Business Development from Start to Scale
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Week - 07
Branding and Pricing
Lecture - 34
Servitization

Hi friends, welcome to the NPTEL course Business Development from Start to Scale. We are in week 7 with the theme of Branding and Pricing. In this lecture the 34th in the series we discuss the topic of Servitization.

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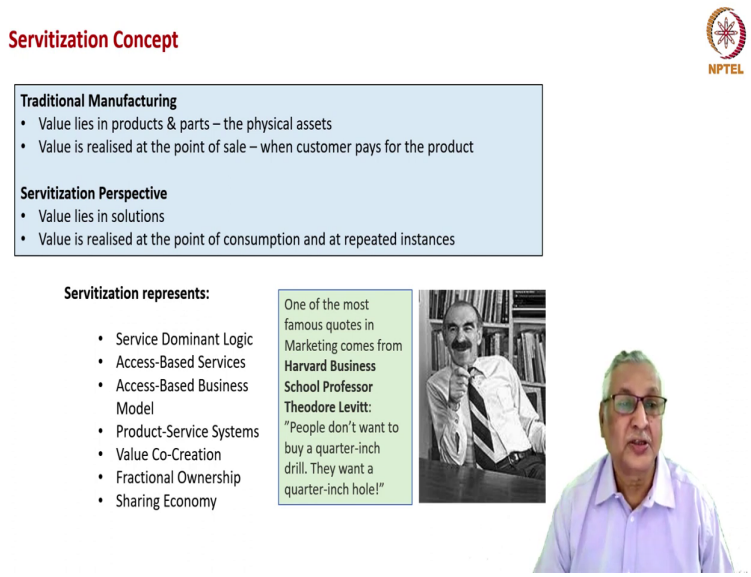

We are discussing servitization in the context of branding. You may wonder what servitization has to do with branding. As we know, we as manufacturers develop and produce

a product and sell the product to the customers. Thereafter and even before that we try all the means advertising, sales promotion, word of mouth etcetera. To make the customers become aware of the product, try out and eventually purchase the product.

We also try to keep the advertisement and sales promotion on an ongoing activity spectrum. So, that the customer retains the brand loyalty and keeps purchasing the product. So, the companies do a number of things to be in the mind shape of the customer. However, servitization is a natural way of being in the customers mindset all through.

Let us look at servitization from the point of view of traditional manufacturing versus the servitization perspective. The traditional manufacturing has taught us that the value lies in products and parts that is the physical assets and value for a company is realized at the point of sale it is also realized for the customer because the customer takes the ownership of the product at the point of sale. And when customer pays for the product he or she gets the product and begins to use the product.

But the servitization perspective believes and suggests that value lies in solutions value is realized at the point of consumption and at repeated instances. Servitization in this context represents the following, one it is a service dominant logic, two it offers access based services. It also offers access based business model, it includes product and service as an in integrated system. It helps co-create value with the customer, it enables fractional ownership and it leads to a sharing economy and even a circular economy.

Before we go further we should recall the wise words of the leading Harvard business school Professor Theodore Levitt. He said people do not want to buy a quarter inch drill, they want a quarter inch hole. What it implied decades ago was that the customers are looking for solutions and not for products and servitization which has taken root over the last few decades exemplifies this wonderful concept.

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This is a matrix which covers two dimensions the horizontal dimension is, the question where does the value lie? And the vertical dimension is the question, when is value realised? In the traditional part, when the value is seen in terms of products and parts and the value is seen to be realised at the point of sale the whole paradigm is just product focused.

On the other hand if we believe that the value lies in the solution and the value gets realised, when the solution is offered at the point of sale it becomes an advisory focused outcome. Let us assume that the value lies in products and parts as per the traditional model. But it is made available all through the life, then we can say that it is an after market focused outcome.

On the other hand if we believe that the value lies truly in the outcomes and they must last throughout the life in terms of the value realizations then it is an outcome focused activity.

So, when somebody sells the product or buys the product and both the parties forget about it then it is just a very transactional product based approach.

If we take a product, but support it through an annual maintenance contract the focus shifts for the customer and for the company in terms of maintenance and there is an aftermarket focused approach. If you give solutions as to how to use the product, but do nothing more about that then it becomes just an advisory focused activity.

On the other hand if you partake the journey of the use of the equipment along with the customer then it becomes the outcome focused activity or outcome focused paradigm. Servitization refers to this outcome focused journey.

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Why is servitization so important? It is important because it will serve as a very definite strategy for growth. It refers to adding services to existing product based offerings to stimulate additional revenue and growth it wraps the product with the service. Information, communication technologies such as, video conferencing, email, the internet and social media play important roles in enabling service interactions that has been proven.

Today we do not need to physically correct the rotor which we have in our homes there could be remote understanding of the problem and remote correction of the problem. Manufacturing firms are increasingly wrapping their products with services Bombardier, the aircraft manufacturer Caterpillar, the equipment manufacturer Hitachi, the capital goods manufacturer and Rolls Royce, the jet engines manufacturer among others earn additional revenue from delivering outcome-based services to their customers.

So, in this what is happening? Firms are not only coping with manufacturing of complex products as usual they are also trying to understand, how to enrich their value propositions through additional services? And because of this combination of product and service and the journey with the customer for almost perpetuity, the market for servitization has been growing exponentially.

This is a concept whose day has arrived in a firm manner and which will stay on embedded in the industrial system.

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Let us look at the customer journey towards servitization over the last few years, typical products that are covered under servitization are capital goods, consumer durables, high cost products and high technology products. In the earlier era we had basic services accompanying the sale of a product these were operation manuals, training manuals, service catalogues and parts catalogues.

Then ICT came on the line and it started supporting in a big way remote troubleshooting. Then the phase of intermediate services had come, it is real time product performance analysis and troubleshooting. And in this ICT combined with telematics began expanding customer support. You can imagine a truck, which is on the road and it has got connected to the manufacturer through the telematic support.

The engine provides certain data, the vehicle provides such a data all the data could can be analyzed by the manufacturer to understand what is the issue and provide service. Similarly when you have a lift, which is digitally connected when there is a problem in the lift, the lift manufacturer can connect with the lift talk to the lift and make sure that things get corrected this is the level of intermediate services.

But then servitization means customized services truly. It is a total life cycle management of the product on site with revenues getting linked to utilization. Apart from ICT and telematics as well as internet of things, the current emphasis is totally on solutions. So, typical outcomes of the servitization approach are end to end solutions automatic hassle free upgrades and so on. And this is the customer journey that has been happening through servitization.

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Servitization drives value added manufacturing with a servitization model the customer pays a fixed fee per unit of service consumed. While the ownership of the system remains with the technology provider who remains responsible for all operation costs, that is instead of paying 2 lakhs of rupees for a particular product you may be paying only 200 rupees for the product based on your usage of the product every week or every fortnight depending upon a model that has been chosen by you and the company.

As such the model strongly incentivises the equipment owner, that is the service provider to think long term when designing and selecting the technology by offering the state of the art maintenance the provider can minimize the operating cost which is the largest cost component over the life cycle of the equipment. Then the servitization and revenue model can be developed in such a manner that the lower the operating cost the higher would be the payouts for the company.

Keeping ownership of the equipment also encourages the manufacturer to think of development of modular systems which is key to a circular economy, you can think of an imaging equipment where the key driver is the imaging sensor and the imaging display unit. So, those modules can be upgraded from time to time by the equipment maker and that could be the thought process which may have a rather stable technology as far as the outer shell is concerned.

But a completely dynamic inner sensor and software technology that keeps on getting upgraded.

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There are several pioneering examples of servitization. Photocopying has been the earliest model of servitization. Xerox the leading photocopy machine maker globally pioneered pay per copy for documentation reproduction needs of busy offices. Offices embraced the concept they allowed the concept and also benefited from trouble free service. And as the photocopy machines got upgraded from time to time Xerox was also upgrading the machines from time to time.

The second example is that of SunEdison. The company pioneered power purchase agreements for solar photovoltaic cells. This enabled rapid uptake of solar PV by allowing customers to purchase solar energy instead of investing in the panels themselves. As you may recall or as you may know the solar cells have been the costliest pieces of equipment in any

renewable solar energy project. And companies were kind of worried about getting into renewable energy because of the high cost of these solar cells.

But by adopting the servitization model SunEdison not only ensured continued demand for itself but also brought in a revolution in the development of renewable energy. Then we have Philips signify, the company adopted the servitization model with its light as a service product. The company implemented it in the Amsterdam Schiphol Airport and various other locations imagine light being a service.

Today Lenovo talks about everything as a service you do not have to buy a laptop you do not have to buy a server you know everything will be as easily accessible as payment for a service.

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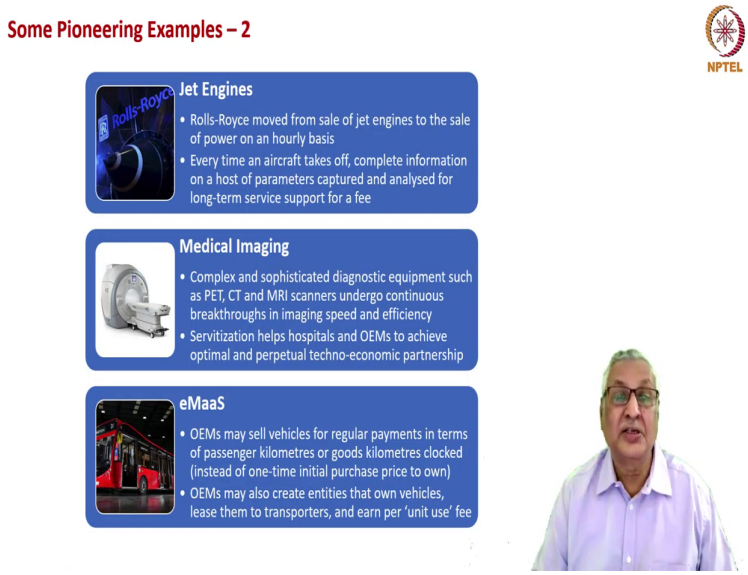

Some more pioneering examples, jet engines are not being sold by Rolls Royce for long it has moved from sale of jet engines, to the sale of power on an hourly basis not only that with the kind of digital technologies that are available Rolls Royce monitors the performance of the engine from the time the aircraft takes off on 100s and 1000s of parameters and those data bits are captured and analysed for long term service support for a fee.

Then we have the case of medical imaging. Medical diagnostic equipment of high technology such as PET, CT and MRI scanners are always in a state of development from 24 slices have moved to 48 then 64 then to 128, 340. Now we have got 640 scanners PET, CT and very soon we may have even approximately 1000 slices scanners. But every time the scanning capability changes it is not possible for a hospital to change the medical equipment.

Servitization helps hospitals and OEMs to achieve optimal and perpetual techno economic upgrading through partnership. eMaaS is another great example, particularly relevant for the costlier electric connected vehicles. Original equipment manufacturers may sell vehicles for regular payments in terms of passenger kilometres run or goods kilometres clocked, instead of the transporters paying one time initial purchase price to own the vehicle.

And from ownership therefore, you have moved to mobility. Similarly, OEMs may also create entities that own vehicles instead of the transport operators leaves them to transport operators to operate them the way they like, but earn per unit use fee. And this is another pioneering way in which the automobile industry is transforming itself.

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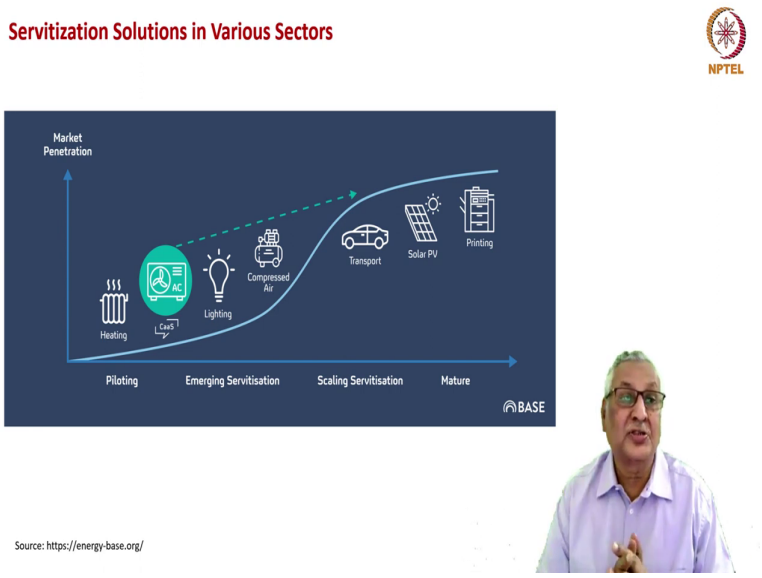

If you look at various sectors these solutions have been varying. If you look at the piloting stage it started with (Refer Time: 14:46) systems and market penetration was low. Then air conditioning, lighting and compressed air began to occupy good space in terms of servitization and that was the phase of emerging servitization. Then transport has come into play with scaling servitization.

As I said solar PV and printing are now representing the mature state of servitization having been there for long.

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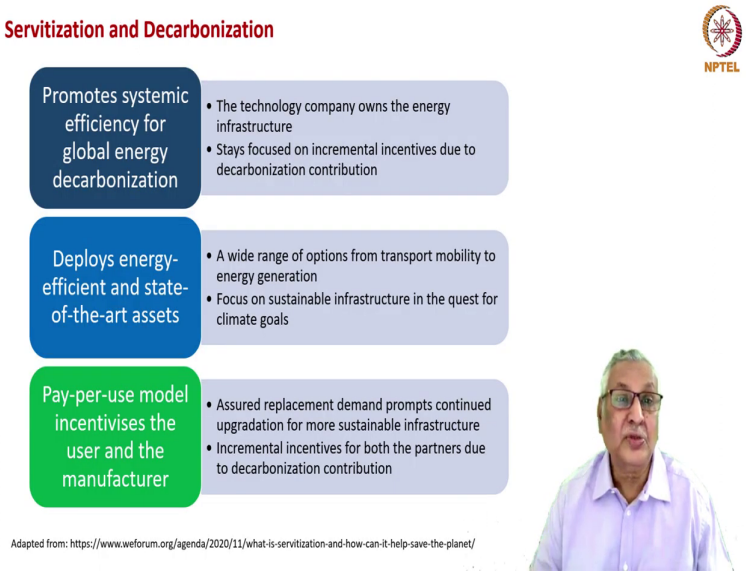

Interestingly servitization can lead to climate control, efforts and decarbonization initiatives. How does it do? One it promote systematic and systemic efficiency for global energy decarbonisation. The technology company was the energy infrastructure stays focused on incremental incentives due to decarbonization contribution.

It deploys energy efficient and state of the art assets, the technology provider can offer a wide range of options from transport mobility to energy generation within a particular mine or within a particular steel company. It could focus on sustainable infrastructure in the quest for climate goals.

So, the manufacturer of the capital goods the manufacture of products and the natural resources exploiter and the overall society are in one alignment to reduce the climate change.

And this pay per use model incentivises the user and the manufacturer. There is an assured replacement demand that prompts continued upgradation for more sustainable infrastructure.

And secondly, incremental investments are provided for both the partners due to the decarbonization contribution. This is how servitization is going to help in the decarbonization effort.

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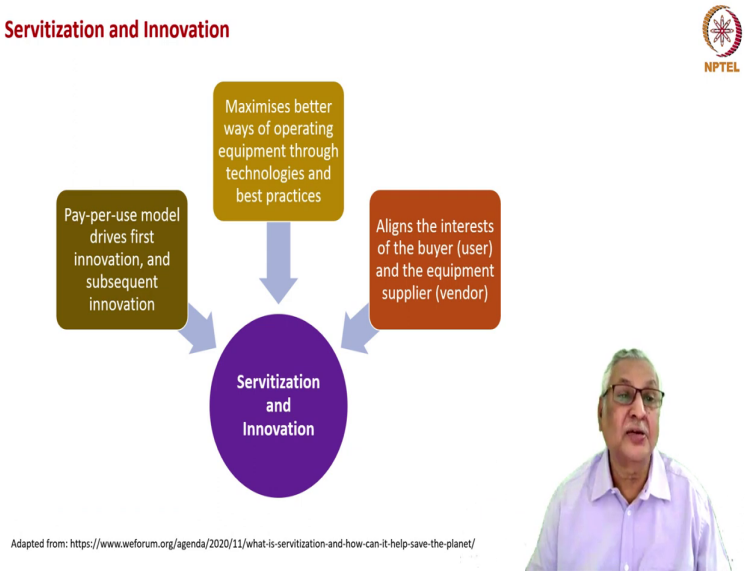

Another important aspect is that servitization by its very nature promotes innovation. Pay-per-use model drives the first level of innovation. And then keeps on taking in subsequent innovation cycles. Secondly, it maximises better ways of operating equipment through technologies and best practices because the payments can be linked to the technological efficiency that has been put in place in subsequent years.

And finally, it aligns the interests of the buyer that is the user and the equipment supplier that is the vendor towards better performance of the equipment and better operating margins for the customer and therefore, better revenues for the provider.

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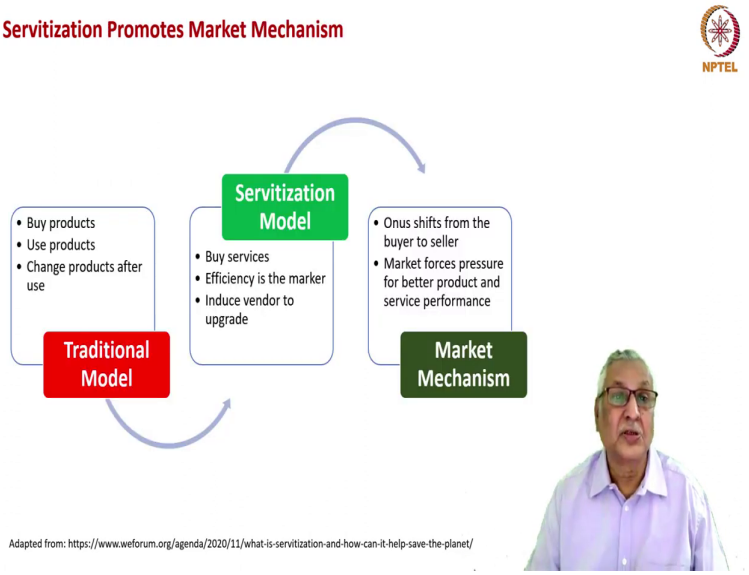

Servitization also promotes market mechanism any mechanism is as efficient as the efficiency of the markets. In the traditional model we used to buy products, we use the products and change products after use. If we think that the product has become obsolete that product gets replaced and the company also goes all the way to project the new product as being an appreciably better product than the established product and induces the customer to replace.

But in the servitization model, once you have a model of buying services and once you have the efficiency of the device and the outcome as the marker, then there is no need for inducing

the vendor to provide products or inducing the customer to buy the products. There is a natural inducement to have the highest level of service.

You can imagine where in the future the cell phones are not bought, cell phones are provided and taken back by the telecom operator or the cell phone manufacturer once a new model and new generation of services become available and that is how servitization model will work. When that happens there is going to be a market mechanism ticking in.

The onus shifts from the buyer to the seller because in the traditional model, it is a kind of buyer being beware if the buyer takes a model after whatever scrutiny the buyer is able to make then the use of the equipment is entirely the buyers responsibility more or less. And therefore, the responsibility stays with the buyer for proper upkeep of the equipment and if the equipment does not measure up to the requirements unfortunate it is.

But in this servitization model, the onus remains with the seller. The market forces pressure for better product and service performance and if more companies are in the servitization model the more would be the competitiveness in terms of the final outcomes rather than selling of a particular product that is how servitization promotes market mechanism.

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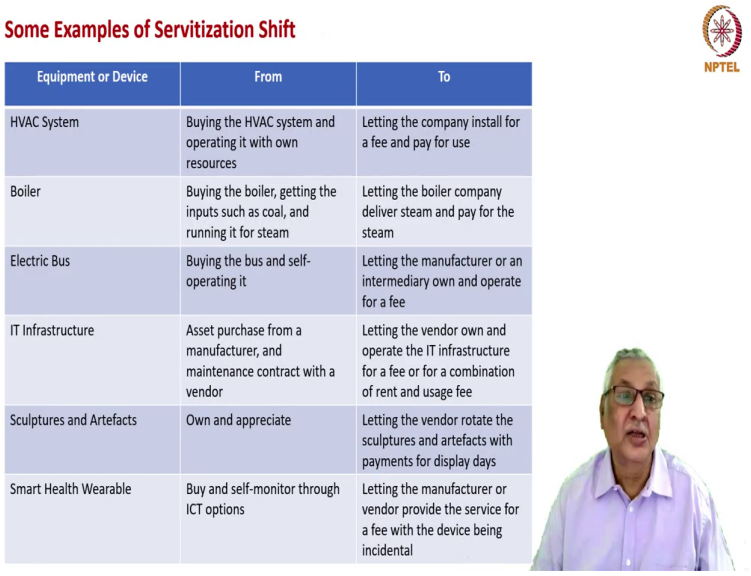

Equipment or Device	From	To
HVAC System	Buying the HVAC system and operating it with own resources	Letting the company install for a fee and pay for use
Boiler	Buying the boiler, getting the inputs such as coal, and running it for steam	Letting the boiler company deliver steam and pay for the steam
Electric Bus	Buying the bus and self-operating it	Letting the manufacturer or an intermediary own and operate for a fee
IT Infrastructure	Asset purchase from a manufacturer, and maintenance contract with a vendor	Letting the vendor own and operate the IT infrastructure for a fee or for a combination of rent and usage fee
Sculptures and Artefacts	Own and appreciate	Letting the vendor rotate the sculptures and artefacts with payments for display days
Smart Health Wearable	Buy and self-monitor through ICT options	Letting the manufacturer or vendor provide the service for a fee with the device being incidental

Let us look at some examples of servitization shift. You take a HVAC system that is heating, ventilation and air conditioning system. Earlier we used to buy the HVAC system, it used to be a thorough detailed and long term process and we used to operate it with our own resources in pharmaceutical factories, semiconductor factories etcetera.

But today we are willing to let the company which manufactures HVAC systems to install it for a fee and we pay for the air conditioning that we use or the heating we use. And by that way we are also conscious of the need to minimize the HVAC usage and the customer also understands how to install the digital systems and sensors to make sure that the HVAC utilization is optimal for the consumer.

Then you can buy a boiler, you can get the input such as coal and run it for steam generation for your factory. On the other hand you can let the boiler company install the boiler, own the

boiler, but deliver the steam because you need steam, you do not need a boiler. Boiler is incidental to your requirement for steam. And therefore, in the servitization model you pay the manufacturer for the steam that is generated and used and not for the boiler, which you pay otherwise.

Let us take the example of electric bus, typically the transport corporation buys the bus and self operates it. But today the model is to let the manufacturer or an intermediary own and operate for a fee. In IT infrastructure we purchase the assets including, the hardware and the rotors, servers all of those products from a manufacturer and we also have a separate maintenance contract with a vendor authorized or unauthorized by the original equipment manufacturer.

Today we let the vendor own and operate the it infrastructure for a fee or for a combination of rent and usage fee. We can even look at an example of sculptures and artefacts. We own a sculpture or we own an artefact in your home, but then you appreciate it and how long would you appreciate it.

Can you keep on buying one like sculpture after another sculpture, one artefact after another artefact the servitization model says that there is no need for that you can let the vendor rotate the sculptures and artefacts with payments for display days. Then look at a smart health wearable typically you have a watch which monitors you, connects you to your mobile telephone and you buy that product and self monitor through ICT options.

Instead you can think of a case where the manufacturer or the vendor provides you the required advice on your health parameters and the device is going to be just incidental. We can think of any number of developments for that electricity boards provide you with energy meters the whole idea is to measure the energy that you are consuming and then bill you accordingly.

But you can have an energy meter that performs many other tasks including advising the house or the office as to how to optimize the energy usage, where to switch off, how to switch off, how to dim the lights, how to adjust the lighting to the natural daylight and so on. That

way you are providing a total lighting service through your energy meters to the company or to the home and that is a great example of servitization.

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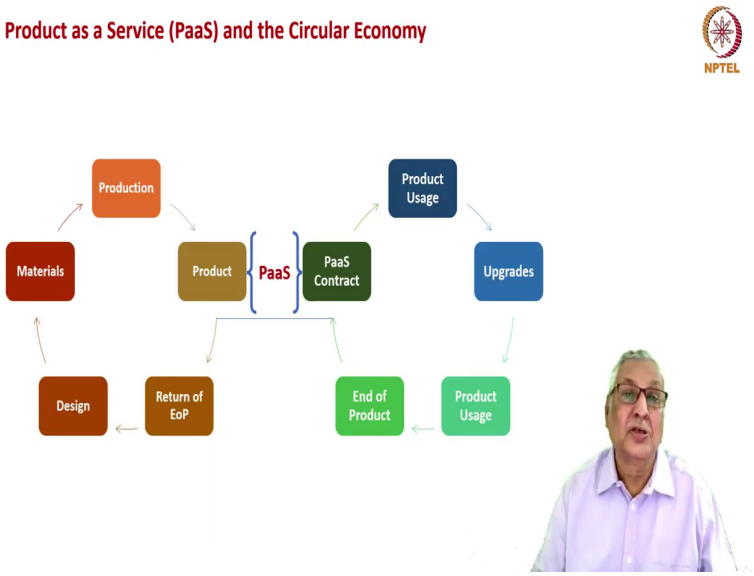

When you look at product as a service, there is going to be a circular economy that is going to come in. So, this graphic illustrates PaaS that is product as a service and the emergence of the circular economy. Typically how do you design and operate a product? We design the product first, we get the materials that are required for the production of the product, we produce the product, the product is available for use by the consumer that is when the pass kicks in.

There is a PaaS contract between the manufacturer and the consumer. And the consumer begins to use the product. And then the PaaS provider that is the vendor provides the upgrades to the product again the product gets used for further time. But a time would come

when the end of product would be necessary, then the product gets returned to the design and manufacturing system and it goes through the design refurbishment and reuse cycle.

So, you can see that servitization of a product as a service would lead to circular economy, which is what every society and every nation as well as every government looks forward to in today's circumstances.

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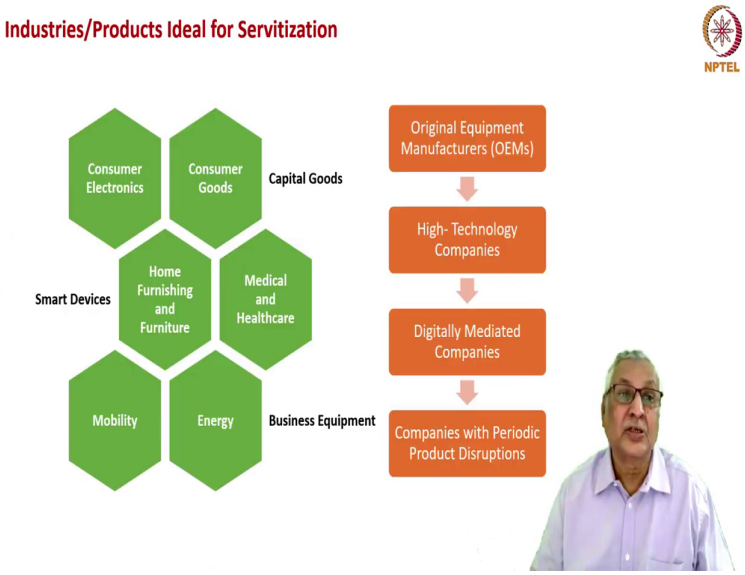

There are several industries and products that are ideal for servitization consumer electronics, consumer goods, home furnishing and furniture, medical and healthcare, mobility, energy these are all great industries for experimenting with and perpetuating servitization. In addition highly technology intensive, highly cost intensive, industries such as capital goods, highly dynamically technologically driven industries such as smart devices and highly energy consuming industries related to business equipment they are all ideal for servitization.

So, original equipment manufacturers, high technology companies, digitally mediated companies and companies with periodic product disruptions all qualify for servitization.

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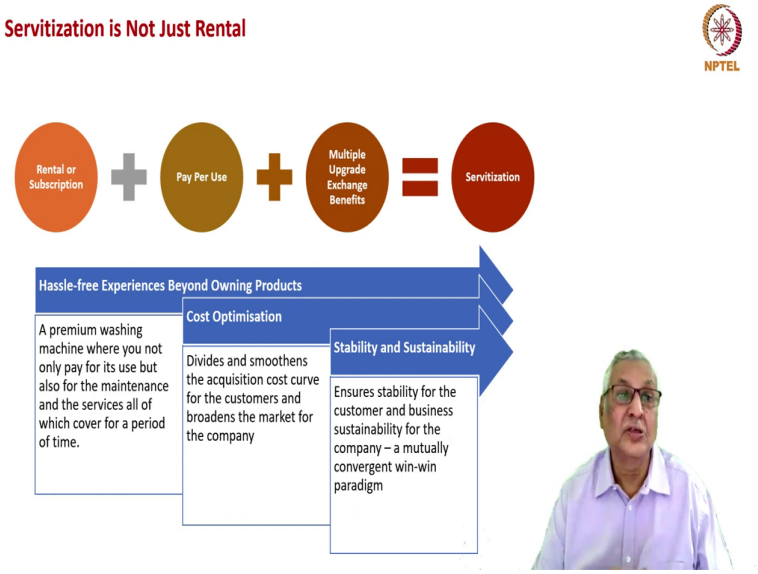

But let us not think that servitization is just paying a rent. Of course, rental is a part of servitization it provides the base fee or base sustenance economy for the developer. But along with that you get the pay per use, rental is not a flat rental as you have for a home. It is a pay per use methodology. Secondly it gets accompanied with multiple upgrade and exchange benefits and that total paradigm of rental or subscription together with a pay per use modality and enhanced with multiple upgrade and exchange benefits is the servitization model.

So, what does it entail? One hassle free experiences beyond owning products you do not just buy a product you own an experience. Because when you buy a premium washing machine you expect that washing machine to go through any types of washing cycles for any type of

load as economically and as carefully as it was functioning when at the time of purchase. But it does not happen that way with most washing machines.

Therefore when you have a premium washing machine, where you not only pay for the use, but also for the maintenance and the upkeep as well as upgradation services all of this come under the umbrella of servitization. It also leads to cost optimisation, it divides and smoothens the acquisition cost curve for the customers and therefore it broadens the market for the company.

Definitely as opposed to buying a product for 100,000 rupees you are able to buy a product for 5000 rupees you would be inclined to take that product and that could be covering a whole lot of devices and therefore the market would expand people who are not able to afford will come into the market space. Whereas, the company will be able to scale up its production and therefore derive greater economies of scale. It is a virtuous cycle that would be operational in the socio industrial system.

And thirdly it will lead to stability and sustainability. It will ensures stability of the customers operations, it will ensure sustainability for the business and for the company as well as the customer it will be a mutually convergent win-win paradigm. Therefore servitization should not just be seen as a mere rental operation it is far more than that.

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So, the advantages of servitization just to recapture at this point of time, it ensures continuing customer relationship. Therefore, it enhances brand loyalty, it reuses trade in equipment or its parts therefore it promotes circular economy. It ensures end to end customization for the customer with futuristic upgrades. And it provides recurrent revenue streams for the company and therefore expands the market these are the four key advantages of servitization.

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Why does servitization enhance customer service? There are four aspects of that if you deep dive into this. The first is enhancing reliability and uptime. When you monitor a vehicle, when it is in movement for performance or failure alert you have a better way of providing the operator with greater travel assurance that is one way.

Second you have an example of Maersk, which has a drilling operation and it has a partnership with the GE for performance analysis and proactive correction. Therefore, the drilling rings are always in a state of excellent performance. The second way servitization helps customer service is through customer operational improvement. Rolls Royce engines have smart technologies that advice pilots and airlines on optimal flight paths and fuel consumption metrics.

Energy utilities can supply as I said energy metres that do more than just metering they can track and optimise energy usage and advise the buildings and homes, how to optimise the energy usage. Adding new operational capability is the third feature. You can download operating systems into devices for upgraded performance. So, far we used to have operating systems, what with the device and not upgraded unless new major revolution comes in the operating system.

But we can have a continuous induction of newer operational capabilities in various equipment what we see in mobile phones can actually be a matter of fact and practice for every equipment. Because every equipment of the future is going to have the core in terms of an operating system.

For a machine tool it is not just going to be the machine bed and the cutting tool there would be an operating system which measures, tracks and corrects everything from the tool depth, tool chamfer from the cooling liquid arrival into the cutting space all of these things could be monitored by the machine tool.

Tesla is having a software which ensures that the electric vehicles that Tesla supplies in operation adjust their suspension and other systems in response to the terrains. Fourthly we can have new businesses that are derived based on the insights, the company gets from the operational monitoring. Kaeser is a famous manufacturer of air compressors it no longer sells air compressors, it sells air compression as a service.

As it monitors the usage of its machines and in that process it has discovered that there are different needs, and different ways of using air compression in factory operations. And that varies depending upon the manufacturing methodology. Mitsubishi Hitachi and Tata consultancy service are working on an a I based system, to adjust the combustion process of coal fired power plants and that will reduce costs as well as carbon dioxide emissions.

So, new business segments are evolving because of servitization, which involves the manufacturer to be part of the customers journey of operating a particular equipment.

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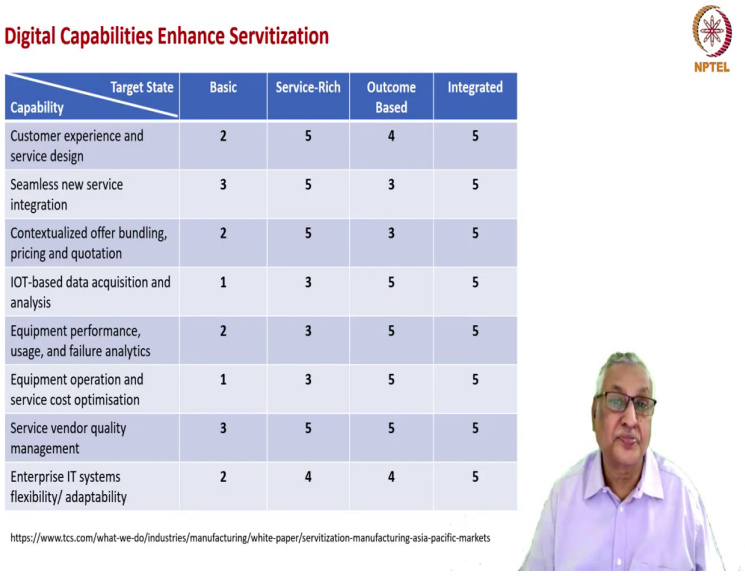

But to be able to have that level of design capability and enhance servitization and to move from a basic stage to an integrated outcome based stage, you require certain capabilities. This TCS table says on a rating scale of 1 to 5, 5 being the highest capability and 1 being the lowest capability.

What kind of capabilities and at what levels are required for good servitization? So, there are factors such as customer experience and service design, seamless new service integration etcetera which you can see. So, in respect of customer experience and service design for example, if you offer basic servitization that is like remote functioning of the equipment, remote monitoring of the equipment, remote servicing then the requirement could only be 2.

But if you are moving to service rich offering you may require 5 level of competence, outcome based for again integrated 5 level. If you want to have seamless integration of new

services, you need to have 3 5 3 5 as the competency levels. If you want to have contextualized offer bundling pricing and quotation the expectations are 2 5 3 5. If you want to have IOT based data acquisition and analysis 1 3 5 5. Equipment performance usage and failure analysis you require levels of 2 3 5 5 in terms of competencies.

If you require equipment operation and service cost optimisation, the requirements are 1 3 5 5. If you require service vendor quality management, 3 5 5 and if you require enterprise it systems flexibility adaptability it is 2 4 4 5. What you will see from this table, is that if you want to stay at the basic level of servitization. Your requirements are more in terms of 1s and 2s.

But if you want to be an integrated service rich as well as outcome based provider of equipment and services you got to be 5 on 5. On every capability that is required in terms of digitalization to enhance servitization that is the teaching that we get from this table.

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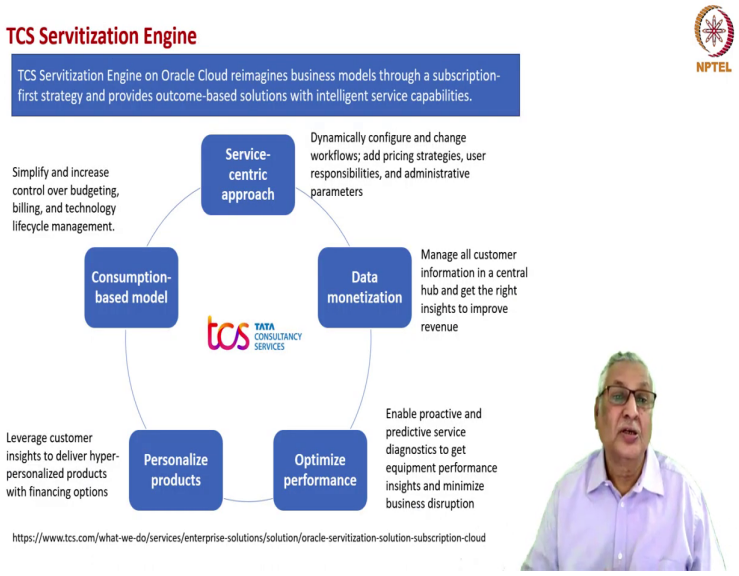

TCS has developed a servitization engine, it is mounted on oracle cloud, it reimagines business models through a subscription first strategy and provides outcome based solutions with intelligent service capabilities. And the first aspect of that is a service centric approach. It dynamically configures and changes workflows, adds pricing strategies, user responsibilities and administrative parameters.

Second it does data monetization it manages all customer information in a central hub and gets the right insights to improve revenue. The third aspect of the engine is optimization of performance. It enables, proactive and predictive service diagnostics to get equipment performance insights and minimize business disruption. Personalization of products for the customer needs is the fourth advantage.

It leverages customer insights to deliver hyper personalized products with financing options. Then you also have a consumption based model feature. It simplifies and increases control over budgeting, billing and technology life cycle management. Therefore, the cloud based servitization engine provides optimal business models for various customers depending upon their products and depending upon their usage patterns all backed by the digital backbone.

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Accenture another leading technology services company has a view of servitization, which is integrative. Accenture believes that the shift to servitization has been highly evident in the B2B industrial space that is businesses and businesses collaborating together. It would be a BHEL power equipment producer and a power generation company which could be a energy company of a state board and they together collaborating and making the servitization possible.

So, most companies in the B2B market sector are quickly moving towards connected products and services. They are employing a wise pivot from a product economy to a service economy and they are also enabling a level of efficiency in the whole linkage customer manufacturer raw material supplier. So, how does it operate? Operational efficiency accrues from devices, asset utilization, operational cost reduction, equipment productivity, enhancement.

Then the services take the next leap in terms of new business models, pay per use, software based services, product service hybrids and data monetization. Then the entire ecosystem gets transformed in a positive manner. Outcome based activities happen, pay per for outcome not pay per use you, pay for outcome, new connected ecosystems, platform enabled marketplace, industry blur, shared risk imagine a CT scanner it is not about the number of slices you use it for and number of images you take. The images must be riser shop as promised.

Therefore, if you pay for the outcome that is much better than pay for the use model, so that is also going to come in terms of the outcome focus, then a platform economy gets generated as a result of that, continuous demand sensing end to end automation resource optimization and waste reduction.

The secret sauce that is helping B2B industrial companies and original equipment manufacturers to succeed in this servitization mission is their ability to leverage real time data, generated within their ecosystem, to analyze and increase asset utilization and ensure optimum availability. And the trillions of data bytes that are generated are continuously captured and analyzed to provide better services and better product design for the future.

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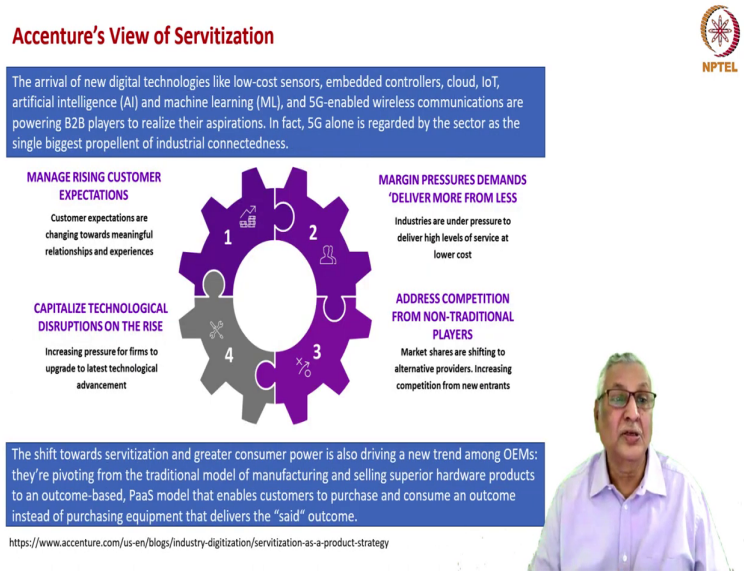

So, the arrival of new digital technologies like low cost sensors, embedded controllers, cloud, IOT, artificial intelligence and machine learning as well as 5G enabled wireless communications are powering B2B players, to realize their aspirations. In fact, the industry believes that 5G alone is the single biggest propellant of industrial connectedness.

So, how does this paradigm operate? First management of raising customer expectations, customer expectations are no longer confined to purchasing the so called best product based on pay per specifications or reviews, customer expectations are changing towards meaningful relationships and experiences.

Second margin pressures are demanding to deliver more from less that is industries are under pressure to deliver high levels of service at lower cost because the end consumers that is you and me are becoming more vocal about getting more for less. Then we have to address as

companies competition from non-traditional players. Market shares are shifting to alternative providers, increasing competition from new entrants that happens all the time in the real world.

When the movie industry and the theatre industry is threatened by OTT it kept on increasing its sound experience its visual experience. So, that people are drawn back to the mega theatre complexes with all the Dolby Atmos and various other methods of projection as well as acoustic purity, that is as far as the physical space. But when you make this physical space continuously modern in your home or in your office, then servitization takes place.

Then the fourth one is capitalized technological disruptions on the rise increasing pressure for firms to upgrade to the latest technological advancement is a part of business life and that can be managed again by servitization. The shift towards servitization and greater consumer power is also driving a new trend among OEMs they are pivoting from the traditional model of manufacturing and selling superior hardware products to an outcome based PaaS model that enables customers to purchase.

And consume an outcome, instead of a hardware equipment that delivers a pre-described outcome that is the change that is happening in servitization.

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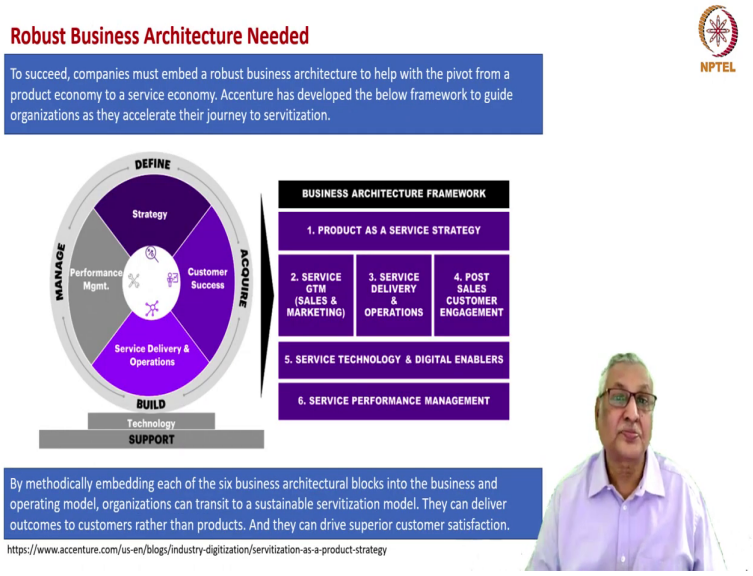

But, for servitization to occur, the companies have to do lot of business reinvention, technological reinvention and the architecture itself has to be different. Accenture recommends that companies must embed a robust business architecture to help with the pivot from a product economy to a service economy. The framework adopted by Accenture is provided below.

The first stage is definition of the strategy that you are likely to adopt for servitization and you are likely to adopt that because you feel that your strengths weaknesses match with the opportunities and threats that are there in the environment and the customer needs and desires. Then you have the strategy in put in place and that strategy has to be through customer; that means, you have to acquire the customers. And then you have to build, you

have to build on service delivery and operations and you have to manage through the performance management of the device.

So, from definition to customer acquisition to operation to management of the whole paradigm you got to keep on thinking about the customer and working for the customer which means that you need a business architecture, where the top level statement is that I am going to sell my product, develop my product as a service strategy. Second you look at service GTM sales and marketing.

You look at service delivery and operations then you look at post sales customer engagement. Then you understand technology for service as its own requirement it is not just a kind of bill of materials that need to be catalogued and logistically provided to the consumer with a service technician it is much more than that.

So, service technology is an entirely different bundle of technologies with digital enablers, then you have service performance management. By methodically embedding each of the 6 business architectural blocks into the business and the operating model a company will be able to transit to a sustainable servitization model. And in that process companies can deliver outcomes to customers rather than just products.

They can also drive superior customer satisfaction which in turn leads to superior revenues and superior profit margins. So, companies which are servitized in their outlook must change their business architecture their management processes and be able to measure to the requirements of servitization.

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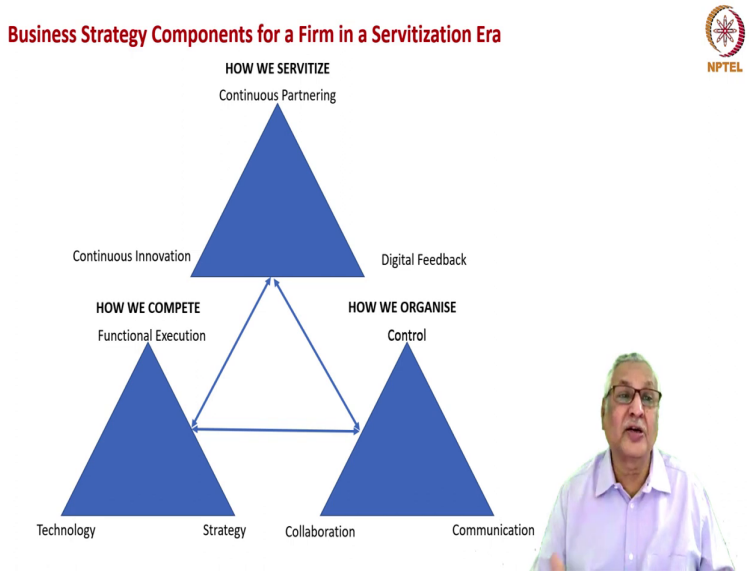

Let us look at this from a different angle. Let us look at the business strategy components for a firm in a servitization area, we look at the triangle in the bottom left. Typically how do we compete as a company? We have technology that enables our products, then we have strategy that tells how different functions of the organization and the organization as a whole must move forward and it that could include generic competitive strategies as to specialization, differentiation and niche.

Then all of these generic strategies are put into actual delivery in terms of functional execution, this is how we compete. How do we organize for this competition? We collaborate with each other internally, we collaborate with the channel partners, we collaborate with the vendors, we make sure that our company value chain is well managed, well oiled and well delivered.

And to be able to do that we communicate constantly in physical terms in emotional terms with all our stakeholders and to make this happen we also not only set this direction, but we also control the operations to see whether the direction is being maintained.

But in a servitized economy you will not only need to do these two triangular activities, you need to look at a third triangle that is the one which is going to lead us to servitization. How do we servitized? We ensure continuous innovation technology will not stay still in a servitized company. Because new technology has to be pumped in to this customer, so the customer stays with you. If you do not do that somebody else will take the lead.

And to be able to do that you require continuous digital feedback to ensure that the machine is running in an optimal condition and you also understand the strengths of your design and manufacture, the limits to your design and manufacture of the current generation of equipment. So, digital feedback analysis and digital feed forward are very important for this particular servitization paradigm.

And then you need continuous partnering customer is not a onetime periodic customer, the customer is a continuous perpetual entity who is always with you if it is an individual and that is how we servitized. So, to be able to cope ourselves in this servitization area with enough productivity and with enough competence, we need all these triangles operating the way they should be operating.

They how we compete triangle, how we organize triangle and how we servitized triangle? And these triangles are always in conversation with each other. And making sure that the business strategy and the business execution occur flawlessly.

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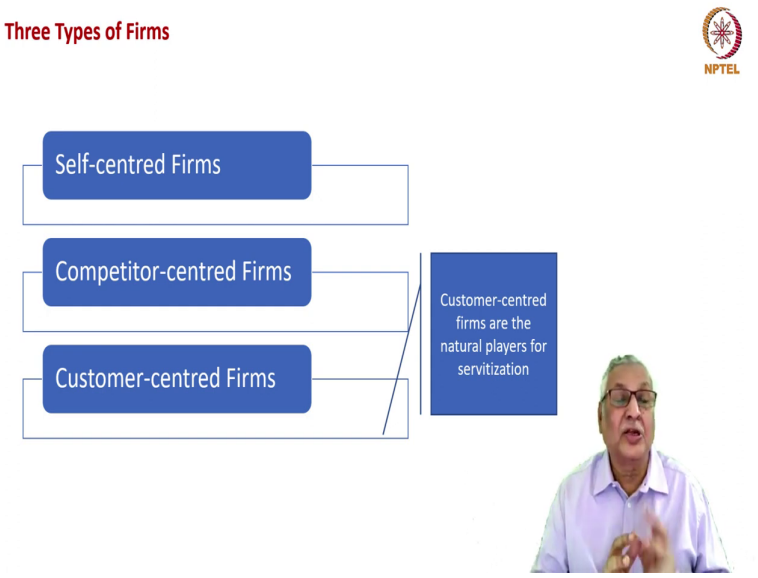

Servitization becomes important for certain types of companies. There are basically three types of companies; the first is the self centred firm. I do not mean that these firms are selfish firms when we say self centred firms they are inward looking; they always measure their growth in terms of their bettering over their previous performance. These are self centred firms.

Others are competitor centred firms. They do not worry about themselves, they always look what the competitor is doing, they always look at what competitors are doing. And then they try to get better of the competitors and these are competitor centred firms. But the third class of firms is the customer centred firms. Customers are the core and the very purpose of such firms all their activities are based on getting customers, on board and staying with the customers. This type of customer centred firms are the natural players for servitization.

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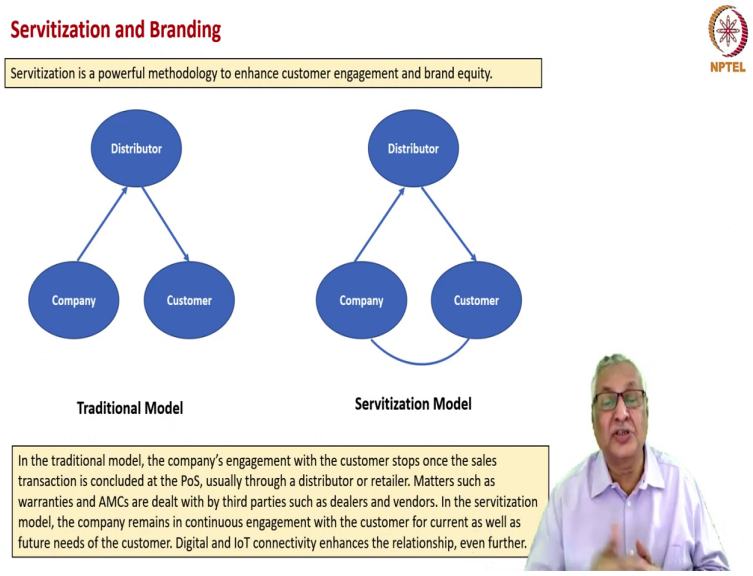

Why are we discussing servitization as part of this branding theme? Because servitization is a powerful methodology to enhance customer engagement and brand equity, let us look at the traditional model. We have the company, the company sells its products to the customer usually through a distributor or a retailer and therefore the transaction ends there.

But in the servitization model company may still sell the product through the distributor to the customer, but there is a continuous loop of information, collaboration and communication that exists between the company and the customer. So, in the traditional model the company's engagement with the customer stops once the sale transaction is concluded at the point of sale, usually through a distributor or a retailer.

Matters such as warranties and annual maintenance contracts are dealt with by third parties such as dealers and vendors. But in the servitization model the company remains in

continuous engagement with the customer for current as well as future needs of the customer. Digital and internet of things connectivity enhances the relationship even further. And when this kind of virtuous collaboration and communication and engagement happens the brand loyalty naturally increases.

Therefore servitization is an important component of branding, which is the core theme of our lectures this week, that is why I am spending this much time on servitization as a concept it completely changes how we do product design, how we do product manufacture and as students of management, how we view the traditional manufacturing. Servitization is a new chapter in the history of industrialization as I would say.

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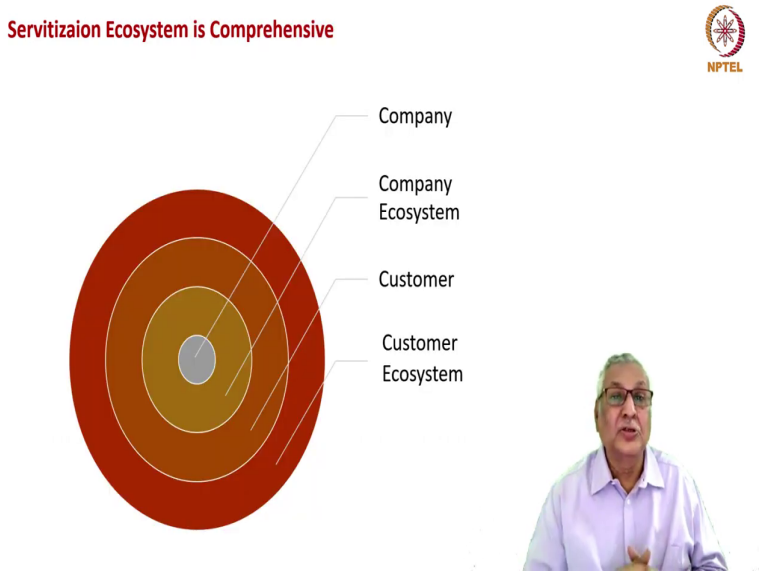

So, the servitization ecosystem is comprehensive, company as always is at the core then the company has an ecosystem which comprises the material suppliers, vendors, equipment

suppliers, the facility makers, the logistics providers all of these constitute the company ecosystem. Then we have the customer.

The customer an individual like you and me or a customer like a company with which we work and function it is a business system or an academic system that is the customer. But you also have the customer ecosystem because customer has to deliver to other customers with whom the customer is in relationship with.

So, the efficiency of a electricity generation company depends on the efficiency with which the power is produced and supplied without any load factor changes to the distribution company power distribution company. Power distribution companies customers are homes offices and the ability to price it products and distribute the power in all types of environmental conditions and to be able to do that every customer must be cognizant of the customer ecosystem that is relevant to the customer.

So, servitization ecosystem is completely comprehensive from the company to the company ecosystem to the customer and finally to the customer ecosystem. And when this servitization happens, then you can have full fledged customer service that happens for the consumer. And the brand loyalty the branding of the company become very exciting and very perpetual for such companies and for such customers.

Thank you for your attention, I hope you enjoyed this lecture look forward to seeing you in the next lecture.