Chapter 1 : Why Wishful Thinking Fails and Lean Six Sigma Succeeds With Personal Finance - blog.quinto

Examples of mathematical models well-known in the Lean Six Sigma (LSS) world are Little's Law and other queuing models. Simulation models can be built using computer software. Simulation models can be built using computer software.

Thousands of organizations use it to define problems, quantify them, identify the causes, implement fixes and maintain the solutions. That approach has been successfully adopted by businesses around the globe for decades. Did you know it can be applied to personal finances too? This same approach provides clear and practical ways to get out of debt , save more for retirement and sock away money for short-term goals. You might be surprised at how often people charge up a storm, live above their means or drown in debt without realizing they have a personal-finance problem â€" or worse, they just ignore it. They go about their days, weeks, and months paying the minimum on their credit cards, incurring debt and having little if any money saved for emergencies, let alone retirement. That can create untold financial hardships and a potentially lifelong cycle of debt. For people who are in debt, admitting there is a problem is the only way they to correct it. To do that, they have to conduct a deep dive into the intricacies of their debt and compare that to their income, with an eye toward identifying ways to cut expenses. Sometimes a cold, hard reality check and a deeper understanding of your debt is all you need. But most of the time it requires successfully identifying the problem. For people nearing retirement or trying to set aside money for an emergency, identifying what is preventing them from making that happen can be the starting point for change. The question is, why? The answer typically lies in how people set their priorities. Recognizing you face a shortfall, and that it will be a huge problem come retirement time, is the first step toward finding a solution. Measure the Size of the Problem Credit card debt can be crippling, as can a retirement shortfall. What is tolerable to one person might be intolerable to another. For debt holders, that means determining the total amount you owe. Armed with that information, you can compare what you need with what you have saved to quantify your problem. Establishing the gap between your baseline budget and target budget helps guide your efforts. This strategy can also be applied to saving for a down payment on a new home or a reserve fund to send your children to college. You have to be able to quantify how much you require before you come up with a plan to meet your financial goals or fix a personal finance problem. If credit card debt is the problem, figure out what got you there. Those are all bad reasons to spend money. The good news is you can control these habits. If you identify the triggers for your out-of-control spending, you can come up with strategies to reign it in. If student loans preclude you from saving for retirement, and you know that, you can plan to reduce outlays elsewhere so you can put money away for retirement. You need a feasible plan. This can mean destroying credit cards, closing accounts or vowing to keep them in a safe and pay with cash only. You also need to regularly revisit whatever solution you use to make sure it is still realistic and working. The idea is to devise a solution and make sure it is enough to fix your problem and achieve your goals. In order to effectively apply DMAIC, you have to come up with a plan to start saving for your golden years. That may mean participating in a company-sponsored retirement savings plan or opening up an IRA. Thanks to the financial technology movement, there are a host of startups that let you save your spare change and invest that in stocks, mutual funds and exchange-traded funds. The way to keep your new plan in control is to regularly check your balances, debt, reserve funds and the other measures of your financial health. Final Thoughts Lean Six Sigma and the DMAIC method may seem like a complicated process used only by businesses, but the principles involved are simple and can be applied to different aspects of your life. After all, Lean Six Sigma helps you do a deep dive into the current state of your finances and devise a realistic strategy to bring positive financial results. Harvey Stanton Harvey Stanton is an avid user of Lean Six Sigma and has seen its benefits span beyond his small business and bleed into his personal life.

Chapter 2 : Final Thoughts: Bechtel - ASQ

So, if you're using the Lean Six Sigma methodology, one of the most obvious ways to do this is with a digital or online Kanban board. Final Thoughts.

The people that make up the company need to be invested in the process throughout all of its stages. In the end, they are the ones that the company depend on to make the changes long-lasting. Here are three valuable tips to help you out: Involve as many employees as possible into the conversation As successful change management hinges on the employees to a very large extent, the effective change leader should get them involved and emotionally invested as early on as possible. The best way to do so is to spark a conversation about why the company needs to change. They should explain what the challenges the company is currently facing are, and what the perfect solutions for them would look like. What you need to do is talk about the threats and opportunities that the current market environment presents, and publicly asking the question how the company should react and adapt to those forces. The conversation should be ongoing, open and honest, and employees should feel they are being listened to. This will make them feel invested and connected to the process of change. It will also make it more likely for them to stay engaged throughout the duration of the whole transformation. Praise and reward change agents When change is already under way, you need to empower and reward the people that are participating in it in a productive way. The executive that has taken the lead on change management needs to make finding and rewarding positive change agents one of their highest priority tasks. This can be quite motivating for the workforce, and you should be looking to praise, not just team leaders and managers that have helped facilitate the change, but lower-level employees as well. Everybody needs to feel that their efforts are appreciated, and they also need to see the benefits of their work. You should praise the people that are contributing to the process, but you should also show how the change they are working to support is transforming the organization for the better. The process should be divided into a multitude of small steps so you can declare wins as often as possible. When any small step towards positive chance is completed, you should praise and credit the employees that took part in it. This will boost morale, and would motivate people to continue contributing. This is simply not enough. Everybody in the company needs to know what is going on, why it is going on, and how the vision for the future looks like. When nobody is in the dark, people have an easier time understanding their own roles in the process, so it is easier for them to participate and contribute. Having clarity about the vision for the future allows employees to do their part while staying motivated, instead of being confused and dissatisfied by the efforts they are being asked to make. Most people are resistant to changing their habits, so providing them with the context and reasoning behind what is going on will make it easier for them to get on board. Even if some employees remain resistant to the process of change, most will accept it, and will be happy to be a part of it. You should also address any negative attitudes. This should be done in the context of the proposed vision and the benefits it can bring in a discussion that is honest, open and non-assertive. Final Thoughts As mentioned above, implementing change is not easy, and you need your whole organization to be your allies. This is why devoting a lot of energy and resources to maintain high employee engagement is important.

Chapter 3 : Gemba Academy |

Join Chris Croft for an in-depth discussion in this video Final thoughts, part of Process Improvement Foundations The latest ideas like lean and Six Sigma sound.

Author Archive Medical device startups tend to share many common issues. They are usually striving for better resources such as people and capital as well as the knowledge and expertise required to deal with the U. He also serves as an adjunct professor at St. Cloud State University in Minnesota, where he teaches courses on quality, risk management, and design controls. We recently had a talk about startups and the important aspects they should consider with a QMS. They might have a napkin sketch of a product they would like to develop, but they freak out when they learn about all the regulatory requirements involved. This brought up a story from work I had been involved with a handful of years ago. I was working with a startup in a consulting capacity. They founders had some funding but were working on a shoestring budget while waiting for a large cash injection. They wanted my help with work on a quality system because they were struggling with it a bit. When I got in there, I noted that the current QMS was actually a very impressive system, which had been put together for them by another expert. It had everything, which really was the root of the problem for this company. It was overburdened with compliance, which meant it just never kept up with it. A lot of people in startups are ex-employees of bigger organizations. Companies can blow a lot of money on a robust QMS, but this only ends up slowing them down. If you think about the end result of this, patients will be affected because the device will be slower to market. What exactly do you need to know to ensure you have a QMS that makes sense? What are the key parts of a QMS that are an absolute must? Here are the key basics: Your company should have good managerial oversight, access to resources, and experienced knowledge. As a very basic strategy, simply follow the guidelines the FDA has already provided. When in pre-market, you need to be lean and flexible. The level of compliance should be commensurate with the risk of the product. From a startup perspective, though, it can be overwhelming getting to a point where the necessary steps are understood. The key will always be to start with the regulations and focus on those key points. It is also helpful to hire an experienced consultant for practical advice. How can you use them to make improvements? The company lacked a real design control process, which can be seen in its documentation. Every startup should be aware of this: You will attract FDA interest as a scaled company. How on earth did they put together an acceptable k without design controls? David agrees - it makes sense that you should develop a product under design controls. Using that documentation would be an easy and practical way to demonstrate that equivalence. Keeping up with your design history file will probably make your k submission easier. Most failures prior to the introduction of design history file requirements were found to be related to design. As engineers and developers, we should have control of our design and show our planning through to validation. Was it the right product, and has it been built well? To sum up, keep these few tips in mind: This will not only assist with your k submission, but will also help you as you scale up.

Chapter 4 : Maintaining Employee Engagement While Implementing Change |

Final Thoughts: DuPont Contents Editor's note: This department features Six Sigma related content excerpted from the annual reports and other communications produced by a variety of the world's most successful companies.

If using Kanban cards to improve business efficiency, you can choose to use either a digital or physical board to speed up operational processes and encourage workplace productivity. Although both work to track tasks in much the same manner, each have their own distinct set of advantages and disadvantages for business. Here are some of the main things to consider when choosing between a digital or physical Kanban board. Since tasks can be easily updated in real-time online without the need to hunt around for board markers or sticky notes, choosing this option can create better efficiency for your business and significantly streamline tasks. Another advantage to consider when opting for a digital Kanban board is that they can usually be accessed from anywhere, providing the user is connected to the internet. Using a cloud solution such as Google Drive, you can save your Kanban cards easily online where any employee with login credentials can easily get to them. This can help to improve workplace efficiency by giving employees access to progress data before the working day even begins. This works especially well when you have a remote team that cannot easily meet in person. Since digital Kanban boards require a computer screen or device to be viewed on, they can often have your team squinting at the monitor. Additionally, it can be difficult to ensure the constant visibility of a digital Kanban board when using it to monitor progress in the workplace, for example, if the user is automatically logged out after a certain time period. This is especially true in an office setting, where a digital Kanban board could have the opposite effect and minimize communications. This is because workers can simply stay in their seat and pull up the Kanban board online rather than heading over to discuss their idea with a colleague. Pros of Physical Kanban Boards Unlike their online counterparts, a physical Kanban board does not require an internet connection. Physical Kanban boards utilize items such as colored magnets, sticky notes, and push pins to represent tasks at various stages of to do, doing, or done. Physical Kanban boards can be used to encourage communication in the office. Since employees need to get up and walk to the board to update it, this facilitates more conversations between employees. You may even notice an improvement in workplace morale as your employees get away from their desks regularly, improve their productivity, reduce ergonomic issues, and strengthen workplace relationships. Physical Kanban boards are highly customizable, and there are many examples of them being used to improve employee satisfaction. For example, some businesses have their employees pick their favorite color or even a cartoon figure to represent their tasks on the board. A small gesture, with big results! Cons of Physical Kanban Boards Perhaps the main problem with physical Kanban boards is that unlike digital boards saved to the cloud, they are not indestructible. Additionally, it is more difficult to expand a physical Kanban board. On the other hand, physical Kanban boards must also be added to physically. For a business that uses physical Kanban boards often, a magnetic board is ideal, since this will help to reduce paper waste. Lastly, consider the number and type of tasks that your business carries out. If the workload is very high, an interruption or restart often means making the effort to tear the Kanban board down and start all over again. Final Thoughts Regardless of the type of business you run, there are many ways that you can benefit from using Kanban cards and boards to track your tasks, improving efficiency and productivity. Keep in mind the pros and cons of each Kanban board type to make the right choice for your workforce.

Chapter 5 : Final Thoughts: DuPont - ASQ

Final Thoughts. Lean Six Sigma and the DMAIC method may seem like a complicated process used only by businesses, but the principles involved are simple and can be.

Not understanding that difference can lead to many models that do not truly represent a real-world process and lead to errors in forecasting or predicting of the outcomes. In this article, we will explore the meaning, importance, differences and basic method of verification and validation. What Is a Model? The first step to understand these two different processes is to understand what a model is. A model, whether it is a mathematical, simulation or physical model is a representation of a real-world process. The model can be used for studying, experimenting or making a prediction of the real-world event without directly observing or making change to the real-world process. A model is created in order to understand relationships among independent variables or inputs Xs and the dependent variable or the outcome Ys. Simulation models can be built using computer software. A physical model is not common to Lean applications but is frequently used for experimental purposes in engineering, architectural and science applications. British statistician George E. The question of how good a model can be is answered using verification and validation. The first pitfall that many LSS practitioners fall into is using the model that they created without both verifying and validating it. This leads to unrealistic prediction, misguided results and a loss of the integrity of the model. Verification is the process that ensures that the model is producing or predicting the right outcomes based on the relationships of input variables and output variables that are built into the model. The verification process does not rely on, or compare to, the real-world process. Or does it return a result of 0. Validation is the process to ensure that the model is representing the real world as much as possible. The validation process helps a modeler be certain the correct model is built. The validation process relies heavily on the data collected from the real world, and the perception and understanding of the process of the modeler. The validation process ensures that the model is doing what the real process is doing. The Process of Verification and Validation Example: Ice Cream Stand Consider a modeler building a model to represent a queuing system at an ice cream stand. He observes an arrival profile of customers and the service rate of the server. He finds that the server serves each customer at a constant rate of three minutes per customer. He builds a model to predict the waiting time W when a customer arrives at the stand and finds that there are customers X waiting in the system. To validate this model, the modeler would conduct a time study when a customer, Jessica, arrives at the stand. For five different instances, the modeler observes there are 1, 2, 5, 10 and 20 customers in the line. The real system may return different waiting times for Jessica since some customers that are already in the line may decide to leave when the waiting time exceeds their tolerance limits. In this case, even though the model passed the verification process, it does not represent behavior of the real system and fails the validation process. Distribution Center Why are both verification and validation of a model needed? Consider another example of a process creating a simulation model for a distribution center consisting of four product-sorting machines. In each step, a machine sorts product to its destinations. Figure 2 shows the schematic of the distribution center. After that, the team builds a model using simulation software. Based on the data that was collected and statistically analyzed, the team found that the processing time of Machine A is normally distributed with a mean of 5 minutes and a standard deviation of 1 minute, Machine B has a constant processing time of 1. Products B and C arrive with equal distribution at Machine A every 5 minutes. After the model was created, the team ran the model until reaching a steady state and found that there is an excessive queue in front of Machine B, but none in front of Machine C. Based on the assumption of the processing time at these three machines, and the arrival profile of products B and C, the team realizes that there could be an error in the model code or parameters. The team ensures that all parameters have been entered correctly, including breaks and lunch times, processing time and distribution types, staffing and time available in a day. Eventually, the team found a mistake in the processing time parameter at Machine B â€" 15 minutes was entered instead of 1. This error-checking process is a verification process. By ensuring that the model is producing what it should be producing, the modeler verifies that the model is error free. Based on the assumption that Machine B sorts products faster than Machine A,

there should not be any physical queue in front of it. Consider the same distribution center and a corrected model. The team decides to use the model to predict the behavior of the process during a peak demand period. What is the best way to validate the model and ensure the model acts as close to the real process as possible? For an existing process for which the data is available, the process is simple. The team may use data from the previous peak period such as work in progress, queue length and queue time from the last known period. They can use the known data as input variables and compare the results of output variables to the last known data collected to adjust the model. This way the team can ensure that the model acts similarly to the real-world process. Validating the model is not as easy when the process did not previously exist or data is not available. The team can only assume the most likely behavior of the process based on the relationships between input and output variables. Verification, Then Validation The validation process should be performed after the verification process has been completed. The table below suggests some validation methods for each modeling scenario. Modeling Scenarios With Corresponding Validation Methods Modeling Scenario Validation Method Model of existing process, data is available Test the model in several different cases during the normal and extreme periods using last known data and compare the model outputs to the last known outcomes Model of existing process, data is NOT available Observe behavior of real-world process and compare that to the behavior of the model Model of nonexisting process, relationships of variables are known Use correlation analysis to analyze the relationship between the outcome of the model and the input variables. Compare that to the known relationship of the variables. Final Thoughts There is no one verification or validation process that fit all scenarios. A modeler should be aware of the available methods. Both verification and validation processes should be completed at the earliest stage in the project â€" and as thoroughly as possible. The key question for verification is whether the model was built correctly. After verification, the model should be error free. The key question for validation, on the other hand, is whether the correct model was built. After validation, it should be clear that the model acts similar to the real-world process so a team can be confident in using it to predict the behaviors of a process.

This article provides readers with a comparison of Lean, Six Sigma, and human performance technology (HPT)/performance improvement (PI), three systems that focus on providing quality and value for the organizations and ultimately for customers.

Thought Process Map for Six Sigma: It should be one of the first tools employed when starting any Six Sigma or process improvement project. It is a living document that will change throughout the project and has no set format. A TMAP should include, but is not limited to: The single, most important benefit of using a TMAP early in a project is it ensures that nothing is left out or missed. It is an effective tool for ensuring all potential questions and issues of a project have been both identified and addressed from the beginning of a project to completion. It also provides an effective way to brainstorm, take notes, gather and view information and even summarize data. It reminds the team what assumptions were made, the actions that followed, and the latest status of the project. It is an effective way of communicating, as well as consolidating information from a single person or among various teams. Finally, it provides a visual map that tracks the development of ideas and issues, as well as the extent of inquisition. Like all maps, it shows where the team or individual has been, where they are at, and where they need to go in pursuit of resolution to particular issues. This allows information to be viewed easily. Do not make initial i. If the data is unknown, list it as so and research it later. Here then, is how these five steps can be used to create a TMAP. Define the Project Goal s First and foremost, a team needs to clearly define the goal. What is the team trying to accomplish? Is it a problem that needs to be solved? Is it a potential opportunity for growth that needs to be explored? By defining the goal, the team also will define the project scope. This is essential to do early on in a project. Referencing the project charter the document that formally recognizes a Six Sigma project, identifies the scope, includes a problem statement, objective, benefits, team members, process owner and Champion is very helpful in this step, as it should contain the goal or problem statement of the project. At this point, someone on the team write the goal or problem statement at the top of a large poster board or easel pad. And the TMAP is begun. The other four steps will be put on the board or pad below the initial statement. For this example, a generic problem can be used to clearly illustrate all the steps. Here is a common problem encountered in the manufacturing world: It might be surprising how much information is known, but even more surprising how much the team does not know. Information can include, but is not limited to metrics, times, costs, issues, potential barriers, points-of-contact, current problems, customer requirements, outputs, inputs, process steps, quantities and locations. Knowingpertinent information and data in the initial stages is important; however, equally important is realizing what data the team will need to research. Team members will recognize that their unknowns from Step 2 and questions from this step are very similar. The main difference is the approach. Using two separate approaches allows very different pieces of information and questions to surface. In the previous step, the team is stating inquiries from the perspective that they simply do not know a vital piece of information. Define, Measure, Analyze, Improve and Control. These will be the five areas into which all questions will be categorized. So, again using sticky paper, some common questions are shown in Figure 2. Questions from a DMAIC Perspective Next, the team needs to ask questions from the perspective of groups that are within or affect the process Figure 3. Questions from Group Perspectives Step 4: Sequence and Link the Questions Now it all comes together. Sequence questions below the problem statement or goal and flow them down. Additionally, link questions that are related to each other. The team members will find in this step that they will generate many additional questions. Obviously many questions, sub-groups and links could yet be added. Identify Possible Tools to Be Used Finally, the project team should identify the potential Six Sigma tools to be used to answer the questions posed. The most effective way to perform this step is to create a four-column matrix, as illustrated in the table below. It should have a column for the question, the tool or method, who is responsible, and the due date.

Chapter 7 : LEAN AND SIX SIGMA PRIMER

5 Ways to Make Agile Great Again Home» Blog» Using Lean Six Sigma» Thought Leadership» 5 Ways to Make Agile Great Again Over the course of my years as a Certified Scrum Master and ICF (International Coach Federation) Certified Leadership Coach, I have personally observed that organizations are not making nearly as much progress as they.

There are countless books, consultants, seminars and even certification programs available to managers who are seeking a better way of doing things. Indeed you may find yourself assigned to a team or position responsible for implementing a Lean program in the context of your own job responsibilities. What Is the Definition of Lean? The first order of business when implementing or bringing a Lean program online is to obtain an agreement on what the program is supposed to accomplish. That may seem somewhat elementary, but it is essential. Lean has unfortunately acquired a number of definitions over the years, some of which are not altogether positive. The simple fact is, Lean means different—vastly different—things to different people. Many investors see Lean in the context of expense reduction—reductions achieved mainly through layoffs. The resulting expense reductions are reported against otherwise flat or even lowered earnings as profitability increases. Companies that lay off workers, outsource large segments of the business or move manufacturing operations offshore frequently do these things under the guise of a Lean initiative. Again, Lean becomes a code word—a word loaded with negative connotations because the public has grown accustomed to companies carefully couching words in their press releases to buffer bad news. If this is the kind of Lean your management has in mind for your project, you need to understand that. Your responsibilities in implementing that kind of Lean are more about damage control and less involved in process review. The kind of Lean that backs up successful companies like Toyota is all about the efficiencies realized through focusing on eliminating waste and delivering value to your customer. Real Lean orients the organization toward a growth footing. It positions the company for growth by facilitating flexibility and agility and the ability to accommodate growth. How to Achieve Lean Operations Lean initiatives are usually accomplished through the efforts of senior-management sponsorship and team-oriented execution. Lean teams are cross-functional in nature and served by leadership who is comfortable with dealing and working at all levels within the organization. In addition to a permanent core membership, the team should also have temporary membership representing functional areas directly involved in a given portion of the Lean initiative. Team members need to have analytical skills that can see beyond specific personalities involved in a given process and be able to visualize how the process itself needs to function. The focus of the team should be process improvement, as opposed to personnel issues if the goal is to improve operations. However, there are some essential points to include in your Lean operations plan. Enterprise-wide review — This is simply a high-level cataloging of your primary processes. Categorize each process in terms of its own criticality—its relative need for improvement. When you are done, you will have a list of priorities to guide your focus throughout the initial process. This requires getting your team conversant in Lean vocabulary and acquainted with Lean processes. It tells the rest of the company that you are doing things that will make life better for them. Start with the physical organization — Years ago, companies had methods and procedures experts who would design workstations for the processes performed there. A lot of this was based in ergonomics. This is a great place to start looking for waste. Wasted movement, wasted effort and wasted space all can be alleviated through the intelligent arrangement of tools on the workstation relative to the person using that station. Product and process — Review processes by examining where and how your product moves through your organization. Where are errors likely to occur? Where are delays found? Where are unnecessary steps being performed? This is frequently called Value Stream Mapping. Think in terms of cellular design — Rather than designing long assembly lines, look at how the product is actually built. Frequently pulling together tools and processes into a series of manufacturing cells reduces the waste of unnecessary movement and allows concentrated effort to complete larger portions of the build process more rapidly. Kanban signals are far more efficient than calling the warehouse, emailing your supply managers or other error-prone communication methods. There are

numerous methodologies and philosophies offering systematic approaches to Lean that are worth investigating and considering, including: Total Quality Management and Six Sigma. These offer frameworks on which to build your Lean operations program. Lean Operations Require Practice The most important aspect of embracing Lean is to remember that achieving Lean operations is a journey, not a destination. Continued monitoring, measuring and tweaking will keep your program in tune and your operation trim. Your Lean team should establish an ongoing process to review and report on progress over the long term. Too many good Lean programs are started but end up failing because management assumed that the program would eventually just run itself. Lean is a practice, and that means it must be practiced to improve operations.

Chapter 8 : Digital vs Physical Kanban Boards |

Bechtel was the first major engineering and construction company to embrace Six Sigma, a methodology that uses statistics to identify and eliminate errors in work processes.

Something is fundamentally broken and needs fixing. Organizations are not making nearly as much progress as they should or want to with their Agile and Scrum implementations. Evidence, Signs and Symptoms of Failure Agile project failure rates are still too high. Survey outcomes continue to indicate disappointing results. The 30 percent left are none too happy. Now the hard part â€" why is this happening? If you accept the premise, I would now like to point my Certified Scrum Master and Leadership Coach finger directly at what I consider to be the true underlying culprit: Organizations, leaders and middle managers who insist on telling people what to do, how to do it, when to do it, etc. I have witnessed this behavior time and time again and can only say that it is an absolute employee morale and project killer. Consider this excerpt from the Scrum Alliance State of Scrum report: Maybe they never saw the infamous Steve Jobs quote: Solutions and a Way Forward First a quick story: When I was young my father was an executive at a large paper manufacturing company. As a hardworking executive he used to go into the office many Saturday mornings and sometimes he would take my young brother and me along. We roamed the halls playing Nerf football and mostly made a mess of the place. But when we took a break to see what dad was doing, we noticed something profound: And they responded with smiles and hearty discussions about everything from the kids to spouses to the machines that needed upgrades. What stood out to me is that he really cared for these folks and they in turn cared for him. Later I learned that when he really needed them to go the extra mileâ€" they did it without hesitating. A Way Forward â€" Suggestion 1 Leaders at all levels â€" you must invest the time to get to know and truly care for the people you work with and who work for you. Establish relationships with them. Learn about their families and the personal and workplace issues that are most important to them. Connect and engage with them regularly. Encourage and support their personal and professional growth. Then watch the magic start to happen! You may also stop reading right here. A Way Forward â€" Suggestion 3 Start working to change the company culture from command and control to a Coach Approach style of leadership. Ask probing questions Listen closely for the answers Guide Encourage Gently direct vs. Get started and watch the magic happen! Identify the obstacles and barriers to success and put a SWAT team together of leaders and influencers from all levels of the company committed to breaking those barriers down. Demonstrate to the people who work for you that you are committed and believe in the process by which you will all work together to succeed. There are many other steps along the path to renewed Agile focus on people and Agile success but these few should get you started and on your way to reaping the benefits. Are you ready to jump on board? Have a question or comment? Let us know in the comments below! Armand Feigenbaum Do you have a hidden factory? Do you know employees who always have time toâ€¦.

Chapter 9 : Lean Six Sigma Final Project by Cuthbert Demello on Prezi

And since I get to teach people about lean and six sigma everyday I am like a kid in a candy store with endless aisles. I also have a family I love more than anything money can buy. And the smiles on my kids faces when I walk in the door each night makes me feel like the richest man on earth already.

This is a very critical aspect for the organization as it builds its process improvement structure within each process. These are the project-specific, full-or part-time resources that provide process and cross-functional knowledge, as well as help to sustain the gains. They have co-ownership of the project with the Six Sigma Experts and are responsible for the quality of the work and results. This team also plays the critical role of translating the process gains from Six Sigma to other areas of the business after the specific project has been completed. This is the true leverage of Six Sigma methodology! Deliverables of a Yellow Belt: Supports Green Belt or Black Belt in developing process maps, helping with data capture, facilitating simulation, and improvements. YBs may often be responsible for driving smaller process improvement projects using Lean tools or best practice sharing in their processes. Benefits of being a Yellow Belt for Organization and for self-career: They are the spokes of a wheel and can help drive any Six Sigma process to closure by using their process expertise. Example of a Mobile Phone factory which intends to transition to Six Sigma methodology in a mobile phone factory: BPR is process of streamlining the processes by challenging the each step of the current process. The classic example of BPR is from the banking industry. Go to the bank during banking operation hours Fill in the withdrawal requisition slip Submit the slip and receive a token number Wait until our token number is announced by the Cash Teller Then receive the money The above process had a lot of drawbacks. We could go to the bank only during their operational hours. Certain banks did not have many branches and thus, we had to go to the location of the bank. We had to fill the withdrawal requisition slip. We had to wait in a queue where others are also waiting to withdraw money and so on. What did the banking industry do? Do we now need to go to our banks? Do we have to wait in queues? Do we need to fill any withdrawal slips? This kind of a process improvement is called as Business Process Reengineering. In contrast to BPR, Six Sigma is an approach which focuses on variation or uncertainty reduction in processes. It is the only methodology available which is a documented process improvement methodology. Unlike BPR, Six Sigma uses a five step method to identify root causes and provide world-class solutions. Six Sigma does not involve a complete overhaul of the process like BPR. However, it requires out-of-the-box thinking and questioning status-quo to identify and implement solutions. An example of a banking process will be as follows: Consider that you are applying for an account opening process in a bank. You will need to go through the following steps: Meet the banks representative and fill out Account Opening Form Provide KYC Know Your Customer details and submit identification proofs Telephonic verification takes place Physical Home Address verification takes place Account is created and check book and ATM card is sent to customer address The above process may have an Account Opening timeline target of 48 hours and the mean performance of the process may be 40 hours, however, the variation may be as high as 8 days. There may be multiple instances where the account opening took place as late as 8 days. And the customer does not look at the mean performance but looks at this specific variation just happened to him. When a Six Sigma project is applied to above process, it focuses on reducing this variation and streamlining the processes to achieve customer satisfaction. It may not necessarily change the entire process flow like it takes place in BPR. Key questions to answer are: How can we make sense out of all this data? How do we differentiate valid from flawed claims? Have you really achieve customer satisfaction with this result? However, only statistics can reveal here the performance and quality and this is why Six Sigma is great, powerful and better than other gut-feeling oriented improvement methodologies. So, what is statistics then? Statistics is a way to get reliable information from data. Statistics is a tool for creating new understanding from a set of numbers. Statistics can be better understood under two branches: Descriptive Statistics is a method of organizing, summarizing, and presenting data in a convenient and informative way. The actual method used depends on what information we would like to extract. Mean is the arithmetic average computed by summing all the values in the dataset and dividing

the sum by the number of data values. For a finite set of dataset with measurement values X1, X2, â€¦. Mean Formula The sample mean is represented by x-bar. For a given data set: If there are even numbers of observations then median is average of the two middle values. Mode is the data point having the highest frequency maximum occurrences. A quartile is any of the three values which divide the sorted data set into four equal parts, so that each part represents one fourth of the sampled population. It can be interpreted as the average distance of the individual observations from the mean. Standard Deviation Formula Sx stands for standard deviation of the sample. Variance is defined as the square of standard deviation. Variance Formula Sx stands for standard deviation of the sample. Range is defined as the difference between largest value in a data set and the smallest value in a data set. Range Formula ValueMax stands for the highest maximum value in the data set and ValueMin stands for the lowest minimum value in the data set. In a given data-set like 12, 13, 11, 12, 12 Range: Square Root of 0. Inferential statistics is also a set of methods used to draw conclusions or inferences about characteristics of populations based on data from a sample. Whenever we execute a project, it has to be managed under many constraints such as time, cost, resources, among others. This is mainly because the product will get destroyed after testing. Thus, sampling is used in these cases where only a sample of products is taken in for quality testing and inferences are made for the population basis the result of this sampling. Some other examples of sampling include manufacturing of cars in specific lots i. If it is a lot of cars, they will only test 10 â€" 15 cars and make an inference of whether to accept the lot or reject it. Sampling helps in managing the project by utilizing lesser resources and is still effective in getting results. Sampling by and large is done by all of the organizations and thus, it is an important topic for our discussion. The processes and their associated measurements need to have High Precision and High Accuracy in order produce the expected business outcomes. Accuracy vs Precision As we see in the above picture on the top-left corner, all the darts are concentrated in one corner of the board instead of being concentrated at the center of the dart board. This is an example of High Precision and Low Accuracy. Processes which have high precision and low accuracy need to work towards improving their accuracy so that they start achieving the target. Similarly, the picture on the top-right corner indicates that all the darts are around the internal blue line of the dart-board but are not exactly on target. This is an example of a situation with High Accuracy and Low Precision. Processes with High Accuracy and Low Precision need to focus on improving their precision so that they start achieving the target.