

# Chapter 14

## Project: Your Lean Journey

Following the understanding of all the Lean Wheel System's elements comes the moment to assemble your own wheel and start the lean journey by yourself. As we discussed in Chap. 7, adopting lean thinking in a company is a cultural change, as a consequence, changing a Product Development Process into a Lean Product Development Process means changing (sometimes subtly) the mindset as well as different aspects of your company.

In order to help you in this endeavor we are going to give you some advice on how to prepare yourself and how to proceed. But always keep in mind what we stated in this book's introductory chapter, since any company can copy techniques and practices or purchase the tools and technology used by any other company. Successful utilization of such techniques, practices, tools, and technology, though, depends on the ability to customize them in a way that makes them fit to the unique reality of the company using them. Remember that a lean tool can be used in non-lean way and vice versa.

### 14.1 Setting Your Attitude

As any athlete who makes a careful and thorough preparation before an event or competition, you must prepare yourself before starting your lean journey. This will help you avoid an over estimate of your expected gains, and will prevent you from getting discouraged if your progress is slow.

Every day, you should keep a *hansei* and *kaizen* attitude (humble and driven, never complacent) thus making your daily job a bit better each time. Also, work on becoming an example for your team, inspiring them to do the same.

By having the burden of responsibility on us, we tend to keep going even if something small happens. We postpone analyzing the problem and getting to a solution. These small problems are like sparks that will trigger lots of firefighting sometime in the future. A fire seldom starts big!

Set specific, measurable, component level goals to build continuous improvement into each program. Celebrate every inch of your progress, it helps create a positive and winning mood in your team.

We also suggest that from time to time you double check your company against the product development low performance drivers we list in Appendix A. Appendix A is a good resource for you to find the presence of low performance drivers in your company, and for you to start working on them before they cause real problems.

We like to say that there are ten tenets for the lean leader:

1. Do understand the value that any initiative you take has to deliver.
2. Do make abundant use of go-and-see, being humble, and learning from everyone.
3. Do use what you learned to define a vision and make it a goal everybody will go towards.
4. Do create stable and steady improvement by taking one step towards the vision at a time; avoid great advances and regressions cycles (keep walking forward!).
5. Do think thoroughly before you act, and act fast after you think.
6. Do not be afraid of making mistakes; be afraid of not learning from them.
7. Be afraid of not making mistakes, maybe you are living an illusion.
8. Do accept your mistakes and let the team know that you will accept theirs while progressing towards the goal.
9. Do first, then say (be the reference).
10. Do not have a complacent attitude towards waste.

## 14.2 Before You Begin the Journey

Before you begin, you have to make sure you have all the gear and have assembled the right wheel for your journey.

First and foremost: make sure you have top management support. Any cultural change success is doomed if you have no support from high above. A top management public support acts like a force pulling the changes. Without it, any vision you define is your own and frail since it is not corporate aligned.

Remember that front loading the product development process means changing priority of how the time, money, and resources will be used (see Chap. 2). Therefore, how do you think you would be allowed to do so without upper support? For instance, how do you think you would be allowed to perform SBCE or to spend time during *kaizen* sessions?

Second, you must assemble a credible transformation team. The people responsible for driving lean must have active line involvement. Driving lean from a staff function with no active line roots reduces the initiative credibility [1].

Finally, create energy, critical mass, and awareness by communicating the change and educating the people. We are not talking about extensive training and

materials rolled out to everyone before taking any action. We are talking about making the impacted group aware about what is going to happen and the expected benefits to be achieved.

Setting expectations is paramount. For instance, a manufacturing company in Brazil started implementing lean manufacturing in two of its sites at the same time. In one of the sites the initiative worked smoothly, the other went on strike. The reason for that: good/bad communications on what to expect from the changes. Even though this was a manufacturing process change and not a product development process change, it tackled the same issue we are talking about—changing culture and mindset.

### 14.3 Setting a Plan for Your Trip

Defining or changing your company's own development process is a tricky job. Some companies defined their process solely based on benchmark and on incorporating accepted best practices. Even though these sources give them good directions, you must cautiously plan your lean journey. We suggest taking the following steps:

1. Set the vision of your new product development process.
2. Identify the value through your product development process value chain: each company has a different value chain and you must understand what and who are you dealing with, how and which value they perceive.
3. Identify the possible wastes preventing the full value to be delivered: your process should be robust against waste. Considering the PDP peculiar particularities (Chap. 1), perform what-if analysis where you consider different scenarios and its possible issues and outcomes will help you identify possible waste causes. The comprehensive waste drivers list presented in Chap. 6 gives you a good start.
4. Identify the best practices, tools, and techniques (labeled and not labeled lean) that would help you to reduce/eliminate these wastes. Remember that the tools Toyota or any other successful company that applies the Lean Philosophy uses the tools that best fit them. It's not necessary for you to use exactly the same tools, but you shall pursue the same goal of internalizing the philosophy. Therefore, be creative about the tools while making sure that they have sufficient literature to support its correct use. By the way, using a new tool often is easier than using an old tool in a different way.
5. Reflect on your organization's maturity level in order to incorporate the alternatives of best practices, tools, and techniques you have chosen previously. Remember the climbing the stairs metaphor (Chap. 4), if your company is actually on the first step, jumping to the twentieth step might be very dangerous. Be careful and respect the limitations imposed by your people and process maturity level by taking care while climbing the stairway.
6. Plan the steps of your stairway (they will act as pull events).

**Table 14.1** Using the VFD to support your lean journey

VFD element	Adaptation to supporting your lean journey
The product	What is your future PDP vision?
Stakeholders	Who is involved in performing, supporting, and receiving the results from your PDP?
Value items	What value do these stakeholders pull?
Measures of effectiveness	How is the value these stakeholders perceive present in the PDP?
Value delivery functions	Which are the PDP's activities?
Risks	What are the perceived risks to the improvement project? How can the company's maturity level affect the improvement process?
Value delivery team	Who performs the PDP activities? Who is going to support the improvement process project?
Pull events	What is the game plan for making the process changes, incorporating the best practices, tools and techniques, while mitigating the identified risks? What are the steps from my planned stairway?

As you could have imagined, the Lean Product Development Process we presented in Chaps. 9–13 can be easily adapted to support your PDP improvement (Table 14.1).

Be sure, though, that no plan gets away unchanged after execution. Indeed, the only assurance you have after you finish a plan is that it will not happen exactly that way! Therefore, you will need double the energy you use to plan it to execute it.

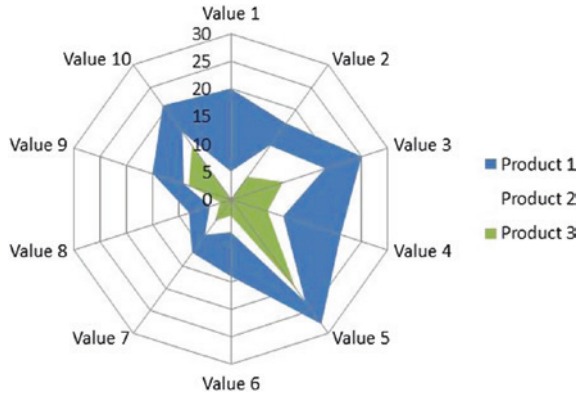
## 14.4 On the Road

While on the road, use the continuous improvement (Chap. 6) to create a stream of changes into the PD process in a way that the PD team can absorb and steadily grow by incorporating the best practices, tools and techniques.

The cross functional group composed of the value delivery teams should do the climbing of each step up your stairway of pull events as a PDCA cycle.

Different from physical products, where every piece, module, or system typically keeps its characteristics and functionalities after being developed, processes cannot be left alone. As we discussed in Chap. 6, a process, if left by itself, tends to erode and lose performance. Consequently, a sustaining team must support the process owners until they get used to the improved way and is capable of doing the continuous improvement by themselves.

Use the PDVMB to review and report progress and metrics. We emphasize the benefit of using a radar chart for showing the project progress on delivering value as each pull event is executed (Fig. 14.1).



**Fig. 14.1** Visually keeping track of the progress

Never stop going and seeing. Identify the improvement effect on the total PD system; pay special attention to identifying and addressing the issues of linkages and flow between processes.

## 14.5 Bumps on the Track

One thing we can assure you: the road ahead of you is neither paved nor smooth, and that your trip will be eventful. From our experience, the main sources of bumps you might expect while on the lean product development journey's track are related to:

1. Breaking the roots from the traditional paradigm;
2. Solving misunderstandings of the lean philosophy; and
3. Falling in the common pitfalls.

### *14.5.1 Breaking the Roots from the Traditional Paradigm*

Even motivated teams struggle to give up on the actual paradigm. This is true if they are either in a comfort zone or facing a crisis (although when in a crisis people's minds are more open to change).

Plain and simple: people do not invest the time to really understand the new way; they often jump into biased conclusions. By really understanding we mean recognizing:

1. What remains the same as the previous way: When changing a complex process like the PDP, we expect that some things (maybe lots of them) remain the same. This is particularly true while applying continuous improvement.

2. What is similar to the previous way: This is the tricky part, when people jump to conclusions by (wishfully) thinking they understood it correctly. Since we measure new thing using our previous knowledge, if you leave the people alone to understand the new way, their previous experience will lead them to the wrong conclusions. This is where training, communication, and particularly the mentor-mentee system make a difference.
3. What is completely different: Even though this part is easy to recognize, here is where skepticism reigns. Again, training, communication, and the mentor-mentee are a must here.

Even though the traditional and the lean way aim to design and develop the best product/service, in reality they achieve different results. Companies applying the lean way deliver better products (better fit to the pulled value).

### ***14.5.2 Solving Misunderstandings of the Lean Philosophy***

Although being lean means focusing on delivering value while reducing/eliminating the waste, the first aspect that comes into people's minds when facing the "lean label" is "waste complete elimination." They expect doing more with less.

Some people even try to take advantage of the transitioning to lean effort by eliminating work they are not fond of doing, regardless of whether it delivers value or it is a necessary support to the value delivery activities.

For the people that believe lean = waste reduction, speeches advocating front loading the PDP and the use of SBCE are paradoxical and confusing. This is the reason that any change effort (transitioning to lean in particular) should be preceded by a well-designed and executed communication plan.

### ***14.5.3 Falling in the Common Pitfalls***

As previously listed in the ten tenets for the lean leader, the common pitfalls also have to be constantly in your mind. While the former say what you should do, the latter lists what to avoid doing.

The common pitfalls are:

- Aimlessly applying tools: Remember that it is not the tools that make you lean, but the philosophy behind them. Lean labeled tools can be applied in a non-lean way, and the other way around is also true. How do you know you are doing it right? Simple, the implementing of individual tools must create positive impact on the development process flow.
- Waiting to achieve perfect stability before getting started: It is true that a perfectly unstable process is harder to improve, but once you have a clear vision of where to go, you can start walking even if the process is not completely stable.

Waiting for perfect stability is like missing the vision for the perfect stability of the current process.

- Excessive communication without action: This is the same case as the story of the boy who cried wolf. Communication without action gives the sense of false start and erodes the initiative's credibility. We learn lean by doing, not by listening or reading.
- Making kaizen events an end unto themselves: Some companies define a kaizen quota for each sector to perform in a period. While these kaizens help teaching and incorporating the continuous improvement routine into the corporate culture, you should balance these learning kaizens with real improvement kaizens. By real improvement we mean those planned kaizens that have a system focus [1, 2].
- Complicating when you can keep it simple: The world is already getting more and more complex by itself, avoid adding more unnecessary complexity. Remember that this unnecessary complexity will only lead to waste.
- Giving responsibility to an underqualified/under experienced transformation team: Some companies send a few people to a training session and expect them to be experts, thus giving the responsibility to make a cultural change that they are not completely prepared for. [2] This ends up burning the credibility of the lean initiative.
- Letting outside experts do it for you: In order to understand the lean philosophy, one learns by doing. [1, 2] You can (and should) take the advantage of having external mentors, but they are the mentors, you are the executer.
- Not taking into account the actual company/team maturity: What we learn from the literature and from other companies' experiences is much more about their final result than the difficult path they had to follow in order to achieve it. You have to consider your team/company's maturity level and make sure your journey considers advancing it from level to level. Jumping levels usually creates greater assimilation difficulties and the related natural resistance to change.



## 14.6 A Practical View

From our experience, there are some aspects you might consider doing, which can improve the chances to have a better ride.

- Put up a block diagram showing the sequence from preparation to execution plus bumps.
- Use what we discussed about the VFD in order to plan your lean journey. Indeed, the vision you want to achieve is the arrival destination and the “product” from your lean transformation project.
- Use the PDVSB to make visual your roadmap.
- Use kaizen events to overcome all the bumps you find on the road as well as for training.

- Do not hesitate to stop on the side of the road and get some help from experienced mentors.
- Remember that the wheel hub elements (value, waste, and continuous improvement) are the core of everything else, therefore do not stick to lean-labeled tools, but creatively apply the available tools.
- Utilize a small pilot to achieve quick results. These results can be used as success cases that will help market the lean transformation initiative as a whole.
- Remember that a good plan helps but does not guarantee the journey's success: there are no rules, only exceptions!

## References

1. Morgan JM, Liker JK (2006) *The Toyota product development system*. Productivity Press, New York
2. Rother M (2010) *Toyota Kata: managing people for improvement, adaptiveness and superior results*. McGraw-Hill, New York