

Toyota Production System
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Lecture - 31
Cultural Issues in Lean

Welcome friends. Now we are starting in the 7th week of this course on Toyota Production System. All through these course we are talking about how to achieve competitiveness, excellence through manufacturing and Toyota Production System the title of the course is one such technique or you can say is a philosophy which can help any organization. We started with manufacturing, but later on we realized that it can help any organization to achieve excellence.

And when you follow the principles of Toyota manufacturing or the Toyota way of working you will find that it is going to make lot of positive change in your personal life also. Wherever you read about Toyota system and those employees, executives working in organizations where Toyota philosophy is implemented. It became part of their personal life also.

So it is such a interesting concept of manufacturing, it is such a interesting concept of working that will create excellence not only at your workplace, but also at your personal life. Now during this discussion of Toyota Production System we discussed about 4P model of Toyota and these 4Ps are philosophy, process, people, problem solving and Toyota goes to the root cause of solving a problem.

We discussed an example that how if the oil is there at the shop floor because of leaking from a machine it resulted into the change in purchase policy of the organization because of your root cause analysis. They are repeatedly ask why, why, why and these repeated asking of whys resulted into the core of the issue. So Toyota is a way of working and then we realized that this way of working is more towards how to minimize the waste.

How to reduce the cost and how to become competitive by eliminating those waste then we also discussed about agile manufacturing that it is not only the cost reduction which is going to be helpful, which is going to create excellence in you, but at the same time you also need

to have some kind of external orientation, you need to understand the requirement of your customer and we discussed how lean and agile can be practiced simultaneously.

And further we discussed that the environmental issues, the global warming, the erosion of natural resources and all these kind of problem are creating additional pressure on manufacturing and therefore manufacturing must be done in a way that it should create minimum negative impact to the environment and it should also help us in protecting, preserving, conserving our natural resources.

So therefore the sustainable manufacturing concepts also became important part of our discussion and then we also discussed that how the traditional values related to quality, cost delivery are now changing into new kind of issues like adaptability, innovation, flexibility and based on that we discussed the concept of flexible manufacturing system. To some extent we can create some kind of synergy between agile manufacturing and sustainable manufacturing.

And you can say this finally flexible manufacturing. So different authors in different contexts have used these different terms, but more or less the implementation of all these things you will find lot of similarities because all these are looking towards external environment. Flexible means how with respect to customers changing demand you are able to provide those solutions without creating any kind of negative impact on the environment.

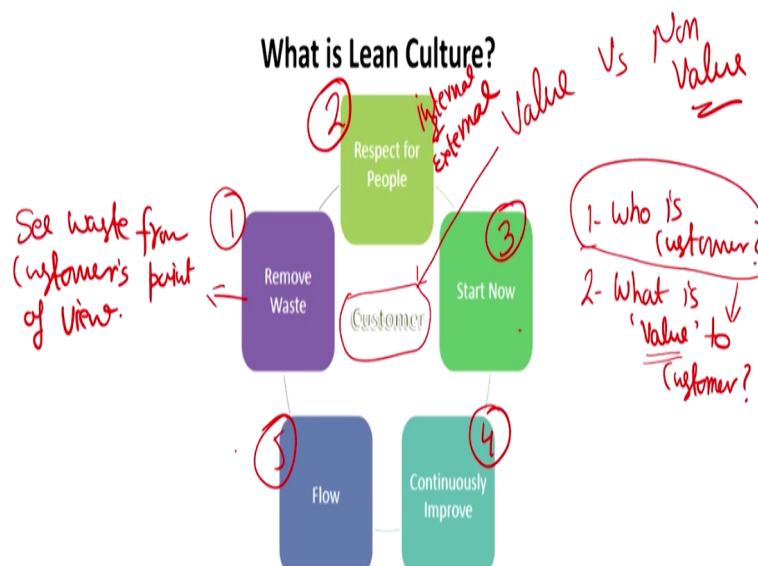
Without creating any kind of waste in the system and that is what your sustainable manufacturing and lean manufacturing respectively and then finally we also discussed that benchmarking is very important that you should know that what is the level of excellence in a particular department, in a particular activity and you should try to achieve that level of excellence that is benchmark.

So all these things we have discussed in our so far 6 weeks. Now in this particular session we will discuss some more interesting issues in lean organization because the focus of Toyota manufacturing is mostly on lean manufacturing that manufacturing where you have minimum waste, the organization where you have minimum waste whether it is a manufacturing organization or a service organization.

But you should have minimum waste that is the idea behind Toyota Production System particularly if I say lean manufacturing. So in the lean manufacturing there are different types of issues technology plays important role no doubt you have better technology. So you will be in fact able to create things more in JIT manner. So obviously your waste will be less in that particular case.

But there are interestingly large number of cultural issues also and therefore this particular session is focusing on cultural issues in lean organizations. So now let us see that what is the success mantra for a lean organization and the success mantra for a lean organization is basically coming from the mindset, the cultural background and therefore we are dedicating one full session only for discussing the cultural issues or cultural aspects of lean environment. Now what is the lean culture? Let us first try to understand what is a lean culture?

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Now the lean culture is having some important 5 elements and in the center of that lean culture is your customer. Now customer is the central point focal point in the discussion of lean organization whether I am talking of lean manufacturing or I am talking of a lean service organization you need to have your focus on customer then only you will understand value versus non value.

When you know what is required to my customer that only you will produce, that becomes value what is not required by your customer that becomes non value. Like in our definition of quality from the customer's point of view we say that fitness for use. Now fitness for use for an example you have very costly, very expensive, very elite shoes which are worn by

President of a country.

Now if you give that shoes to a soldier who is at the border he is standing in snow there he requires a shoes which is able to protects his legs, but now those shoes which are very expensive, which are very elite they are not able to provide the kind of safety, kind of comfort that person that requires that soldier requires. So it is non value for that person. So therefore shoes which is a value for one person may not be a value for other person.

So we need to understand that what is value and therefore the whole idea of lean system is centered around your customer. So 2 things are there who is the customer many a times we get confused because we do not know who is my customer. So the first important thing is correct identification of the customer. If you are able to identify customer correctly, then you are close to understand what is required.

And then what is value to customer. First identify who is your customer and then what is valuable to that customer. So these are 2 very important things with respect to your customer and many organizations are not able to clearly identify who is my customer and therefore they try to satisfy demand of all possible segments with their products and therefore they may not get success.

Therefore, nowadays we also understand that the issues relating to agile manufacturing, issues related to flexible manufacturing systems are only applicable when we are trying to satisfy customer requirements in unique ways and therefore identification of customer and once you identify them what is value to them becomes very, very important. Now once you have understood this now there are some important aspects.

The 5 important aspects which are according to customer you have to customize that first is you have to remove waste because you have understood what is value and what is not value. So what is all non value you remove that, that is waste for this customer. So see waste from customer's point of view. Do not see waste from your own point of view many a time we do this mistake that we see waste from our eyes, but we need to see waste from customer's eyes.

This is very important and particularly in India you see that large number of customers are coming from bottom of pyramid, large number of customers are coming rural markets, large

number of customers are marginalized people in the society. So therefore their requirements their value is very much different from my value. So I need to see what is valuable to them and what is not valuable to them that is one very important thing we need to understand.

The second thing is respect for people. You have two types of customers in any organization internal customer and external customers internal and external customers. Now you need to have respect for both internal and external customers. For many organization you can see just by having good time with them that they have respect for the external customer because you consider how it is perceived.

That you consider your external customer as a revenue source that external customer is center for revenue so that is your profit center and your internal customer the employee in your organization is considered to be a cost center and therefore normally organizations give more respect to the external customers rather than internal customers, but in a good lean culture it is very important that who is going to remove the waste.

Who is going to remove the waste, who is going to understand what is value and what is non value to your customers these are internal customers. So therefore you need to give lot of respect to your people and if you give that respect if you empower them, if you take them to higher level if you create a learning organization where they are able to think freely they will actually contribute in making your organization a lean organization.

So that is the second important thing that respect for people that is also very, very important. Third is start now. Many a times organizations feel that it is already too late. My competitors are way ahead of me so I cannot compete with them and we start like a suicidal cycle for ourselves. We feel that we are already out of race so there is no point of competing with those people who are far ahead of us.

But in a lean culture wherever, whenever at whatever time you understand the importance of lean you must start immediately that is start now. It is never late you can start at any moment that is the point of start now. Then next is you have to continuously improve that a waste is never ending phenomena. Have you seen the flow of water from a pipe so when water is continuously flowing from a pipe you need to clean that pipe occasionally on some frequency.

Otherwise there will be some kind of depositions on the wall of that pipe. So you need to regularly clean that pipe though there is no impurity flowing in that water clean water is flowing, but still you see that some kind of depositions are taking place. Same thing is in the organization also. Though you have adopted lean culture, you are expert in lean culture, but still you have some scope of improvement.

Improvement is a never ending activity. It is a continuous process so you have to continuously improve your organization. Every day you will find that something is lacking. So like presently we all know that USA is the biggest economy in the world it is touching around \$17 trillion, but they also know that they have to continuously improve otherwise tomorrow it may be China or it maybe even India also which can cross American economy.

So even if you are at the top you have to continuously improve to remain at the top position so that is continuously improved and that is also a very important essential aspect of lean culture and then the fifth one is flow. In lean culture we are not believing in randomness, we are not believing in unevenness. We want to have a smooth continuous flow of our activities whether it is service or manufacturing.

But there has to be a smooth flow of various activities. So that is how the 5 important elements of lean culture are centered around customer. If you understand that at what rate customers are purchasing your product so the very flow rate you will like to maintain in your entire manufacturing system. So that is how flow will take place. When you understand the customer and how the preferences of the customers are changing.

For an example if we see the data of our Indian automobile market in last one year there is a growth of around 14% sale in auto products, but the sale of SUVs in India has increased by 100%. Now it shows that Indian customers are moving towards SUV purchase more and more SUVs are being purchased in Indian market and it is also a sign of maturing auto market in India.

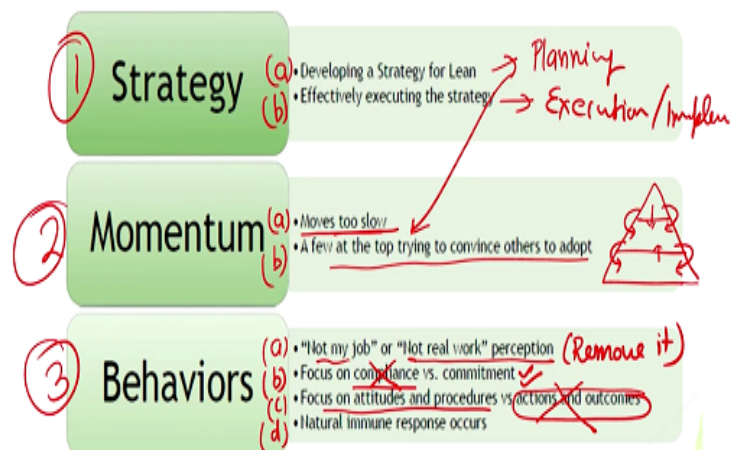
So when Indian auto market is maturing it is important to understand that they will love superior, they are not going to satisfied with the base models and therefore it becomes even more important for those cost effective manufacturers for example Mahindra, Maruti, Toyota

that they also should come with their SUV versions. So that is related that how customer is changing and according to change in customer you have to improve.

You have to provide the flow, you have to remove the waste, you have to respect the people and you should start immediately as soon as you understand your customer you should start immediately to satisfy the customer requirements with respect to value additions. So these are the elements of lean culture. Now why we are discussing the issues related to lean culture.

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Why Issues in lean Culture?



So there are 3 dimensions, 3 aspects in which these issues are discussed primarily. One is strategy. Now in strategy there are 2 aspects. One is developing a strategy for and the second is effectively executing that strategy for lean organization. So you have to effective strategy and then the implementation. So like how to eliminate the waste, what type of continuous improvement program you are going to have.

How are you going to respect your people, how are you going to maintain the flow? So planning is one part that developing strategy and the second part is execution or implementation. So these are the 2 parts related to strategy then the second is momentum. Now in momentum we have already discussed in our Toyota principles that moves too slow. You see take enough time do not do anything in hurry.

If you do things in hurry you will not get the sustainable answer for those questions. So if you want to ensure sustainability you should move slow then you are going to remain for long time in the race. If you do things in a hurry you will be exhausted, exhausted means you will

not be able to maintain the flow, you will not be able to concentrate about making the lean organization.

In fact when you take some things in very hurry you tend to waste lot of resources so that is also very important thing that you should move slow particularly move slow with respect to planning. You should do slow planning; you need to incorporate all your partners in the decision making activity. So take enough time 60% to 70% of the time we have discussed should be devoted for the planning purpose.

And then 30% time of the entire project be given for the implementation purpose. So that will give you much lesser cost of project. If you at the top trying to convince others to adopt. Now in organizations normally we see that there are people who have some kind of resistance from one hierarchical level to another hierarchical level. So though practically you will have different hierarchical level.

And here these people may not have a very good harmony a very good synchronization. So therefore it is very, very important that to have momentum in your organization there should be some kind of you can say connectivity between top level their immediate successors top level then immediate successors. So that you can create the momentum of work in the organization.

If there is no communication then there will be really a problem that how to implement, how to create that momentum of change in your organization and the third thing is behaviors. Now with respect to behaviors not my job or not real work perception. Many of us we are so much standardized in our routine activities that whenever something new comes we say that this is not my job.

And we have divided ourselves in so much tight compartments that we do not want to expand our arms. So that is a challenge and we need to overcome this challenge. So we need to remove it then focus on compliance versus commitment. This is also very important we are more focusing on compliance whether we have fulfilled the legal requirement, whether we have fulfill the regulatory requirements.

So our focus is more on compliance so for excellence organization. For those organization

which are going to be at the top of success they have to have more commitment than just compliance. So that is again a very important behavioral issues that I am not satisfied with just complying I want to go ahead of compliance, I want to have a very higher degree of commitment for that purpose.

Then another important behavioral aspect is focus on attitudes and procedures versus actions and outcomes. So now we are to be considering more importance that what type of process we are adopting, what type of attitude I am going to have rather many organizations are focusing on actions and outcomes by hook and crook where you follow shortcut, ethical, unethical whatever way you do I am more concerned about the outcome.

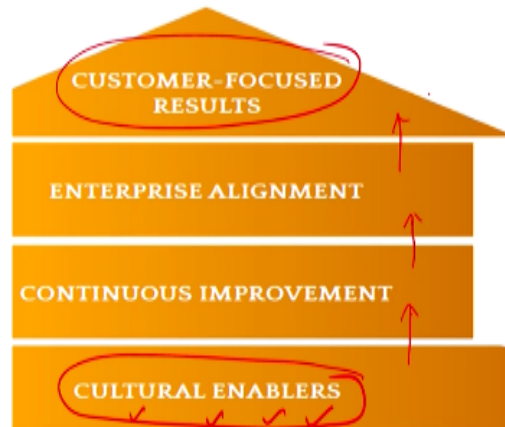
Whether you got the result or not that is what nowadays all modern manager says, but if you are having a right culture in your organization people will not ask about outcomes, people will not ask about the results. They are more concerned about the process that is again an important aspect of behavior that it requires lot of efforts. It is not possible that all of a sudden you become a totally transformed personality.

Another important aspect of behavior is natural immune response occurs. So you need to have the naturally immune response that means you should not create extra effort for something which is going wrong to stop it. You should not be affected by the external things so often. So you should create a system where automatically, naturally external things should not be able to affect your peace, your ability to think, your ability to think creatively.

So that is again a matter of practice over a period of time you learn that how you are immune to everything around you. You should learn the art that you are in crowd, but still you are alone. So that is the essence of natural immune system and then we see that what are the different dimensions of this lean culture and just as we discussed the first diagram in the form of that circular phenomena.

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The Four Dimensions of Lean Culture



Here we see that the 4 dimensions of lean culture are one is customer focus results. Finally, at the top of this lean culture you have customer focused results and the base of this is cultural enablers. So organization becomes lean organization why it is able to implement the lean successfully and at the root of that cultural enablers are there without proper cultural issues because just now we discussed that there are large number of behavioral issues which are very, very important.

Nowadays we are becoming more and more result oriented society. Now when the society is becoming result oriented how can you talk of procedures. Many a times we are not interested in procedures; you work very hard but still you are not getting success so people say that hard work is of no use if success is not coming. So we are obsessed with the outcome and therefore it requires lot of courage that you can think of process.

You can think of procedures without focusing on output and that is why it is important that culture, that everybody speak in the same language, everybody think in the similar direction that is the cultural enablers if you are trying to implement something where you are thinking to eliminate the waste sometimes you can see the benefit immediately, but sometime you may not be able to see benefits immediately.

And at that point you will see that benefits which are long term people do not have that much patience to wait for long term to see those benefits. So therefore they are more interested in the short term benefits immediate gains. So cultural enablers are very, very important, the culture of continuous improvement and when I am saying the culture of continuous

improvement.

Today I am here on a particular position so I am expert in the process of continuous improvement, but the real continuous improvement take place when I am able to create that organization where my successors are also able to follow, they are also able to take my position and they also carry forward this culture of the organization. So continuous improvement is not with respect to my processes but with respect to my human resource also.

So that is the issue with respect to continuous improvement. Then enterprise alignment that you are continuously improving but the direction of continuous improvement so that you are continuously aligned with the objectives, with the customer requirement and with the concept of sustainable manufacturing with the concept of lean manufacturing etcetera and therefore finally we say that the important dimension of the lean is customer focused results.

So what type of values customer are expecting from your product whenever Toyota name comes we expect that they are delivering quality at low cost. So it is not known for that kind of status symbol like Benz, Audi and Volvo etcetera, but the customer related value is Toyota known for low cost and good quality. So that is again very important that we are able to crate customer focus results out of our lean system or not. So these are the 4 important dimension of our lean culture.

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Core Principles of a Lean Culture

- Create Value for the Customer
- Build Alignment Around Common Purpose ↔ ERP
- Take a Process-Oriented View Towards
Process over outcomes
- Solving Problems
- Lead with Humility & Respect.

Now what is the core principles of lean culture now create value as we again and again discussed that we have to identify what is waste and what is value for the customer so this is

one important principle, building alignment around the common purpose. So the entire organization is having some common purpose and things like ERP you can say a vice-versa relationship that because of common purpose ERP type of things are possible.

And because of ERP you are able to achieve alignment between various functional areas. So it is a vice-versa relationship. Take a process oriented view towards solving problems. So you need to understand that processes are more important, process over outcomes. So process is more important than the outcomes and finally lead with humility and respect. We need to have full respect Japanese culture is full of respect to others and it is part of their organization also.

So like in India also we have lot of respect for our elders in the family, elders in our neighborhood those people get lot of respect those who are senior people, but we also need to bring this to our place of work that we need to lead, we need to create that system of humility and respect. So that is also a very important cultural aspect of lean organization. So these are the important core principles of lean system.

The 4 dimensions we just saw that how you are creating the culture, continuous improvement the alignments therefore everybody is going into the same direction and this is the customer focus, customer is at the center. So that is how we can understand this lean system of with the help of this diagrammatic representation. So with this we come to end of this session on cultural issues in lean manufacturing or lean organization. Thank you very much.