
Why Culture Change May Be Lean Six Sigma's Greatest Value

How One Award Winning Company Discovered the True Value of Lean Six Sigma

Introduction

In the most recent research topic in the July / August 2008 version of iSixSigma magazine, Michael Marx asked participants to identify “the most important basis for defining the success of their company’s initiative” and “*changing company culture*” was the number one response, garnering 22% of the total population. Although Marx’s emphasis for the research was to explore “how businesses listen to the customer” and viewed the desire to *change the culture* to be an internal focus, our research and experiences suggest that the data was once again “right” and that culture change may be the greatest long-term benefit of an investment in Lean Six Sigma initiatives.

During our consulting careers we have been fortunate to work with several companies that have intuitively understood that changing company culture was very important for long-term survival and growth and that Lean Six Sigma was part of the answer to accomplishing that objective. One of those companies was Wainwright Industries (Wainwright), a 1994 Malcolm Baldrige Award winning organization, that helped us better understand the linkage between Lean Six Sigma and positive cultural change.

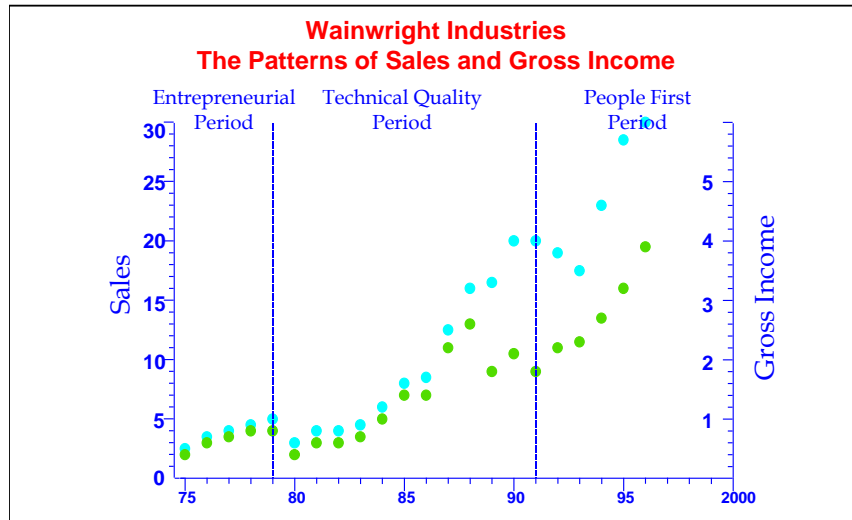
Leading with the Heart

When we first walked into Wainwright, one could feel the culture, and it was captivating. The people were energized and excited about making a contribution to the organization. Senior leadership talked passionately about sincerely trusting and believing in their people, and the employees reciprocated with a similar trust and belief in senior leadership. The experience felt surreal and their corporate culture was unlike most of the organizations we had ever been allowed to visit.

We listened skeptically to the Wainwright story about how they transformed their organization over fourteen years from a traditional command and control, fear-based leadership environment to one of sincere trust and belief in people. As we listened to Mike Simms, the plant manager responsible for much of the cultural change, he zealously preached the importance of *people*. As he outlined Wainwright’s history, he convincingly described the epiphany responsible for shifting the overall philosophy of their organization: Their management team was participating in a workshop held by IBM Rochester, winners of the 1990 Malcolm Baldrige Award, when the speaker stated that the only way to *manage* a truly involved organization is through “Sincere Trust and Belief in People.” Mike stated that at that moment, their organization changed forever.

With encouragement from Wainwright, we moved into the organization to study the systems in place that supported their enticing culture. When examining the Wainwright history we discovered

three distinct “S-Curve” periods which we labeled the Entrepreneurial, Technical Quality, and People First Periods.



Why S-Curves are Important

Currently, a paradigm shift is occurring in the world of economics, and the study of business models is changing from rather theoretical equilibrium models to models that view businesses as complex adaptive systems that evolve over time as the business environment changes.¹ These models incorporate a much richer understanding of how change should be incorporated into our business modeling, and encourage an analytical approach that mirrors reality instead of theory. Although the depth of this approach is beyond the scope of this article, its methods are well suited to the statistical and fact-based approach of Lean Six Sigma. One approach to identifying complex adaptive systems is to look for performance data that represents “S-Curves”, a clear indication that a company has gotten its business model positioned well in its competitive environment which results in exponential growth. Since we wanted to understand how and why the culture changed at Wainwright and believed the change was required due to pressures from its competitive environment, we analyzed Wainwright Industries as a complex adaptive system.

People First, of Course

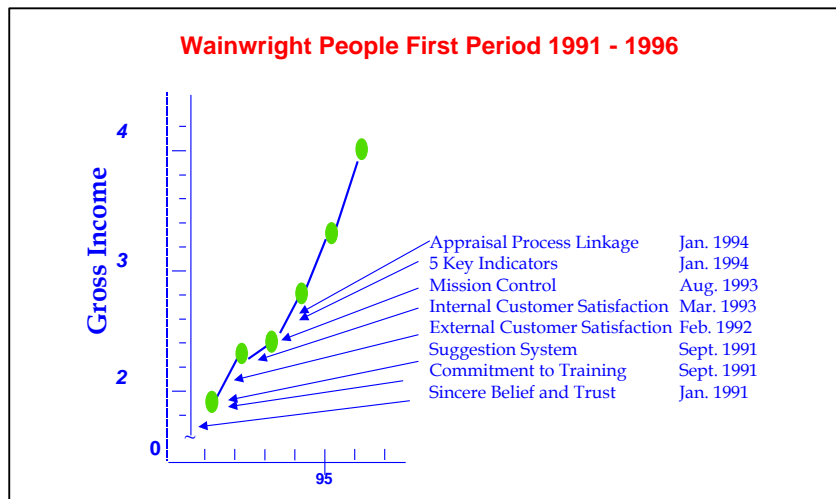
We were so attracted to the third wave, People First, that we thought we had uncovered a universal value that every organization required. As Lean Six Sigma practitioners, we hoped that we could create positive cultural change by teaching every organization about this People First wave.

Better yet, we were not the only ones who had found this wave. Our research brought to light a bounty of anecdotal data around people-first cultures. Almost every consultant has heard about Southwest Airlines rallying around the need for a 15-minute turn, the Nordstrom myth about the employee accepting a return of tires that they didn't even sell, or the Milliken mantra "The hard stuff is easy; the soft stuff is hard!" Each of these stories resonated within us a much deeper feeling than any

¹ Eric D. Beinhocker, *The Origin of Wealth*, Boston: Harvard Business School Press, 2006.

analytical reasoning about increasing shareholder value. Intuitively, we believed that People First was the proper way to manage.

In addition, our understanding of corporate culture encouraged us to better understand the Wainwright management systems since the management systems would reflect the organization's core values that are embedded in these practices.² Consequently, we focused on identifying the key systems that were instrumental to supporting the change effort of the third wave. Building on a new belief about the importance of trust and belief in their people, Wainwright created several systems that supported their People First philosophy, which included a Commitment to Training, External and Internal Customer Satisfaction Processes, an Employee Engagement Program, and a Mission Control Measurement System. In addition, the creation and implementation of these systems correlated nicely with the exponential growth the business was experiencing as illustrated in the graph below:



Our First Attempt at Culture Change

Working with Mike Simms, we converted Wainwright's best practices into standardized systems with the intent of implementing these systems into other organizations to renew or sustain performance growth. Together with Wainwright we preached the message of "People First" systems around the country while we brought companies in to see and feel the Wainwright culture. Many organizations were encouraged by the message and wanted to have the same cultural feel. Several of these companies attempted to implement People First systems on their own—with little success. We knew we could help by bringing our own documented internal and external customer satisfaction programs, interpersonal skills training, measurement systems and employee engagement programs to them. However, although our ability to implement the systems was better, the overall performance was not improving at anything near an accelerated rate.

The focus on people seemed so right that we were perplexed as to why "leading with the heart" wasn't working? If we had run this approach by any marathon runner they could have told us we were destined to fail. To go the distance in a marathon, you need more than a healthy heart. Your entire body must be healthy and disciplined to endure the distance. To successfully lead with the heart, organizations must be healthy throughout. The ones we were working with were not.

² Edgar H. Schein, *The Corporate Culture Survival Guide*, San Francisco: Jossey-Bass Inc., 1999.

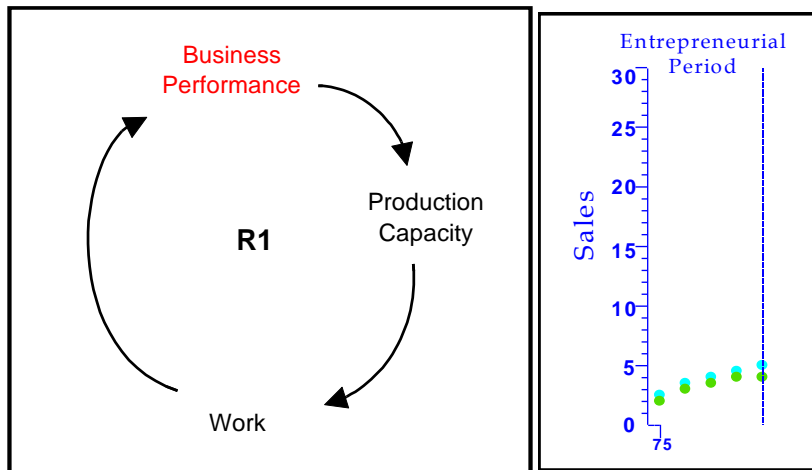
Listening with the Head

We were confronted with a troubling change management issue. We had clear evidence that the cultural change had occurred at Wainwright Industries through a pragmatic and systematic series of interventions, and yet we were not succeeding at replicating the transformation in other organizations. We were left with the question as to why their efforts were failing. Again returning to the discipline of systems thinking, we further analyzed the Wainwright story to better understand the complete history. As we thought about the three waves of change, we had to question our basic assumptions about how the People First step change occurred. Because of our initial enthusiasm and desire to believe Mike Simm's stories, we thought that an organization could change by implementing People First systems, but our consulting experience was proving us wrong.

When we thought about the Wainwright story, we realized that we overlooked the foundational work that supported the People First effort. Our initial desire was to accelerate cultural transformation by grafting People First systems onto an existing organization, without realizing that these systems were dependent upon a very sophisticated root structure. By revisiting Wainwright's organizational evolution over the last twenty years, we understood better the requirements necessary to support our change process.

The first period (Entrepreneurial Period) consisted of developing a small family-owned business operating on a simple business model of production and cost. Using systems thinking, the business model can be described as a simple reinforcing loop that links revenue, production capacity, and work, which was sufficient to drive performance at the onset of the business.

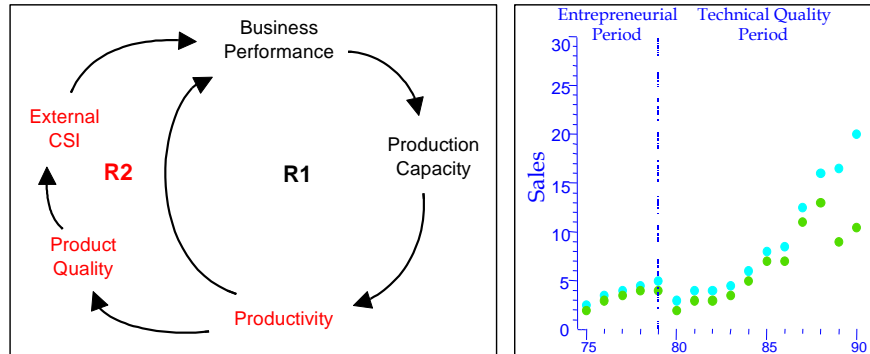
This model describes the basic engine of most manufacturing startups.



In the terminology of systems thinking, R1 represents a reinforcing loop, a system in which each variable is positively correlated. In this case, as Production Capacity increases the amount of Work increases which eventually leads to an increase in Business Performance.

Entrepreneurial periods inevitably reach a point where they can no longer maintain growth within their existing structure. In the Wainwright story, this limit rapidly approached when they ran into capacity constraints at their initial facility. Wainwright purchased a new facility in early 1980 to accommodate their need for growth. At the same time, their major customer, General Motors, began to encourage their suppliers to adopt quality practices that focused on quality, statistical process control, and customer satisfaction. Wainwright's second growth period (Technical Quality Period) incorporated the new quality and customer satisfaction systems required by their primary customer. Of course, today

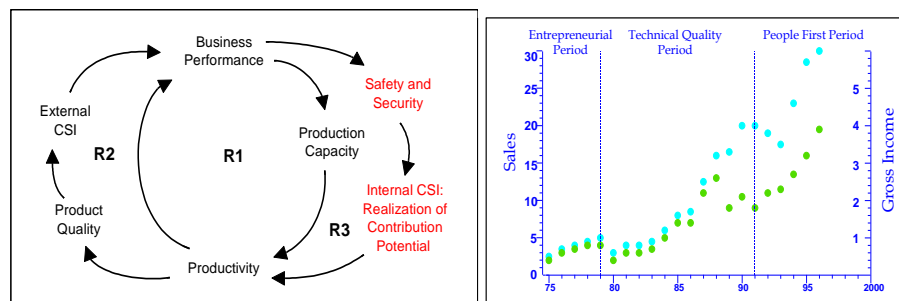
we know these to be the fundamentals of Lean Six Sigma, although those concepts were in their infancy in the early 1980s. This systematic shift enabled a second exponential growth period.



As the Wainwright business model evolved, another reinforcing loop was added, R2, in which Work was replaced with Productivity, which required an increase in Product Quality and External Customer Satisfaction (External CSI).

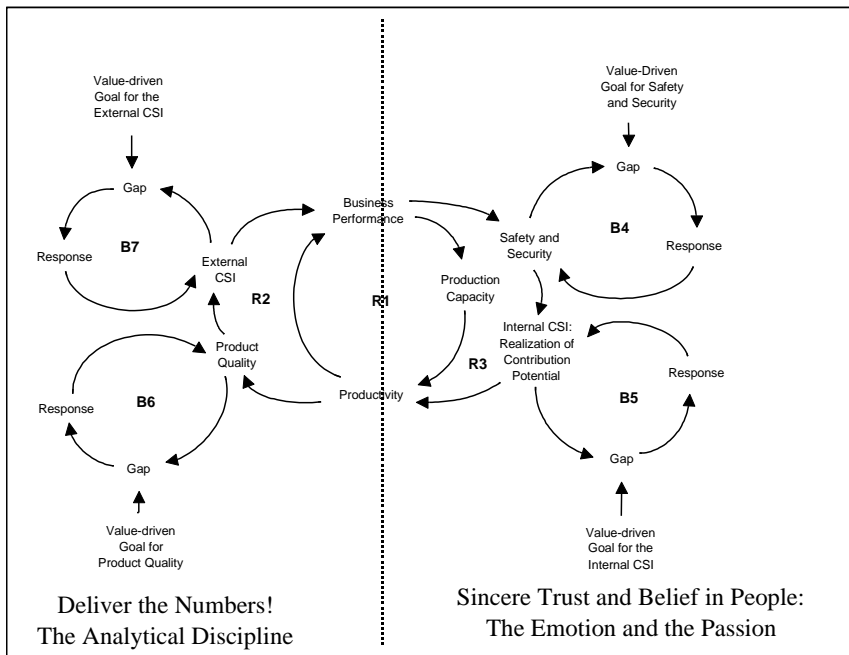
During the Technical Quality Period, overall sales grew exponentially from 1981 through 1991. It is significant to note, however, that although sales were growing, the ability to generate profits began to flatten in early 1987. Mike Simms remembers this to be a period of high tension in the organization which prepared the organization for a shift to a better managerial process.

As discussed previously, Mike Simms and the management team shifted their management style in early 1991 to one of trust and belief in people, and built systems to align with that set of beliefs. Working within a manufacturing environment, Mike passionately established new systems that emphasized the importance of employee safety, engagement, and satisfaction to support the external customer’s desire for quality and satisfaction. The addition of these systems enabled Wainwright to rekindle their growth in both sales and profit.



From a system thinking perspective, Wainwright discovered a new source of capacity by tapping into the additional capacity of their employees. R3 represents the discovery of a positive hidden factory, the potential of a People First set of systems, represented by a focus on safety and the internal customer, the employee.

Our initial premise was partially correct, but flawed in one important concept. The People First systems did indeed drive the overall performance during the last wave of change. These systems, however, were *in addition to*—not *in lieu of*—the previous growth period's systems. The new growth engine had added the People First systems but still maintained the integrity of the quality interventions. Their integrated systems metaphorically mirrored the two hemispheres of the brain, in which the analytical and emotional elements were both represented.

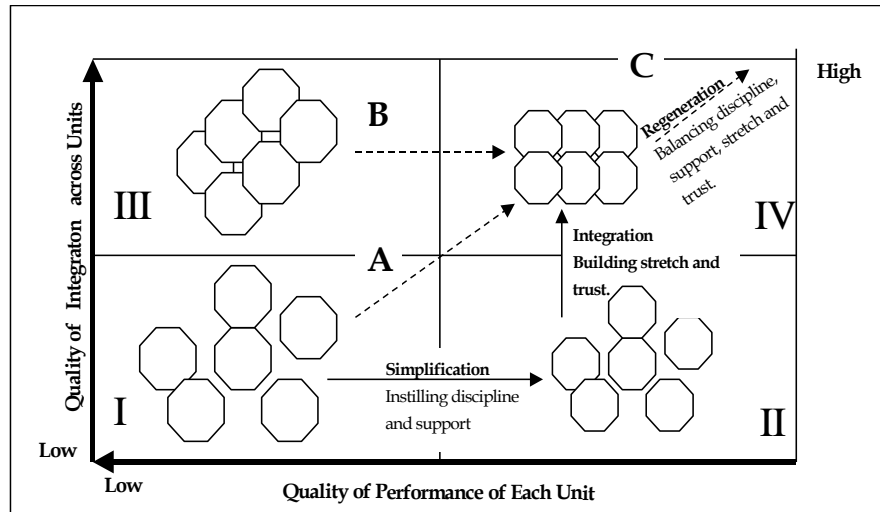


Finally, Mike Simms and his team translated their understanding into creating systems to monitor the performance of each of the reinforcing loops' variables. Reinforcing loops can be either positive or negative, i.e., if things are going well, everything gets better; however, if a variable goes bad, the whole system can go bad just as quickly. The loops represented with a "B" are balancing loops, used to monitor a variable, so that if a variable moves in an unfavorable direction, the variation will be observed and a response can be implemented to correct the variation. Of course, this approach is exactly why Lean Six Sigma professionals are adamant about control charts, control plans and FMEA.

The Importance of Trust Explained

Driven by our new insight, we decided to conduct a literature search to develop an explanation for our observations. Although several articles discussed interesting opinions on culture, employee involvement, and continuous improvement, an article published in the Sloan Management Review entitled "Rebuilding Behavioral Context: Turn Process Reengineering into People Rejuvenation" by Sumantra Ghoshal and Christopher A. Bartlett directly explained the transformation processes we were experiencing in the real world.³ In their study, Ghoshal and Bartlett discussed four elements necessary "to establish a behavioral context that rejuvenates a company's employees: discipline, support, trust and stretch." In addition, "carefully phased or sequenced processes were more effective than sudden frenzied commitment to the latest management fad." They illustrated successful transformations using the following 2 x 2 matrix.

³ Sumantra Ghoshal and Christopher A. Bartlett, "Rebuilding Behavioral Context: Turn Process Reengineering into People Rejuvenation," *Sloan Management Review*, Winter 1996, Vol. 37, No.2, 24. Copyright 1996 Sloan Management Review Association.



Ghoshal and Bartlett found that, in general, the most successful transformations have simplified their organizations around discipline and support before they ever attempted to integrate services which require a deeper level of trust. Discipline encompasses sound quality practices such as "attention to unambiguous performance standards, a commitment to feedback, and a process of clear, consistently applied rewards and sanctions." These organizations needed to be measurement-managed before they could ever begin to instill trust.

The Wainwright example illustrated a history of quality discipline and measurement prior to employee involvement. Organizations are capable of building sophisticated trust-based interactions only upon a backbone of discipline. Our findings in the marketplace paralleled Wainwright's observations. Organizations that failed in implementing our People First systems did not have the discipline required for long-term success. Essentially, they were trying to move up the trust axis without the proper alignment and measurement within the organization. In a very real sense, a potential result of such an organization is a team of very motivated employees marching enthusiastically in different directions. Without the appropriate feedback mechanisms, these teams have little information to adjust their course proactively, and usually require a cliff to startle them into action or accelerate their fall.

Our findings indicate that trust-based systems require a rich and well-prepared organizational measurement and process orientation to ensure proper deployment. Although this work is not easy, it can be very valuable to the organization because one of the few true differentiators of modern organizations continues to be the alignment of behavior to the vision and direction of the organization. Organizations must first be measurement managed and disciplined, before ever hoping to move to a trust-based high performing culture.

Our Revised Approach: Linking the Head with the Heart through Values

The good news is that the majority of right-brained (Myers-Briggs "N") types believe intuitively that trust-based organizations outperform other organizations. The bad news is that the majority of left-brained (Myers-Briggs "S") types, will say prove it! Drawing on our deep experience of fact-based, analytical reasoning, we wanted an analytical, measurement managed approach to cultural change that would appeal to both modes of thought.

The critical bridge to link both sides of the management world was to better understand the phrase "sincere trust and belief in people." In organizational development circles, such a phrase would be considered a cultural value. The *values* of the organization constitute an invisible thread that ties

systems and people together to create the fabric of the underlying culture. Values provide a sense of meaning. They satisfy the heart’s desire for a sense of involvement, community, and shared purpose. They provide the direction and purpose needed by the disciplined head. Knowing the organization’s current and desired cultures or value sets is especially important when the organization is faced with a new leadership vision, an acquisition or merger, or changes in business strategies, core technologies, or competitive/regulatory environments.

In the May/June 2007 issue of iSixSigma Magazine, the research topic was on “Organizational Culture Change” in which Michael Marx highlighted a rather sobering reality:

- “95 percent of respondents... said their company is purposefully pursuing culture change to some degree
- 1 percent of respondents... said their company has achieved it’s desired culture
- Those that track culture change – either with quantitative metrics or qualitative evidence – are further along to their desired state than those that do not measure the change.”⁴

We developed a tool to facilitate this work, a values gap analysis approach, which incorporates a simple survey instrument to define an organizational culture in reference to the following six culture types:

Culture Type	Organizational Description
Controlling – Focus on Predictability	Places a high priority on reliability and control to maximize shareholder / owner profits. Emphasis on this type is often necessary when value can be achieved from economies of scale. This culture is well suited to stable, predictable environments in which organizations can succeed by building highly structured, controlled systems.
Executing – Focus on Current Results	Places a high priority for results and a strong bias for action. Although innovation may be important to this culture the emphasis on accountability and performance may punish failure. This culture is well suited for organizations needing to maximize the value of the current position in the environment and quickly align resources to meet short term goals.
Supporting – Focus on Employees	Places a high priority on taking care of its members. Often described as like a family or club the importance of fitting in may overshadow an emphasis on performance. This culture is well suited for organizations needing to maintain a long-term relationship within a community.
Architecting – Focus on Evolving Systems	Places a high value on understanding and consciously designing the organizational structures that bring them benefit. Often popular in engineering or manufacturing environments this culture is well suited for organizations in which continuous improvements in the structures are necessary to keep pace with changing environmental

⁴ Michael Marx, “Research: Organizational Culture Change,” iSixSigma Magazine, May/June 2007, pp. 33-40.

factors.

Innovating – Focus on Positive Change and Creativity

Places a high priority on developing new markets and products. Innovating organizations often need to anticipate customer needs and are found in small firms, startups, or separated and protected departments within larger organizations.

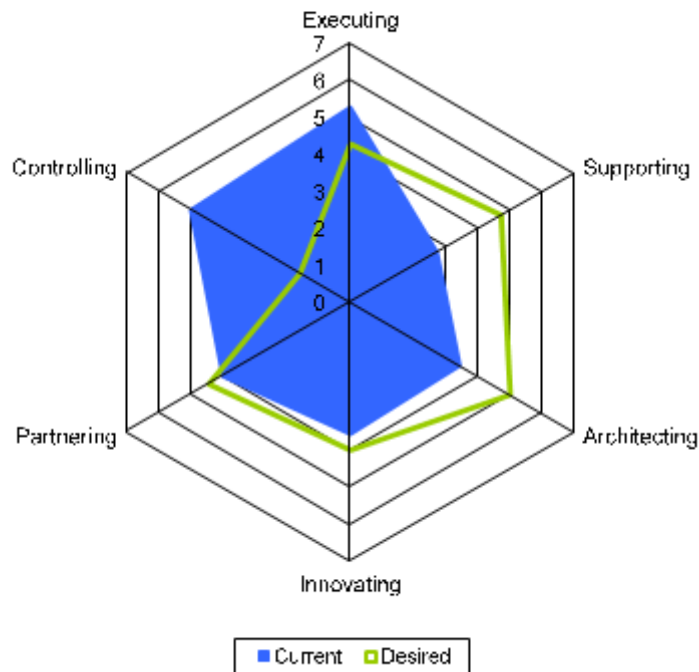
Partnering – Focus on External Relationships

Places a high value on working closely with their customers, suppliers and other external stakeholders. Often popular in service environments this culture is well suited for organizations in which working with the customer or supplier is highly valued to the customer as an added service.

One of the nice features of this approach is that the cultural values can be quantitatively analyzed and qualitatively represented on a radar chart that visually depicts the gap between the current culture and the desired culture. The gap between the current and desired culture shows an organization which dimensions require refocused efforts. When we applied the analysis to the management team at Wainwright, the results helped describe Wainwright’s journey from its early command and control management days to a trust based system during its heyday as a high performing company. As an example, the shift from the entrepreneurial period to the people first period is represented below:

Radar Chart

Senior Management Team
Wainwright Industries 1975 - 1996



Is “Architecting + Supporting” the New “Controlling?”

Although the values gap analysis is designed on the premise that no prescriptive culture is expected, a trend is emerging from collected surveys that is showing a general shift from a *current state “controlling” type* to a *desired state blend of “architecting” and “supporting” types*. Since cultures evolve over time older organizations have a legacy of control systems that may not be well suited for faster changing environments. Similar to the *controlling values*, the *architecting and supporting values* provide a focus on adding structure to an organization but are more interested in alignment of effort and improvement via measurement and involvement instead of hierarchy or status.

Although Wainwright Industries is a small company they provide services to some of the most sophisticated and demanding markets in the world, primarily automotive and aerospace. In order to survive in such a competitive landscape, Mike Simms and the senior management team, relentlessly challenged many of their inherited assumptions about management, architecting new systems and relentlessly supporting their employees in order to grow and survive in a very competitive environment.

Although one might be tempted to believe that such an aggressive shift in managerial approach was required by Wainwright because of their size and precarious market position, two extremely large and resourceful organizations have come to the same understanding. Most Lean Six Sigma practitioners know that General Electric is often considered the flagship organization for the renewal of Six Sigma extending Motorola’s manufacturing application into the enterprise. What many people may overlook, however is that when Jack Welch launched the effort, he “believed that a highly analytical approach such as Six Sigma would reinforce GE’s already exaggerated tendency to analyze and audit rather than act. It would not have changed the underlying culture of hierarchy and constrained dialogue. By running with Work-Out (GE’s empowerment program), Welch created a more flexible and change-oriented culture with fewer boundaries – a culture that was subsequently receptive to the analytical rigor of Six Sigma without becoming bogged down by it.”⁵ In a similar manner, Toyota had to relentlessly remind its students that the Toyota Way “was more than the tools and methodologies of lean production or even lean applied to the office... Toyota had created an entire system of organization that focused on adding value to customers through *people*.”⁶

Trust May Be Even More Significant Than We Thought

An interesting aspect of the Wainwright story, however, is that their technical quality period was not sufficient for their long term viability, and that building a management system in alignment with cultural value of “Sincere Trust and Belief in People” somehow increased the overall performance and productive capacity of the organization. . In order to continue their growth, the senior management team developed a new understanding of their relationship with their employees which they described as a “Sincere Trust and Belief in People.”

Coincidentally, the new economic models studying the global economy as complex adaptive systems have discovered that the amount of trust in an economy is positively correlated with economic performance. Numerous theories exist as to why high trust systems may be so economically powerful, but a good summary is provided by Eric D. Beinhocker, in his discussion about the importance of organizational culture:

In low-trust, low-cooperation environments, interactions between agents must be spelled out in great detail, with numerous rules and little flexibility. One sees this in organizations in

⁵ Ron Ashkenas, Matthew McCreight and Patrice Murphy, *WorkOut and Six Sigma Excerpt*, Rath and Strong’s Six Sigma Leadership Handbook, Copyright 2003, John Wiley & Sons, Inc.

⁶ Jeffrey K. Liker and David Meier, *The Toyota Way Fieldbook*, Copyright 2006, McGraw-Hill Companies, p. 4.

which labor and management have poor relations and unions have stepped in with detailed contracts that specify which person can pick up which screwdriver. Norms that foster trust and cooperation allow people to use their brains to determine what is best, given the circumstances, creating both better performance and the possibility of experimentation and improvement....

Despite what may be written on posters in the company lobby or on plastic cubes on people's desks, at many companies, values and culture are not top management priorities.⁷

Culture Change and Path Dependence

As Lean Six Sigma practitioners, why should we care about culture? Based on our consulting experience, we believe that top management understands the importance of values and cultures but prioritizes cultural change efforts low because of the perceived resistance, disparate consulting approaches, length of the effort and correspondingly low probability of success. Nevertheless, those “posters and plastic cubes” usually clearly articulate what senior management desires.

Lean Six Sigma consultants are uniquely positioned to approach cultural change from a fresh perspective. Our experience with Wainwright Industries and follow-up research taught us that culture change is path dependent and that high trust / high cooperation cultures desired by so many senior management teams require the foundational discipline and support that is embodied in the Lean Six Sigma principles. The new Lean Six Sigma professionals can assist senior management in designing and implementing the systems, measurements, processes and controls that will provide the foundational support for the high trust / high cooperation cultures required in the 21st century.

⁷ Eric D. Beinhocker, *The Origin of Wealth*, Boston: Harvard Business School Press, 2006, p. 373.