Management Information System
Prof. Saini Das
Vinod Gupta School of Management
Indian Institute of Technology, Kharagpur

Module – 08
E-commerce : Digital Markets, Digital Goods B2C Business Models
Lecture – 37
B2B Business Models

Welcome back! So, currently we are in week 8 and we are in the 3rd session of week 8. So, this session talks about the B2B Business Models. In the previous session, we had discussed business models in B2C e-commerce and in this session, we will be focusing more on business to business e-commerce and the various business models that exist therein.

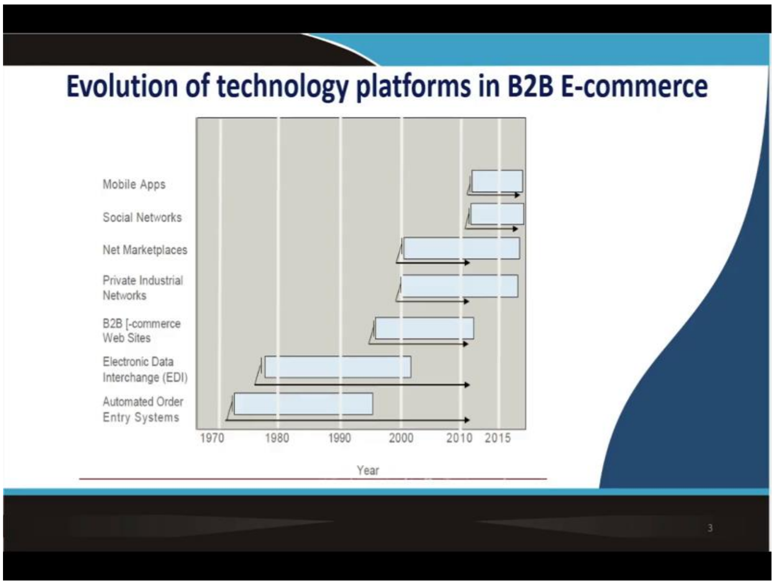
(Refer Slide Time: 00:50)

So, to begin with, what is B2B e-commerce? Inter-firm trade to exchange value across organizational boundaries enabled by the internet and mobile apps. So, B2C e-commerce dealt with trade between an organization and a customer whereas, B2B business models primarily deal with trait within the firm across or across international boundaries that is between a firm and its business partners enabled or facilitated by the internet and mobile apps.

So, what are the various business processes involved in B2B e-commerce? We have demand management, order fulfillment, manufacturing management, procurement, product development, returns, logistics, inventory management, CRM. So, all of these are business processes that are involved in B2B e-commerce.

Now, why is B2B e-commerce very-very important? Because the global B2B e-commerce market value of US 12.2 trillion dollars in 2019 is over 6 times that of the B2C market. Very often we focus on the B2C e-commerce market without realizing that the B2B e-commerce market is worth over 6 times the value of the B2C market. Therefore, the B2B e-commerce market is extremely important and a lot of emphasis should be given or is given on this particular market.

(Refer Slide Time: 02:26)



So, moving on, evolution of technology platforms in B2B e-commerce. So, because this course focuses primarily on management information system so, today we will be discussing the various technology platforms that facilitate or enable B2B e-commerce. So, we begin with the 1970s very, you know several years back where B2B e-commerce had its first routes or primary routes. So, at the technology platform at that point in time was automated order entry system.

Then mid 1970s we moved on to electronic data interchange or EDI as we call it. EDI also has you know the even today EDI has an important role in B2B e-commerce. Then say mid 1990s onwards we had e-commerce websites B2B e-commerce websites followed by two very important technology platforms which will be the primary focus of today's discussion. So, we have private industrial networks and we have net marketplaces.

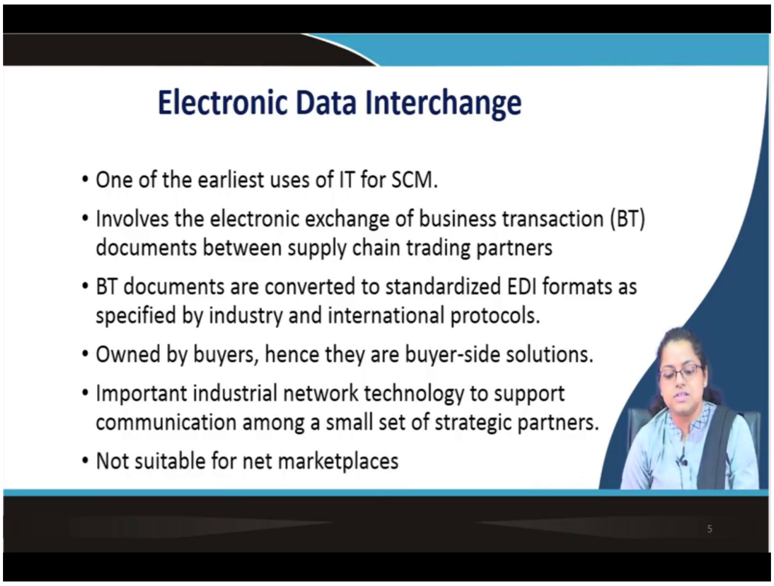
Following these post 2000 we see more of social networks and mobile apps which facilitate B2B e-commerce.

(Refer Slide Time: 03:52)

So, we will begin our discussion with automated order entry systems. This was the time in 1970s when we had telephone modems, we did not have internet as such. But, we did have telephone modems and these modems were used to send digital orders.

Some companies automated reordering by placing the modems in their procurement offices. Automated order entry systems are seller-side solutions because they showed goods only from a single seller. Therefore, they are seller biased. So, moving on to electronic data interchange.

(Refer Slide Time: 04:26)



This is one of the earliest use of IT for supply chain management. It involves electronic exchange of business transaction documents between various supply chain trading partners. So, what do we mean by business transaction documents?

Very often you know whenever there is a transaction between two business entities, there are a lot of documents involved. So, we have invoices we have purchase orders, invoices, we have RFPs, we have RFQs and so on. There are multiple business transaction documents involved.

So, what happens is you know if there is no standardized format, every organization or say certain industries or say even countries would have their own business transaction documents in their own formats. And, whenever there would be trans organizational interchange of interchange of data or when there would be trans-organizational transactions happening.

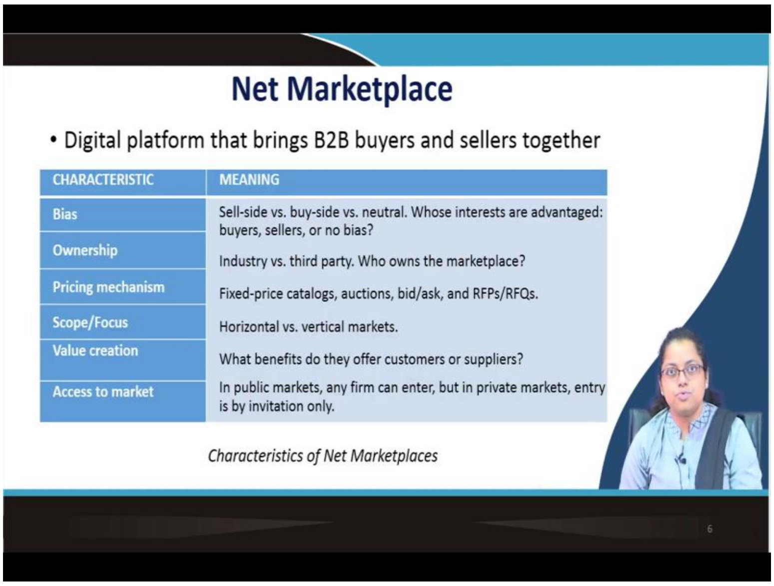
Or maybe between different industries or different when there is a interchange of value or transactions happening bit across organizations and countries, there would be a lot of confusion because countries or organizations or even industries would adhere to their own standards. But, with the arrival of electronic data interchange a business transaction documents are converted to standardized ETI formats which are standard across industries or across you know global boundaries.

So, they follow certain industry standards or they follow certain international protocols and they are designed according to these standards. As a result of which what happens is there is seamless flow of information whenever a transaction happens between organizations across industries or across different geographies.

EDI or electronic data interchange platforms are owned by buyers; hence they are buyer-side solutions. They are very important network technologies to support communication, but among only a limited set of partners. They cannot support communication between n number of partners between multiple partners. So, only a limited set of partners can you know gain the value from an electronic data interchange system.

Therefore, the problem here is this is not suitable for net market places where there could be multiple buyers and multiple sellers. So, this is a limitation of electronic data interchange which makes it less useful for net market places which have multiple buyers and multiple sellers.

(Refer Slide Time: 07:25)



So, we move on to the third technology platform which is very important and we would want to highlight this particular technology platform net marketplace. A net marketplace is a digital platform that brings B2B buyers and sellers together. Net marketplaces do have certain very important characteristics. Let us focus on some of these very important characteristics.

Bias, so, what do we mean by bias? Is the net marketplace seller side, buyer side or is it neutral? So, by seller side we mean there is only a single seller or there are very few limited number of sellers and multiple buyers. Therefore, the platform or the net marketplace is biased in favor of the seller.

On the contrary, buyer side net marketplaces have n number of sellers, but very limited number of buyers. So, it is biased in favor of the buyer. Neutral platforms would have more or less equal number of buyers and sellers on both sides. So, that is what we mean by bias.

The next characteristic is ownership. So, who owns the platform? Is it owned by an industry? Is it owned by a third party or an independent body? Who is the owner of the marketplace? The third characteristic is pricing mechanism. So, are the prices decided; so, are they fixed price catalogs or the prices are decided by auctions or through bid ask rates or are they decided through RFPs and RFQs? So, what is the mode through which the pricing is decided on this particular net market place?

The fourth characteristic is the scope or the focus. So, is it a horizontal marketplace or a vertical marketplace? By horizontal marketplace we mean that it is not focused towards a particular industry whereas by a vertical market we mean that this particular marketplace is focused towards a particular industry. So, there is a focus on only one particular industry in a vertical market.

Value creation is the next characteristic. So, what value does this particular net marketplace bring to the customers or to the suppliers? And finally, access to the market. So, by access to the market we mean, can the firms, different firms that want to be a part of the net marketplace, can they join free, freely or can they join only after they get an invite?

Very many a times it so happens that certain suppliers or certain firms can join a net marketplace only after they get an invite from a particular entity or a particular firm. So, that is in so that is called a private market where everybody is not free to join, only those who are invited can join. Vis-a-vis on the contrary, we do have public markets which where any firm can freely enter and freely leave.

The entry or the exit does not have to happen by invitation or after taking a permission. So, that is the difference between a public market and a private market.

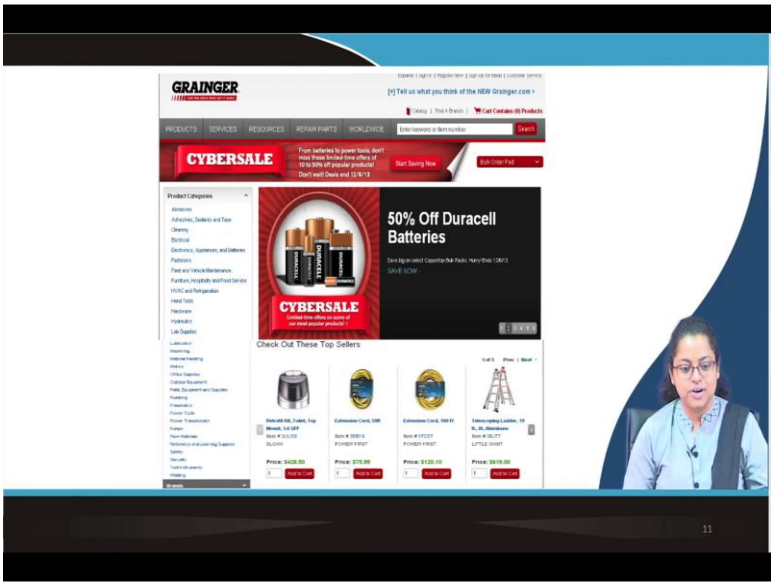
(Refer Slide Time: 11:11)

Moving on, after having you know discussed these six characteristics there are two other important characteristics which actually determine the category of the net market place. So, let us see what those two characteristics are. These two characteristics are what do the businesses buy and how the how do the businesses buy these inputs. So, the first parameter that is what businesses buy could have two categories – direct inputs or indirect inputs.

By direct inputs we mean that these inputs can be you know is an integral part of the production process. That is, these inputs could be raw materials which are directly involved in the production process. For example, it could be iron ore, it could be say wood or it could be you know any raw material that is directly involved in the production process as I already mentioned.

And, the second category is indirect input which means that these inputs are instrumental or they facilitate the production process, but they are not directly involved in the production process. For example, it could be electricity or it could be adhesives you know there could be multiple examples.

(Refer Slide Time: 12:24)



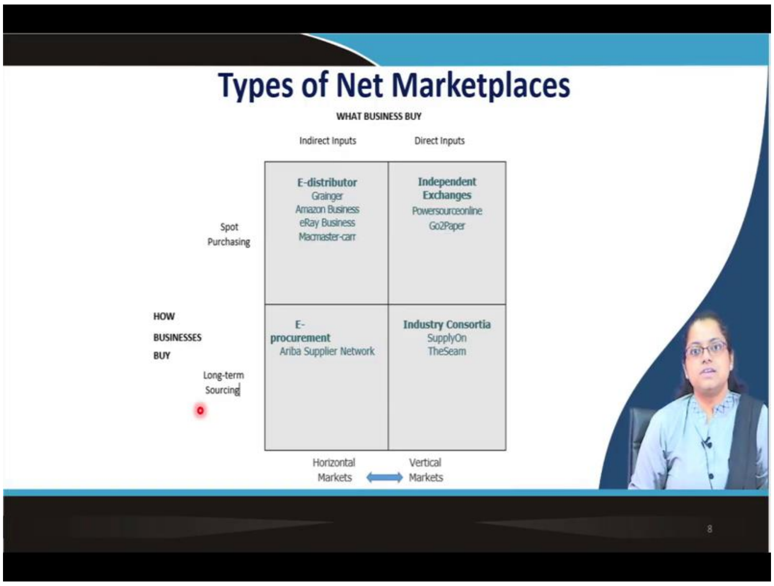
Let me show you the website of Grainger dot com. So, here we see there are multiple you know because Grainger dot com is does not cater to a particular industry there are indirect inputs which can pertain to multiple industries. For example, they are they facilitate buying and selling of abrasives, adhesives, if we come here extension cords.

So, hardware, tools, hand tools so, all of these – fasteners, all of these are indirect inputs they are not directly involved in the production process but, they do assist or facilitate the production process.

Now, the second parameter, so, how businesses buy? So, do they buy and sell through spot purchasing which means these are episodic and anonymous purchases and the buyer or you know more importantly the seller does not even know the buyer. Because, the buying and selling happens at certain intervals and they are episodic and anonymous purchases.

The second category of you know the mechanism by which businesses buy is called long term sourcing. So, here purchases take place over many years and according to a contract between a firm and its vendor. So, in the case of long-term purchases, long-term sourcing very often the vendor knows at the firm, the buyer. So, the buyer and the seller both of them know each other very well because they are engaged in long term sourcing agreement through a contract.

(Refer Slide Time: 14:13)

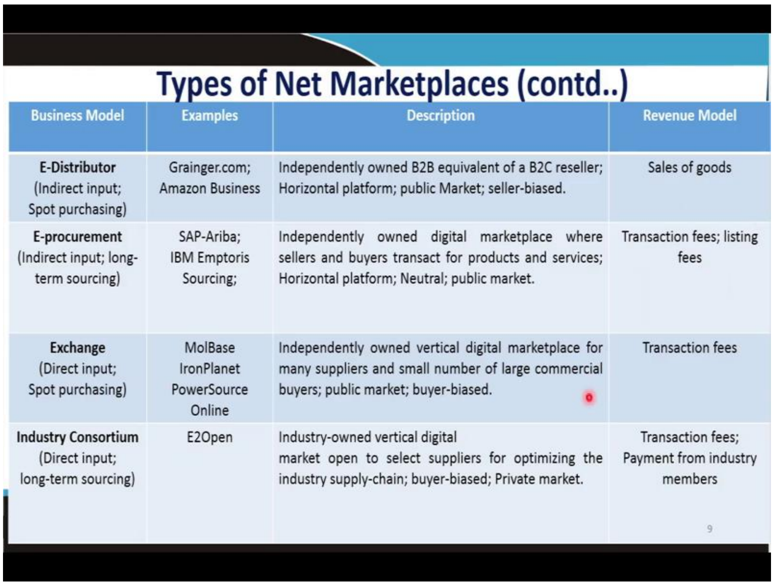


So, moving on, now, based on these two parameters primarily these two parameters net marketplaces are categorized into four categories. So, for indirect inputs and spot purchasing the net marketplaces are called e-distributors. So, we have examples, we just saw the website of Grainger dot com that is an e-distributor for indirect inputs purchased through spot purchasing. There are a lot of other examples eBay business and Macmaster carr, etc.

Now, for indirect inputs which are bought through long term sourcing we have e-procurement net marketplaces. Very popular example is the Ariba Supplier Network. For direct inputs which are directly involved in production process – direct inputs purchased through spot purchasing we have independent exchanges. These are the examples and for again for direct inputs purchased through long term sourcing we have the fourth category of net market places known as industry consortia.

Also at the same time we see that e-distributors and e-procurement platforms are horizontal markets which means that they do not cater to only a particular industry. But, independent exchanges and industry consortia are vertical markets. So, they cater to only a particular industry we will actually see examples of how you know industries to which different industry consortia or independent exchanges cater to in the subsequent slide.

(Refer Slide Time: 15:53)



Moving on we have seen these four categories of net market places. So, let us spend some time in talking about the others we have we had seen you know in the previous slide we had actually categorized the net marketplaces into four categories based on two parameters. Now, we will see the characteristics of these four the definitions and the other characteristics of these 4 categories of net marketplaces in this slide.

So, e-distributor as we have just seen is meant for indirect inputs through spot purchasing. Examples are Amazon dot com and Amazon business and Grainger dot com now description. So, this is these are independently owned that is owned by a third party B2B equivalent of a B2C reseller.

So, we have seen in the previous session what a B2C reseller is e-distributors are the B2B equivalents of the B2C resellers. Now, these are horizontal platforms as we have just seen so, they did not cater to any particular industry but, they cater to all industries. These are generic platforms.

This is a public market which means that a buyers and sellers can join freely there is no need for a specific invite and these are seller biased because these platforms are generally owned by a particular seller there is a particular seller and multiple buyer. So, these are seller biased or biased in favor of the seller. Revenue happens gets generated through the sale of goods, direct sale of goods.

Now, coming to the next one, e-procurement. So, e-procurement platforms as we have just seen are meant for buying and selling of indirect inputs through long term sourcing. Very popular examples are SAP-Ariba and IBM Emptoris sourcing. So, e-procurement platforms are independently owned again digital marketplaces where sellers and buyers transact for products and services. So, these are the B2B equivalents of B2C net market B2C marketplaces.

Now, e-procurement platforms are again horizontal in nature so, they are generic ah; but, these are neutral. Contrary to e-distributors, e-procurement platforms are neutral in nature. They are neither biased in favor of the seller nor in favor of the buyer and these e-procurement platforms are neutral because there are multiple buyers and multiple sellers.

These are also public markets because buyers and sellers can joined freely. Revenue model is transaction fees whenever a transaction happens between a buyer and a seller and listing fee.

Now, coming to the third category which we saw in the previous slide exchanges meant for buying and selling of products independent of direct inputs through spot purchases. These are certain very popular examples. Net marketplaces are independently owned again digital marketplaces where sellers and buyers transact for products and services.

So, independently owned vertical digital marketplaces where sellers and buyers transact and of course, there are many suppliers and very small number of large commercial buyers this part is very important. So, these are vertical marketplaces which means that they cater only to a particular industry and there are many suppliers and very small number of large commercial buyers.

So, these are public markets. So, again any seller can join, but very importantly since there are very few number of large commercial buyers and multiple suppliers. So, these are buyer biased. The revenue model gets generated revenue gets generated through transaction fees.

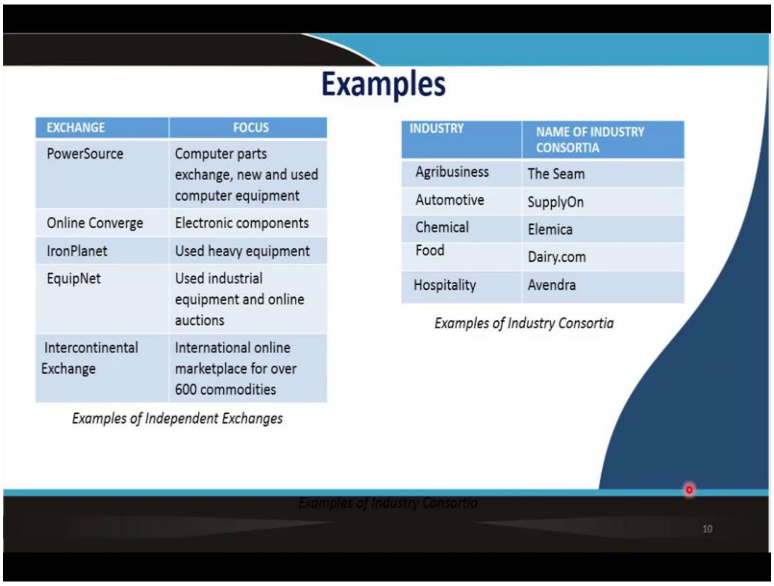
Coming to the last category of net market places, industry consortium. So, these are meant for direct inputs through long term sourcing very popular example is E2Open. Now, again contrary to an exchange which was independently owned and industry consortia is owned by a particular industry. So, this is industry owned again because it is owned by a particular industry it caters to that particular industry.

So, that is a vertical digital market open to select suppliers for optimizing the industry supply chain. So, this is again buyer biased and this is a private market very important because you know sellers cannot join this market without an invitation. They require an invitation from the buyer to be able to join the market. So, this is a private market.

Contrary to way to the other three which were all public markets and they were free for sellers could freely join irrespective of whether they had an invite or not, but an in an industry consortia sellers can join only after they receive an invite from a buyer. The revenue, it gets generated through transaction fees that the, from the transactions that happen and also revenue gets generated by payments from industry members.

So, because there are large members belonging to multiple industries a lot of payment gets generated by these industry members. So, that is another very important source of revenue for the industry consortia.

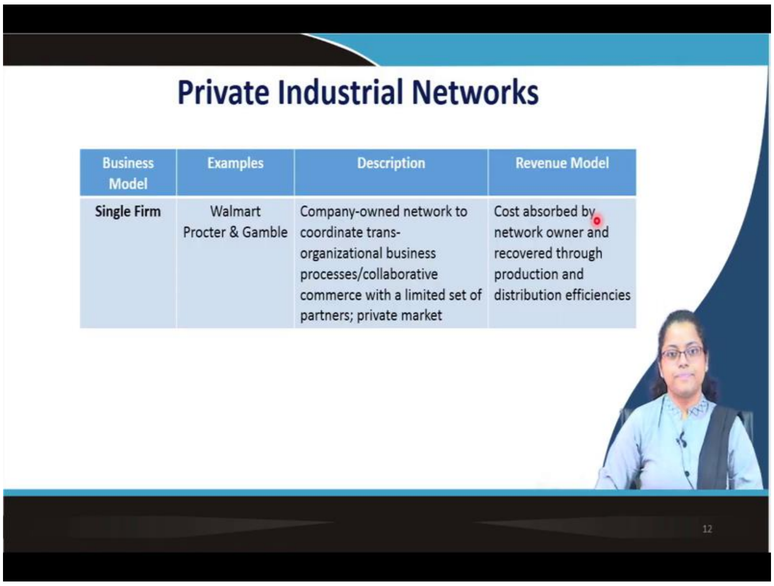
(Refer Slide Time: 21:50)



Now, let us see some examples. So, exchanges power source is an exchange for computer parts and new and used equipments. Similarly, you know these are examples. So, iron planet is an exchange for used heavy equipment. So, these are all examples of exchanges with the industry on which they focus.

And, these this the second table here talks about industry consortia multiple industry consortium and so, these are the names The Seam, Supplyon, Elemica, Dairy dot com Avendra. So, all of them cater to particular industries they are owned by certain industries. For example, Elemica is owned by the chemical industry; Supplyon is owned by the automotive industry; Dairy dot com by the food industry. So, these are all industry specific and they are owned by these industries.

(Refer Slide Time: 22:54)



So, moving on, the next category of private industrial of you know technology platform sorry is the private industrial network. So, private industrial network the term private the term private here comes from the fact that this is owned by a single firm. So, private industrial networks are owned by single firms and these are actually very popular firms such as Walmart, P and G: Procter and Gamble.

This is also this also owns a private industrial network as part of its technology platform to interact with its suppliers. So, this is different from net market place because these are generally owned by single firms these are private contrary to a net marketplace which could be owned by say independent bodies, but they were meant for multiple buyers and sellers or they could be owned by industries.

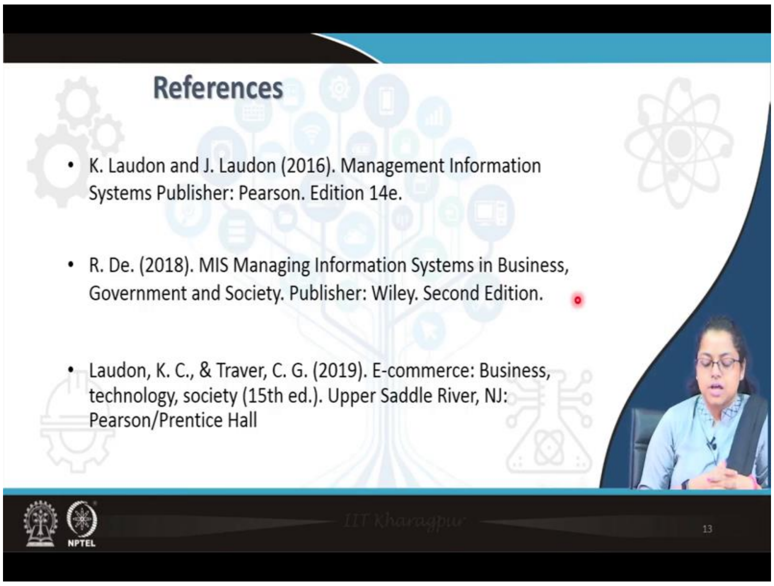
So, a private industrial network is a company-owned network to coordinate trans-organizational business processes or collaborative commerce with a limited set of partners. For example, Walmart has its own private industrial network with its limited set of partners and this is meant a private industrial network is meant to share trade secrets or to share industry best practices so that you know so that the organization on the firm grows with support from it is suppliers.

So, this is also used for collaborative commerce with the limited set of partners. This is a private market which means that the suppliers can join this only after they get an invite. So, they cannot join freely, but they can join only after they receive an invite explicit invite from the firm, from the owner. The revenue model, the revenue gets generated so, if the cost absorbed by the network owner and is recovered through production and distribution efficiencies.

So, here the cost that gets you know that is involved in setting up of this technology platform by the player of the large player of the industry is recovered through production and distribution efficiencies that happen as a result of you know better enhanced communication with the trading partners due to sharing of trade secrets and industry best practices and due to collaborative commerce.

So, this is the next category of private industrial network that we wanted to you know this is the next category of technology platform that we wanted to focus on.

(Refer Slide Time: 25:45)



Now, the last two categories of technology platforms for B2B e-commerce which involve mobile phones and of course, social network; so, social commerce and mobile commerce will take up in a subsequent lecture. But, in this session we wanted to focus more on the technology platforms which happened pre 2000 era and some of which are prevalent even today and are very very integral elements of B2B e-commerce.

So, today we focused on, we began with automated order entry systems, then we focused on electronic data interchange, followed by net marketplaces and finally, private industrial networks. So, these are my references for today's slides. In the next session, we will be focusing on unique business models in e-commerce.

So, thank you and see you around!