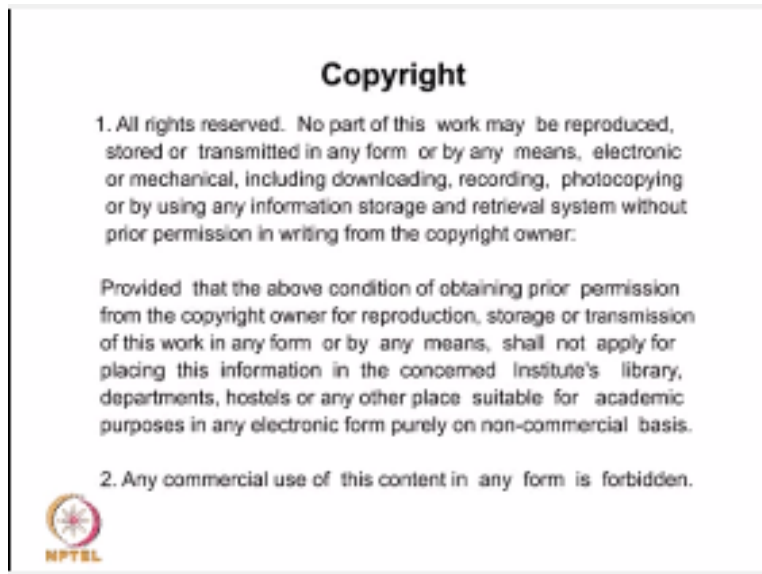


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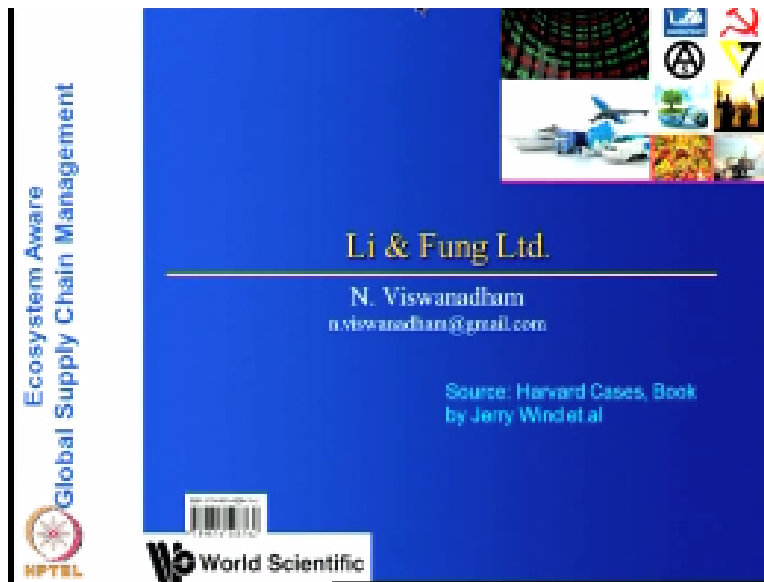
Global Supply Chain Management

**Lecture22
Li&fung-part**

**Prof. N. Vishwanadham
Department of Computer Science and Automation
Indian Institute of Science
Bangalore**

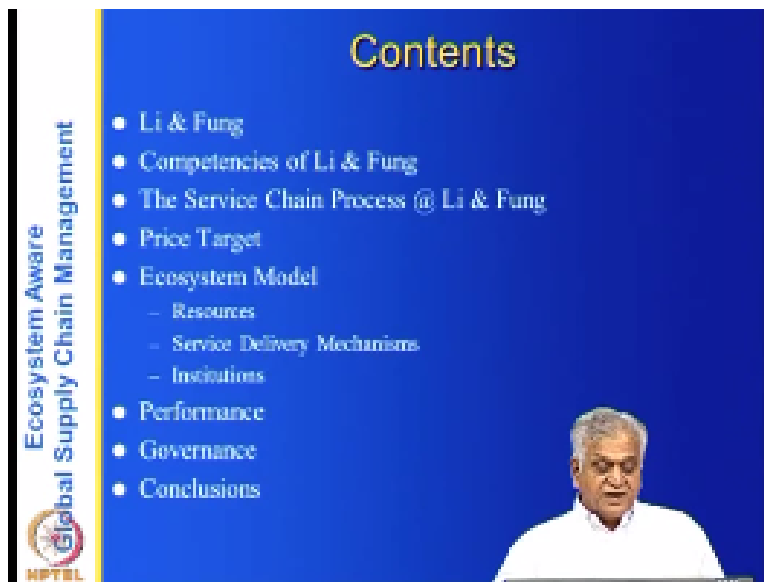
Today we are going to look at one of the important companies called Li & Fung and that Hong Kong based company and I will talk about how they are a very nice and good Orchestrator. And they are in the apparel business and we have seen in the last few lectures about governance of global supply chains and also the orchestration as a model of governance this is a Zionist warning everything in our castration we basically the Warner does not want anything but he just our districts in other words he just manages our those resources but this may look very trivial and easy but it is not it is not so we are going to look at dolly and phone case.

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And see how we can learn about artist ration from Li and thanks example well the servicer is the hard work cases there are lots of other cases Li and front right from 1999 onwards and there is a book by Jerry Lynn at all on dealing with this.

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So to start we will talk about Li & Fung about have to come this one I am living from it is an Orchestrator what are the competence is such a and form so as an Orchestrator and the second thing is we are going to be use the ecosystem approach here the ecosystem has this service

chain process at Li and Fung and so we are first going to map and learn about the service chain process then we know that the price target how Li & Fung.

As an artist, it is going to bring down the prices and there is better than competitors there lots of competitors to Li & Fung and how they act on bins in the price market and look at the ecosystem model and where they we have already looked at the supplier and service giant process so we look at the other three resources are wasted every mechanisms and institutions do not we use the circus system model to study performance.

Risk innovation and governance so we are going to do that we are doing to two things which are important are the performance and governance here we are going to look at how Li & Fung governs the entire supply chain and they service J and then you can load and the conclusion is basically a simple thing we are going to say Li & Fung is the best Orchestrator that is in the world today and is it possible to imitate Leon front and you become the best to straighter that is a good question and last people try to do it and it is something to be learning then from this case.

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Li & Fung

- B2B trading service provider
- Who are its customers?
 - Large retailers and manufacturers of labor-intensive, low-cost consumer goods. Majority of them hail from the US and Europe
 - Small retailers and manufacturers who lack the volume
- Competitors
 - Customers' staff could perform the same functions as Li & Fung in searching out, inspecting, analyzing, and selecting factories for each order, and then making inspection visits to track the supplier's progress on the order.
 - B2B companies need to prove that they can do better than the customer's employees. Thus competition comes from
 - Large companies with international supplier networks like Li & Fung
 - Small outfits that have a good knowledge of suppliers in a small region or small production area
 - Large customers who have the capital to invest and operate their own buying offices
- Threats: Disintermediation via New technologies

So let us look at Li & Fung it is a b2b trading service provider it is with between the big players or big retailers in the US you and so on and the tail end of the supplier and the suppliers in the Air ship AK region and who its customers the customers are large retailers and manufacturers.

Of elaborate talus no cost consumer goods in other words he is dealer with a pro he is dealing with toys and other another goods and so on these are low-cost highly level intensive goods

majority of them held from US and Europe there is a large retailers small retailers and manufacturers who lack volume so well they latch retailers have large volumes and so on they are looking for cost cutting small retailers and manufacturers.

They go to lay in front because they do not have the volumes and if they want to do it themselves then it becomes very expensive from them so who are the competitors of early and from customers staff could perform the same functions suppose you are getting a particular big order for Li & Fung from Wall mart that Wall mart has staff that could perform the same functions as Li and Sunday they know like I do as a child or a good suppliers.

They could inspect analyze and select the factories for each order and then making the inspection measures to track the supplier progress of the order well then have to grow in their dish they must be doing this already so they could continue doing it instead of outsourcing it to me and from then due to big companies we need to prove that they can do better than customer employees there is the computation comes from large.

Companies with international supplier networks like Li & Fung then small outfits that have good knowledge of suppliers in small region or through product area large customers who have taught you to invest and operate on their own so these are some of the competitors that that we have that we are going to show in our analysis that the competitors of their networks.

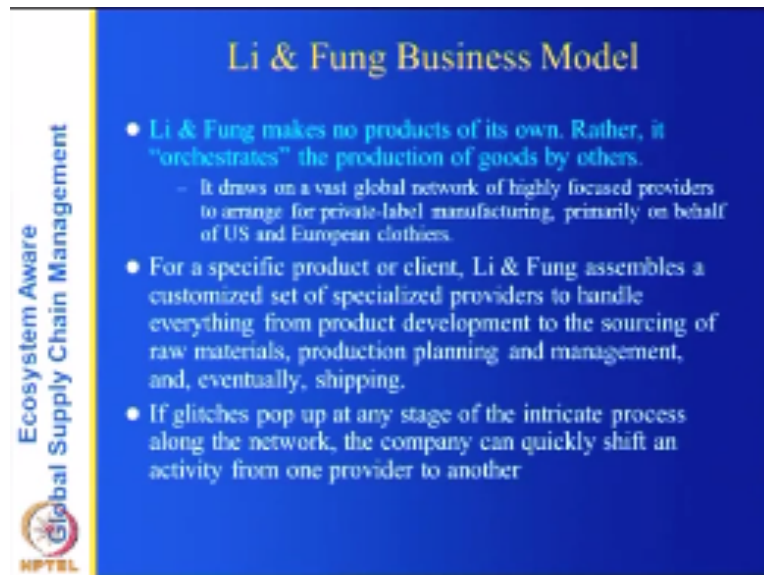
Likely and for others the infanticide better than them we will show you an example how they do better what are the threats for early and from the threats are disintermediation language its ability to access an intermediary between two companies they retailers I am on yet and they supply us in the Asia-Pacific region so he said is there a threat of this intermediation power new technologies for example people that when they internet.

Be to the exchanges have come into play then people thought that you can easily search for the suppliers and you can find out from the web who are supplying what and you can be directly with them and the brokers or the intermediaries like Li & Fung then they can dissipate it but they do not happen the reason is the following the reason is you can search the internet to search for a good player or good supplier who can see.

And so on but how do you know that they are good how do you know about the quality if they at this one they may say anything on the Internet that may not be and second thing is if you are

a foreigner if you are a supplier we are above all from United States why should a Chinese supplier or an Indian supplier believe you so there is the that is the repetition count that consent so for several reasons there is new technologies and BBB b2b exchanges and we did take us very much as we see later that it is much more than just connecting via the internet.

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Li & Fung Business Model

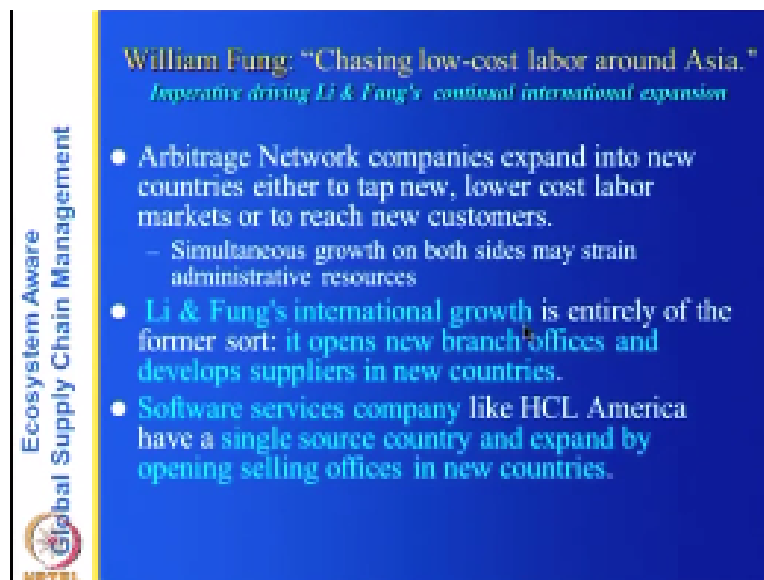
- Li & Fung makes no products of its own. Rather, it "orchestrates" the production of goods by others.
 - It draws on a vast global network of highly focused providers to arrange for private-label manufacturing, primarily on behalf of US and European clothiers.
- For a specific product or client, Li & Fung assembles a customized set of specialized providers to handle everything from product development to the sourcing of raw materials, production planning and management, and, eventually, shipping.
- If glitches pop up at any stage of the intricate process along the network, the company can quickly shift an activity from one provider to another

So what is this earth was will not tell me in some follows the end song makes no products of its own now that we talked us first the production of goods by others this is the orchestrator definition we have seen in the last class and it draws on best global market finally focused. Providers to arrange for private label manufacturing primarily on behalf of US and European Claudius now here we are dealing with small players who are highly focused if somebody is doing dying he does only die he is an expert on that somebody manufactured jeepers he is expected in supers if somebody knows how to sew no Claudius he is an expert at that so these are highly focused small players and Li&fung does is to drop on them.

And connect with them and for a specific product or a client the end song assembles a customized set of specialized providers to handle everything from product development to sourcing of new materials production planning and management and eventually shipping it to the customer so I mean you can see the complexity of for luckily and funk has to do it has to get these players well test with thee to handle everything from product development.

To finally shipping on delivering the testable if will just pop up and then ten things nothing is perfect the things can go up at any stage of the intricate process along the network the company can quickly shift the activity from one provider to another so you can see the kind of execution capabilities that Li & Fung should have so that you can move from one to another first of all over to direct there is a glitch and second I guess you have to find out what it is and it can be repaired and thoroughly if they sniffle it be you have to switch to another provider.

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William Fung: "Chasing low-cost labor around Asia."
Imperative driving Li & Fung's continual international expansion

- Arbitrage Network companies expand into new countries either to tap new, lower cost labor markets or to reach new customers.
 - Simultaneous growth on both sides may strain administrative resources
- Li & Fung's international growth is entirely of the former sort: it opens new branch offices and develops suppliers in new countries.
- Software services company like HCL America have a single source country and expand by opening selling offices in new countries.

**Ecosystem Aware
Global Supply Chain Management
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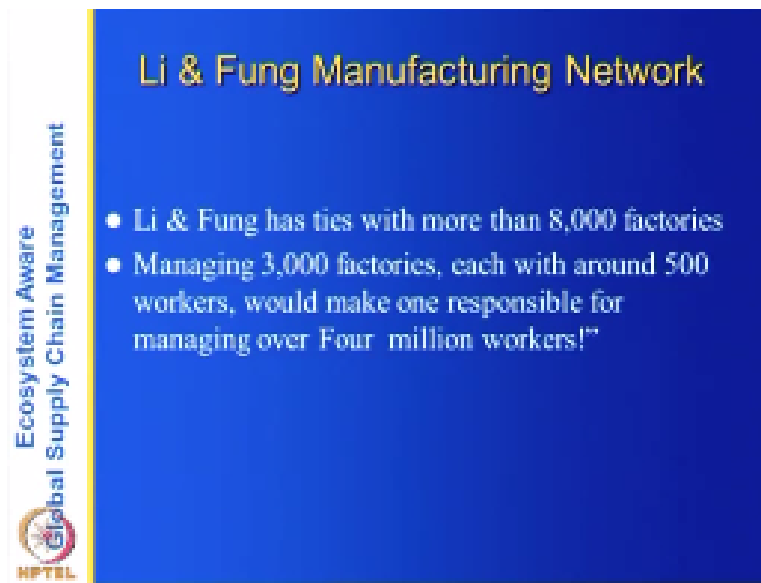
So choosing the will cost you burn around Asia that is the imperative of NIAMS continuous international expansion now if you look at the international expansion of arbitration network companies are average network companies expand into new countries either to tap new lower cost rather markets or to reach new customers what is that you are looking for new customers that we had the have low-cost markets at the other end as a tail end simultaneous growth.

On both sides muster in the administered resources it is not possible to but that does li& fung us sense International Countries entirely in the former sort neither much it opens but I just in developing countries and develops supplier contacts in the new countries whether it is India, Vietnam, Bangladesh ,Cambodia, Indonesia wherever it is it opens new branch offices and olive supply us in those countries were terminated on the other hand.

Our software service providers like HCL Infosys and so on there it is a second source country that is you know your sourcing to India and expand by opening selling offices and new

countries you want to market by IT competencies in either you are previously you and so on so basically you are looking for new customers in US, Europe and so on so this there is a difference between whether you are looking for new customers or new partners so there is a Li & Fung case we are looking for low partners.

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The slide features a blue background with yellow text. On the left side, there is a vertical banner with the text 'Ecosystem Aware Global Supply Chain Management' and a logo for 'HPTCL' at the bottom. The main title 'Li & Fung Manufacturing Network' is at the top in yellow. Below it, two bullet points are listed in white text.

- Li & Fung has ties with more than 8,000 factories
- Managing 3,000 factories, each with around 500 workers, would make one responsible for managing over Four million workers!"

Who supply at in the low from the low-cost countries so what is Li & Fung manufacturing network the infant has ties with more than 8,000 factories and managing for the eight thousand factories you each with five hundred workers would make one responsible for managing four million workers so this should be it should be eight here so manager late thousand factories.

To issue it around five thousand what two would make one responsible for four million workers so you can see that by artists rating across a thousand factories and similar number of logistics players warehouse players and several hundred or 100 countries you can see the kind of effort that Li & Fung should have and it is superior to having four million workers for this as far as your production is concerned.

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A presentation slide with a blue background. The title 'Financial Human & Social Capital' is centered in yellow text. On the left side, there is a vertical white sidebar containing the text 'Ecosystem Aware' and 'Global Supply Chain Management' in blue, and the NPTEL logo at the bottom. The main content area contains a bulleted list in yellow text:

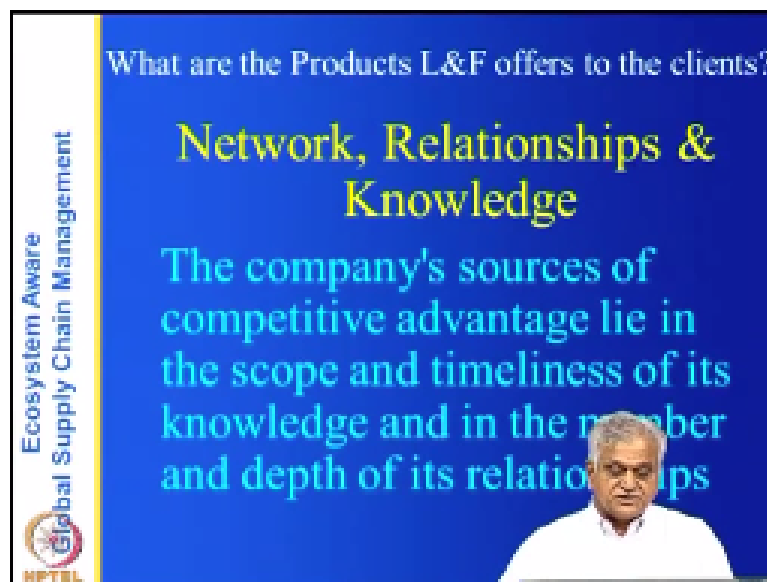
- A Company has three kinds of capital:
 1. **Financial capital** which is cash on hand, reserves in the bank; assets.etc
 2. **Human capital:** Employees with intelligence, combined with education and experience.
 3. **Social capital** which is relationships with other players who get opportunity to use its financial and human capital.

That you do not want any of them so let us look at you go to be all these great kind of things not to manager 8,000 workers and supply to all the people are not I at low cost then what are the competencies that are required early and fall so you think is a financial human and social capital in general the company has three kinds of capital the first one is financial capital which is cash on hand reserves in the bank and the assets and so on and here in case of funny and funk.

You should be the human capital that that it has it has the human capital employees with intelligence combined with education and experience of course it has cash and third one is social capital which is the relationship with other players who get opportunity to use its financial and human capital so if you want to look at which importance wise what is the li&fung concentrates on is the social character the human capital.

Of course the skill training and others the soft skills the human capital with soft skills are the employees of the end farm and first financial capital is it follows automatically from the social capital and the human capital so and if we look at other companies for example in software companies the human capital dominates whereas the social capital there is in terms of the done by the marketing companies so in most of these in the case of an Orchestrator the social capital dominates.

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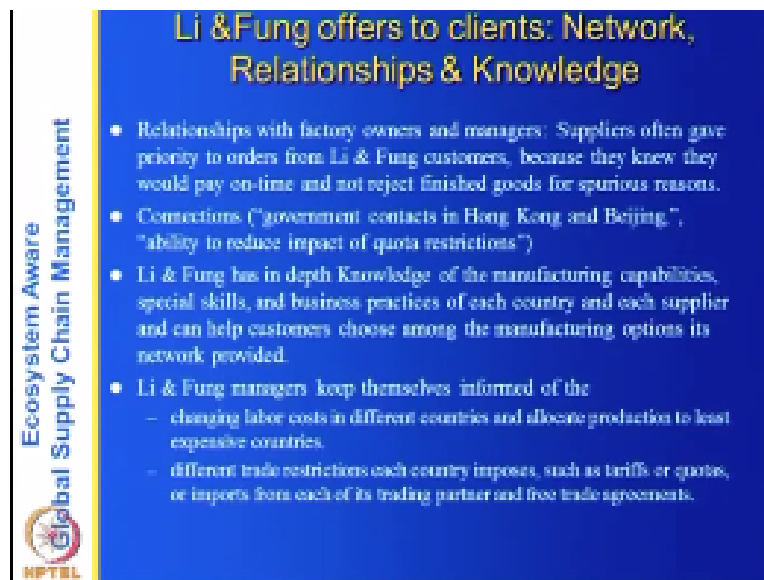
So what are the products no inform offers to the clients network relationships are knowledge I think that is very simply it is not or something but it is the relationships is the knowledge of the domain knowledge that it has and also it was the network that so if you map the social network of lien from the inter organizational network it should be an interesting this one I did have strong ties with the governments with all the resource providers.

Who are the suppliers of various kinds of resources for Apple industry and also the relationships with various kinds of small and medium manufacturers in the Asia-Pacific region

in India, China, Indonesia, and so on and also knowledge about the whole thing in other words knowledge about the countries their labor their loss about the trade laws and also the culture and other kinds of things so the company sources of competitive advantage lie in the scope.

And timeliness of its knowledge and in the number and depth of relationships as I said this is an expansion of this what is the source of competitive advantage supposing there is somebody else some other Orchestrator so I have been how do you temporarily and firm with some other some other Orchestrator in the same business it depends on the strength of the network but also the number and depth of its relationships and so on.

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Li & Fung offers to clients: Network, Relationships & Knowledge

- Relationships with factory owners and managers: Suppliers often gave priority to orders from Li & Fung customers, because they knew they would pay on-time and not reject finished goods for spurious reasons.
- Connections ("government contacts in Hong Kong and Beijing", "ability to reduce impact of quota restrictions")
- Li & Fung has in depth Knowledge of the manufacturing capabilities, special skills, and business practices of each country and each supplier and can help customers choose among the manufacturing options its network provided.
- Li & Fung managers keep themselves informed of the
 - changing labor costs in different countries and allocate production to least expensive countries.
 - different trade restrictions each country imposes, such as tariffs or quotas, or imports from each of its trading partner and free trade agreements.

So meaningful offers to clients network relationships our knowledge of course that is it relationships with factory owners this is an expansion of the previous light relationship with factory owners and managers suppliers awesome new priority two orders from me and from customers because they knew that they would pay on time or not reject finished goods or spurious results so what if they take arrests that supplier small-scale suppliers.

This is in case of trouble if the factory one of the big player is in trouble then he would try to pass it his troubles to the suppliers by saying that the boots are not of quality and so on yeah not giving not giving and very good reasons but some subjective reasons and so on so that they were not found never does it the connection connections with the government in Hong Kong and Beijing the ability to do reduce impact of quota restrictions.

Now that is what is called total restrictions that are followed worldwide in other words in bilateral industry that is a there is a what is called multi-fiber agreement according to which each country is allocated a certain amount of quota so that is why what if these players have started their factories in various low-cost countries like Cambodia and Vietnam and other places so what happens is each country is given a quota supposing it so happens. That a particular country is not able to supply that water then a particular company in China is not able to supply that is allotted to it then in such a case then the government because of the government connections the inform is informed of that and he will be able to use that that extra quota of other companies as hits water so mean form has in-depth knowledge of the manufacturing capabilities special skills and business practices of each company.

It knows whose finances that particular company or her their employees what are their capabilities what it does and so on and each supplier that can help the customers choose among the manufacturing options where they network provided so once it knows the depth knowledge in other words each supplier has an ecosystem not only it is service Chie where it gets with resources from and if it is a net country and the institutions and the government regulations and ask that for that country.

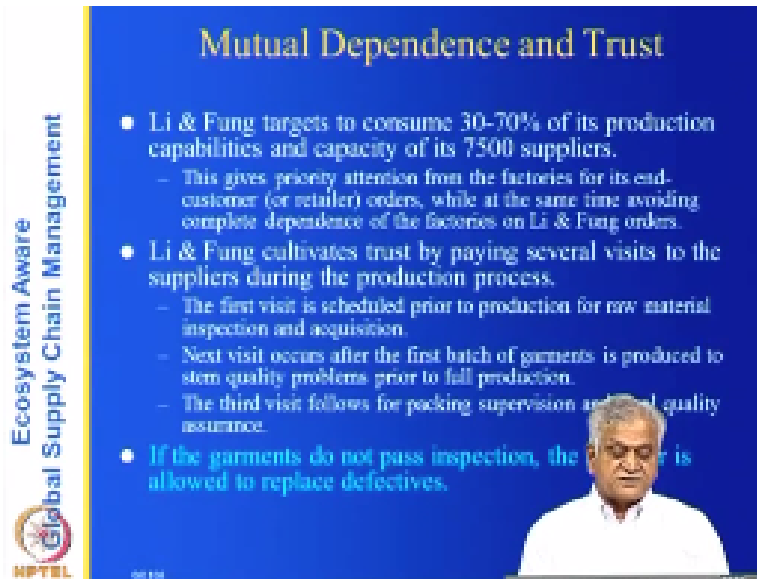
And also their delivery mechanisms that they use so the in front has in-depth knowledge of the its capabilities for each company that it works Simon fund managers keep the managers keep themselves informed of changing labor costs in different countries and allocate production to least expensive countries different traditions each country imposes such as tariffs or quotas or imports from each of the trading partners and free trade agreements.

So there are several things that in the global threat that happened between countries so if there is a new free trade agreement between the two countries and lien found tries to utilize that so you have you have Li & Fung offers to the clients network relationships and knowledge you can see what it does in terms of this and how important data is the social capital of a particular company in terms of yes so while studying this particular.

Example of Li & Fung I am trying to emphasize on then here an Orchestrator what are the capabilities that you should develop so that you succeed because the infant could be an apple business but supposing you are in some other business then you could be in education you

could be in other health care no cost housing and so on so in all those things what are the kinds of capabilities that you have you cannot just start a business and try and think that the capabilities come by themselves.

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**Ecosystem Aware
Global Supply Chain Management**

Mutual Dependence and Trust

- Li & Fung targets to consume 30-70% of its production capabilities and capacity of its 7500 suppliers.
 - This gives priority attention from the factories for its end-customer (or retailer) orders, while at the same time avoiding complete dependence of the factories on Li & Fung orders.
- Li & Fung cultivates trust by paying several visits to the suppliers during the production process.
 - The first visit is scheduled prior to production for raw material inspection and acquisition.
 - Next visit occurs after the first batch of garments is produced to stem quality problems prior to full production.
 - The third visit follows for packing supervision and final quality assurance.
- If the garments do not pass inspection, the supplier is allowed to replace defectives.

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Now one important thing is to give to a dependence and Trust as I mentioned before Li and fung those goes to companies to get business dirty business but the companies should listen till they gain value and do things for thirdly and from so what does it do how long does this mutuality happens we learn from targets to consumes 30 to 70 percent of his production capabilities of the capacity of its 8,000 suppliers it was the suppliers look at the minimum amount of work.

I am going to give you is 30% the maximum is 70% the rest of it you have to get from others in other words it has to do these suppliers has to do at least 30% of its business through outside suppliers what is the advantage of this kind of constraint I will tell you now but this gives priority attention from the factories for its end customer orders while at the same time avoiding complete dependence of the factories only informal offs there two things then they have to both have 30 percent.

So they are keeping contact with outside world so when they are keeping contacts with outside world two things happen one thing is they are not completely dependent at the Le& Fung only and Fung wants to the safety of their affects partners even if it fails so that is one thing so that it

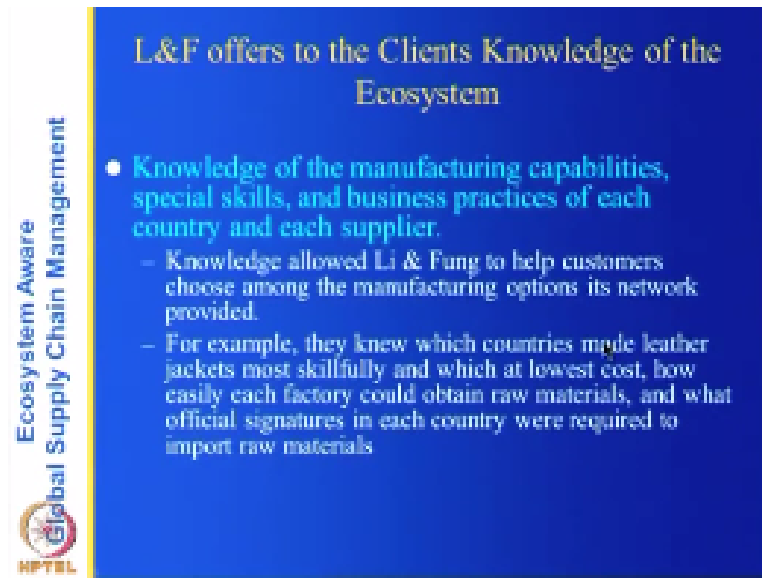
keeps contact with other players and second thing is the suppliers with the other players demand some other efficiencies in the process.

If they want to use new technologies the suppliers will learn from that and that will be beneficially have fun so this is basically a mutual trust on mutual learning reflects one wants to also learn from the suppliers and suppliers will learn from the competitors of Li&fung we inform calculus trust within several visits to the supplier during the production process first visit is scheduled throughout the production of raw material inspection and acquisition next visit occurs after the first batch of garments is produced to stem quality problems prior.

To production and third visit before packing for supervision and final quality assurance so we inform always keeps in touch with but they would be with the suppliers and as at least three visits and nowadays of course there is some of this these are being replaced by videoconferencing and also by data mining using whatever the results they have their quality and other data you can mine and find out what is what is happening but of course nothing can replace hi checking so the li&fung employees usually visit their suppliers.

So if the garments do not pass inspection the suppliers are allowed to replace the defectives so it is given it is not fired but he is given another chance so you can look at how lien form gets the trust of the people first of all sure a 30% roughly of the of their capacity as orders and saying that 30% you have to get outside this is called the 30 room which is followed which is imitated by others as well and also by frequent visits having conferences of the partners partnership conferences and also engaging in terms of financial assistance and so on.

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L&F offers to the Clients Knowledge of the Ecosystem

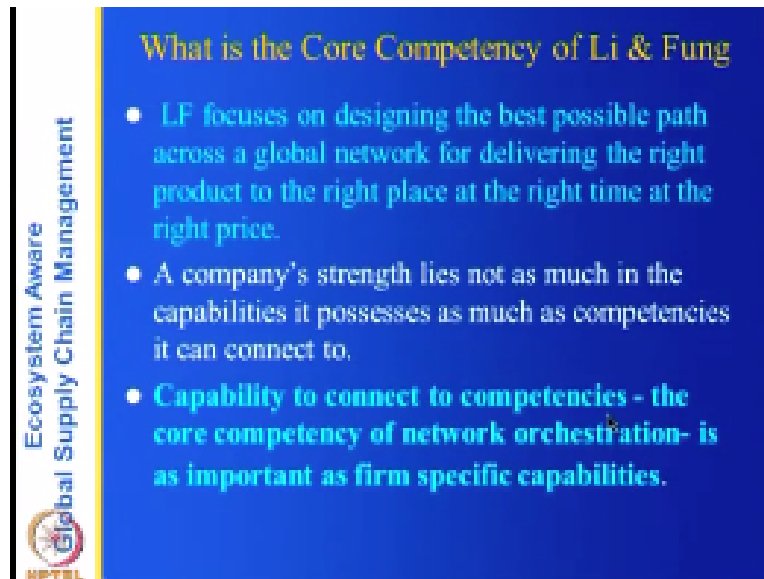
- Knowledge of the manufacturing capabilities, special skills, and business practices of each country and each supplier.
 - Knowledge allowed Li & Fung to help customers choose among the manufacturing options its network provided.
 - For example, they knew which countries made leather jackets most skillfully and which at lowest cost, how easily each factory could obtain raw materials, and what official signatures in each country were required to import raw materials

Then for offers to the clients knowledge of the ecosystem what does it mean knowledge of the manufacturing capabilities special skills business practice of each country and each supplier so it tells the knowledge of these or the capabilities of the 8,000 suppliers I also not only their suppliers what skills they have and which country they are and what are the rules and regulations of this country and knowledge allowed lien found.

To help customers choose among the manufacturing options it network provided and for example they knew which countries made leather jackets more skillfully which and which at lowest cost how easily each factory could obtain raw materials and what official signatures in each country were required to improve raw materials rim this is great knowledge. Because each country requires you know there lot of if you want to import some raw materials then each country have their own rules and this is like having an excel sheet of all the all the countries for all the materials that it deals with for all the products were all the suppliers so it is a huge database that it has and it has data mining another there are lots of lots of skills of using machine learning techniques here well over the years took selection of these suppliers.

So you can see that that lean form follows the ecosystem approach here in other words it not only concentrates on these on the suppliers it concentrates on the delivery mechanisms it concentrates on the institution's it also concentrates only on the resources that are available like finance resources human resources and so on so we inform actually doing here is to collect data about each country on about the about their governments and for each of these products they deal with them.

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What is the Core Competency of Li & Fung

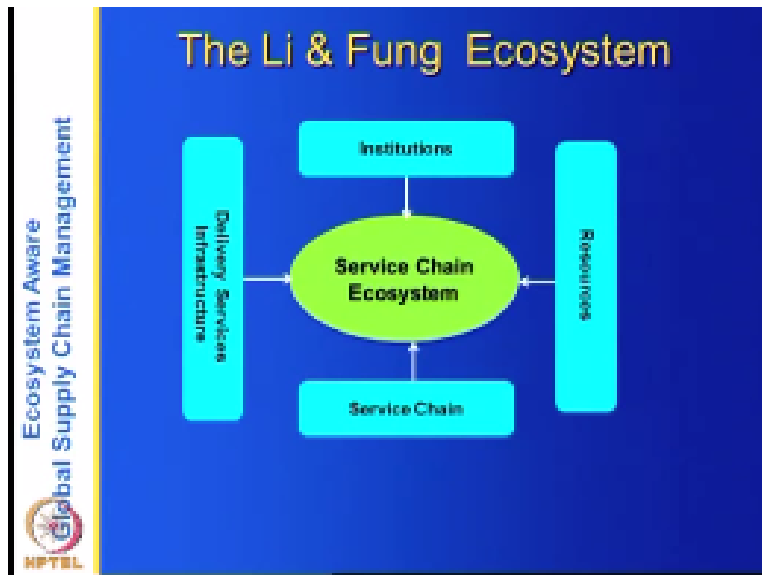
- LF focuses on designing the best possible path across a global network for delivering the right product to the right place at the right time at the right price.
- A company's strength lies not as much in the capabilities it possesses as much as competencies it can connect to.
- **Capability to connect to competencies - the core competency of network orchestration- is as important as firm specific capabilities.**

So what is the competency is the info I mean this is one of the terms if you are a management consultant the first thing you ask for every company is what is your core competency so having described what lie front us and what are its qualities and all that what is reinforced core competency so it focuses on designing the best possible path across the global network for delivering the right product to the right place at the right time and at the right price.

That is what it does but what is its strength it is not as much in the capabilities of our cells as much as competencies it can connect you so if you to get them what is the core competence of this capability to connect to competencies that is the core competency of li&fung so it may not it has to cut where the capabilities which nice to people it can connect to competences and the core competences in our code adequate Network orchestration.

Is as important as foreign specific capabilities so in an artery form you have the capabilities like you could manufacture this you can design this product you can deliver this product very safely if you are a logistics company but these kind of things but if you were an Orchestrator then you need not have to deliver anything you can connect to people who deliver so this is like employing somebody to find out the truth of the matter like employing a good detective you know a good detective to find out what it is and so on so basically this is the this is the core competency of anarchist rather capability to connect to competences.

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So what is the ecosystem of li&fung and then we have the service type and they have the service chain resources institutions and then very mechanisms so let us try to map for the ecosystem of lay and form so to map the if your system first of all we should know the service chain we have described so far all the activities of Li and that Li & Fung does you know it connects to people it has the customers in the US and Europe who are the retailers and it has connections with a lot of suppliers in the Asia-pacific and so on but what is its ecosystem.

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Let us look at the service chain of Li&fung that is a service chain this you know what it does is it takes the customer needs and finally delivers it to the customer that is the service join that lean form pairs but remember it is not at there you know you take you take the measurements from a customer make a shirt and give it to the customer it is not because remember that Li&fung does not want any factories it only chest orchestrates it.

Only connects to people to do what so once the customer comes in let it be repower let it be follow or whoever is the big players that it be Walmart depending on the consumer needs Walmart many needed what a respecer for ten dollars.

Whereas Massey's many needed or four hundred dollars depending on the customer needs what first do the product design the product this is usually done in Hong Kong which has had letters of affiliate form in association with the client teams the client has to approve the product decide once you have the product design then you have to develop the product development and design are two different things and then if you have a if you have a short it can be made in several ways.

So the product development also needs to be the final product which is developed which is the material is used and what kind of zippers are used what kind of weapons are used and how what are the colors lines and everything you know the from the design to product development this

is the full product in the design process so once these two are all done in association or in cooperation with the deemed subject client now.

Once you have decided this then we have to get the various kinds of raw materials in other words you have to decide what are the kinds of raw materials you have a source now what the other li&fung does not leave the sourcing of the raw materials to the suppliers it basically sources from its sources and supplies it to the customers due to its suppliers so our material sourcing is that it could be cheaper so it could be one that could be cotton.

It could be anything it could be fabric depending on whatever it is that our material is sourced from this you know sourcing means it says you supply this amount to this one and other thing is sort of mentioned in the in the order then afterwards you see the factory sourcing now the suppliers basically you can call it supplier sourcing but it is like to source and because I supplier may have different kinds of factories in different locations.

So if somebody has a factory in Hong Kong somebody has a factory in Shanghai and somebody else has a factory in somewhere else then you may choose the factory depending on the consumer needs and the cost you are going to pay from each of these countries so you have to basically do the factory sourcing and this is where you know use all the knowledge domain knowledge that they have about the factories their countries.


And what is the kind of quality and what is the kind of employees that it does it have and so on so the sourcing our procurement is two kinds one is you procure raw materials and then we procure the factories and then you go into the once you give the order to these people you go into manufacture and control this is basically monitoring and then once the manufacturing are done it goes to shipping and shipping control It does not do the shipping you should you should look at the terms very carefully when it says manufacturing control it goes to manufacturing that it does not do the manufacturing.

But it actually controls or no monitors the quality of the manufacturing and then shipping and of course afterwards it is goes to further honor and consolidation in other words there may be several goods that are going to the United States as they are going to some other place so Europe so it consolidates all the goods that are there and goes for customs clearance and once the customs is cleared it goes to after shipping than equals to local forwarding and wholesaler.

And finally to the consumer the consumer in this particular case if you retail retailer and retailer may it may go to the retailer's warehouse or it can go to the retail market so you can see the end to end process that Li&fung managers and the kind of logistics that is involved from one place together and the kind of skills that are needed for its employees when it goes to all this I also yet each stage then they have to choose.

All these people properly and believe me another thing is this is one order that Lee informed has for every order this has to be done maybe if Li&fung at any point in time has thousand such orders and this has to be done by Li & Fung for a thousand times for this so the service chain mapping for Li&fung for having for any other company of the orchestrator is a very important thing is has to be done very carefully so once you have the service chain then of course you can you can see the other things easily.

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Ecosystem Aware
Global Supply Chain Management


A Typical Order Flow @ Li & Fung

- Upon receipt of the order within a division, Li & Fung dissects the manufacturing process and optimally allocates the work at each step to its global supply partners.
- The manufacturing process is divided into two sub-processes: the front-end (sales, design) and the back-end (logistics, banking) & the labor-intensive middle portion.
- The front and back-end are performed in Hong Kong
- The middle portion is further decomposed into various tasks and Li & Fung finds the best factory to perform each task.
- The entire process is integrated using IT and logistics

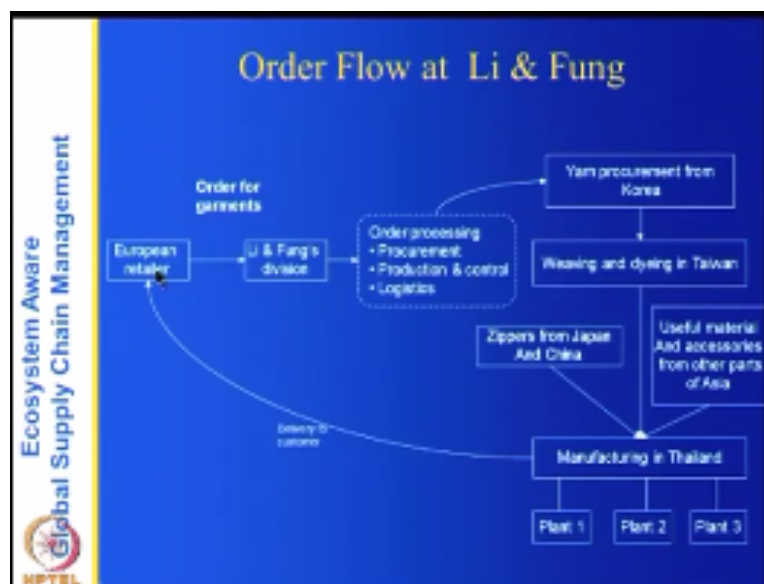
So that is the typical order flow of how does this flow of it let us take an example but on the receipt of the order within a division li&fung resets the bank's action process and optimally I will test work at each steps to scrub all suppliers so this is what is happening here at this point once it resources this manufacturing control is very clear if after the fact is have sourced and there are material is this one normally he is delivered to the factories and the factories.

Were asked to do whatever it needs so al in front this X the manufacturing process and optimally allocates the work at each step to its global supply chain partners the manufacturing process is

divided into two sub processes first one is the front end sales and design and the back end logistics and banking and the last returns to middle portion.

So there were only two one is the front end and the back end all done in Hong Kong and labor-intensive middle portion is spread over all over the world so the front and the back are not performed in Hong Kong the middle portion is further decomposed into various tasks and Li & Fung fronts the best factories the best factory to perform each task and the entire process is integrated using ideas logistics so that is what a typical order roughly and found it takes.

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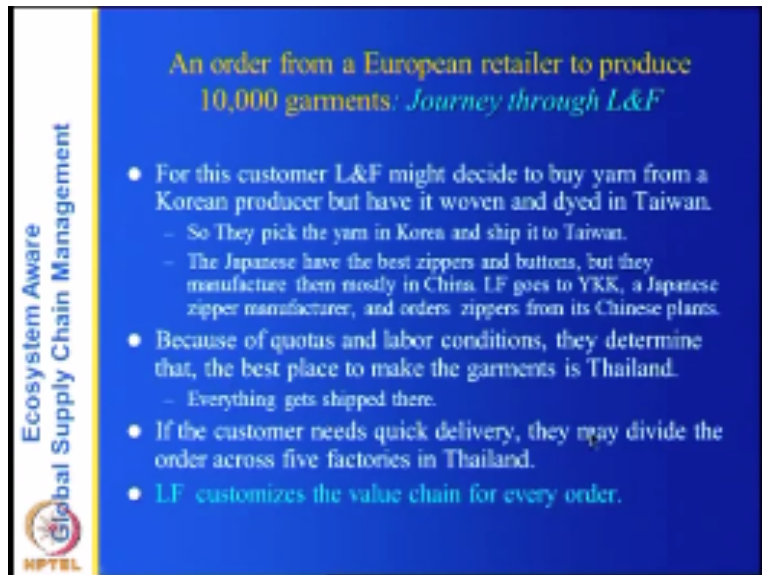


So let us look at an example yeah so if you look at the order for the garments from a European retailer each retailer well you see look at the governments of Li & Fung each retailer goes to one division of Li & Fung and these fellows are located in Hong Kong and reinforced division once the order is settled it does procurement production and control and logistics there are the three things in the service chain that we have seen.

And yarn is procured from Korea and weaving and dyeing in Taiwan choker's from Japan and China useful material and axis all other parts of material and manufacturing is done in Thailand now in Thailand one factory one plant may not have all the capacity that is needed with my go to plant one two three factories and finally from Taiwan it goes to the retailer so you can see that the order passing after either passing step how many countries each one visits these are

also now finished products which visit each of these countries and the final product was to the European retailer so this is the other flow of Li & Fung.

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**Ecosystem Aware
Global Supply Chain Management**


An order from a European retailer to produce 10,000 garments: Journey through L&F

- For this customer L&F might decide to buy yarn from a Korean producer but have it woven and dyed in Taiwan.
 - So They pick the yarn in Korea and ship it to Taiwan.
 - The Japanese have the best zippers and buttons, but they manufacture them mostly in China. LF goes to YKK, a Japanese zipper manufacturer, and orders zippers from its Chinese plants.
- Because of quotas and labor conditions, they determine that, the best place to make the garments is Thailand.
 - Everything gets shipped there.
- If the customer needs quick delivery, they may divide the order across five factories in Thailand.
- LF customizes the value chain for every order.

So in order from European retailer to produce 10,000 garments that take the journey for each customer we had some may decide to buy yarn from Korean producer that have it woven and died in Taiwan so they pick the yarn in Korea and ship it to Taiwan the Japanese have the best teacher course and buttons so they have to manufacture mostly of them in China and others goes to YKK a Japan Japanese cheaper manufacturer and other staples.

From his Chinese plants because of the quotas and other conditions that determine that the best place to make the garments is Thailand everything will get ship up there and if the customer needs quick delivery they may divide the order across five factories or three factories in Thailand so a lot of customers just a value chain for each order this is the important thing that for each other there is a different value chain so if the order comes next day then this same order sell material it may take a different route it may go to instead of just of Korea it may go to some other place and instead of getting it done in Thailand which can I get it done somewhere else in Vietnam so the point is the best value chain.

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Ecosystem Aware
Global Supply Chain Management


An order from a European retailer to produce 10,000 garments: *Journey through L&F*

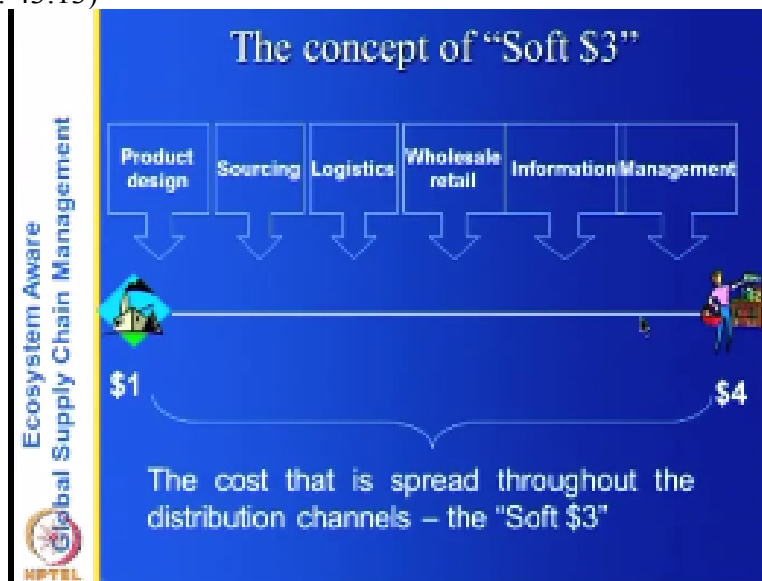
- Five weeks after the order, 10,000 garments arrive on the shelves in Europe, all looking like they came from one factory, with colors, for example, perfectly matched.
- The logistics and the coordination are exceptional
- A new type of value added to produce a truly global product.
- The label may say **“made in Thailand,” but it’s not a Thai product.**
- It is not about which company can do the best job. It is about pulling apart the value chain and optimizing each step – and doing it globally.

For each product is made by this five weeks after the order five weeks please notice that time 10,000 garments and I finish also you know are looking alike they came from the same factory with colors for example perfectly matched if it is right color it is right color through and through all the 10,000 of them same color they come as though they are come from the same Factory the logistics and coordination or exceptional.

A new type of value added to produce a truly global product now here the product becomes a community it is a shotgun but to produce anybody any anytime anywhere once it is designed and so on what does lien from and although the product is visiting several countries has described still it is not very expensive how does it make although it is very visiting several countries in spite of the logistics and other shipping cost.

How is it able to still deliver at the lower price the label necessary made in Thailand but it is not a Thai product well it may be sold in Thailand or it may be ironed in Thailand but it is not a Thai product with these several other countries so it is not about which company can do the best job it is about pulling apart the value chain and optimizing each step and doing it globally so you can see the competencies that are required for deceptive in the value chain and giving each task to some partners globally and then putting it all together and assembling a very nice core potato product and that is the competency is that clearly and firm has and all the competencies that an Orchestrator should have and this is the kind of lessons that you should learn from this Lee and fung example so how does leave I was talk about the price in spite of all this.

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How does the price and cost manage the price well it has what is called a concept of soft three now we have several steps that here product design sourcing logistics wholesale retail information management and so on these are all the cost centers in other words each one of them will cost money and they have their own cost now supposing it costs \$1 to manufacture the cost in other words if you put the unit cost of a product put it all together.

All the component costs and supposing you want to sell this at \$4 at the retail price or to the retailer at \$4 so in between is the \$3 that you have where you have to do the product aside you have to do this for sourcing you have to do the logistics you have to do the wholesale retail and so on and then supply to them and information management and also the managing the entire show so these three dollars.

Are the one the cost that is spread throughout the distribution channels is this off three it is the entire thing is the soft three so you have to basically manage you were all your activities necessarily so that it comes below soft three because whatever comes below threat if you could do all this in two dollars you say one dollar and that becomes the profit for the company because otherwise you are selling at four dollars and you are yourself you your cost is \$1 and all this takes more than for the three dollars then you are making a loss if it makes less than three dollars then you are making a profit.

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Ecosystem Aware
Global Supply Chain Management


How do you reduce the soft S3 ? : An Example

- The limited sources shirts from LF: Order fulfillment time 30days regardless of order size
- The shipment arrived at the distribution center in Columbus ,Ohio where the shirts were sorted by size, price tagged and repacked as right assortments for each retail store.
 - The travel by sea took 30days and the relabeling and repacking took 15 days.
- The limited and LF worked out an arrangement where garments were price tagged(barcoded) & sorted in factories in Asia and were air shipped to a cross-dock

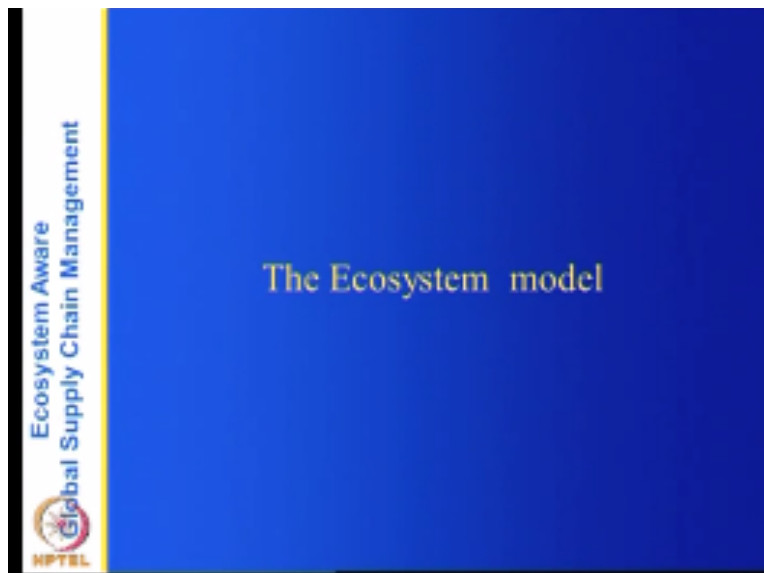
The entire chain is optimized

So that is how they are try to manage the cost how do you reduce the this one now for example how to reduce is kind of this what this requires looking at evolve processes for example Limited is a company it is also li&fung lay and firm orders from frequent time 30 days whether it is either side of hundred thousand the size of 1 million or the size of ten thousand it is it has to be supplied within 30 days now the shipment arrived.

At the distribution center and Columbus Ohio where the shots were serviced sorted by size price tag and repacked as rice right assortment for each retail store the travel by sea to took 30 days that is from Hong Kong to or wherever it is manufactured to Columbus Ohio and reliably and repacking to 15 days so but it in other words the manufacturing time is nothing compared to the fortified is that it took say what limited.

And I left did you reduce to maintain to get at this off three yes one is that I do not like to wear garments were price tag and sorted in factories in Asia and what I shipped that I have shipped to across dock so in other words this 30 days are gone to one day and this relabeling and replacing that is gone to where they were not do this because they are done in inertia and you can have you can do yes so that is how it does the cost this one so at every process at every process you look at the entire value chain and try to optimize it by of course it requires the collaboration of various kinds of people but and also some talent of free engineering the entire network so this is how li&fung and found us they call it.

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How do you reduce the soft \$3 ? : An Example

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The entire chain is optimized

So then so look at what the case so far yes we have looked at the le & fung its competencies and it is basically a Hong Kong-based company and with offices in almost every country and the auspices from the country are not for manufacturing but what did I do they are basically collect information regarding the countries labor laws and collect information what are the kinds of suppliers what quality of products they do what is their cost advantage few this.

One what is the availability of power water and so on to the supply what are the financial capabilities of financial status of each of these suppliers and what are the government rules and regulations and all that so what it has is the entire ecosystem of the investment climate.

Of each of these countries in Asia Pacific where this apparel business is done and also apart from the investment climate it has also the competencies of each of these suppliers and so on so once it has this kind of knowledge and it has the connections second thing is the connections what are the connections with the government because addresses follows what is called a quarter system there is a multi fiber equipment and all kinds of rules and regulations.

And each culture is different for example the Middle East the kind of clothes that are different from in India or Hong Kong and so on so basically we are the countries depending on the country whether it has to the wound it has to be cotton or whatever so taking all these factors into account what Leon found us and taking the cultural factors is to make a product within the price that is best label and still make a product and now.

Remember it has to be competitive with other players and the competitors that li&fung has are the big players copy purchasing companies because they have all the skills that Li & Fung has but they lack only the connections that Li and fung has so you get this kind of scenario the orchestration model of Li and fung is outstanding and what we are going to do in the next class is to look at the other parameters of the ecosystem.

Which are the resources and map the ecosystem first and also look at the performance and also in particular what is the governance mechanism that Li &fung follows I mean it is doing an outstanding job and we said it is an Orchestrator as the governance model but in particular what is the what would be a governance mechanism that it follows we will do that in the next class you.

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