is product count driven growth.

It is challenging because it requires massive R and D capabilities to develop products of multiple usage factors, multiple firm factors and multiple design parameters within a single company. It also requires huge manufacturing facilities to be able to deliver those products for the customers. It is heavily investment intensive strategy.

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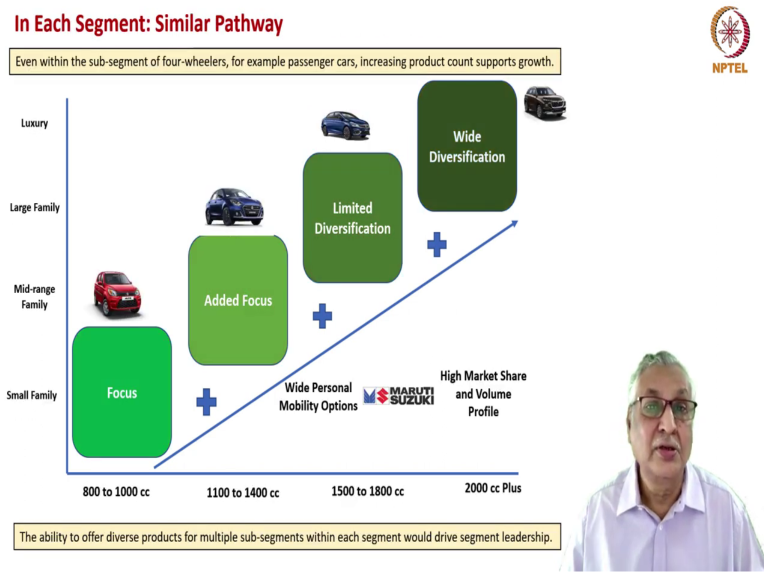

Similarly, when you look at the passenger car segment alone, you can find similar pathway. Even within the subsequent of four wheelers, for example, passenger cars, increasing product count supports growth and it has been also evidenced in respect of Maruti Suzuki, the largest passenger car manufacturer in India. You can look at the passenger car portfolio divided in terms of the engine capacity 800, to 1000 CC, 1100 to 1400 CC, 1500 to 1800 CC and 2000 CC plus.

And each of these product categories or each of the product clusters fulfills a different kind of transportation purpose. The 800, to 1000 CC small car fulfills small family mobility needs. 1100 to 1400 CC mid-range family needs. 1500 to 1800 CC large family along with business needs. 2000 CC plus again luxury oriented mobility needs. So, you are moving from focus to added focus to limited diversification and to wide diversification as you build your value chain.

Maruti Suzuki offered wide personal mobility options over a period of time and it has achieved high market share and retained its growth in the volume profile on a continuous basis despite as many as 20 companies with international bearings entering the Indian automobile industry.

So, the ability to offer diverse products for multiple sub segments within each segment as well would drive segment leadership. You have a total industry leadership, then you also have segment leadership.

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The Product-Count-Driven Market Evolution does many things and also requires many things. Product- count -Driven Market Evolution can boost volumes and revenues, but not necessarily profits to be able to drive up the volumes, the revenues as well as profits you require a real good alchemy of business strategy and business execution. The reason lies in the investments required to launch multiple product lines and the challenges in gaining returns on investment.

What are the facets that are required to be put in place for a company to be Product-count-Driven Market Leader? There are four layers of this. The first is the internal technological capability. The R and D capabilities in terms of infrastructure and people, the manufacturing capabilities again in terms of infrastructure and people, the marketing capabilities in terms of channels and customers and the financial capabilities in terms of equity and debt the company is able to raise.

Then we have the environmental factors which provide the overall canopy or the envelope for the company to operate the economic trends, demographic trends, psychographic trends and behavioral trends. Then we have the financial parameters, the investment requirements, cost and price factors, supply chain capabilities, vendors and logistics providers in terms of their health and wealth and the aftermarket capabilities in terms of serving the customers even in the post sales period through parts and service.

Some of these could be independent business lines as well. Then we have got supplementary and supportive requirements, digital capabilities, intellectual property capabilities, brand capabilities and corporate goodwill. The value chain capabilities of the company must cater to the customer value chain requirements for volume growth.

It is important that we develop our value chain competencies in a manner that it serves the customers through their value chains and presents for us a lasting place in the customers' minds as well as in the overall market space.

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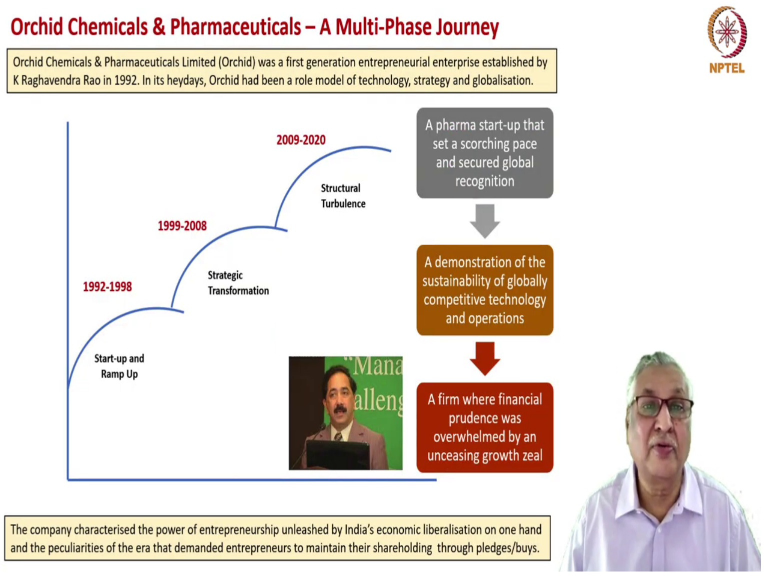

Now, let us start looking at a case study. This case study is about orchid Chemicals and Pharmaceuticals which is now called orchid Pharma after it went through the insolvency and bankruptcy code procedures. This case study is not a discussion of a good judgment or a bad judgment. It is all about how a startup can lay its path of growth. The good things the company could do in bringing the company to a state where it is globally recognized.

Orchid Chemicals and Pharmaceuticals Limited Orchid was a first-generation entrepreneurial enterprise established by K. Raghavendra rao in 1992. In its heydays, orchid had been a role model of technology strategy and globalisation. If you look at the phases of orchid, the years 1992 to 1998, but tend to the startup and ramp up phase. The years 1999 to 2008, but tend to the strategic transformation phase. And the years 2009 to 2020, but tend to the structural turbulence phase.

Orchid has been a pharma startup that set a scorching pace and secured global recognition in no time. This is a demonstration of the sustainability of globally competitive technology and operations. Orchid has been a firm where financial prudence was unfortunately overwhelmed by an unceasing growth zeal. This also teaches us the boundaries of growth for any startup.

The boundaries of growth for any business in a highly competitive arena. We have been talking about balance throughout our business development course, saying that every good opportunity also has a challenging risk. So, how do you balance the reward and the risk? How do you balance the opportunity and the challenge?

How do you balance growth and profitability or the key considerations in strategic planning for business development? Orchid has a company characterised the power of entrepreneurship unleashed by India's economic liberlisation on one hand and the peculiarities of the era that demonstrated entrepreneurs to maintain their shareholding through pledges and buys.

Today, even if the promoter shareholding is reduced to 10 percent or if a promoter sells his or her stake through the initial public offer, the market does not feel worried. But those were the days, particularly in the 1990s, the promoters were expected to stay on in the business and keep investing and keep raising equity capital through pledges and buys nobody told, but that was the practice.

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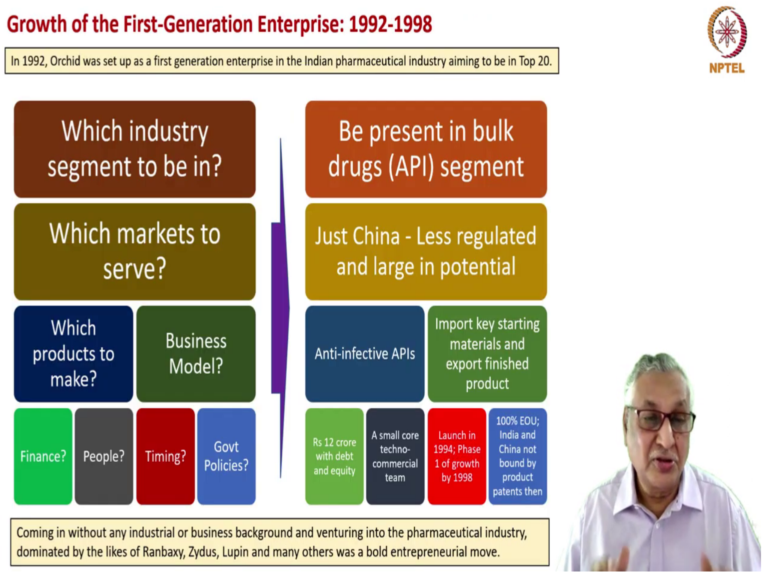

Let us look at the first phase of the first generation enterprise. During 1992 to 1998, the growth has been something which made several startups feel smaller and several big companies take notice. In 1992, orchid was set up as a first generation enterprise and the aim from the beginning was to be in the top 20 which got upgraded to be in the top 10 a few years later.

The questions I have talked about in the left side of the slide are very pertinent not merely for a pharmaceutical company, but for any company which is wanting to set up an enterprise.

Fundamental questions which industry segment to be in, which markets to serve, which products to make, what is the business model that I am going to adopt, do I have the finance, do I have the people, do I have the timing and do I have the government policies providing me the required tailwind and the answers in respect of orchid have been quite innovative.

The company decided to be present in the bulk drugs or the active pharmaceutical ingredient segment as I have told you earlier, the bulk drug or the active pharmaceutical ingredient is the substance of your tablet or capsule or any other dosage form that has the real proper and appropriate therapeutic effect that is the molecule, the basic molecule which works on the disease pathway and cures the disease.

And the market to serve was just China. It was less regulated and has large potential at that point of time of course, even today China is a huge pharmaceutical market which products to make the company decided that you would operate in the anti-infective API market because it is an acute therapy product.

The requirement goes on continuously in the emerging markets and how do you start the business, what business model would you adopt, import key starting materials and export the finished product. How much finance is required just rupees 12 crore with debt and liquidity in today's terms, but at that point of time it was a significant investment for a first generation enterprise. People a small core team of techno commercial savvy people and timing launched in 1994 two years after incorporation phase one of growth to come to be 1998.

It was set up very uniquely as a 100 percent export oriented unit. India and China were not bound by product patents then the advantage of starting the unit as an export oriented unit had several reasons and several backups one being export oriented makes the quality the highest. Two export quality product requires higher capability machine tools, higher capability equipment in this case and higher quality utilities.

Number three to be able to export in global markets from day one requires a strong and capable managerial bandwidth and fourth when you establish an investment intensive complex to manufacture product line for export markets you set up entry barriers.

So, coming in without any industrial or business background and venturing into the pharmaceutical industry and that too into sophisticated product group requiring high investment intensive manufacturing capabilities was a feat at the point of time and the company made its mark in an industry that was dominated by the likes of Ranbaxy's, Zydus, Lupin and many others.

Therefore, the company was hailed as a bold entrepreneurial company that was quite different from any other company.

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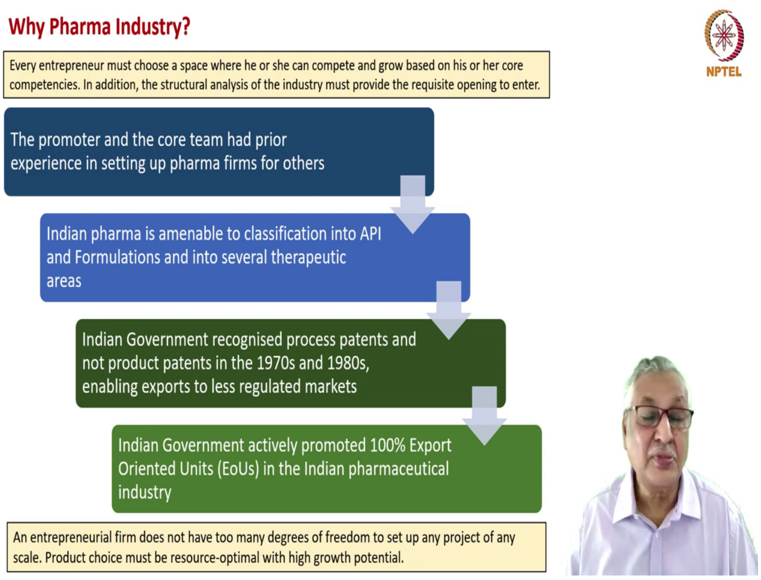

Why did the entrepreneur choose pharma industry? Every entrepreneur must choose a space where he or she can compete and grow based on his or her core competencies. In addition, the structural analysis of the industry must provide the requisite opening to the entrepreneur to enter the market space. In this case the promoter and the core team had prior experience in setting up pharma firms for others in India and abroad.

The Indian pharmaceutical industries amenable to classification into API and formulations and also into several therapeutic areas in both these broad categories. Indian government recognized process patents and not product patents in the 1970s and 1980s. This has enabled exports to less regulated markets without any restraints. Indian government also actively promoted the 100 percent export oriented scheme.

In the Indian pharmaceutical industry. An entrepreneurial firm or a startup does not have too many degrees of freedom to set up any project of any scale. Therefore, why is product choice? Why is business space to operate in? Must be taken up as a priority. This product choice must be resource optimal with high growth potential.

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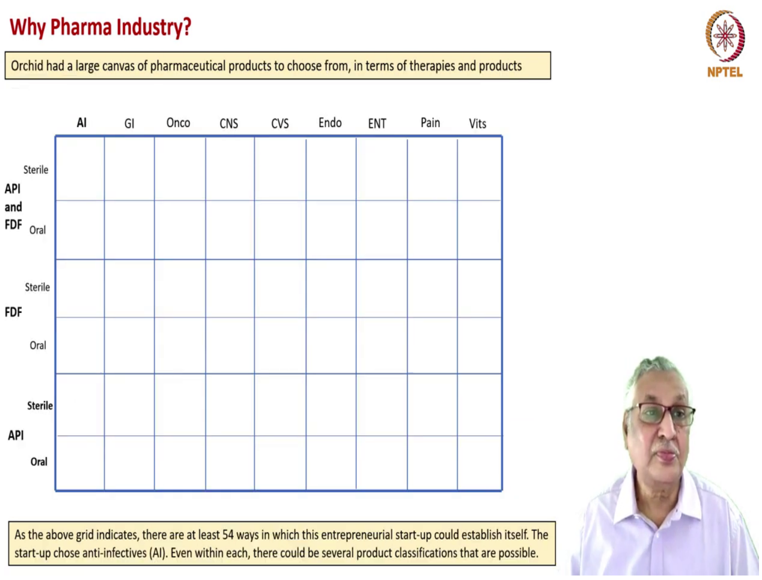

Looking at this question further, Orchid had a large canvas of pharmaceutical products to choose from in terms of therapies and products. This is one of the reasons why pharmaceutical industry was taken up. As a startup, you cannot operate everywhere, but as a startup, you will need something where the demand profile is strong and stable. So, when you look at these classifications that is on the y-axis API, finished dosage form and together that is API as well as finished dosage form.

And on the x-axis, you look at various therapies, anti-infectives, gastrointestinal, oncology, central nervous system, cardiovascular system, endocrinology, ENT, pain and vitamins. You see the kind of options that are available and these are not comprehensive. These are just representative or illustrative.

Similarly, within the each product structure, you have either a overall type of product or a sterile type of product. Therefore, you have categories, six categories to be precise in the y-axis. As the above grid indicates, there are at least 54 ways in which this entrepreneurial startup could establish itself.

The startup chose anti-infectives which is shown in the bold and it chose the sterile and overall formulations in the API space. And as a result of it, the company started setting up its business with a good focus. Later on, the FDF and API and FDF were considered. As I keep saying, a product portfolio is also like a bill of material. It cascades into sub- categories and the sub- cascade into further categories.

So, within the pharma industry, we have seen the general product grid and the choice that has been made in terms of anti-infectives.

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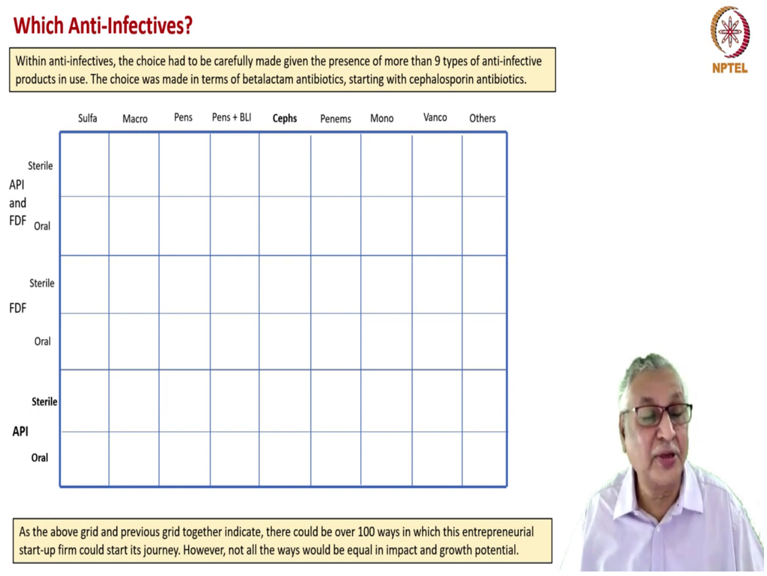

Now, let us go one step further, which anti-infectives is the next question. Within anti-infectives, the choice had to be carefully made given the presence of more than nine types of anti-infective products in use. The choice was made in terms of beta-lactam antibiotics starting with cephalosporin antibiotics. There are different kinds of antibiotics from very long time.

Sulfa drugs were available. Then macrolides came into being, Penicillin's were there. Penicillin's were potentiated with beta-lactamase Inhibitors. Then, cephalosporins came. Carbapenems came much later. Monobactams have been there ahead of carbapenems. Vancomycin kind of anti-infective products were there are also other types of anti-infective products as well. And each of these products and some probably in oral or some all only a sterile, but most as oral and sterile existed.

When the company looked at this product or sub-product grid, it wanted to have a product range, which would be capable of not merely starting the venture, but also ramping up the venture. So, the company chose cephalosporins, API with sterile and oral as the key drivers. As the above grid and previous grid together, would indicate there are over 100 ways by which this startup could have started its business.

However, not all the ways would be equal in terms of the impact and growth potential. And that is where judgment, decision-making and data analytics come into play. And business development depends on all of these things. You start with data analytics, then you get use the layer of experience and then use the next layer of judgment.

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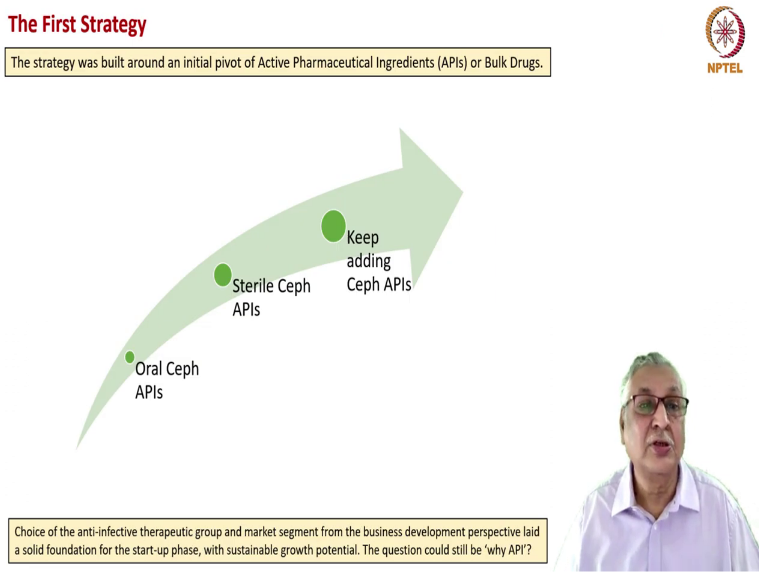

So, the first strategy was built around an initial pivot of active pharmaceutical ingredients called APIs or bulk drugs. Oral cephalosporin APIs to start with, simplest to manufacture, then leading onto the sterile APIs. And then keep adding more cephalosporin APIs.

Choice of the anti-infective therapeutic group and the market segment from the business development perspective laid a solid foundation for the startup phase with sustainable growth potential. The question could still be why API, why it could not have come into the formulations.

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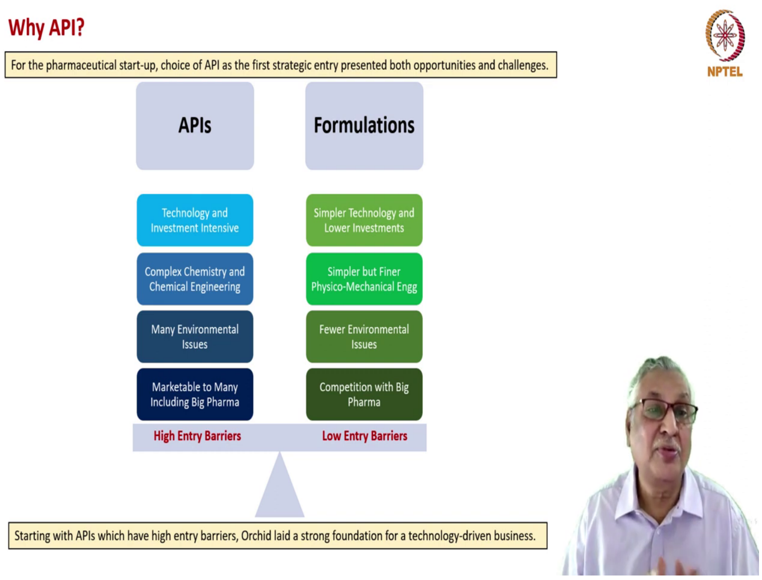

Why API? For the pharmaceutical startup, choice of API as the first strategic entry presented, both opportunities and challenges. APIs are technology and investment intensive. That is, it would create entry barriers which others will find difficult to crack. APIs require complex chemistry and chemical engineering, not a very scientist can manufacture an API, while most scientist can manufacture formulations.

There are many environmental issues related to manufacture of APIs. Therefore, it requires a higher order commitment to make the APIs zero discharge facilities and kind on environment. And the APIs are marketable to many including big pharma because big pharma are these manufacturers of the ultimate medicines.

The differentiation for big pharma lies in the formulation or the dosage form and not in the supportive API. Therefore, while being a manufacturer of APIs, you can also link yourself with the fortunes or the big pharma which could be huge.

And high entry barriers therefore, is the characteristic of the API business vertical. When you look at formulations, you have low entry barriers for the reasons that it involves simpler technology and lower investments. It involves simpler, but final physico mechanical engineering. It will have fewer environmental issues and competition with big pharma is going to be there once you enter the formulation.

So, when you look at the balance of both the options, you will find that APIs is certainly better than being in the formulation space. Starting with the APIs which have high entry barriers, orchid laid a strong foundation for a technology-driven business.

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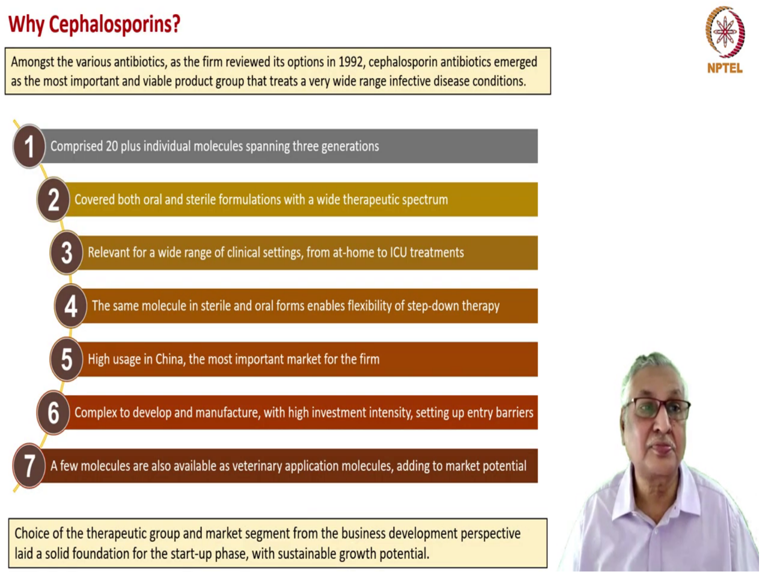

Again, in the choice of antibiotics, why Cephalosporins has been chosen as the first product group to enter. Amongst the various antibiotics, as the firm reviewed its options in 1992, Cephalosporin antibiotics emerged as the most important and viable product group that treats a very wide range of infective disease conditions.

There were as many as seven reasons why Cephalosporin antibiotic field should be chosen compared to any other antibiotic. Fundamentally, it comprised 20 plus individual molecules spanning three generations. What do you mean by generations? If a product is developed in 1960s and another product is developed in the 1970s, we call the second product as the second-generation product.

So, in respect of Cephalosporin antibiotics, the developmental generations have been three. Two, it covered both oral and sterile formulations with a wide therapeutic spectrum. Oral formulations have their own requirements and sterile formulations have their own requirement. Oral or more for clinics, mild infections and for home usage. Whereas sterile formulations are for daycare units for hospitals. Therefore, the entire coverage of the treatment spectrum is achieved through the Cephalosporin antibiotic range.

The relevance for a wide range of clinical settings from at home to ICU treatments is something which is going to ensure the broadest possible patient coverage as well as the dispensation coverage. Also, very unique factor. The same molecule in sterile and oral forms enables flexibility of step-down therapy. You imagine yourself having a patient who underwent intensive care therapy and intensive care therapy is always with sterile injectable products. But the patient would be discharged at some point of time.

But the patient would still require antibiotic cover, in which case the sterile injectable product is no longer required because the patient has reasonably recovered. But the residual antibiotic cover is provided by the oral product. So, if you have let us say an product which is called Cervarix vaccine which is available in injectable form and is given in the intensive care therapy and then you come home and you have the same tablet, same molecule as a tablet form.

Then you are having the same therapeutic impact with step-down. You can also mix and match. You can have a sterile injectable such as (Refer Time: 35:36) and you can also have a oral product called Cefadroxil or Cefalexin. So, the same molecule in sterile and oral forms enables flexibility of step-down therapy.

As I mentioned earlier, the Cephalosporin antibiotics have high usage in China, the most important market for the firm. These are complex to develop and even more complex to manufacture with high investment intensity and setting up entry barriers.

And manufacturer requires a very high grade of complex utilities. The utility cost in a Cephalosporin antibiotic facility would be probably higher than the manufacturing facility cost. That is the kind of utility requirements that exist in Cephalosporin antibiotic manufacture.

A few molecules are also available as veterinary application molecules adding further to the market potential. Choice of the therapeutic group and the market segment from the business development perspective laid a solid foundation for the start-up phase with sustainable growth potential.

This algorithm of business strategy, business development, category development and the sub-category development as well as the ultimate product focus will drive successful establishment of a company, successful establishment of business line and successful business development. The principles that I have outlined are useful for any other product group and any other product portfolio decision, quite apart from the value chain decision that needs to be made alongside such decisions.

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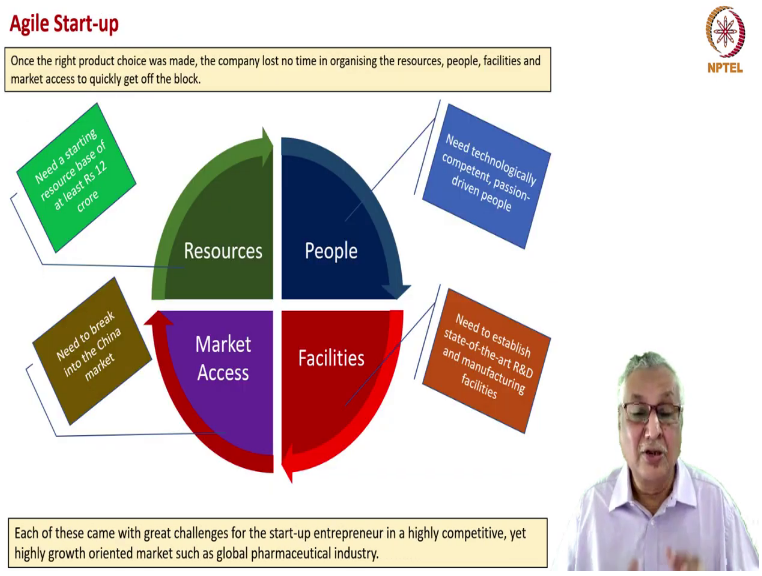

It is not necessary that only product choice will drive a company. It has to be in terms of the execution capability as well. So, this company succeeded because it was an agile start-up. Once the right product choice was made, the company lost no time in organizing the resources, people, facilities and market access to quickly get off the block.

So, resources, the company decided that it has to have a resource base of at least 12 crore rupees to start the business. People have to be technologically competent, passion driven people. You cannot sub-optimize the people competencies.

The market access has to be ready made and waiting to accept the products. So, need to break into the China market and the facilities have to be state of the art, R and D and manufacturing facilities. Each of these came with great challenges for the start-up entrepreneur in a highly competitive, at highly growth oriented markets such as global pharmaceutical industry.

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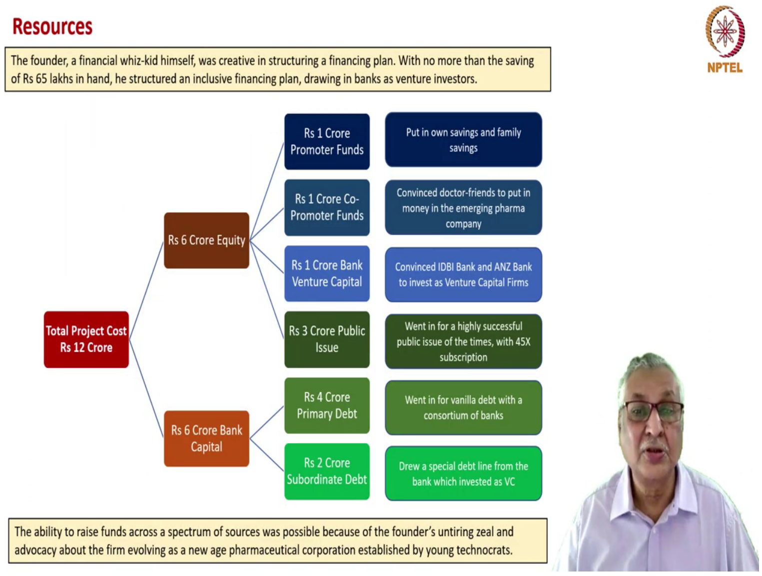

Let us look at the resources. The founder of financial whiz kid himself was creative in structuring a financing plan. With no more than the saving of rupees 65 lakhs he had in hand after his overseas stint, he structured an inclusive financing plan drawing in banks as venture investors. This was the first time that a development institution acted true to its name. Instead of investing in big companies, the company acted as a venture capital partner for this company.

The total project was rupees 12 crore which was divided into 6 crore equity and 6 crore bank capital. I have modified these numbers slightly, but the overall theme remains true to the original form. It had one crore of promoter funds comprising the own savings and the family saving. It had one crore of co-promoter funds.

He convinced the doctor friends to put in money in the emerging pharma company. He had one crore bank venture capital I refer to IDBA bank, convinced IDBA bank and ANZ bank to invest as venture capital firms in a manner of speaking. And he went in for the public equity issue of rupees 3 crores. It was a highly successful public issue of the times with 45 times over subscription.

The 6 crore bank capital was in terms of 4 crore primary debt, went in for vanilla debt with the consortium banks. And rupees 2 crore subordinate debt, a special debt line from the bank which invested as VC. The ability to raise funds across a spectrum of banking and lending sources as well as equity sources was possible because the founder had passion and zeal which were evident in the way he advocated his plan for the future.

He clearly sold the vision of a firm that is a startup and that to a first generation startup evolving as a new age pharmaceutical cooperation established by young Indian technocrats. And that has been the theme and that has been the dream which he has sold to the whole range of stakeholders. And of course, he and the team passionately believed in that dream.

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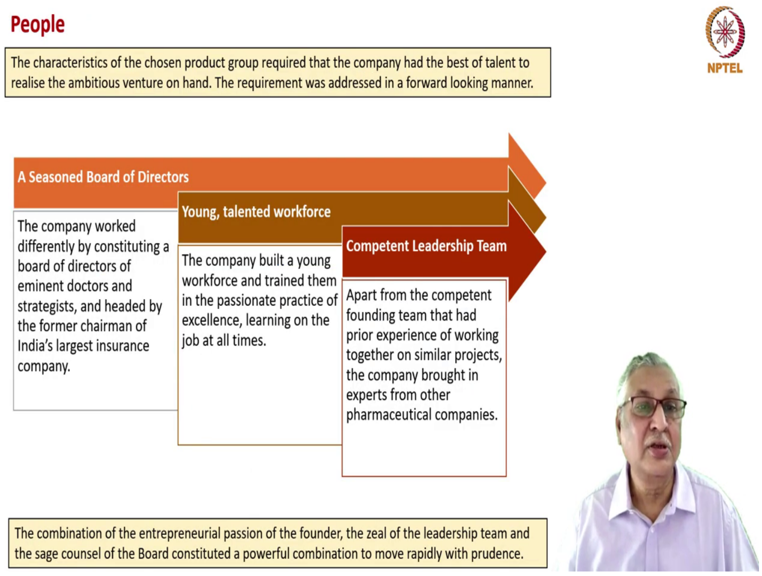

The third aspect people, the characteristics of the chosen product group required that the company had the best of talent to realize the ambitious venture on hand. The requirement was addressed in a forward-looking manner or in terms of how much this person would cost. He started off with the seasoned board of directors, something which startups try to avoid.

He started having a different kind of board comprising experts right from day one. He had eminent doctors, strategies and had the former chairman of India's largest insurance company as the chairman of the board. Therefore, it was a very informed, incisive and independent board that guided the company.

He had a young talented workforce. The company built a young youthful workforce and trained them in the passionate practice of excellence learning on the job at all times. And also, to inspire the workforce, most facilities that big companies offer were provided from day one like subsidized lunch, transportation to various parts of the city, good uniforms and nice working conditions.

Then there was the competent leadership team. Apart from the competent founding team that had prior experience of working together on similar projects the company brought in experts from other pharmaceutical companies.

So, this convergence of different types of technological and scientific capabilities further enhanced the capability levels of the firm. The combination of the entrepreneurial passion of the founder, the zeal of the leadership team and the sage council of the board constituted a powerful admixture to move rapidly with prudence for the company.

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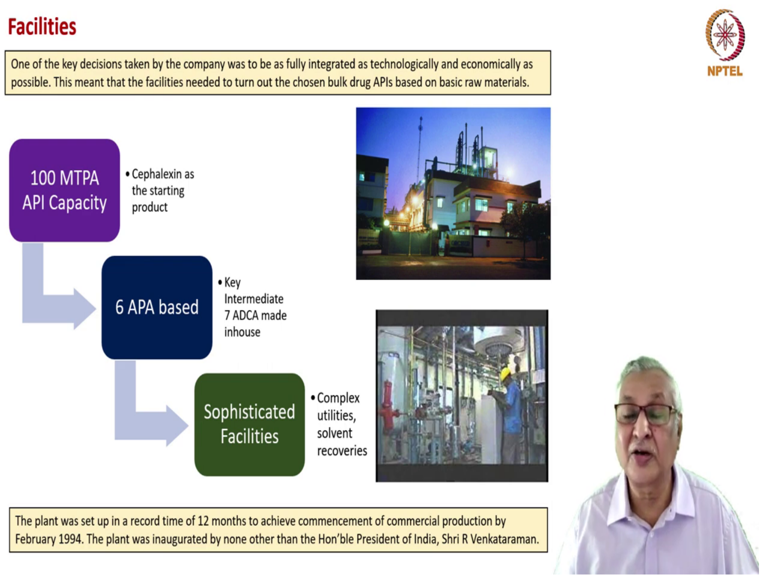

The fourth aspect the facilities one of the key decisions taken by the company at the time of inception was to be as fully integrated as technologically and economically possible at that point of time. This meant that the facilities needed to turn out the chosen bulk drug APIs based on basic raw materials. So, the plant was set up to manufacture cephalexin as the starting product with 100 metric tons per annum capacity.

At its peak this capacity grew to 1200 metric tons in a manner of molecule equivalence. It also started off based on the 6APA based keys intermediate and starting materials. The key intermediate 7 ADCA was made in house and that was a challenging key intermediate and its ability to manufacture the intermediate in house provided competitive advantage. And all the facilities a few pictures as shown here have been sophisticated, complex utilities and complex solvent recoveries.

Why do you recover solvent? Because solvent is the mother liquor which goes out into the environment and which is not good. The more you recover the solvent the better will be your environmental footprint and also the better will be your cost level. The plant was set up in a record time of 12 months to achieve commencement of commercial production by February 1994.

The company was incorporated on 1st July 1992 and within nine months in a matter of speaking the plant was ready for the flak off. The plant was inaugurated by none other than the honorable president of India Shri R Venkataraman of those times.

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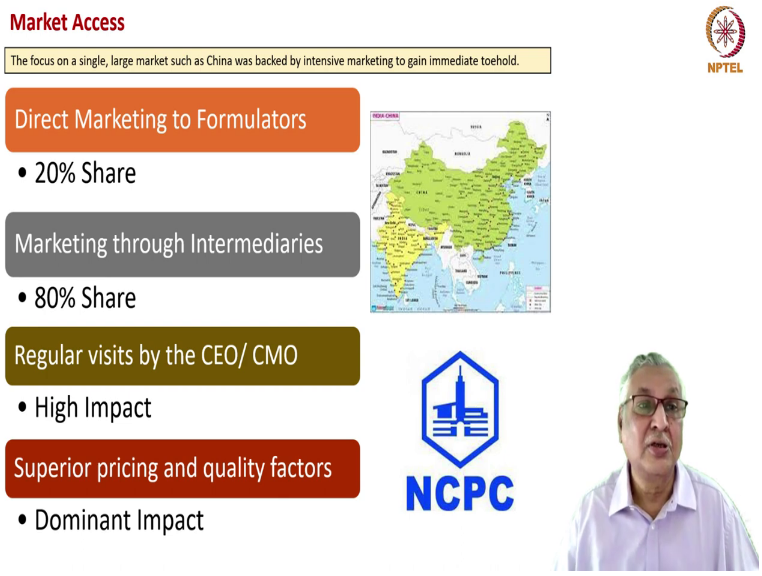

Market access was sort after in a very diligent and focused manner. The focus on a single large market such as China was backed by intensive marketing to gain immediate toehold. The company entered into long term management with leading cephalosporin formulators in China such as NCPC and several others.

So, direct marketing to formulators was providing 20 percent share. Marketing through intermediaries was providing 80 percent share. Regular visits to the key markets particularly China by the chief executive officer and the chief marketing officer had high impact. Superior pricing and quality factors resulted in dominant impact in the overall pharmaceutical space.

So, it was a very comprehensive strategy covering product range, manufacturing capability, people capability, financial resourcing and market access. All of these things come by to provide the thrust for the company to move on an accelerated ramp up path.

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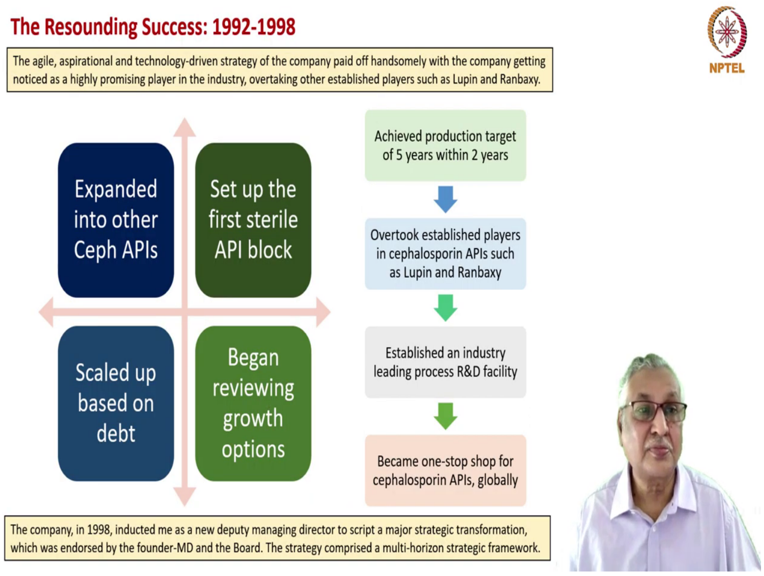

Therefore between 1992 and 1998 the company experienced resounding success. The agile aspirational and technology driven strategy of the company paid off handsomely with the company getting noticed as a highly promising player in the industry. Overtaking other established players such as Lupin and Ranbaxy consulting companies such as McKinsey, wide with each other to work alongside orchid market management to craft new areas of development.

So, four things the company did during this phase expanded into other cephalosporin APIs, set up the first sterile API production block, scaled up based on further debt and began reviewing growth options in the short span of six years. And if you really look at the date of commencement of production as the real starting point within the short span of four years the company achieved this monumental task. Achieved production target that was set for five years within the first two years.

Over took established players in cephalosporin APIs such as Lupin and Ranbaxy, established an industry leading process R and D facility, became one stop shop for cephalosporin APIs globally. This demonstrates that strategic execution is at the core of aggressive business development. The company in 1992 inducted me as a new deputy managing director to script a major strategic transformation.

I continued to be working in Ashok Leyland until 1998 was on the board of the company as a part-time independent director. Whereas the promoter was also an alumnus of Ashok Leyland and he had common friendship with me and therefore, I decided to support this company.

Going to the patient care business even more swiftly and even more radically and create value in the Indian pharmaceutical industry. So, the company in 1998 inducted me as a new deputy managing director. To script this major strategic transformation from the year 1998 onwards. This was endorsed as a plan for the future by the Founder MD and the independent board. The strategy comprised a multi horizon strategic framework that was very unique for a startup of that level at that point of time.

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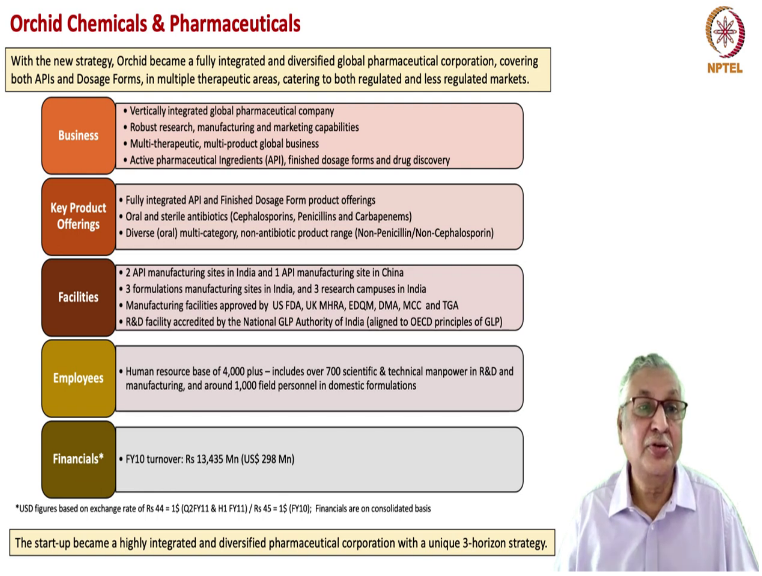

With the new strategy, orchid became a fully integrated and diversified global pharmaceutical cooperation between 1998 and 2006 covering both APIs and dosage forms in multiple therapeutic areas, catering to both regulated and less regulated markets. What did the business become? It became a vertically integrated global pharmaceutical business.

Supported by robust research manufacturing and marketing capabilities. This spread was multi therapeutic not just antibiotics or cephalosporin antibiotics. It became a multi product global business. Active pharmaceutical ingredients finished dosage forms and drug discovery became the three arms of the business. The key product offerings were very wide and diversified.

Fully integrated API in finished dosage form product offerings, providing quality and cost competitiveness, oral antibiotics, comprising cephalosporin, Penicillin's and to some extent other products. Diverse oral multi category non antibiotic product range, non- penicillin, non-cephalosporin.

Two API manufacturing sites in India and one API manufacturing site in China. Three formulations manufacturing sites in India and three research campuses in India. All the manufacturing facilities approved by USFDA, UK MHRA, EDQM, DMA, MCC and TGA.

Many pharmaceutical companies underwent significant difficulties and most of the difficulties were traceable to the non-compliance with regulatory agency requirements. Even today many companies get adverse reports from the international regulators. I talked about the Ranbaxy issue and erosion of value for some pharma due to the acquisition and the continuing regulatory overhang.

However, Orchid has been the only company which had no regulatory roadblock at all and if it has kind of faced turbulence, it certainly was not due to its technology or its strategy. It was due to factors which were quite different in terms of the over extension of the ambitions.

Employee's human resource base of 4000 plus including over 700 scientific and technical manpower in our Indian manufacturing and around 1000 field personnel in domestic formulations. Imagine from just one person to have this level of employment generation in the country.

In FY10 the turnover was 298 million dollars. The startup became a highly integrated and diversified pharmaceutical corporation with a unique three horizon strategy which I will briefly present, but will take you through that strategy in the next lecture.

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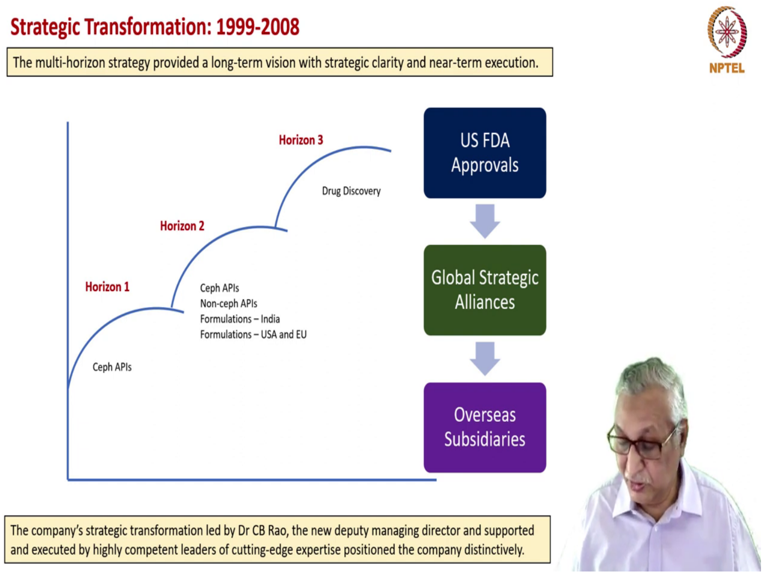

The strategic transformation between 1999 and 2008 was multi horizon. It provided a long term vision with strategic clarity and near term execution. Horizon 1 comprise the starting product basket of cephalosporin APIs. Horizon 2 comprise cephalosporin APIs, non cephalosporin APIs, India based formulations and USA and EU based formulations.

So, it moved away from its 100 percent bulk drug focus to very diversified bulk drug and formulation focus until orchid came on the scene. There was in a manner of speaking no injectable product that was manufactured by India that was administered to the developed world and that has been the kind of transformation that orchid brought to the Indian pharmaceutical scene.

Then in the Horizon 3 drug discovery that is discovery of new chemical entities was taken up as one of the important segments of business for the future. And the three pillars that supported this US FDA approvals, global strategic alliances and overseas subsidiaries. The company strategic transformation was led by Dr. CB Rao which is the instructor for you in this course. I served the company as the new deputy managing director from 1998 onwards on a whole time basis and supported the strategic transformation.

It was also supported in execution by highly competent leaders of cutting edge expertise and all these efforts as a board level team effort, as a top leadership team effort, as an employee level team effort with aligned vision, aligned strategy and aligned execution help position the company distinctively that has been the core of the success of orchid up to 2008. We will talk about the details of the 1999 and 2008 period in our next lecture.

Thank you for your attention. Hope to see you in the next lecture.