

LEAN PROCESSES IN MUNICIPAL MANAGEMENT

by

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CHAPTER I – WHAT IS LEAN

Introduction

Since the collapse of the financial markets in 2008 as well as the recession that followed, individuals and organizations have had to learn how to get more out of less. This idea of more for less has been incorporated not only in the private sector but also how we as public officials administer and operate different municipal government (Cavazos, 3). Over the years there have been many theories on how different organizations can become more effective and efficient while reducing various costs at the same time. Over the next few years many municipalities will most likely be going through a defining period for local governments (Chieh, 2010). Recently, implementing what is known as Lean has risen to the forefront and become the leading theory for introducing the ways and means to reduce unwanted waste and make an organization better at providing high quality services with fewer resources than in the past (Klings, Levine, & Wall, 2006).

There have been recent initiatives by various municipalities to take the principles that are present in Lean and apply them to local governmental processes (Sticklen, 2006). With this rise in the acceptance of the Lean implantations it is important for municipalities to be aware of where exactly Lean came from and the direction it could possibly take their organization. In order to be more successful, municipal managers must seek to provide services at the highest level possible while maintaining a low level

of cost. Lean management seeks to reorganize services at an effective and efficient level that benefits the public and also allows for maintaining high levels of service that can be adapted at the municipal level (Krings, Levine, & Wall, 2006).

Lean at its core attempts to allow individuals to be able to understand how an organization can promote positive values and remove various wastes through some lengthy and detailed exercises. Over several years many different private companies have profited from the implementation of Lean. The term Lean was first coined by John Krafcik in his 1988 article, *Triumph of the Lean Production System*. This study illustrated that Toyota, which Krafcik worked for as a quality engineer, was performing significantly better than any of its competitors through the application of what was known as the Toyota Production System and what their research team dubbed Lean. (Kenworthy, 2011).

In their book *The Machine That Changed the World* (1990), James Womack defined what he felt were the 5 principles of Lean Manufacturing. These Lean Principles helped to define the philosophy of Lean. Within the first principle Lean seeks to identify value as it is perceived by the consumer. Organizations should look to see what things consumer place more value upon than others. The second principle of Lean implementation should be to identify and create what is known as a value stream. These value streams are a series of steps that occur to provide the product, service and/or experience the customer desires. The third principle is that organizations should seek to make value flow without delays. The last principle of Lean implementation is that

organizations should be able to pull from the value stream at the demand of the consumer. Another principle within Lean is that an organization should always strive for perfection and never settle for less than what is optimal performance.

These lean principles still hold true today and are central to what lean thinking is all about. The removal of waste within organizations is a result of these principles and not the other way around. There is no point in making a process more efficient and removing waste if the process itself does not add value to the organization as a whole. By implementing Lean according to these principles, rather than just focusing on waste, it is possible to create a Lean organization. However, in order to do this there is a need for a level management commitment, a good understanding of the lean principles and respect for and the involvement of all employees. Lean implementation clearly specifies values in order to line up all the activities for a specific product along with what is known as a value stream. Then organizations make things flow more smoothly for the benefit of the consumer in pursuit of perfection.

Lean Management History

Lean uses many old tools and concepts along with some new ones to help organizations remove waste from their different processes. It is a proven way of bringing together some of the greatest ideas and successes from the history of mass manufacturing. Lean first surfaced within manufacturing companies. Since the early 2000s, the manufacturing part of the name has pretty much been dropped (Kenworthy, 2011). This

is because Lean is now used in all kinds of industries. Lean has found its way into large manufacturing, small manufacturing, logistics, customer service, hotels, financial institutions, and many other originations. Lean history can go all the way back to the late 1700s when perhaps one of the oldest concepts of Lean was created. After World War II, Toyota in Japan began building and manufacturing cars (Kenworthy, 2011). With this competition, each country tried to outdo the other with ideas for better efficiency and lower costs while still ensuring quality in the manufacture of their cars. In the end, it was the Japanese who were winning out and seemed to have found the ability to produce top quality cars for very even less of a cost. Toyota's ideas and successes have contributed greatly to the foundations of Lean.

For many people, Lean is just a modification of the Toyota Production System. “The Toyota Production System was essentially fathered by Taiichi Ohno and Shigeo Shingo” (Kavanagh, 2010, para. 2). Basic Lean tools such as quick change over, one piece flow, and zero inventories were created from the creative thinking that Ohno and Shingo encouraged at Toyota (Kavanagh, 2010). By the mid-1990s, Lean Manufacturing was a common term in all automobile manufacturing plants. As time passed Lean gained huge popularity and many manufacturing companies had implemented Lean within their organization. By 2003, even non-manufacturing companies got into the action as they realized that they could increase efficiency if they treated their processes like that of the Lean manufacturing process (Kavanagh, 2010).

Theoretical Background

To answer the question of what is Lean; first, imagine a business that has many different processes with a lot of steps within them. Each process has multiple steps that get the larger goal from start to finish. A business process with lots of time consuming steps can be referred to as a fat process. Therefore, a business process that is straight to the point and purely value adding, with very little time and steps involved is a lean process. Originally known as Lean Manufacturing, this technique grew to be used more and more in non-manufacturing processes as people realized its power. Lean is a simple strategy of removing waste from your processes. This waste can be caused by many things such as redundant steps, variation, work imbalance, and other quality issues.

Lean looks at everything from the point of view of the consumer. Anything that does not add value for the consumer is considered to be a waste. Many people would describe that Lean is a simple strategy. It is actually a lot more of common sense but somehow a lot of this sense gets lost when looking at many different business processes and steps combined in organizations. Lean tools and concepts help break these processes down into manageable pieces and give the ability to see how each of these pieces affects the total picture as a whole. After all, there is no point in spending time improving processes that are not going to create any benefit in the total picture. It is precisely because of Lean's effectiveness in breaking things down and making the waste easy to see that it has gained so much recent popularity.

In Sticklen's article entitled *Lean Government 101: Value Stream Mapping* (2006) the basic tool of Lean, the value stream map, provides a high level view of the company's value stream from beginning to end while still providing detailed information on the different processes involved. According to Sticklen this makes it very easy to see where improvement efforts should be focused to give the biggest impact on the total value stream. This to identify wastes, but does not remove it. Once it is known where the waste is, organizations need to find the root causes of the waste. Then organizations begin the use of other Lean tools and concepts combined with some common sense and creativity to remove the root causes of the waste. Usually the solutions are quite simple and were not thought of before simply because it was hard to see the whole process. Lean is a strategy that helps to see the waste in processes, find the root causes of the waste, eliminate the root causes, and optimize process flow while adding more value to the end product.

Local government managers routinely find themselves in the middle of a dilemma. Can there be a reduction of costs without facing criticism for slippages in the quantity and quality of services? Can there possibly be an improvement to services, only to run headlong into the budget hawks among constituents? More often than not citizens request to provide them with more while they provide less with funding. This is a troubling but familiar feeling from local government's customers. Public sector managers are not alone in facing those challenges. The specter of intense global and domestic competition haunts the private sector and raises similar challenges (Sticklen, 2006). In

today's world it is getting harder for local governments to make continuous cost reduction a reality without undermining the value they deliver.

Lean Office Management

Lean office techniques have been around in one form or another for more many years. When individually applied, these techniques offer logical and organized approaches to manufacturing the products that consumers demand (Smith, 2013). Collectively, these techniques enable organizations to gain a significant competitive advantage by producing high-quality products or services at lower costs, all the while shortening the time between the different processes of production. Processing information, handling paper, correcting processing errors, meeting deadlines, and fulfilling internal and external customer expectations, these production activities are important to organizational effectiveness. The processes necessary to convey consumer orders and to deliver a product or service are keys to gaining and maintaining consumer satisfaction in all organizational environments (Smith, 2013).

The experiences of those organizations that have embraced Lean office principles prove the existence of abundance in opportunities to reduce wasteful processes within organizational settings. Typical results include “reductions of paperwork process flow time of at least 50 percent, dramatic reductions of required floor space, reductions of hand-offs from 50 to five, and on-time performance improvements of up to 100 percent” (Smith, 2013, para. 4). The Lean office implementation begins with the creation of what

is known as a value-stream map. This can relate to services or products for which process improvement holds potential for a positive impact on consumers. Mapping the process helps each organization to understand and see possible waste within the current processes that exist. This can include things like paper handling, hand-offs, excess information flow, and quality deficiencies (Smith, 2013). A map of the current state of the organization forms the building blocks for later discussion as well as the analysis needed to identify the processes that could add value for the consumer. From there organizations develop a future plan and how to achieve that specific goal.

Successful Lean initiatives rely on what is known as tracking centers as a critical implementation technique. Organizations develop these centers after the creation of current and future state value stream maps. A tracking center is a physical space where the owners of improvement projects can meet regularly to discuss needed changes (Smith, 2013). Such a center also allows team members to hold each other accountable for completing projects on time.

CHAPTER II – LEAN IN GOVERNMENT

Lean within Government

The complexity of government operations can make the process of defining desired results less straightforward than it can be in the private sector. Government managers cannot always clearly identify the exact desires of their consumers, much less know what that consumer finds as truly beneficial (Cavazos, 2012). The building inspector serving the public through building code enforcement has to balance the competing demands of homebuilders, potential buyers, and political personalities in policy positions. Constructing a product like bird feeders without defects at a reasonable price seems, by comparison, a much clearer cut undertaking.

When focusing on the processes within a municipality, an analysis should include reviews of the federal and state laws as well as the regulations applied to the government agency. With respect to each, the municipality must consider the need, or lack thereof, for a particular law or regulation (Cavazos, 2012). The municipality can then more clearly assess how the marginal benefits of satisfying a requirement lay up against compliance costs. While municipalities usually cannot control enactment or the need to enforce laws and regulations, their ability to question these underlying rules can provide valuable information about the compliance processes when they decide to execute. In developing a Lean government organization, a manager should also analyze consumer perspectives. Typical questions “should include; who are our customers? Can we make a

service more readily available? Are our services meeting our customers' needs? What represents true value to them?" (Cavazos, 2012, para. 3)

The Process of Implementation

In *Delivering Rich Services While Achieving "Lean" Public Sector* (2012) author Christine Carmichael describes how progressive managers within municipalities can benefit from using a four-step approach to implementing Lean improvements. The initial step in the process is to assess and plan (Carmichael, 2012). What is known as the plan and assess step focuses on understanding the needs of the organization and how its internal processes operate. Insight into the organization is achieved through interviews of executive leaders and key staff members. This is followed by data gathering and analysis, and process observations. The information gathered out of this step is a report identifying the different strengths, constraints, opportunities, and threats; and also the prioritized improvements of the municipality (Carmichael, 2012).

The next step is to train the individuals within the organizations on the new Lean implementations (Carmichael, 2012). Successful lean implementation occurs only when organizations develop a large amount of Lean process expertise within the organization. Developing this expertise must begin at the top with the executives of the organization thoroughly understanding and committing themselves to Lean improvement. Only then can those with more responsibility for implementing a lean initiative begin to develop

their own knowledge and expertise through change management, process improvement techniques, and performance measurement.

Once the initial training is done municipalities must then implement the program. As implementers gain knowledge and an understanding of Lean, they can focus on applying these skills in a number of ways. For efforts involving a short time frame and a narrowly focused improvement opportunity, implementers can use a cross-functional group that focuses on improving a process over a limited period to achieve a desired result or goal. Improvement efforts of longer duration will require a guided implementation approach, involving managing direct resources to achieve the desired result or goal (Carmichael, 2012). Both approaches use Lean continuous improvement tools, process measurement techniques, and project management skills.

Embedding the ideals into the organization is the last and maybe the most important step in the process of implementation. Sustaining the Lean processes can be the most difficult aspect of implementation. Yet the existence of lasting Lean improvements remains in the creation of a culture of continuous improvement that embeds the Lean philosophy into the culture of the municipality (Carmichael, 2012). The monitoring and tracking of key performance measures and the coaching and mentoring of lean implementers are critically important steps to building this desired culture.

Value Mapping

Lean's main focus is on satisfying the three objectives of lowering cost, increasing quality of services, and making service delivery more efficient and effective (Sticklen, 2006). In many government operations, managers can achieve one or two of these objectives, but usually not all three. If delivery time must be shortened without an increasing the number of errors, there usually has to be an addition of personnel within an organization. Sacrificing one for the other is a common response when addressing any of the three objectives in implementing Lean. There should ever sacrifice quality, as poor quality services will cost drastically more in the long run of a municipality. The Lean tool known as value stream mapping focuses on exactly this issue (Sticklen, 2006).

The first aspect in creating a value stream map is to document each step along the way. This captures each of the activities of the process in detail. If a contract is transferred to another department through internal communications, it should be documented. If copies are made and filed after sending out a bill, it should be documented. The more detailed the information in the value map, the more useful it will be. After the initial value map is complete, there should be an analysis of each step. Then each of those steps must be identified as being; value added, non-value added, or non-value added but necessary (Sticklen, 2006). "Value added" is the term used to define a situation in which a knowledgeable consumer is willing to pay for. "Non-value added" is a process step that the same customer is not willing to pay for. These are the steps that municipalities want to reduce, if not eliminate. "Non-value added but necessary" steps

are not adding value but are still required through a current system, statute, or law (Sticklen, 2006).

In order to further illustrate these concepts, the following example illustrates a process that involves paying a contractor. “The physical steps of writing and mailing the check are things that are value added. In this process the contractor is the consumer, and they care about this step. However, they do not care that the invoice has to sit in a bin waiting for a runner to take it from engineering to finance” (Sticklen, 2006, para 2). This is an example of a step that is a non-value added step. An example of a non-value added step that may be required under applicable laws or regulations is having multiple signatures on certain types of documents. Assigning these value indicators to each step of the process is often difficult. Participants making the value map may become defensive regarding their part of the process and how it should be done. It is hard to admit that there may be better ways to do the job that they have been doing for years. The hardest part is communicating to individuals that many of the steps are not adding value to the organization.

What is known as value indicators serve as targets for improvement with the intent of eliminating or reducing the steps that do not add value to a process (Sticklen, 2006). Addressing each non-value added step helps to communicate what is known as the improvement idea generation process. However, this is another difficult component of value stream mapping, because it requires complete objectivity from the participants that are involved. Often people are so close to the processes that they think the current

way of doing it is the only way it can be done. A shift in the way people think about the process is necessary to reach the full potential of value stream mapping (Sticklen, 2006). With a current state map and a list of improvement ideas, a future state map can be created. This map is what the process should look like six to twelve months down the road after incorporating the brainstorming ideas. The future state should be ambitious in its goals, but it should also be a realistic end target for the municipality to achieve.

The final part of the value stream mapping process is bridging the gap between current and future state value maps (Sticklen, 2006). This step is relatively easy, because it spells out all of the improvement ideas in an implementation plan of the municipality. The plan assigns responsibility and a timeframe for each of the improvement goals. It is the part of value stream mapping that holds the individuals within an organization accountable for the improvement process. After completion, the implementation plan along with the two maps should be displayed in a visible place within the participating departments so that everyone can view the progress (Sticklen, 2006). Value stream mapping can be a very useful tool in addressing cost, quality, and service delivery for many different processes within a wide range of municipalities.

CHAPTER III – CASE STUDIES

City of Carlsbad

The City of Carlsbad is known for providing an extremely high quality of service to its residents. The City was challenged to figure out a way to continue its high level of services into the future while dealing with declining state and federal aid. The City consistently received a high level of satisfaction from residents with regards to its services and few residents wanted to see a reduction in those services. The most recent annual public opinion survey, from 2011, showed that “98 percent of residents rated the city’s quality of life as good or excellent, and 94 percent are satisfied with the job the city is doing providing services” (Kenworthy, 2011, para. 1). The challenge facing the City of Carlsbad was how to maintain such high ratings while addressing the very real concerns of a volatile economy and increasing labor and other related variable costs. To address the issue, the City created a Best Value Services program. This program aligned with the City’s strategic goals of staying a sustainable municipality in which being an adaptable, responsive, and efficient organization that delivers cost effective, high quality services (Kenworthy, 2011).

The implementation of Lean was initially intended to evaluate service delivery methods and costs for all of the City’s operations except for sworn public safety services. The city selected Baker Tilly to assist with the Best Value Services program. The first step in this program was an operational assessment of all the services provided by any

particular department. The consultants commenced their first operational assessment with the Parks & Recreation Department (Kenworthy, 2011).

The review that was completed looked at the full range of options available within the city relative to the delivery of Parks & Recreation services. “A total of 48 opportunities with a range of \$2.3 million to \$4.7 million annually in estimated potential savings were found and revenue enhancements or resource reallocations were identified” (Kenworthy, 2011, para. 3). Not every opportunity had a tangible savings associated with it. Some were opportunities for increasing the efficiency of staff but they did not necessarily translate to dollar savings for the City.

Of the many different opportunities there were some key options that provided the most significant impact to the city. The first was the consideration of outsourcing of the entire Parks Department’s maintenance function. The Park’s maintenance function encompassed all aspects of operations associated with parks maintenance activities. “Based on comparison of actual labor costs and initial vendor quotes, the potential savings to taxpayers ranged from \$1,700,000 to \$3,866,000” (Kenworthy, 2011, para. 2). These cost estimates were very preliminary in nature. However, the high level of stated cost difference was so significant that it warranted a formal process to assess actual cost savings for outsourcing this function. There was also consideration of outsourcing of individual lines of business within parks maintenance if the city determined that it did not wish to pursue outsourcing of the entire park maintenance function. The analysis

indicated that consideration of outsourcing these two specific lines of operations might also result in high quality service at a lower cost.

Another finding was that if the City were to also outsource routine parks maintenance based on a comparison of public to private sector labor costs the potential existed for the City to save money each year after. Also, if the city were to outsource tree maintenance based on information from comparing city and a vendor quote there was the “potential savings estimated at nearly \$700,000 a year” (Kenworthy, 2011, para. 2). There was a consideration of managed competition for landscape and trails in those two areas. The gaps between the current cost of delivering a service and what a vendor could potentially charge was narrow enough to use managed competition as a strategy for reducing the overall costs of service. They considered a wider span of control for Parks & Recreation. It was recommended that the city adopt a ratio of 10 employees per manager in order to gain further efficiencies (Kenworthy, 2011).

Aligning labor costs with productive hours is described as the number of hours available in comparison to number of hours paid (Kenworthy, 2011). At the time the City paid for a higher than average amount of unproductive hours in many areas within Parks & Recreation. The City could have addressed this by either increasing part time staff or using private sector vendors to provide the work. The City also looked at aligning fees charged with market rate and demand (Kenworthy, 2011). This would allow for the City to maintain its high level of service it is known for and provide an exceptional quality of life experiences for its residents through Parks & Recreation,

programming and facilities. It was through implementations of Lean in the city that helped lower costs and saved money for its tax payers.

Lean in Ohio

In the article the *Use of Lean in Local Governments (2006)* authors Krings, Levine, & Wall wrote about the implementation of Lean in Cincinnati, Ohio. Following a four-step approach to implementing Lean improvement, City leaders sought to modify the culture of their municipality with lean techniques and work towards process improvement. The first step was to conduct a citywide assessment of the local government. Fifty four city staff members representing 16 departments, three local unions, and the office of the city manager were formally interviewed (Krings, Levine, & Wall, 2006). The information generated from these interviews was pulled together and categorized into strengths, constraints, opportunities, and threats across the entire organization. Different charts were developed to highlight significant problems and opportunities. Managers developed a detailed plan of action to focus on key improvement opportunities within the City. Finally, they agreed on a schedule for the specific Lean training for city leaders and facilitators of continuous improvement.

Cincinnati conducted two distinct training efforts. “The first, a one-day Lean leadership course for the 16 department directors and 35 department improvement facilitators, introduced the concept of lean and stressed the importance of generating a culture of continuous improvement” (Krings, Levine, & Wall, 2006, para.1). The second

was a three-day process improvement course for the departmental improvement facilitators which provided them with a structured methodology for continuous improvement. Using techniques from Lean and its process improvement training, each facilitator wrote a departmental improvement plan focusing on what processes could be redesigned and if there were other improvements that could be done within their home departments.

One of the many process the City looked there were some that provided the most beneficial change for the City. Many months had passed between the acceptance of any police employment application and the applicant's admission to the police academy. The extremely slow pace of this process often resulted in qualified candidates' needing to move on and find employment with another city. Many times applicants could see six weeks go by from the time they applied for the job until they took the written exam. “More than 55 percent of applicants who applied failed even to take the initial written exam. And when the physical agility test was administered 20 weeks after the applicant originally applied, only 49 percent of the applicants scheduled to take this test actually took it. Similarly, about 38 weeks passed between the written exam and the behavioral assessment” (Krings, Levine, & Wall, 2006, para. 3).

To construct a visual representation of the entire process, the improvement team drew a current-state map that identified the steps between human resources' advertisement for the position and when the candidate actually began the position. The map assisted the team in finding many opportunities to make the process move at a faster

pace. The team then outlined a future-state map incorporating these improvements and set a three-month time frame for implementation of the changes. Additional improvements were identified through ongoing coaching and mentoring of the staff. The process is expected to yield timeline reductions of up to 50 percent (Krings, Levine, & Wall, 2006).

City of Tyler

In the article City of Tyler, TX Lean Sigma Program Saves \$2.4 Million (2012), Susan Guthrie describes how the City of Tyler reached a major milestone by exceeding \$2.4 million in savings through the implementation of Lean. The City originally launched its Lean program by bringing in a Lean Consultant. The employees worked on Lean initiatives in conjunction with their normal job duties. (Guthrie, 2012) Examples of changes the City completed were the reduction of vehicle part inventory, the effective management of chemical usage at the water treatment plants, cutbacks of overtime, and improving the way refuse is collected. The most important aspect of the implementation in Tyler was the high level of the culture changed that occurred within the municipality.

Lean implementation was a logical step in the city of Tyler's long history of continuous improvement that began with the City's blueprint and continued with future organizational planning (Guthrie, 2012). The City of Tyler at the time was one of only a few cities in the nation to implement Lean throughout their entire municipal organization. Success of the City was mainly attributed to the team work within their Lean program

combined with other employee engagement strategies, including the City University training program and a high belief in being called to serve within their internal communications (Guthrie, 2012). Employee buy-in and empowerment truly was the key to the success of the implementation within the City. If the employees are not committed to the strategy, it is unlikely that it will become engrained into the organizational culture. The City of Tyler provides an example of how employee buying is one of the most critical aspects of Lean implementation and is the most important part of creating lasting change in organizational changes.

City of Cape Coral Lean Government System

In what Author Craig Chavez described was at the time a visionary effort, Executive staff of the City of Cape Coral realized that they could put themselves in a more financially sustainable position by managing its processes, in all departments, in the most efficient and effective manner. In the article *City of Cape Coral's Lean Government System* (2009) Chavez discusses how this would ensure a solid foundation to deal with any unforeseeable challenges that the City might incur. The City sent a request for a proposal to a consultant for assistance in its implementation of new and improved processes. It was important to find a methodology that not only revealed waste or non-value added steps in a process, but also provided a tool to find a solution and ensure the viability of that solution (Chavez, 2009). In the search, the City learned about the Lean

philosophy and found it to be at the forefront in helping entities from all sectors, including government, be more efficient and effective.

Eventually the City of Cape Coral implemented the Lean Government system. The City engaged the services of a consulting group at “an initial cost of \$135,800 for 16 events and trainings” (Chavez, 2009, para. 3). To date, the City of Cape Coral has held multiple events introducing Lean to several departments and divisions within the City. “There have been approximately \$2 million in cost savings and cost avoidance in materials and resources” (Chavez, 2009, para 4). It has encouraged collaboration between departments and divisions by identifying wasteful practices and building a bridge toward understanding the whole value stream of a process.

The City of Cape Coral was unique in being a municipality implementing the Lean system. The Lean Government system provides departments and management with the tools and skills needed to be more efficient, dynamic, and able to meet the challenges that the City will face in the harsh economic climate of today (Chavez, 2009). The goal in every event was to increase productivity and reduce cost without sacrificing quality and service to the citizens. Chavez described how Lean implementation also alleviated the workload of employees by identifying non-value added steps in different processes within the City. This allowed the employees to be able to work on other tasks that added more value to the City. To name a few successes, the Building Division reduced the time to obtain a permit for construction from 21 days to eight days (Chavez, 2009). In

the Fire Department, the city had been able “to reduce the time to hire a firefighter from 66 days to 30 days” (Chavez, 2009, para. 5).

In the planning stage, it was realized that it was imperative that all levels of management support the implementation. The goal was to have all levels of managers assisting the end result. In the implementation stage, it became clear that it would be necessary to recognize how structuring the program and aligning all resources, personnel, and material affect each other. The City had to do this without ignoring external variables that would have derailed all of the work that was performed (Chavez, 2009). After undergoing events, stating goals, and realizing outputs, it is important to evaluate the program to ensure that the principles of the program have taken hold in all areas of the organization. The foundation of Lean implementation will ensure the survival of all initiatives and continual improvement within the organization.

CHAPTER IV – ISSUES WITHIN LEAN

Lean Government Challenges

Lean government implementation does present some difficulties for municipal managers. In many organizations there may be a lack in leadership (Pagano, 2013). Many governmental processes overlap different levels of government. Functional departments are often managed by politically independent elected officials. Statutes spell out the duties of some agencies, and changes literally require an act of Congress in order to be implemented (Pagano, 2013). There can be no guarantee of continuing top-level ownership of the process. Political leadership, for instance, can be constantly changing.

Those in charge simply may not comprehend undocumented processes that have real operational implications within the municipality. Moreover, other explanations may exist as to who the consumer is. All of these characteristics of government run counter to both the philosophy and the practice of Lean (Pagano, 2013). Yet, the principles underlying Lean, plus the analysis and other tools required to implement it, help managers understand the nature of their customer service requirements and the work necessary to deliver the desired level of service. Lower employees and top managers collaborate more routinely and effectively to more clearly understand what constitutes good, value-adding work, as well as the constraints faced in maintaining a sharp focus on only this kind of work (Pagano, 2013).

Barriers to Lean's Success in Government

One of the main issues with Lean is that the industrial jargon tends to turn people away (Chieh, 2010). The Lean terminology of waste, value stream, and supply-chain is not helping either. All of these terms bring up visions of cogs in a machine that are mass producing undifferentiated widgets that exist only for the happiness of the consumer (Kavanagh, 2010). This is the exact opposite of how most people would view their careers in the public sector. The Lean concepts of increasing capacity, making processes flow more smoothly and understanding what different customer's value all can have a huge impact on a municipality's performance (Chieh, 2010). But only if people in those municipalities believe the concepts and they are willing to apply them. The more we fill helpful concepts with industrial age terminology, the more barriers we put up to achieving change.

Government executives generally do not care about operations (Chieh, 2010). Most elected officials and government executives didn't join government to manage. Instead, they are driven by a deep desire to advance a cause, a policy issue or a political agenda. They get excited about bold new programs and solving big problems, not about making the widgets. The key to results in government is a combination of innovative policy and improving the performance of operations (Kavanagh, 2010). There has to be a balance between things that are new and improving the stuff that municipalities already have. At the moment we have too much emphasis on policies, programs, politics and people and not emphasis on the processes that go into them (Chieh, 2010).

The current focus of Lean is on reducing waste. However, unless the Lean practitioners rethink their message, they will meet the same fate as Total Quality Management (Kavanagh, 2010). Total Quality Management (TQM) struggled in government for two key reasons: first, the manufacturing jargon and second, TQM was ultimately an elaborate solution to a problem that was not necessarily occurring (Kavanagh, 2010). The emphasis of TQM was to reduce defects. In the end governments did not jump on the bandwagon. Municipal government's biggest hurdle does not involve defects or mistakes. The number-one challenge facing government is capacity. Municipalities do not have enough resources to keep up with ever-expanding and ever-more complex workloads. (Krings, Levine, & Wall, 2006)

What Causes Lean Failure

There are so many different ways to help an organization to succeed. One of the ways is by implementing Lean. It is important to make sure that Lean is used in the correct way or it will fail (Chieh, 2010). The first way that can cause Lean failure is through not enough preparation. There must be preparation to become a Lean organization. Organizations can not just decide one day to become a Lean organization and think it will happen overnight. It takes a lot of time and effort. Organizations must figure out what things cost to buy and how they can save while buying them for instance cutting out the middle man. The next thing they need to do is decide what areas organizations can afford to cut costs in and what areas they can not cut any more from.

The second way that can cause Lean failure is not having the appropriate training. This can be caused by not having the management trained right, or not having the right training tools (Chieh, 2010). It can even be caused by leadership not getting things done and resolved in a timely manner. Not having a well-designed plan is another approach that will cause Lean failure. If there is no follow up on Lean implementation things will start to get changed and stretched and the Lean implementation might not be as effective which in return will cause failure.

Another issue that can cause Lean failure is if employees do not put forth an adequate effort. This can be done if employees do not meet the expectations that are required of them, or they do not apply to it themselves (Kavanagh, 2010). To avoid Lean failure, management should praise employees and make them feel like they are part of the organization and let them know that without them the organization would not succeed (Chieh, 2010). It is important to make employees feel needed. Having employees feel validated makes them feel like they are more a part of the process.

Lean implementation can suffer when organizations do not implement changes to decrease down time (Kavanagh, 2010). For example, if there is down time when machines are being switched over and employees are just sitting down or talking the organization is losing money (Chieh, 2010). To avoid Lean failure during down time management should have them clean up their work areas and make sure everything is organized. This will help save money by not having to pay a housekeeping crew to come in and clean up people areas. It will also allow less time spent looking around for things

because everything has a certain place and is organized. Lean failure can also occur when organizations are not working to be on top of the latest technology. Management must make sure that they have the best technology and be ready for any situation that comes their way.

There are many different ways that could cause Lean implementation to fail. To avoid it, management must always make sure that individuals are thinking one step ahead and people on every level are looking towards the future (Kavanagh, 2010). This will help to forecast what products or issues municipalities will be dealing with in the future. This will prepare and make sure that there is not over-spending in some areas and not having enough resources in another. Lean implementation is a great tool to make sure that municipalities succeed in the future. Managers just need to make sure to avoid the pitfalls that may causes lean failure.

CHAPTER V – CONCLUSION

Implementing anything new into an organization's culture is going to be hard work. However, changing the ways in which a municipality thinks, how it behaves and acts is the ultimate challenge that management will face (Carmichael, 2012).

Implementing Lean principles in organizations is an equally challenging goal for any manager; however the competitive advantage that they can create is worth the risk.

When starting the journey to implementing Lean principles in any organization, managers will want to be aware and plan for three major issues: the difficulty in gaining understanding of the principles, familiarity, and organizational priority (Chieh, 2010).

It is difficult for the people within some organizations to understand the different aspects and principles that are built within Lean. Different experts may explain Lean principles in different ways using slightly different terminology. This makes it harder for people initially learning Lean principles to be able to organize their own thoughts in a way that helps build confidence in one's ability to apply it successfully in their organization (Kavanagh, 2010). There is also different information available from many different sources. Often times the information does not appear to be the same due to different terminology and focus on the implementation procedures. This can cause a great degree of confusion. The amount of information available on the subject can also be overwhelming causing people to stop or hesitate in developing an understanding and converting it into a vision that could be applied for the betterment of the organization.

Familiarity will always be a hurdle when trying to implement Lean principles (Kavanagh, 2010). This familiarity comes from the sense of non-conformity of those who do not truly believe in anything new until they have had actual experience with it. As human beings we tend to resist random change that we might not initially feel comfortable with. We are wired to survive so we hang onto what has worked in the past. This can occur not only in our personal lives but our professional lives as well. Unfortunately, some work against the need for hanging on ferociously to what works until there is undeniable evidence against it. The implementation of a strategic direction with Lean principles in an organization is an enormous change in the way municipalities currently can do business (Chieh, 2010). Its scope, size and complexity can seem overwhelming to some within an organization. Changes in organizations tend to follow the same path. The faster a leader tries to force change, the more shock waves of resistance compact together, forming a massive barrier that runs counter to meaningful success (Krings, Levine, & Wall, 2006).

Organizations must also realize what their organizational priorities are before implementing Lean. There are the daily situations that need to be handled, pressing problems and projects with deadlines that are always present. There are also things that are urgent but may not be very important. These are the daily interruptions, meetings that someone thought was important for you to attend, reports to be published and read, phone calls, and constant stream of e-mails (Smith, 2013). Each of these things can run counter the effectiveness and efficiency of a municipality (Kavanagh, 2010). There are those popular activities that seem pleasant but can be a waste of time. All of these activities

can tend to consume our day. This can leave us with little time left for those things that are important but not urgent. Those things that fall into the important or not urgent category can be the beginning of developing a strategy (Carmichael, 2012). Those things that matter most for moving the municipality in the new direction sometimes never seem to find the time of day.

History has proved that Lean principles are here to stay. The question is whether or not municipalities have the capabilities to embrace these concepts and make a permanent and lasting change (Kenworthy, 2011). The answer to this question will determine whether an organization will thrive in the ever more frugal world that we live in today. Many organizations have considered hiring a consultant for a few days (Kenworthy, 2011). Another option is that they can also develop people internal to the company who are resident experts in Lean implementation. These individuals can really take Lean to the next level within the organization they represent. Strong leadership can be used as valuable resources for consultation on special projects. It helps to have people others can go to when questions arise to help guide those trying to develop their Lean skills.

What is being seen in Lean is the result of many small steps, some of which were discarded and others embraced within municipalities (Krings, Levine, & Wall, 2006). It is the result of many different aspects that go along with the implementation of Lean. These implementations are different throughout because different organizations are on different learning cycles and may possess different needs or goals. The manager's task

is not to impart a routine for doing work, but rather to inspire new more effective and efficient work habits (Klings, Levine, & Wall, 2006). That inspiration can be missing in some organizations that use top down management objectives. Therefore managers have no choice but to blindly start cutting things. This is not the best thing to do.

One of the most important things to do before trying to implement Lean is to ensure there is a certain level of buy-in from all levels of senior management (Pagano, 2013). They are just as important in the overall process of change management and if they are not completely committed to the process, they could be a hindrance to its success. At that point, it should be communicated down the line of management to get all members on board. Once these individuals understand the benefits of Lean programs and how they can benefit them in their roles, the adoption process can be much smoother (Pagano, 2013). It is in this process, that organizations will be able to ensure implementation of lean programs is a success. Through this successful implementation municipal managers should be able to solve the recent dilemma of how to provide a high level of services while doing it for less (Chieh, 2010). The principles of Lean are principles that should also be part of municipal management. Both strive to make the organizations that are able to perform in a more effective and efficient manner. When this occurs it will not only benefit the individuals within the organization but the municipality as a whole.

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