

Logistics & Supply Chain Management
Professor Vikas Thakur
Department of Humanities & Social Sciences
Indian Institute of Technology, Kharagpur
Lecture 05 : Logistics Services Providers

So, hello dear friends. So, welcome again to NPTEL online course on Logistics and Supply Chain Management. So, today we are into the fifth lecture that is on Logistics Services Providers. So, I am Dr. Vikas Thakur, Department of Humanities and Social Sciences, IIT, Kharagpur. So, in this lecture we will try to address the following points.

First we will discuss about the logistic services provider and then what are the key components of these players and then why we need those players right, why we are going for outsourcing partially or may be fully our logistics operation to these players. So, depending upon whatever your requirements are we either you will go for first party logistics services provider or second party or third, fourth, fifth party. So, the latest is the sixth party logistics service provider are also available and then we will discuss one small case study on this session. So, logistic service provider is a company or organization that offers a range of logistic solutions right and those logistic solution we already talked about may be transportation, may be warehousing, may be storage, may be distribution, management of goods and materials and may be the reverse supply chain right.

if a particular organization who is operating ah the business in the market maybe are not good with the distribution setting up the distribution channel maybe they are not having those many resources or maybe they they don't have that much expertise in that particular market right or they don't have access to that market right there are other reasons as well but basically these are few reasons then we need some partner who can do these operations on our company we have right and we want that those operations should be done efficiently and effectively right. So, because we are may be not competent enough in that field. So, it is better to go for outsourcing. So, just before starting I just want to give you very generic structure already we have discussed about this that this is our supply chain where we have suppliers first in that may be suppliers of suppliers and then we have manufacturers in between and then we have a long distribution chain. And this chain may include your wholesalers, distributors, retailers, carry forward agents, whatever structure the particular organization is following.

And finally, we are reaching to the end customer. So let's keep it very simple and we'll

show it here like only four stakeholders. So already we discussed about all, there may be so many different layers in that network. Obviously, from one point to other point we need your transportation services, in between may be sometimes we need the storage services, may be we need the packaging or labeling services as well sometimes or may be finally, the fulfillment centers or distribution centers may be there. And then when we are again processing the returns.

then also we need the warehouses where we will keep the returns, maybe we will repair the returns, we will replace the faulty components or maybe we will again change the packaging or maybe just customer return that product because customer did not like that product. So, again we will repackage that product and then we will again keep that product on the shelf for the future sales. So, this is very simple structure. so this structure will keep on mind when we will go through this whole session and because I want to highlight these basically special services where if I am not as manufacturer expert in those services so obviously we will try to look for someone who can do these services for our organization let's take very small example and I am having a very small restaurant within a city okay so right now the structure is customers are visiting my restaurant and then they are taking the meal maybe breakfast maybe lunch maybe dinner as per their requirements right but now I can see that let's say imagine this restaurant is nearby IIT Kharagpur campus or maybe within campus as well right so because IIT Kharagpur strength we need to keep somewhere on board we have 18 to 20 thousand people living within that campus right so now because I'm serving to those people so but the problem here is now if you observe the latest trend in the restaurant industry we are hardly getting time to you know go specially to restaurant sit there for half an hour chit chat with the friends family and then again 1 hour or maybe 1 hour 30 minutes we are taking the stuff whatever we want to take right so that much time we are falling short of maybe there are special occasions we we are celebrating those occasions then we are sparing some time right but usually day routine life is like that we are reaching late at home and then we want delivery at our doorstep right so now because i'm very small restaurant maybe 15 to 20 people including me are working in that restaurant so right now only capacity what i can utilize within that restaurant is whosoever is visiting my restaurant but let's say i'm thinking let's provide the doorstep delivery right so people can come and or maybe use my platform whatever app if I have developed some app so they can use that app and place the order I will provide the doorstep delivery right so obviously you are looking for further expansion of your business but then doing those deliveries let's say we are getting 100 or 120 deliveries per day so let's say to make those deliveries now i need five bikes and obviously five riders who will ride the bike and will deliver the orders right and those orders are uncertain when it will come right and then accordingly we will do that so getting these many resources these are kind of fixed your investment right getting these many resources again you need 7 to 8 lakhs right so that means this much money is

required and this is very huge amount for a small restaurant so the very simple way out is let's collaborate with Swiggy let's collaborate with Zomato and then deliver the order at doorstep and using our capacity fully right so even now you are looking for outsourcing partner because you want to avoid this fixed cost so let's say within campus only maybe we are covering 3 kilometer area or maybe 3 to 5 kilometer area so still I feel that because whatever kitchen area I am having I am not able to utilize the full capacity and my resources man power so let's expand this delivery process to another 15 to 20 kilometers so again if you want to go for that you need not to think about that only you need to care about that that you need to procure that much raw material the rest of the distribution thing will be taken care by your delivery partner which may be swiggy or zomato or may be any other local player right if you are not deploying your separate network right dedicated network so these are the some of the examples when we will discuss this session we will use these examples i will refer these examples right so what are the key components of services offered by your logistics services providers first is transportation either that is their headache now whether which type of transportation mode they will use road air or rail or through ship they will transport your material that is one kind of services you can get from them freight forward you are moving your stock from one point to other point you can use these services custom brokerage if you are you know shipping your product overseas or you are crossing the state boundaries interstate boundaries so those many things customs duties and all the documentation these players can take care right then inventory management if you take outsourcing the process of inventory i don't want because i'm very small restaurant i don't want to take care or i even i'm not expert how i should manage my inventory how many dinners i need to prepare tomorrow right how many lunch plates i need to serve let us outsource this function and some agency will forecast will find out the demand patterns automatically will arrange the raw material inventory and then they will fulfill the order as well that depends upon what type of solution you want right. so these logistics players will provide you that customized tailored solution to you and then if you want packaging they will do the packaging also labeling packaging and separately if you want to implement any technological solution maybe you want to track the movement of the goods you want to track the final delivery whether it has happened with the final customer or you want to track the payment cycle right.

So, that those kind of softwares also you can just outsource and those players will prepare the platform for you. Then the next point is customization. These logistics service providers will provide you the customized solution depending upon your requirement. may be location may be volume and then if special handling requirements are there like we talked about if kind of fragile items you are handling if you are handling electronic components then you need to take care in that way if you are carrying food with you you have to be conscious about the hygiene of that right so those many things you need to

consider So, yes, then again, the next point is expertise and experience because these players are specially dedicated. You can see a huge list is there.

These all are international players, right? Who are doing logistics, transportation, warehousing, all those activities overseas. And when you approach them, obviously you are approaching expert in that way, right? As a restaurant owner, maybe I'm very limited in my knowledge how I can route my distribution in a best possible way because if I am getting one order I am just rushing to fulfill that order maybe I will my bike rider will travel 15 kilometers will deliver that if I am having that strong platform integrated technological platform where if I can combine 2 or 3 or 4 orders so that means I can somewhere increase the efficiency I can because same cost will be there whether I am carrying one packet of food or I am carrying 10 packets of food but that will only happen if you have that idea that within that time you are going to get orders for 10 packets of food right so if you have expertise in that so these players will provide you those kind of solutions global reach so let's say if today we are operating here only we are operating in India only and then the next day now you are thinking that let us explore we have some chances in means at least in Asian market we can go and we can explore right but then again the point comes then because we are expert in manufacturing something let's say we are manufacturing home appliances we are manufacturing refrigerator right we are expert in manufacturing that but we don't have access to the foreign market how will set up the distribution network distribution network is very very you know important thing strategic decision as well as carries huge cost right so then if there is someone who is already expert in that and they have branches over all over the world right so then immediately we can approach them and we can have access to the international market not only market if we have some overseas supply suppliers, vendors who are supplying material to us and may be better quality material we are getting, may be cheaper material we are getting, may be on time we are getting the material right. So, or we are struggling with the local players for getting all those things right. So, then we can immediately we can contact find those overseas players and these logistics services providers will help us to get the raw material on time. so technological integration so because these are expert they have warehouse management systems software solutions they have gps software solution rfid technology for packaging cloud based platforms now these ah these are the technologies which will help to increase the transparency in the ah supply chain right so logistics distribution whenever wherever your product is what is the information whether the product is finally consumed or still in the maybe on the shelf of that shop right so that inventory also you can track at that time packaging once it is destroyed you can find out ok finally it is consumed right so this way you can manage the inventory as well risk management because you are getting those services from these suppliers logistic services providers so this is their headache to you know carry the freight from one location to other location if anything goes wrong they are providing you the insurance services as

well right and if anything is wrong maybe in the route they will automatically they will divert their pilots or uh whosoever is distributing their vehicle in that way so that your product reaches at the right point right location right now let's say even because of the let's say natural disaster or weather conditions so you are somewhere stuck in on the road right so even because you are stuck somewhere in the road that is not your headache because you have outsourced your warehousing as well so now those warehouses storage center distribution center they need to maintain the inventory if there is any fluctuation in the demand your material is getting delayed those many you know disruption also can be absorbed by using the services of these logistics services providers cost efficiency when we talk about logistics services provider or outsourcing the first very basic element is why we are going for outsourcing is to reduce the cost and already i just discussed with you if i'll go for you know investing into 5 or 10 bikes to deliver my food packets so that much money is required i don't want to do that let's give some share of my profit to the third party and I can maximize my share as well because earlier maybe I was serving only 100 customers now I am getting the reach to maybe 500 customers so in that way I will also maximize my market share.

continuous improvement because these players are already in the market they have developed the KPIs how they can be more efficient right so they are already tracking all these points so getting services from these specialized players we need not to bother about the performance matrix they will take care of all those things So, let us go with this video link which will help you to understand the this is the advertisement by logistico company. So, here I have included some video links you guys can just quickly go through these videos and then we will continue our discussion on the topic. So, let us explore what are the various reasons for outsourcing logistics right. the first one is to avoid the fixed capital expenditure like i told you if you want to set up your distribution network so those many resources are required in case of restaurant maybe you need bikes maybe you need 10 more manpower and maybe you need it platform where you can record your orders you can process your orders maybe then you need a bigger raw material storage house these many things you need so because I'm very small restaurant still I'm thinking of expanding my business how the industry will take it how the market will take customers will take it that is another point right there is a risk if I'll go for investing all this and then I want that there should be my own exclusive showroom own exclusive supply chain distribution network right then if something goes wrong in your expansion strategy then what you will do with those you know assets right which you have acquired so that is one thing second is you can cut the cost how you can cut the cost because when you are expanding your business you are not sure about the demand when you are not sure about the demand the big question that comes is whether the economies of scale can be utilized or not that much if you are hiring 10 manpower 10 bikes whether all the time you are utilizing those resources if you are utilizing only for 3 hours in a day so what you

will do with rest of 21 hours right so that is the extra cost so that you need to take care increase flexibility flexibility in terms of maybe we talked about restaurant in IIT where 18 to 20000 people are living including students staff faculty right so maybe more than that So let's say now next two months there is break. So this population, this size will definitely, customer size will reduce to somewhere around 2000 to 3,000, right? So in that way, 2000 to 3,000, so how you will, your supply chain will be your distribution network will be flexible then those resources what you will do with those resources at that time for 2 months or more than 2 months summer break right so that is another very big challenge for the small players so the best thing is you outsource this to someone who is going to deliver on your behalf today if you are delivering 100 orders they will charge you for 100 orders tomorrow if you are delivering 1000 orders they will charge you for 1000 orders right so focus on core business now because my core business is I am very good with the cooking so why the hell I am going for transportation if I am very good with this cooking only and I don't have knowledge of transportation ok even I am not aware about there is some kind of system who can track my package packaging if you can apply the bar coding and all that then it will help you to you know ensure the quality of the product you can analyze the inventory these many things I cannot understand right so better I can focus only on cooking let someone else will do that for us right and we are happy with that much may be with the core business only improve services because these are the specialist players obviously their services level no one can match at least we cannot match who are not from that industry lack of scale i already discussed what will happen if you are suddenly reducing from eighteen to twenty thousand people on board to maybe two to three thousand students only right or maybe people then acquired talent when you are going for outsourcing the specialist obviously you have the expertise right so you have the right talent and labor related problems if you will deal with the transportation industry is a kind of industry where everyday strikes are happening everyday union issues and all those things are there so i don't want to get into that so how i can do that just to avoid that and maybe i can outsource that so this is the small survey done by inbound dot logistics company and they say that what we are outsourcing actually we are outsourcing most of those function which are which are not our core competency or which is not our USP right which are very routine activities this transportation of the material storing the material is anyhow is not going to add direct value for the customer unless we are not talking about the doorstep delivery obviously doorstep delivery is adding value to customer they are leveraging that but but other things whether you are storing 10 units or you are storing 100 units as a customer why should I bother right I want my product if you will not give me my product I will take it from someone else very simple right so it is your problem so that means we are we are not outsourcing the strategic and customer facing we cannot give this function at least to the third vendor on our behalf because we want to deal and we want to control the customer directly so if you will talk about the share of these outsourcing partners so domestic

transportation 83% warehousing 66% internal transportation 63% so customer brokerage 46% so these all are the list of various you know logistics functions which you can outsource even if you are talking about I don't want to care about my inventory only thing I'll care is as long as I am into that business my inventory should be there so it is inventory management 17% people they are thinking entrepreneurs they are thinking industries are thinking that let us not bother about the inventory someone else will do that whenever we need material on our production line they should be responsible for providing that right or sometimes maybe customer support services I cannot handle the calls I cannot handle the platform if anything goes wrong I cannot handle if the customer is cancelling the order and payment is already done who will do that because I am only good in cooking right so i don't know all those things right so let us hand over this this particular function to other parties who can who are expert in that and can do in a better way so this is very simple example to understand the industry this logistics services provider first party logistics provider only two parties are there one is producer another one is who is getting that product right so if a farmer is delivering eggs to grocery store this is first party logistics no one is involved in that second party logistics is kind of courier services people right or any agency who is delivering your packet on your behalf so now farmer is producing eggs here and one courier partner is there who is delivering the these eggs to the grocery store or wherever you are locating it third party logistics services they this is a kind of fulfillment company who is having their own fleets and then they are what they are collecting eggs from the farmer they are storing those in their distribution centers and then in the end as per the requirement sending those to the fulfillment grocery store fourth party logistics is the next version where they are providing the lead logistics kind of services everything is included in that right so they are handling your third party vendors also now third party vendors you just remember the first example we talked about where I talked about the complete distribution network where transportation was one function, warehousing was another function, packaging may be another function, distribution may be another function so now fourth party logistics if I am outsourcing all those things to different vendors they will take care of all those vendors right so they will consider all the vendors they will whatever is required means this is a kind of company which is connecting all those vendors with me ok so this is fourth party logistics fifth party logistics is who is going to handle my complete supply chain they will produce they will find the raw material I am good at may be with the coming up the new product new design like what Philips is doing right now.

Philips if you see they are not having any manufacturing most of the home appliances Philips is manufacturing they are having co manufacturers. right so co manufacturer means they are providing different different designs to those co manufacturers they they are providing what are the specification for the components required for making that let us say they are the very common is may be iron you are using at home may be juicer

mixer grinder you are using at home so what this philips player is doing he is deploying all the co-manufacture to produce at different locations now those co-manufacturers are taking care of all the raw material suppliers they are taking care of the distribution network in the end flips what they are doing they are paying for the product even packaging labeling everything they are doing so in the end the final product juicer mixer grinder is coming to my warehouse from where I will create the demand and then I will finally distribute So, this is how it is happening as fifth party logistics. Quickly we will go through first party logistics. I told you only two organizations are there, only two parties are involved. you can see first party logistics provider transports item from stock to shelves so here only producer is there and then finally we are delivering to the store room so in this type of relationship the suppliers manages their own inventory storage and delivery so when supplier is managing everything we have certain obviously challenges right so you have your own distribution network your own transportation network and warehousing everything you will take care right so as a restaurant owner now I want to leverage all those things right if I am the very simple concept here is who are following first party logistics is because if I will outsource to Swiggy or Zomatto so obviously those people are also making margin out of that so why not I should make margin out of that right so that is very simple concept but making margin out of that is I already discussed so many different challenges so let's talk about the components of first party logistics first is ownership and control obviously when you have complete integration you have full control right directly from your production unit it is going to the store so that means quality you can control ownership also you can control but once you are outsourcing it to some other manufacturing unit so then they are controlling quality obviously you have some checks to ensure the quality but still you cannot control 100 percent so in house operation if you are first party logistics then all in house operations you are doing you have your own fleets warehouses so that much fixed investment you make to make right so vertical integration already I talked about when you start acquiring your suppliers you will be suppliers of your own product right so I want to acquire all the suppliers I want to expand my supply chain distribution so that I should have full control I don't want distribution network wholesaler distributors retailers I don't want I want type of maybe Dell supply chain where they are directly interacting with the customer recording their whatever configuration they want and then processing and then finally delivering the laptop or whatever product you want to purchase benefit of first party logistics already discussed greater control over quality security and customer services because directly you are interacting with them because that is your your baby your business is your baby so in that way you want to take care of your baby yourself you don't want to outsource it challenges already i told first is limited resources in terms of that much transportation facility warehousing facilities are required right and then transportation fleets warehouses technology system is another thing because if somehow you can manage the distribution network somehow you can store the products right but

technology is something is maybe you are not very much relevant with that so you need someone IT manager or engineer who can you know manage that platform for you risk management because you only are integrating all the functions in your organization you are responsible whether delays are happening on the roads whether it is happening because of shortage of inventory or any disaster is happening in the supply chain so in that way you only responsible for that quickly we will go through the second party logistics now we have in between one player who is collecting the material and shipping that material to the market right so this is asset based carrier who is having the transportation mode if it is transportation second party logistics right So, they will be collecting and then they will be distributing.

So, quickly we will go through the components. So, service scope in specific they are operating in specific areas like may be transportation, if you are talking about transportation second party logistics. they will provide you all the solution related to transportation if you are asking for warehouse second party logistics they will take care of your warehousing operations if you talk about order fulfillment they will record your customers order they will process your customers order they will deliver the product to your customers so order fulfillment cycle they will take care if they are working as freight forward company right so they will take care of that component only so that means they are providing the customized solution as per your requirement today if you are requiring only let's say transportation services you can outsource that tomorrow you want to extend may be second party logistics into your warehousing as well because you are also increasing your customer potential market you are expanding so that way you want to expand so then you can utilize the these second party logistics player into different segments so when you have the second party logistics you have better integration right you can share quickly your information ok and you can align your processes which will lead to efficiency and effectiveness now scalability and flexibility like i told you the example if for next two months only 2000 to 3000 people will be there in the campus right so at during that time what you will do with your distribution network so because now I am delivering may be 1000 orders so I told you they will charge for 1000 so you can scale up or you can scale down so they will provide you the flexible solution they will not say that minimum these many orders if you will process only then otherwise we will charge high so already that is very clear technological integration if you are taking transportation management system they will help you to you know get the best routes optimization will be there proper vehicle capacity will be used if utilized if you are talking about warehouse management system so they will take care of your inventory they can help you with the tracking and visibility tools which will help you you know to track your inventory on the way third party logistics this is now complete services they are providing other than transportation services they are providing the brokerage customer brokerage services and warehousing distribution value adding

activities like packaging labeling kitting all those services they are providing You can just see, so maximum share is transportation management 22%, and then they are providing your warehousing activities, which is adding almost 21%. Then value adding activity is 19%, right? So these three functions are carrying the maximum weightage. then intermodal services they are providing they are running their own fleets right and then lead logistics is complete kind of solution and intermodal they will define if your transportation requires may be road transportation then ship transportation then air also so they will do all these things for you so you can see third party logistics which will take care of your packaging warehousing and transportation so manufacturer is left out and market is left out which will cover in fourth party logistics so 90 percent of fortune 500 companies are using third party logistics service so now you just imagine how big this third party logistics industry is right so Hitachi is very known player in that and they are providing a very different basket of services if you want procurement logistics services related to procurement storing the raw material shifting the raw material they will provide you those kind of services if you want production logistics services within your production manufacturing also if you want someone else should handle your all the material handling shifting from may be production floor to the dispatch area to outgoing quality control area Hitachi will provide you those services as well if you are looking for reverse logistics services they will provide you the reverse logistics sales related they will forecast the sales they will maintain the inventory for you in the market and then they will handle the logistics part as well collaborative logistics is another very good example how Hitachi is doing in the same industry there if you have may be limited order so you are not able to utilize the full capacity of the container which is taking your product right so Hitachi is collaborating may be with two or three different vendors and then they are consolidating the product so comprehensive services you are getting under third party logistics including everything whatever we talked about because we are outsourcing to expert again we can leverage their expertise their resources their infrastructure and if you want to expand the market without giving a second thought you can expand it so scalability and flexibility will be there if today demand is for ten thousand products you supply using the same network ten thousand products tomorrow if only you are selling five thousand no issues they will take care of that as well 500 no issues they will take care of that as well right so that scalability and flexibility is very very important once because if you are thinking of investing that much infrastructure and something goes wrong right then what you will do with that infrastructure you you may not be able to utilize that infrastructure right later on so because these players are doing these kind of services for so many different organizations not only same industry different industry so maybe one facility if designed for maybe automobile industry is not utilized properly they can utilize it for some FMCG industry right so that way they are hardly bothering about whether the particular plan will get the success that success or not right global reach already we discussed about they have global network transportation partner

distribution channel throughout the world you just think of expanding your business overseas they are ready with the buffet of services they have and technology integration again because they are taking care of your full supply chain so they will handle your transportation related services and warehouse management services these data analytics will help you to you know because they are directly interacting with the market as well they will help you to analyze the trends in the market will help you to you know define your demand very in a in a very you can say refine way so that you can take care of your full distribution network.

cost saving obviously we discussed it the very first reason why we are going for outsourcing is cost saving because we don't want to invest into fixed assets setting up that complete chain so we are going for outsourcing risk management now everything third party is handling warehousing inventory anything goes wrong with the inventory that is their problem anything goes wrong with the distribution network with the transportation network or maybe during ship during air transportation any damage is happening to the product that is their responsibility right once it is dispatched from our manufacturing unit for us the business is over right so next they will take care of this Now, the fourth party logistics is a complete solution from one end to the customer end and then they are taking care of the third party logistics. If you have two three third party logistics may be for warehousing separate, transportation separate or others may be handling the international transportation shipments. So, they will take care of all those things. Now, the best advantage the best point under fourth party logistics is. as a service provider or product provider you are getting single stop solution single invoice so you can streamline everything now when only one player is involved from suppliers of suppliers to end customer so that means quick information sharing will be you will be more efficient you are getting the correct information without any you know inflation in the information or without any if you can say deviation in the exact information so that getting accurate information on time because only single player is involved and like you can see so these fourth party logistics they are doing the logistics company packaging warehousing transportation ok so they are taking care of your third party logistics because you can consolidate everything and analyze so then it will help you to you know configure your demand function as well that in that efficient way so you can use their ERP systems IOT devices just to get that real information data so that you can apply your analysis tools and get the benefit out of the because you can make information based decisions right so in that way you will be more accurate so these fourth party logistics are providing you the customized solution as per your requirement right if Philips is outsourcing even manufacturing because they are maybe not good with the manufacturing they don't want to invest into manufacturing kind of thing so they are outsourcing that but on the other hand Havel is USP is how efficiently and with quality they are making their MCBs, RCCBs so all the electrical solutions so they have their own manufacturing facilities but

they may be they are not very good with the distribution network so they want another package.

right so philips is not good maybe they don't want to go into that they want to control the quality and branding of the product and just the innovation in that product whatever they are doing so rest thing will be taken care by your fourth party logistics right so again the technological integration will be at the highest level because fourth party logistics actually they are not carrying any assets they are integrating everything all the players in one chain right so they are one stop solution where they are providing you the they are solving all your problems related to distribution so risk management will be in better way right because now it is the responsibility of your fourth party logistics in that way your distribution network will be more resilient and will ensure the continuity you will not be stock out in the market you will not be having enough means overstock in the market right so that you can avoid So, again fourth party logistics continuous improvement you can ensure because these players they are having fixed their KPIs and they have developed that matrix and continuously working on how they can derive more efficiency, reduce cost and enhance the customer satisfaction right. So, that the exact feedback you can get from the customer through these fourth party logistics players. Global reach, obviously again the same point we will have the access to the foreign markets as well and then this fourth party logistic player will help you to get the market insights and those insights will be obviously helpful in planning the future whether you are going for expansion strategies or you are going to maybe diversify into some other industry so that only you can do if you are having that much you know promise in that market potential you are looking for so this is the fifth party logistics the last level where all the players are integrated and all third party logistics service providers are also there and this fifth party logistics is aggregating all the ah requirements from the customer and then whatever it is not now your responsibility to outsource even they will take care you will outsource to fifth party logistics and then they will see distribution network will be handle by this player logistics services may be Hitachi will do may be warehousing will contact with the may be your delivery or may be will final customer delivery will be done by delivery or DHL or whatever you want to pick right. so this is 5th party logistics we are manufacturer also part of 5th party logistics market is also part of 5th party logistics like the example philips i quoted so most of the appliances they are manufacturing even manufacturers are co manufacturers are there who are manufacturing on their behalf and then final market is also handled so what is your function now as the owner of that brand you are just branding your product you are just coming with new ideas you have new ideas just you will say this product i want and that will be done through all these players fifth party will take care of everything so just you can just conclude here first party logistics direct delivery and then transportation companies will be there in the second party third party logistics service provider will be there fourth party complete supply

chain solution plus logistics services and fifth party full services expert logistics services provider right sixth party is the next generation logistics player who will be utilizing AI machine learning and all that where earlier you were designing your product and handing over those product to the co-manufacturer to manufacture and distribute in the market now next level is where I'll just say I just want to go into that industry so my artificial intelligence machine learning will prepare the best possible 3d design and we'll just look for that design what changes we want and then they will finalize the changes and will develop the physical prototype will check it will test it and if it is okay any recommendations are coming from the market feedback are coming from the market automatically it will be taken care through iot system where we can record all the information so very quickly we will go through this case study of elixia which is having its services for indian players as well and you can see they are providing end to end logistics solutions including transportation distribution warehouse in factory logistics and value adding services More than 300 clients they are having. The worth of the company is 35 billion INR and they are operating in 60 million square feet area warehouses.

More than 10,000 vehicles they have deployed and they are serving to more than 17K PIN codes. so operational locations you can see more than 500 plus but the problem they were facing they identified you can go through the full case but just i am i have picked related to this session only they identified that improper vehicle allocation means they were not utilizing the full capacity of the vehicle if a truck can carry 10 ton somewhere they were carrying 7 tons sometimes 5 tons 8 tons so full capacity was not utilized and also the route planning was not done properly they were not using the latest technology gps technology or RFID technologies right to you know plan their routing and all that thing So, they were in that they were lacking. So, what they clearly defined that and then they defined what actual cost should be how they can ensure the optimal utilization of that you know. capacity of that your containers and then routes and then mode of transportation in so we should be in a very objective way we should decide right all those things so there should be some system software solution who is doing that on our behalf and we automatically we can take care of all those things so you can just see the result they saved 6.7 lakhs in one month and they optimized load space and route which will you know definitely add to their efficiency so quickly results you can see cost saving 8.

4 percent after this and 650 ton carbon footprint they reduced and increase in vehicle space utilization is 25 percent which is which is very you know large space they were not utilizing so here we can conclude that so any expansion strategies you need right so you need not to think about the distribution network so in that way you can just say that I am just thinking that now my restaurant should operate within 50 kilometers how I can there are so many players right how I can collaborate with those players so even if I am having very maybe only one hotel so that hotel is not visible to everyone the tourists who are

coming there i can just you know collaborate with the make my trip with go ibibo with so many other platforms are there right so simple way these third party logistics vendor they are providing us the tailored solutions as per your requirement as per requirement of the product they are also helping you with the information how you should you know modify your product and how you should deliver that product to the end customer so that customer in the end should feel satisfied delighted right so that's all from my side in this session so these are the references and textbooks you can refer thank you very much