

Adopting Lean AND Six Sigma for operational excellence in Services



Why are manufacturing techniques like Lean and Six Sigma improvement methodologies gaining attention, but struggling to be adopted in the Services Sector? Coxswain Alliance takes a look at how these fundamentally sound methodologies are relevant to any industry. The key is to be able to internalise the core messages and experiences of those who have spent decades developing and refining these techniques and be able to interpret them into your own environment.

In this article we examine the growing adoption of Lean and Six Sigma improvement methodologies in non traditional sectors – specifically the services sector. We start by examining why it has such a deep and successful history in manufacturing environments and highlight distinctive cultural issues. We discuss how Lean and Six Sigma are relevant to the Services Sector, and talk specifically about the potential pitfalls when introducing Lean or Six Sigma methods, and how to make your implementation more successful.

Lean and Six Sigma are complex improvement and cultural change programs, evolved in some organisations, imitated in many.

Coxswain Alliance's core focus is the implementation of changed work practices – here we have distilled our experience and some lessons learnt from one of Australia's earliest adopters of Lean within one of our largest financial institutions. For additional information on Lean Six Sigma, visit our website: www.coxswainalliance.com.

IN A POST GLOBAL financial crisis environment, many organisations have moved past a cost-cutting phase, and are now examining how to take the next

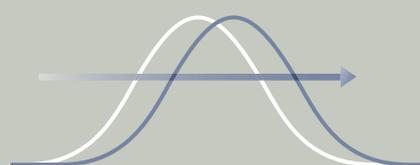
What is Lean?

Lean is fundamentally about culture, i.e., 'this is the way we do things around here'. That implies a range of issues for an organisation seeking to adopt Lean as a business improvement strategy. It focuses on dealing with the flow of information and materials **between** process steps, with a focus on waste, cycle time, process flow improvement and removing 'non-value adding' work.

Lean

- > Focuses on customer value
- > Eliminates process waste
- > Improves cost & delivery
- > Based on growth strategy

Lean shifts the performance of the process to the 'better' end of the spectrum.



What is Six Sigma?

Developed by Motorola in 1981, it springs from a range of existing quality improvement methodologies. It is used to analyse cause and effect. And is most effective when used to address poorly performing process steps **within** a process, with a focus on shifting the average time taken, reducing variation, and making processes more robust and reducing waste and cycle time.

Six Sigma

- > Focuses on customer quality
- > Eliminates variability & defects
- > Measures & improves quality
- > Aligns to strategic goals

Six Sigma reduces the statistical variation in how the process is currently conducted.



Lean + Six Sigma = Value creation

step to improve their business. With the rapid de-scaling of most businesses over the last twelve to eighteen months, many companies are now asking a different question:

“We’ve made significant cost reductions already – how do we continue to decrease the cost of our product or service, without impacting service levels or quality?”

This is a question the manufacturing sector faced three decades ago. Their response was to engineer improvement from within. This was a gradual response and has taken decades of learning.

Now, Services Sector organisations are examining experiences beyond their immediate sector, whether it is other markets or other industries, to look for answers to their needs. This is why it is now common to see Services Sector organisations, and financial services businesses in particular, seeking to learn from the approaches which manufacturing and heavy industry have taken to survive and to stay relevant.

Why Lean and Six Sigma became so prevalent in process driven industries.

Higher customer expectations, cost-cutting pressures, slimmer margins and reduced lead times are challenges manufacturers faced long before the Services Sector. The Lean/Six Sigma business operating philosophy in which customer value drives manufacturing processes, has provided impetus for many organisations to eliminate non-value-added activities, helping to reduce lead times, decrease variability, increase productivity and improve quality and throughput.

The relevance of Lean/Six Sigma to the Services Sector challenges today.

Lean and Six Sigma improvement models start from two basic premises:

1. You can improve the overall process by reducing the steps or making them more efficient. (LEAN)
2. You can reduce the variation within each process, by minimising the ‘errors’ that have to be fixed. (SIX SIGMA)

In services, the core processes of an organisation are subject to the two points above – you can reduce the steps and you can reduce variation. Consider that 60% to 80% of all costs associated with meeting customer demands are administrative or non-production related. The challenge is to interpret the Lean

and Six Sigma disciplines into the specific environment.

This requires a fundamental interpretation of the key drivers of the business and an ability to communicate those issues not from a strict manufacturing perspective, but from your own organisation’s perspective. Simply put, talking about waste makes sense in a factory – you can see it piled up in a corner, dumped in hoppers or being melted down to be re-worked. In an office environment, people cannot see this as readily, as it may be hidden behind the technology of how current offices operate. Waste can be the double data entry that occurs when you re-enter the same information multiple times, or the reports which are done vigorously each week – but have limited use and never prompt any action from the organisation.

Adopting Lean improvement methodologies for the Services Sector – what do you need to do?

Lean and Six Sigma improvement methodologies can operate at many different levels, from the enterprise to the individual. The aim is the same, but scale and practices vary.

At the Enterprise level:

Streamlines and accelerates those processes that touch external customers and suppliers such as order entry, customer service, accounts payable/receivable processing, marketing/sales, R&D, product development and distribution.

At the Organisational level:

Streamlines key support processes (e.g. Information Technology, Human Resources, Engineering, and Purchasing), identifies internal customer requirements and value, and improves communication and cross-functional cooperation.

At the Departmental level:

Focuses on objectives, reduces activities that add time but little value, measures progress to Takt Time, reduces hand-off breakdowns, implements Pull and Kanban systems and uses Visual Management to identify issues.

At an Individual level:

Reduces paperwork, manual entries and errors using Standard Work Procedures, improves organisation using 5S (a workplace organisation methodology program – the key concept is to order items or activities in a manner to promote work flow), and clarifies individual roles, responsibilities and objectives.

Core elements of a Lean program

1. Lean is a long term philosophy, underpinning the overall strategy.
2. Understand the process steps in a high level of detail.
3. Only do what is required when it is required.
4. Remove peaks and troughs in process.
5. Get it right first time.
6. Standardise as much as possible.
7. Use visual tools to support decisionmaking.
8. Technology must be reliable.
9. Build future leaders from within.
10. Build strong teams.
11. Support your partners and suppliers.
12. See for yourself what is going on.
13. Get the right decisions made by the right people.
14. Culture of openness: anyone can – and should – raise or flag problems.
15. Implement rapidly once consensus achieved.
16. Continuous improvement underpins long term gains.

Core elements of a Six Sigma improvement program

It is a 5 stage, sequential process:

1. Define the problem.
2. Measure key aspects of the performance.
3. Analyse the data to get to root cause of variation.
4. Improve or optimise the process.
5. Control process performance with management tools.

These are high level overviews of the Lean and Six Sigma processes. For a more detailed explanation of this and for an explanation of the terms used within this article, go to our website, www.coxswainalliance.com

If eliminating waste is a key driver of Lean, what does it look like in your organisation?

- > **Waste of over processing:** efforts that create no value from the customer’s viewpoint.
- > **Waste of inventory:** more information, project, material on hand than the customer needs right now.
- > **Waste of defects:** work that contains errors, rework, and mistakes or lacks something necessary.

Avoiding the pitfalls

Three areas of potential failure



There are 3 main drivers of lack of traction or failures in Lean programs. They are:

- > How well is it led?
- > How well are the organisation's people set up for success?
- > How is the program deployed?

Management/Leadership traps

Experience shows us that the main reasons for implementation failures involve senior management and their leadership. Ultimately this group is responsible for everything that happens – and doesn't – with an organisation. Failure here compounds failure in the other areas. Strong responses and success here can mitigate problems in the other areas. The traps:

1. Poor development of the business case for Lean.

Unless there is a strong business case for a Lean initiative, it's hard for top management to develop and maintain the passion and determination necessary to implement it; and the initiatives will likely flounder.

Lean must be translated into the language of business: time, money, risk. Future state modelling is vital: a strong, objective assessment of where the company is now, where it needs to be and how Lean will get it there is fundamental. Think in terms of return on investment (ROI).

2. Insufficient understanding of Lean/Six Sigma and its elements.

It's critical that senior management understands the fundamentals of Lean/Six Sigma in sufficient detail to be able to interpret its relevance to their business and the project in play. They must understand the elements of the methodologies being used and what they provide. They must be able to provide their people with a strong and an informed direction. This is critical to prevent expectations being overestimated or understated. The choice of which elements to deploy and the order of deployment are critical and depend highly on the nature of

the organisation; this then makes it essential that senior management have sufficient understanding of the elements and their uses.

3. Insufficient top management focus and involvement.

Lean is not a project: it is a fundamental change in the value delivery system and the culture of the organisation. Top management must lead from the front, this must be done consistently and it must be seen to be a key organisational priority.

4. Communications: too little, too complex, too simple.

Top management must take the lead and explain 'what' and 'why'. Different audiences need different descriptions of the benefits, risks, changes and commitments required. If communications is seen as a key engagement tool to drive success, then it is more likely to work.

5. Ill-defined or inadequate metrics to determine performance and isolate challenges.

Lean requires metrics that focus on the processes of value creation and their associated costs. Consideration should be given to cost per transaction, level of error or rework, true process time versus calendar time to completion, backlog levels and their age, costs of errors, and the 'voice of customer' measures. One aspect that needs to be challenged is whether you are truly capturing performance. Coxswain Alliance's experience is that the systems can be used to mask true performance. Employees find the gaps in the system to manipulate the process and 'make the metrics work'. Ultimately the measures are driving a non-Lean behaviour.

6. Inability to listen.

A fundamental shift in a Lean environment is for management to be able to step back and hear and understand what their people are experiencing as they seek to do the jobs assigned

to them. This should happen through many means, direct and indirect, but tapping into the combined experience and knowledge of your organisation is very powerful; not hearing what it has to say is a tragic missed opportunity.

People issues

Lean, like almost everything else related to business, relies on the brains, commitment and energy of people. The people related causes of Lean failure can be summed up by:

1. Middle-management resistance and lack of buy-in.

Middle managers and professionals are the heart and soul of every company. Traditionally, Lean puts a further squeeze (real or perceived) on this critical source of skills and talent. Resistance fades when middle management are involved in the design and deployment of Lean. Fear is removed through communication, training, involvement, support and control or input to the process. They have a collective responsibility, but not an equal amount of control and authority. The key middle management and professional team must be on board or Lean will fail. If changes need to be made with your people, senior management should make them, but only after exhaustive efforts are made to make this group successful and leverage their skills and experience.

2. Poor role clarity.

When people lack an understanding of their role and how it relates to the accountabilities of others, it leads to confusion and inertia. This is compounded when implementing programs like Lean. What people can – and cannot – do is critical to understand. And each person needs to be clear on what success looks like, how they are to contribute and how they will be measured. Often the bar is also set too low in a change program; getting the balance correct is a critical step.

3. Capabilities are lacking.

People need skills to do their jobs; they need different or upgraded skills to do different jobs. When asking people to work within a Lean environment, they need access to training to help develop an understanding of the implications on their day-to-day jobs and what and how they do things differently.

4. **Insufficient coaching of people, particularly around their involvement in Lean.**

And it should not stop at training. Coaching your people is one of the hardest tasks for any manager as it requires time, patience and a good relationship. However, coaching is a key enabler to get the best out of people, particularly when they are involved in new or challenging things.

5. **Poor past experiences with change.**

A poor previous experience will colour people's approach and acceptance of a new methodology. Cynicism or whiteanting will undermine the best laid efforts. And if people have borne some personal pain for prior involvement in change, they will be at best cautious, at worst openly

hostile. It is important to understand why previous attempts at change have failed, acknowledge them openly and address the root causes with your people. If people see a different environment, they are more prepared to change or contribute.

6. **No visibility of the impact of the changes.**

If people have no sense of the benefits flowing from the Lean initiatives, then it is difficult to remain focussed on continuing. Providing data and feedback on what has gone well and what has not gone well allows people to better understand what needs to be done. It is worth the effort and is a key recognition tool.

7. **Inability to be heard.**

If people sense – or know – that management is uninterested in their views or experience, few will continue past a certain amount of effort. This lowers engagement and drives to a passive workforce. Being able to tap into people's experience, recognising their efforts provides a powerful resource that is focussed on the organisation's priorities.

A view from the auto industry

With the trend towards globalisation, standardisation of processes is even more key. If implemented well, Lean and Six Sigma could become a competitive advantage for any company, helping to retain and attract employees due to an efficient workplace with a culture of continuous improvement.

David Chuter, Chief Marketing Officer,
Futuris Automotive Group Ltd

The Toyota recall – has Lean Failed?

While dramatic, the faults leading to the recalls are more a reflection of a manufacturing business of huge scale. But Lean and Six Sigma will be key to how they quickly address the problem. We talk about this in more detail on our website, but the key themes are:

- > Compared to total miles driven, the actual number of incidents is extremely low.
- > The problem originated in a supplier, not a Toyota factory.
- > Toyota's vision to become the world's largest auto maker has distracted them from their core approaches.
- > Inability to maintain sufficient bench strength of Sensei team.
- > Hubris and losing the ability to listen.

What would make Lean/Six Sigma deployment easier and more successful?

Integrate Lean and Six Sigma as a blended approach – do the dance, rather than rely on one single approach. Both are relevant; determine what you are trying to achieve, then use the best fit tools and approaches to help you get there.

Feedback from the practioners...

- > Ensure you are working on projects which are important to your customers and the long term future well-being of the organisation.
- > Leverage success – demonstrate proof of concept and then roll-out more widely.
- > Never stop communicating – talking, promoting, listening, questioning, recognising, rewarding.
- > Enact culture change as part of the Lean implementation – by doing projects at the 'gemba' (where the work gets done).
- > Recognise how your organisation currently gets stuff done and leverage the good aspects of that culture.
- > Leverage high potentials to deliver the programs: this is a way to blood your future leaders and provide them with key learnings at a seminal point in their career.
- > Keep the doubters close – be prepared to manage the resistance.
- > Everyone has a role: the executive has to lead, set goals/direction, managers provide context/resources/support, and staff provides the input and assists in execution.
- > Data and measurement are key to help make decisions and demonstrate results.
- > Developing the solution is only a part of the program – installing it well is more important. This requires heavy support of your people as you put changes in place.
- > Flexibility – never underestimate the power of recognising you are wrong and need to change tack. It is the end goal that matters.

Deployment methods

Execution of the change is a critical component. One of the key criticisms of many change programs is that while the ideas and the intent were correct, the actual rollout did not deliver on the promise, either in terms of engagement or results. Issues can include:

1. **Weak deployment strategy.**

Organisations must determine where to start and how Lean will expand throughout the operation. This must be determined ahead of time, what core elements are to be deployed and the order of deployment. Companies can fail by attempting too much, also by attempting too little and assigning the initiative to a 'nice to have' status. The deployment plan must assign clear responsibilities, show what resources are to be committed, with metrics and timelines defined. Finally, the deployment strategy should anticipate problems and recovery scenarios.

2. **Reduction in focus from the leadership team.**

The nature of life for an executive team is that there are many competing priorities. Lean is not a short term program, it is about building a

Talking to a CEO who has done it...

'The advice in this article is fantastic. Having been involved with three such programs, I have learnt that you have to have your executive team 100% behind you and then ensure your management group comes along. Without this you are doomed to failure. But getting the buy-in is not enough, you need to be focussed, you need to drive and as Chief Executive you need to be actively involved. It is only then that success is achieved.'

Graham Meyer, Chief Executive Officer,
Institute of Chartered Accountants in Australia

Lead up before starting

1. Get the executive group learning well in advance – reading, case studies and site visits to non-services organisations.
2. On-site visits, understand the principles behind the approaches and activities – look for clues/signs of what you'd do in your business. Relate the experience to your own paradigm, your own industry.
3. Get commitment, articulate a vision, model the future – and then look beyond it to create the burning platform.
4. Think of your product in terms of its specifications – when is it needed, what defines quality, what do your customers want it to do, how easy is it to complete or do, what are people prepared to pay? Resist the urge to allow the product to be specified by your marketing function.

Starting a Lean program in Services

1. Know your process – end to end, your aim is to make it simple and similar.
2. Look for commonality of process, aim for 80% of process steps to be the same.
3. Concentrate on doing it well. Use data to show problems and to demonstrate success.
4. Accept accountability for your own area's performance first.
5. Align your KPIs, know the cost of re-work or errors, align with process – not the silos, and simplify, simplify.
6. Lead the vision.
7. Seek to minimise the number of KPIs. The discussion around the KPIs is more important than the KPIs themselves.
8. Find and use passionate, early adopters.
9. Have a set of consulting tools pre-constructed, not developed as you go.
10. Look for and celebrate success – recognise contribution, build buy-in.

different culture. Therefore, the executive team has to be able to maintain the commitment and focus to those core and visible elements when the program is being deployed. People in organisations tend to look for clues of what is important with their management, and respond accordingly.

3. **Poor balance between a disciplined rollout and the need for flexibility.**
The bigger the Lean initiative, the more discipline is required to hold to the intent and outcomes of the program; ironically, the scale often dictates a need for greater flexibility too. This requires a clear understanding of what is important or core and what can be flexed. Sometimes a small shift in schedule times can have a major impact on how well a change is executed. Equally, allowing too much flexibility in solutions deployed might build high engagement, but lead to poor long term performance as the solutions are no longer optimum.
4. **Time horizons are too short.**
If Lean is a culture change initiative, then it takes time to re-focus the existing culture, which has taken many years to build up. This is not an approach which is a 'turn key' installation. Some elements may not be deployed for some time, depending upon the maturity of the organisation and its ability to adopt change. If an organisation tends to chop and change approaches or has high churn in management ranks, this will make the adoption of a Lean culture difficult.
5. **Conflicting methodologies or priorities.**
Most organisations are looking for clearly articulated directions and approaches. To deploy Lean and Six Sigma successfully, you must be clear on how it is integral to the strategic priorities of the organisation and how it integrates to or succeeds previous approaches to improvement. Being able to leverage from previous approaches is the most compelling way of dealing with apparent conflicts.
6. **Failure to learn and live proper continuous improvement methodology.**
An ongoing and tested continuous improvement methodology is core to ensuring that major changes are

sustained AND continue to evolve and that people are able to take the multitude of small wins that emerge on a day to day, week to week basis. The better you are at continuous improvement, the less you need to rely on major change, including elements such as the Kaizen Blitz. An overly focussed reliance on Kaizen Blitzes is unsustainable. They can be powerful, intense and provide quick improvement results, but they will be short term – unless they are part of an overarching continuous improvement methodology.

The role of IT in Lean

What should you do first – roll out the IT platform so you have common platforms to manage? This is often the temptation in complex services environments. In our experience, this is the wrong approach. Instead, get your operating model agreed, build your processes and people capabilities to a Lean methodology and *then* roll out your IT to support the success of your process changes.



What does Coxswain Alliance recommend for implementing a Lean/Six Sigma program in the Services Sector?

Much of the details of the recommendations are set out above, particularly in the sections *Talking to a CEO who has done it ...* and *What would make Lean/Six Sigma deployment easier and more successful*. However, here are a couple of key points associated with successful execution.

- > Start at the top. This is not a process improvement program, but a fundamental shift in your culture. This means a heavily aligned, articulate and informed executive who are building a foundation for the future.
- > Invest in your people, ask them to step up and support them, listen to them, challenge them. Implementing Lean successfully requires the input

of your employees. 80% of Lean is accomplished through people and 20% is accomplished through techniques, equipment and automation. Equipment alone won't make any company 'world class'. Toyota excels at developing their people and making them successful. Toyota doesn't just build cars, they build people. That's a powerful message.

- > Look within your organisation for the early adopters or those with relevant experience elsewhere. They can be powerful catalysts to bring focus and increase the pace of change.
- > Accept that it will take time to move to your desired state – around performance and around reaping full benefits from Lean/Six Sigma. Think about the long term, compounding value of the investment.
- > Phase change – build relevance and understanding of Lean/Six Sigma. Build foundations and work logically and steadily through the opportunities. By starting simple, being practical and capitalising on small wins, you will start to increase the relevance of the more complex phases as your people begin to understand what is possible. BUT, be prepared to move quicker if your organisation is demonstrating an agility that makes it possible to move through the phases quicker or is able to work on a range of phases at once.
- > Start with a single site, area or function, so as to act as a model for learning. The primary purpose of the initial Lean transformation project is to get people and managers at the chosen site to think and act with a Lean mindset. This can then influence others in the organisation.

