

**Toyota Production System**  
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**Module No # 02**  
**Lecture No # 07**  
**Culture behind Toyota Way**

Welcome friends so, now, we are in the second week of this course on Toyota production system we are discussing that in Toyota's case philosophy is the most important thing and based on philosophy, different tools techniques are there to implement those philosophy. Now whenever we talk about philosophy it is important to understand that philosophy is because of a culture. Therefore, in discussion of this Toyota production system it is very important for us that mere implementation of tools and techniques will not give us the desired outcome.

Many organizations are there you can see around you that organizations have started implementing projects like lean manufacturing there were started implementing projects like JIT, they have started implementing projects like Kanban and based on those tools techniques, they have developed the visual controls, they have developed a different type of inventory management systems,.

But soon they realize that they are not getting the benefits which are expected and then they start inviting consultants to help them that why they are not able to achieve the desired objectives and the very simple answer which I particularly feel is that mere implementation of tools techniques will not give you those results which you are expecting.

You need to understand that it is an organization wide culture which is more important than philosophy, imbibing that philosophy into people of your organization that is precisely the more important reason, then mere implementation of tools and techniques. So, in this particular session, we are going to focus that what is that culture of data, which is going to help you in giving some sort of guarantee about the success of Toyota production system.

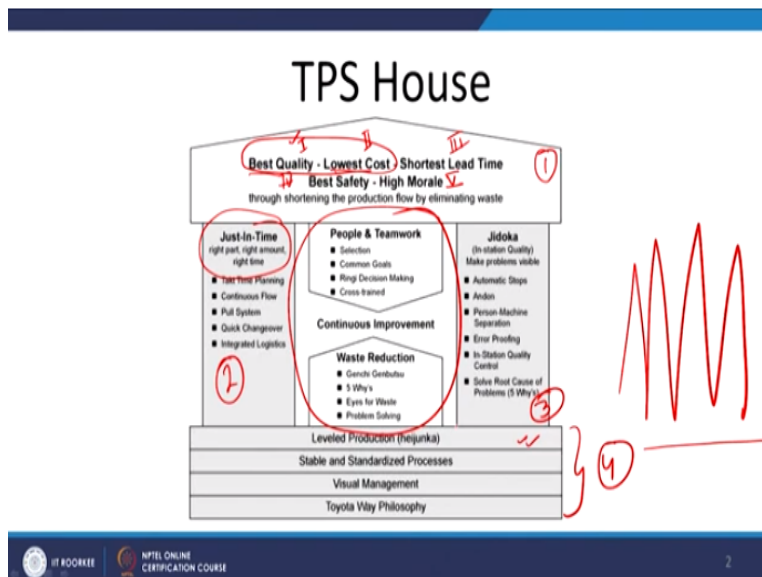
We all want to have excellence and since last many sessions, we are talking of excellence, that Toyota production system is a way to achieve excellence in the operations. So, there is no doubt

that we want excellence and for that purpose, tools and techniques will help us but those tools and techniques will only help when you understand the concept behind that when you develop that kind of enabling environment where tools and techniques give the desired output.

You need to prepare the field and once you prepare the field, then only sowing the fertilizers, seeds and water and pesticides will give you the desired crop. So, without preparing that field that ground you will not be able to use the best seeds, the best fertilizer best pesticides, the right quantity of water will not give you the appropriate output. So, understanding the requirement of culture, what type of culture or what type of ground you have to prepare for getting the output that is the focus of this today's session.

Now in this culture for Toyota way the important thing is that when you read different books, different papers, people have explained that in different ways. One simple way to understand the culture of Toyota is through Toyota Production System house.

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So, in this particular discussion when we are seeing that, it is TPS house, you see that there are four important things in a house, we know that we need to have a strong foundation, then we need to have supporting pillars and then a roof. So, pillars, roof and your foundation, these are important thing. So, in this Toyota production house, you see that there is a roof, two pillars are there and then this is the base.

So, these are the four elements, which are making my TPS house. So, depending upon the strength, depending upon how strong these four elements are, your structure will be accordingly strong, your house will be accordingly strong and the strong house will give the safety of people who are living inside that house. And therefore, this TPS house is going to help us that concept of culture behind Toyota production system.

Now, let us start discussions on that particular aspect. The first important thing the objective the roof based on your foundation, and then two pillars, you are going to have this roof. So, roof is giving the objective of your Toyota production system. So, you want best quality time and again, we want to we have already discussed that this Toyota production system is going to help you in achieving two objectives which otherwise was not possible and these are best quality and lowest cost.

So, these two are two important things rather two different sides of the story and which we are able to achieve simultaneously in TPS then with shortest possible lead time, how to shorten your processing time, that is the third important. So, first, second is the lowest cost and third is the small lead types and then with proper safety arrangement and keeping the morale of your employees higher, so that your employees your people, they feel elevated.

So, all these 4 things, this is the fifth high morale. So, these are the 5 important elements which are required in the objective of Toyota production system and not only for Toyota Production System, if I talk of a manufacturing organization and I want to discuss that what is your objective, what type of objective you see for a manufacturing organization or for in that matter to any kind of organization which is involved in business.

So, you will say that I want customer satisfaction, that satisfaction of customer is most important thing for me and then when you try to explain what is that customer satisfaction, so, that customer satisfaction you will see comes from either from good quality product, lower prices, on time delivery, you should have a very robust system for all these three things and those robust system comes from employees high morale.

So, that is the ultimate objective, which is not only summarizing the external customer, but the internal customer also. So, your employees are your internal customers and those who are

consuming your products, they are the external customer. So, that takes care of in totality all the stakeholders who are involved in your business, then two pillars on which this roof is based that two pillars are one is related to your inventory management, that is just in time.

That most of the organizations are focusing on this particular pillar, that is JIT right part in the right quantity at the right time, that is the philosophy of JIT. And everywhere now, lot of initiatives are being taken, we are trying to develop supply chains, where we can follow the system of JIT there is no need of inspection of incoming materials, incoming material from your vendor can directly go to the shop floor and from the shop floor your output can go to the next stage without any kind of inspection.

So, that is what happening that right product in right quantity at the right time with the objective of JIT and for that purpose, we are following the system of continuous flow pull based approach and therefore we are able to develop a concept of integrated logistics. Then another important pillar on which this roof of TPS house is based that is the system of Jidoka which is a Japanese word and this is that as a process part I have to take responsibility of work which I am doing.

No faulty work, no defective work, no defective output from my station should go to the next station, I need to own the responsibility what I am producing that is the concept of Jidoka. So, no defective piece should go from my workstation to the next workstation and automatically this will strengthen your processes, this will increase the capability of your processes. So that you will be able to strengthen the system and since we are also following at the same time, just in time, so and continuous flow.

So, this system of Jidoka will help us to surface the problem immediately you are having one piece system, as soon as the problem comes, you will immediately see that there is a problem and when a problem is repeatedly coming, then you need to see you need to apply the concept of root analysis. Yesterday, we were discussing about that, that we need to go to the root cause of a problem, we just not to solve only the symptoms rather see the root cause and that root cause analysis is required when again and again when you are having repetitive nature of problems.

So, that is the second important pillar. So on one side, you are taking care of material management and on the other side, you are strengthening the processes. So that no mistake is

carrying forward and the base for all these things on which this entire building is based these pillars are there, this roof is there, that base is based on long term philosophy visual controls.

And most important thing is leveling the production when you have spikes in your production system, you are creating some time overloaded systems and some time under loaded system and this type of dis balance in your system is a going to hamper the performance of the system because it will create more uncertainty in your system when you have spikes in your production system.

So, instead of these spikes, we require a almost horizontal level of production output, where you have more certainty and when you have more certainty, you can maintain continuous flow you can give right time of delivery to your customers, you know when to maintain a particular system. So, all though things become more predictable in nature. And when you have more predictability, your customer satisfaction will also automatically go up.

So leveled production that is going to be a very important thing in Toyota production system. And many organizations are not able to understand the importance of this leveled production. So, in our upcoming classes, we will be seeing that how to achieve this level of production in the organization. Because this is one of the foundation of this total production house then another important foundation is stable and standardized processes, it is again related to this leveling the production output.

When you have leveled production output, that means you have achieved some kind of stability and that stability is going to help you in giving the predictability. So, that is very much related. Then another important foundation element is the visual control. Because many a times there may be different types of barriers about control systems, the most important barrier in India can be the language because many of these philosophy issues are borrowed from Japanese and other cultures.

So, if you go to a multinational organization, many do's and do not's are written in English language, but the workers they are not trained in English language, they know their local regional languages. So, it is very important that we need to develop a lot of control mechanism

where language is not that important. And for that purpose, visual controls are more useful using the appropriate color coding using the appropriate signals which can be universally acceptable.

So, use of more and more visual controls, visual management is going to standardize the language of your control system in the organization and then the philosophy of Toyota way the long term philosophy that is also very important. And out of these 4 elements, which we have discussed two pillars, one roof and the foundation, what rests inside that house. Now, inside that house, you have people and teams.

So, they will feel safe, if you have this kind of robust house, then the people who are living inside that house, they will feel all the time safe, they will remain in high morale and that will be the committed teams for continuous improvement. And that continuous improvement teams will help in eliminating the waste, because we have discussed in our 4 P model processes and processes are mainly revolving around elimination of waste.

So, people will focus on continuous improvement and they will focus on eliminating the waste. So, that will happen inside that house and that is the entire culture of Toyota production system. So, if you can understand that, how these things are interrelated, these concepts of 4P are interrelated, how they are supporting each other, either in the form of pillar or in the form of roof or in the form of foundation.

So, without you have all these things, if one pillar is not there, your roof will not stand if roof is not there, that house has no meaning without foundation, neither pillar will be there nor roof will be there. So, all 4 elements are equally important and they make a kind of interrelated integrated system and that is the culture behind Toyota Production System, you cannot talk in terms of piecemeal systems. You have to have this kind of integrated system, then only the desired output will be achieved.

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- The Toyota way is more than tools and techniques.
- It is the people who bring the system to life.

Now next, we are going to discuss that how Toyota tools are less important and people those who are bringing that tools into the system are more important. So, the Toyota way is more than tools and techniques as I am saying again and again. And it is the people who brings this system to life without giving due recognition to your people.

So, it is very important thing in this culture that people are given the most important thing, tools and techniques are being developed by people, tools and techniques are being implemented by people, tools and techniques are improved by people. So, if you focus more on tools and techniques and less on people, desired results will not be achieved.

So it is people who have developed those tools, Six Sigma, lean, JIT, Jidoka all these tools are being developed by people. They will customize these tools for your organization and they will further improve these tools for your organization. So it is people who are going to help you in achieving the objectives.

And it is also very important that we need to customize these things as per my organization's culture, you cannot copy you cannot imitate the culture of other organization into your organization, each organization has some unique points, they have some unique values and based on those unique points unique values, you will see that you have a way of working in your organization.

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- TPS is a system designed to provide the tools for people to continually improve their work.
- The Toyota way means more dependence on people, not less.

So, TPS is a system designed to provide the tools for people to continuously improve their work. So, that is the meaning of TPS, you have some set of tools techniques, which are there to help people to improve their work and in that the role of people to improve those tools, that is also very important and that Toyota way more dependence on people, not less dependence on people.

Because it is important to understand at this time, we are in an era of continuously industrialization, which is more IT driven, which is more towards automation concepts like industry 4.0 are knocking on our doors, which is saying that we need to be more dependent on machines, you have to be more dependent on robots. So, on one side, you have this type of idea. On other side, you have Toyota type of production philosophy, which is saying that you need to have more dependence on people.

And therefore, you as a manager need to see that how to develop that optimum balance that we need to have a proper dependence on people and at the same time, we need to be proactive in using those advanced technologies tools, but again, it is important to understand that whatever latest technology, whatever tools of automation, you are using these tools of automation are to support human being are to support the labor working in your organization.

So, all implementation of tools and techniques are being done by people. So, therefore, it is saying that you have to depend more on people, how you are dependent on people, the way of dependence, the requirement of people may change from one time to another time, there may be



some kind of manual work maybe in 1980's when you are fixing a screw in some assembly. So that was done manually in 1980's with more and more automation, now robots are fixing that screw.

So, that type of skill set may change, but dependence on people will always be there for improving the organization so, that is important thing. Now the whole Toyota way principles can be divided into 4 important premise and these important premise, we have also discussed under 4 P discussions. Now what are these premise?

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## Basic premise of Toyota way

- ① • Long term philosophy
- ② • The right process will produce the right results
- ③ • Add value to the organization by developing your people
- ④ • Continuously solving root problems drives organizational learning

One is long term philosophy the second is about the process, the right process will produce the right results and most of the principles of Toyota are under this second P only. Third is add value to the organization by developing your people that is about people first was about philosophy, second was about process and fourth is about continuously solving root problems drives organizational learning, so forth P is about problem solving.

So, four basic premises are there and now let us quickly see, though we will be having detailed sessions on each of these principles, but in a simple way to develop the foundation for our further discussion, let me take you to these different premise of Toyota way.

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## Long Term Philosophy

① Base your management decisions on a long term philosophy, even at the expense of short term financial goals.



The first is long term philosophy and in that long term philosophy, the principle is that base your management decisions on a long term philosophy even at the expense of short term financial goals. That means we need to be visionary we need to be thinking for 10 years 20 years not thinking about the immediate financial gains, most of the time, it happens just reverse of it, those who are leading the organization, they feel that I should be more concerned about my tenure.

And therefore, they go for short term financial gains for the organization at the cost of long term vision and many organizations therefore, remain as a mediocre organization they are not able to reach to the greater heights of the success. So, this is one very important principle, but it is very difficult to implement, we will see with the help of some cases studies in our coming sessions that how different organizations have practice this particular principle.

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## The right process will produce the right results

- 1 • Create continuous process flow to bring problems to the surface.
- 2 • Use “pull” systems to avoid overproduction.
- 3 • Level out the workload.
- 4 • Build a culture of stopping to fix problems, to get quality right the first time.

The second premise is about the process. So the right process will produce the right results and in that you have various principles. So, the one principle says that create continuous process flow to bring problems to the surface. So, as we have already discussed, do not create spikes in your production system, rather create a continuous production flow, when there is a continuous production flow, whenever there is a problem, immediately that problem will be noticed and there will be always a sense of urgency in that case.

So, problems will be immediately highlighted when there is a spikes. So, you have some extra production all the time with you and that extra production will cushion out the problems and many a times the problem will not be highlighted. So, that is there then we need to follow the concept of pull system to avoid the overproduction. We need to discuss it in detail level out the workload already we have discussed that we need to create a constant workload for our production systems with respect to machines also with respect to manpower also.

Then we need to build a culture of stopping to fix problems to get quality right. The first time Jidoka concept which we mentioned that each workstation has to take the responsibility of quality, what it is producing that we need to see that we standardize task. And by standardizing the task we are going to help in continuous improvement because it will result into more predictability.

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The right process will produce the right results

- Standardize tasks are the foundation for continuous improvement and employee empowerment.
- Use visual control so no problems are hidden.
- Use only reliable, thoroughly tested technology that serves your people and processes.

Then using visual controls and this visual control will also help us in that all problems are properly surface doubt, no problem remains hidden. And at the same time, particularly in countries like India, it will also avoid the problem of language barrier then use only reliable thoroughly tested technologies that can serve your people and processes. So, these are with respect to processes.

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3} Add Value to the Organization by  
Developing Your People and Partners

- Grow leaders who thoroughly understand the work, live the philosophy, and teach it to others.
- Develop exceptional people and teams who follow your company's philosophy.
- Respect your extended network of partners and suppliers by challenging them and helping them improve.

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Then the third important premise is to add value to the organization by developing your people and partner. It is very important that you respect your people, you respect your partners and yesterday we discussed that we continuously need to challenge our people. We also discussed

that there is a type of problem waste when we are not able to harness the creativity of our people for the benefit of the organization.

So, those types of challenges, those types of problems can be handled by developing our people, so that they add value to our organization. So we need to grow leaders, nowadays, there is a word which we all know entrepreneur, but now with entrepreneur we are talking off antrapreneur's also. So, we need to create managers within managers, we need to create companies within companies and this will help us in developing leaders developing our people for greater excellence.

Then we need to have exceptional people and teams who follow the company's philosophy that what values my organization has, we need to develop a system that value system can transfer from one generation to another generation and I should be able to live those values of my organization then respect your extended network of partners, we all understand that this is an era where one organization is not competing with other organization.

Rather, one supply chain is competing with other supply chain. So we need to respect our extended partners those who are in my supply chain, they are my extended partners. So, we need to see that how we respect our partners and with the help of those partners, we need to collectively improve our entire offering to the customers.

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## Continuously Solving Root Problems

### Drives Organizational Learning

- Go and see for yourself to thoroughly understand the situation.
- Make decisions slowly by consensus, thoroughly considering all options, implement decisions rapidly.
- Become a learning organization through relentless reflection and continuous improvement.

Then the fourth premise is about continuously solving root problems that drives organizational learning. Problems will come but we also need to see that we are going to the root cause of those problems. And when we are going to the root cause of those problems, it will help us to understand those problems and their solutions in a better way.

And this will also promote organizational learning, how organizations grow from one stage to another stage, because they have a system of knowledge management and that is again a very important cultural aspect, when we are implementing the Toyota Production System. Here, what we say that go and see for yourself to thoroughly understand the situation that top management should visit the site of problem.

And when they go to see the site of problem, they understand the problem in a much thorough manner. And if I take a very simplistic meaning of that, when top management is involved in a problem solving activity, it automatically accelerate the working of the entire organization, it creates a sense of urgency in the entire organization. So, that is a very shuttle output, but that is also important one.

Then another thing which is related to this organizational learning is that you need to make decisions slowly by consensus and then implement those decisions in a rapid manner with a force. So, involve everybody in taking the decision take enough time Take your all partners into confidence. But once you have taken a decision, then you should be able to implement rapidly with full force.

And then finally, we need to become a learning organization through continuous reflection, introspection and this will help us in continuously improve our self in many discussions, we focus on seeing on our competitors, but here, it is very important that we also need to see our self we need to introspect and that introspection will help us in improving the organization. So, it is a very important cultural issue that not only see outside, but also see inside and when you see inside, lot of insights will come.

So seeing inside will help you to generate insights and those insights will help you in continuously improve your organization. So with this, we understood that what are the basic

aspects of Toyota production system, the cultural issues related to Toyota production system. So with this, we come to end of this session thank you very much.