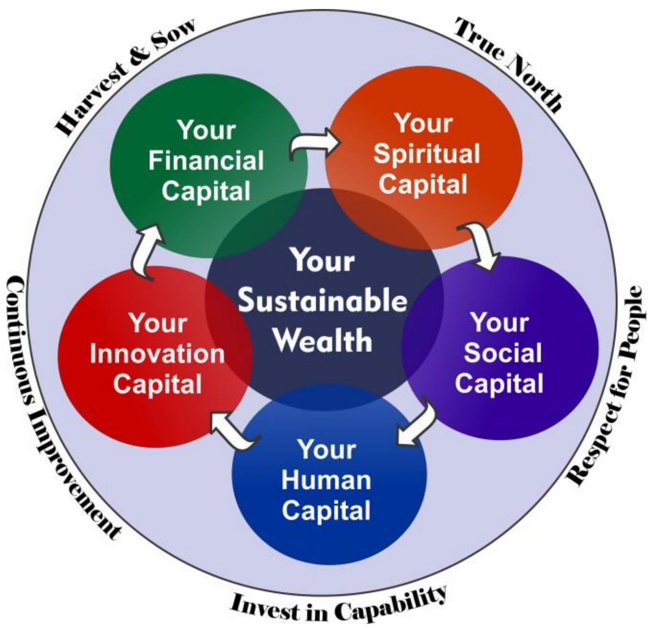
Redefining Capital, Capitalism & Sustainable Wealth[1]

And what we should be creating when we do Whole-System Redesign

The ability to achieve a strategy is dependent on capital or assets. The assets of the organization include much more than financial assets and liabilities. The forms of capital that enable any culture to perform, whether the culture of a country or a company, include spiritual capital, human, social, innovation and financial capital. This is a new way of thinking about how the organization creates value. It is a different understanding of value then most will be used to.[2] However, it is increasingly well recognized that money does not produce money. Money is the result of human motivation, values, social relationships and the ability to innovate. Making money is an result of these other capabilities.



Just as the capability of an organization to achieve its goals is dependent on its assets, we as individuals have assets and liabilities. If you tell me that I have a goal to play in the National Basketball Association or to sing opera you are certain to be disappointed. You can offer me a million dollars and I will still not be able to compete in the NBA or sing opera. I simply do not have those capabilities. There are assets you need to play in the NBA that this writer certainly does not have. Similarly, every company or organization has assets that enable them to perform.

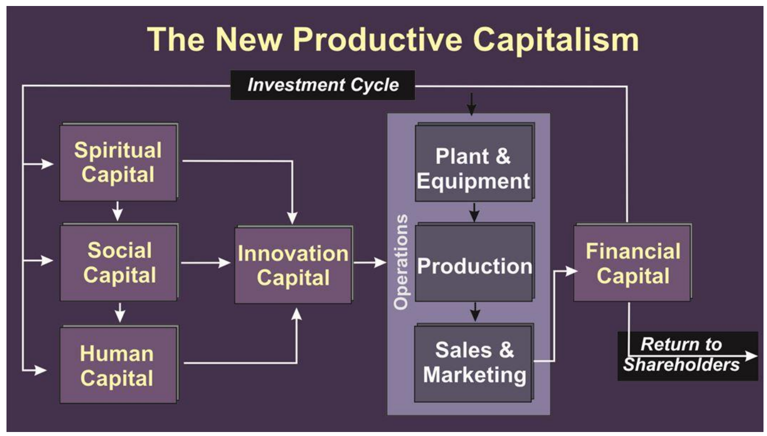
The purpose of this chapter is to help you know and assess your current assets and to identify assets that you will need to build to achieve your strategic goals.

[1] This paper is a chapter from *Getting to Lean – Transformational Change Management* by Lawrence M. Miller, 2013.

What is Capital & How is it Invested?

The plant and equipment, computers, land, and cash on the balance sheet are all material assets of the organization. But, in today's world they are not the primary assets that will create future value. Human capabilities and culture are the much more significant value-adding assets held by an organization. If you had zero money, but if you had a team of dedicated scientists who knew how to cure cancer, you would be in possession of an incredibly valuable asset. Yet, it would not appear on the balance sheet or be visible in cash flow. Similarly, what has distinguished Honda and Toyota and companies like Google, Apple and Facebook, is their human abilities to generate innovation that result in brand loyalty and new revenue.

What is wealth? What are the valuable assets of a person or organization? We think of money, but money is not in the beginning. The "Word," the creative spirit, purpose and values, are in the beginning. The cycle of wealth begins with a creative act of leadership that inspires unity of energy and effort. The ideas, the creative spirit, purpose and values - spiritual capital - come first. This then generates the wealth of social and human capital that stimulates innovation capital and finally results in financial capital.



Spiritual Capital

To the degree that an organization can enable, support, or encourage a depth of personal morality and dedication to a noble purpose, it possesses spiritual capital. This form of wealth accrues both to the organization and to the individual. It will interact and support every other form of capital and ultimately will have its effect on the financial bottom line. In many ways, it is the first cause.

The pursuit of worthy purpose is the primary means of achieving energy in an organization. Human beings are energized by, and will sacrifice for, that which they believe to be noble and therefore ennobling of them. Leaders create energy that may later be directed by managers, but absent the energy that comes from a worthy purpose, there is little motion. Any manager who believes that only technical processes, skills, or financial capital are required for competitive success is much like the racing team that spends a million dollars for the latest race car but then hires a driver who doesn't care about winning. Purpose matters. Ennobling purpose matters most.

Spiritual capital is not about religion. It is about the quality of the human spirit – morality, virtue, and a calling to a higher purpose. It is about spiritual capacities that may be influenced by religion, but stand on their own merit. I am fully aware that to many ears the word *spiritual* may sound out of place in the context of business. However, the perceived division between work life and spiritual life is a false separation and more and more people are recognizing the need for an integrated life. A high percentage of our social interactions occur at work. Many of our anxieties, ambitions, passions and fears center on our work life. Our sense of purpose or self-worth is directly related to our work. The nature of the organization in which we work has a profound effect on our spiritual life.

Many entrepreneurs have been motivated to leave the traditional corporation and start anew, not simply to pursue their dreams of wealth, but to pursue the vision of an organization that contributes to the human spirit as well as the bank account, an organization that satisfies their own spiritual quest. In practice, many organizations have done great harm to the spiritual life of their members. The reader no doubt has sufficient examples without the author providing depressing illustrations. If not, then simply watch Arthur Miller's play *The Death of a Salesman* and know that the graveyard is well populated by kindred spirits of Willy Loman.

I am certainly not the first writer to write about the importance of the human spirit in business. Stephen Covey in his *Principle Centered Leadership* and more recently in his *The 8th Habit* has addressed the importance of spiritual capacities in leadership. Covey writes that his "8th Habit" is *"the voice of the human spirit – full of hope and intelligence, resilient by nature, boundless in its potential to serve the common good. This voice also encompasses the soul of organizations that will survive, thrive and profoundly impact the future of the world."*[3] And, Ken Blanchard, best known for his One Minute books that address leadership and motivation, has designated himself to be, not the CEO or Chairman of his company, but the Chief Spiritual Officer. This is a profound insight into the actual function that should be performed by leaders.

Spiritual capital has two components: first, the degree to which members of the organization are committed to a *worthy purpose* beyond their self-interest; and second, a commitment to *shared values* that guide ethical behavior.

The Pursuit of Worthy Purpose

The pursuit of *worthy purpose* is the primary means of achieving *energy* in an organization. Human beings are energized by, and will sacrifice for, that which they believe to be noble and therefore ennobling of them. Leaders create energy that may later be directed by managers, but absent the energy that comes from a worthy purpose, there is little motion. Any manager who believes that only technical processes, skills, or financial capital are required for competitive success is much like the racing team that spends a million dollars for the latest race car but then hires a driver who doesn't care about winning. Purpose matters. Ennobling purpose matters most.

Purpose is the most pure energy source emerging from the deepest well of our soul. It is the answer to every important question about our being. Why are we here? Where are we going? What difference will it make if we get there? It is the motivation of motivations; it is the reason to seek reason; it is not merely what people will work for, it is what people will die for. The pursuit of purpose was in the beginning and in the Word. Without it you are spiritual dust, because you are going nowhere and don't know why.

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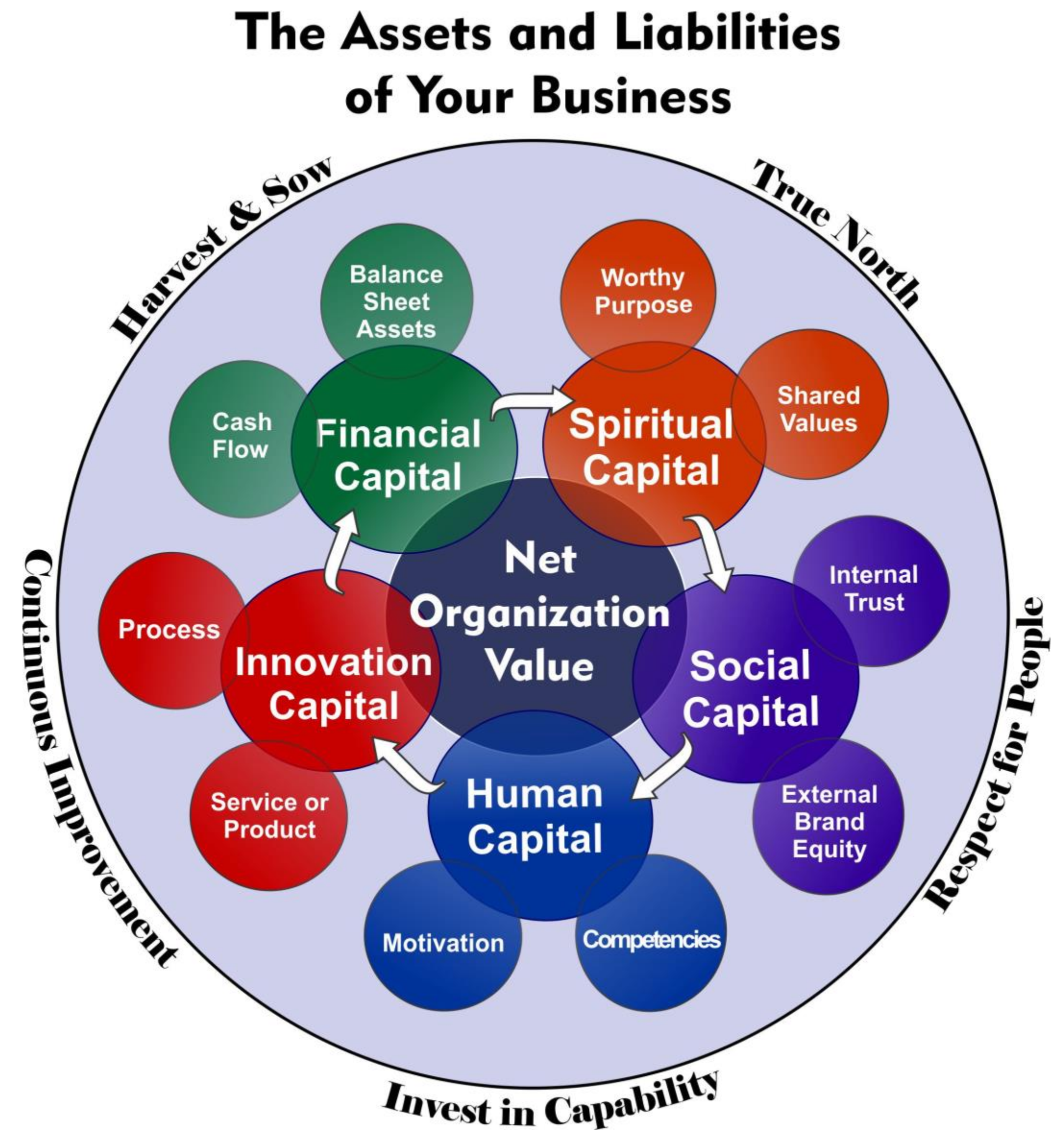
[3] Covey, Stephen R. *The 8th Habit*. Free Press, New York, 2004. P. 5.



The capacity to lead is directly related to the pursuit of worthy purpose. Purpose may be the most powerful link to join people and processes in common effort. Authentic leaders know and display purpose in their lives. Why? The degree to which we pursue an ennobling purpose is the degree to which we attract others. Leaders must attract others if they expect to have followers. Purpose attracts and therefore serves as a unifying force. There is unity of effort and energy to the degree of shared purpose. Our level of satisfaction and our level of energy are directly related not only to our understanding of our own purpose, but also to whether the organization to which we contribute, share that same purpose.

Business purpose is found in knowing and serving customers. Some years ago, I was working with a foundry in Monongahela, Pennsylvania, deep in the heart of the adversarial culture of steelworkers and coal mines. A foundry is a tough environment where the buildings aren't heated, where they pour molten iron to form castings, and where union and management are often at war. Listening as best I could to the experience of workers, I discovered that even though some had worked there for thirty years, they had never met a customer face-to-face. They knew that their castings were put on a truck and shipped to another company, but that company had no human face.

Sometimes the simplest things have the strongest effect. We found that one of the customers was no more than fifty miles away. We gathered some of the experienced union members and drove to the customer's plant on a day when their product was going to be delivered. There, they watched the workers of that plant unload and inspect their castings. These other workers, it turned out, were members of the same steelworkers union. They were brothers, brothers they had never met. And these brothers explained to them the problems they had with their castings, in language more direct and more forceful than their managers would have dared. Suddenly the purpose of their work, rather than meeting the requirements of managers they did not trust, became doing work that met the needs of their brothers. Their entire purpose had changed.

These workers had been denied a sense of purpose, not by any fault of their own, but by the system in which they worked.

The question the steering team and the design team must ask is "How does this organization give its members a worthy purpose?" How can that purpose be enhanced and how can we connect daily work activity with a greater purpose?

The Asset of Shared Values

Shared values are the basis for trustworthy relationships and sociability. Belief systems have enormous impact on the culture of organizations, and it is the function of leaders to exert efforts to intentionally shape these beliefs. A common set of values is the lubricant of fluid associations. It is the basis of unified action and trustworthy behavior.

Countries that are unified have a clearly articulated set of values stated in a constitution or "Bill of Rights" that forms the basis for relationships. We know that (in the United States) we believe in freedom of speech, press and religion. We know that one is innocent until proven guilty. And we know that everyone is entitled to equal treatment and opportunity regardless of race, religion or gender. And, we also know that we have often not lived up to these values, but we know that pursuing them leads to a better outcome than abandoning them.

These values are not innate. We were not born with them. These values must be taught. The degree to which these common values are successfully taught becomes a basis for social cohesion, unity or trust. When the common values are lost a civilization begins the process of disintegration and internal warfare. The same happens in companies. The decline of the American auto companies began in the middle of the last century when they appeared all powerful, but like the Roman Empire, their internal divisions between operating units, functions, and between leaders and led, was a cancer eating away at their strength.

Because of our humble human condition, organizations which desire a high level of sociability or trust, internally and with external customers and partners, must clearly articulate their values, demonstrate adherence to those values, and hold all members accountable for their compliance.

We need shared values precisely to rise above the cultural norms of the moment. We need an anchor in a storm, a deep keel to set our course upwind, a truth that transcends the moment. We have all confronted the teenager who explains his behavior with "Everyone else was doing it!" And Mom or Dad will certainly reply "But, I don't care what your friends are doing; you should know the difference between right and wrong." We try to train our children to have that deep keel to keep them on course in the storm. Yet, the entire adult "smart money" culture of Wall Street in the years leading up to 2008 were packaging exceedingly complex and risky investment vehicles "because everyone else was doing it." The pay packages of not only executives, but moderately successful traders and brokers, were in the many millions and made no sense according to any value system other than the adolescent "Everyone else was doing it!"

Spiritual Capital in an organization is instilled from the top down. It is the function and responsibility of leaders to create and reinforce a set of values that are those to which the organization is dedicated. Commitment to a common purpose and a common set of values must be an explicit component of every employment contract. It is not reached through consensus by first level teams. Nor can senior executives stand aloof as if this is some commitment of underlings. Rather, it is the job of the senior executives to define, practice, and communicate values and purpose from the top. The emphasis should be on practice, because it is deeds far more than words, which will instill Spiritual Capital in the organization.

Shared values are the basis for trustworthy relationships and sociability. Shared values hold a family together. They hold a country together. The decline of every civilization has been marked by internal disintegration into interest groups with conflicting values and a loss of values at the core. Countries, communities and companies work best when committed to core values.

We all have beliefs about human nature that guide our behavior. When someone holds the belief that human beings are created evil and are naturally devious, then it is logical to assume that they must be watched and controlled. However, if we believe that people are essentially created noble and worthy, we treat them with an assumption of trust. Business partners, fellow managers and employees all have a tendency to conform to our beliefs about them. These belief systems have enormous impact on the culture of organizations, and it is the function of leaders to exert efforts to shape these beliefs.

I was once told by a Japanese quality leader that the difference between Japanese and American companies was in religion. He claimed that in Japanese religion (Shinto and Buddhism) man is born good and trustworthy and is to be treated that way. In Japanese culture it is assumed that bad behavior must be taught, a result of the environment or the system. On the other hand, in Western, or "Christian" cultures we believe in original sin, that man is born with sin and must be "saved" from that original sin. According to him, this resulted in completely different types of systems within organization. This may or may not contain some element of truth, but it is an interesting perspective. There is good evidence that the assumptions we hold about people, how we "value" them, will affect their behavior toward us. It is, therefore, good business to hold a set of values toward employees that increases the likelihood that they will act in the common interest of the firm and its customers.

Social Capital

Social Capital is the value of trust. Almost all business transactions are based on trust. Trust will determine the likelihood of customers purchasing your products or services; or, the willingness of employees to sacrifice for your company. Trust is the social lubricant that enables employees to engage in solving problems. It is a key to the effectiveness of all teams, families, communities, or companies. It determines brand equity and market capital.

Social capital can be divided into two forms: first, the trust and sociability within the organization; and second, the trust between the organization and the external market place. The first enables problem-solving and creativity, the second defines your relationship with the markets you serve. In both cases, high trust or social capital is a benefit and low trust is crippling.

The World Bank, recognizing the importance of social capital in economic development, has said, *"Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions... it is the glue that holds them together."*[4] There is a great deal of evidence that social capital is a critical force for economic development. The quality and productivity of a society is directly related to social relationships. For example, the number of parents who participate in school activities is directly related to the quality of education and further economic success. There is even a demonstrated relationship between social capital and health. *"As a rough rule of thumb, if you belong to no groups but decide to join one, you cut your risk of dying over the next year in half. If you smoke and belong to no groups, it's a toss-up statistically whether you should stop smoking or start joining.'"*[5] In our personal lives, social capital, the quality of our relationships, interacts with our physical well-being. In our businesses, social capital precedes and determines financial capital.

If, as the World Bank and others have concluded, the quality of social capital in a society has a positive effect on all measures of social and economic development, it is logical that these same qualities of sociability have a similarly positive effect both within the mini-society of an organization and in relationships with the market place.

Individuals are most aware of the value of their own social networks when they start looking for a job. We hire people we trust. We help those whom we know and trust. To the degree to which you have a trusting social network, a group of people who consider you trustworthy, you have the security of social capital.

Internal Social Capital - Trust

Lean manufacturing is a social system that is built on teams and trust at every level of the organization. It is the strength of these teams that is the mechanism for problem-solving and innovation: the more effective the teams the faster the rate of learning and improvement. This speed of improvement is itself a form of wealth in the organization.

Trust operates both horizontally and vertically within the organization. Horizontal trust is between peers and across functional groups in the organization. Vertical trust is trust in leadership

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[4] The World Bank 1999: *What is Social Capital?*

[5] Putnam, R. D. (1995) 'Bowling Alone: America's Declining Social Capital', *Journal of Democracy* 6:1, Jan, 65-78.

and leaders trust in their employees. In both cases, social capital is the glue that bonds people together.

Internal sociability may have the most significant impact on the ability to solve problems. All organizations are a continual stew of problem-solving. Whether it is solving the problems presented by a customer, a new technology, or a competitor, business is a game of constant adaptation to a changing environment. The apparently small act of walking down the hall to an associate's office and sharing a problem, casually brainstorming without regard to who gets credit, or who bears what responsibility, is the most frequent, and probably the most effective way to solve problems. These encounters may escalate into a formal meeting or problem-solving process. Whether the interaction remains highly informal or becomes more formal, the critical ingredient is the simple willingness to be engaged, to care about the problem, to listen deeply, think together, and brainstorm solutions.

Social capital is an intangible form of capital and cannot be measured on the balance sheet. Yet, in many ways, it may be the most powerful asset. Francis Fukuyama has defined social capital as *"a set of informal values or norms shared among members of a group that permits cooperation among them. If members of the group come to expect that others will behave reliably and honestly, then they will come to trust one another. Trust is like a lubricant that makes the running of any group or organization more efficient."*[6] He points out that every society has some social capital, the important distinction that results in economic differences is what he calls the "radius of trust" that extends outward from the individual to the family, the community, the state and other associations. Similarly, with the corporation, there is a radius of trust that extends out from its employees to its suppliers and business partners, its customers, and to the marketplace. The much sought after financial returns will only follow the creation of social capital.

Francis Fukuyama got it right when he said that *"one of the most important lessons we can learn from an examination of economic life is that a nation's well-being, as well as its ability to compete, is conditioned by a single, pervasive cultural characteristic: the level of trust inherent in the society."*[7] Fukuyama presents an argument for individual virtues which are the bedrock of social relationships, or the tendency toward fluent association, what he calls spontaneous sociability. *"Spontaneous sociability is critical to economic life because virtually all economic activity is carried out by groups rather than individuals. Before wealth can be created, human beings have to learn to work together, and if there is to be subsequent progress, new forms of organization have to be developed."*[8] Fukuyama directly relates social capital to the prevalence of trust in a society. High trust societies are more successful at wealth creation. Those which are low trust societies demonstrate less ability to generate material wealth.

There is increasing research demonstrating that the strength of social networks within an organization correlates positively with higher rates of productivity. *"A social environment rich of participation opportunities, allowing people to meet frequently, is a fertile ground for nurturing*

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[6] Fukuyama, Francis. *The Great Disruption – Human Nature and the Reconstitution of Social Order*, The Free Press, New York, 1999. p.16.

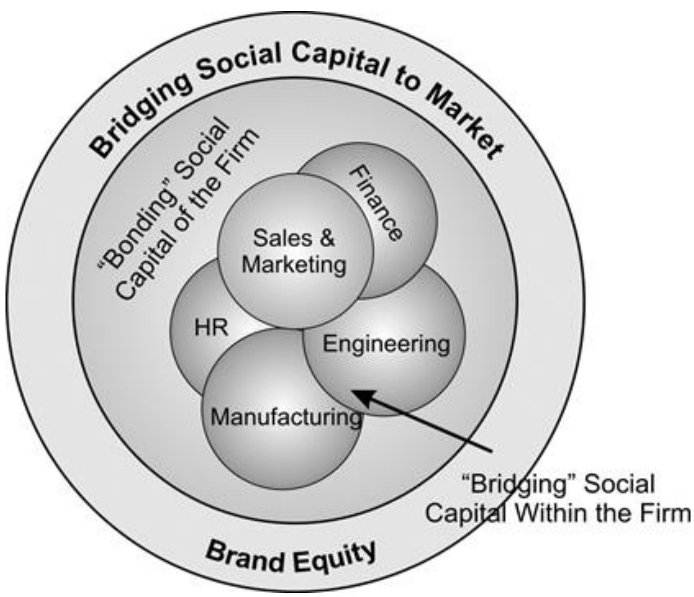
[7] Fukuyama, *Francis: Trust: The Social Virtues & The Creation of Prosperity*, New York, The Free Press, 1995, p. 7.

[8] Ibid. p.47.

shared values and social norms of trust and reciprocity. Where such values and norms develop, the likelihood of cooperative behaviors is higher, and workers may be more motivated and not inclined to shirking behaviors."[9]

In *Better Together* Robert D. Putnam and Lewis M. Feldstein present positive case studies in which social capital was successfully increased. They make a useful distinction that can be applied to any organization. *"Among the many different forms of social capital one distinction will be especially important… Some networks link people who are similar in crucial respects and tend to be inward looking – bonding social capital. Others encompass different types of people and tend to be outward-looking – bridging social capital. Bonding social capital is a kind of sociological Super Glue, whereas bridging social capital provides a sociological WD-40."*[10] They point out that a pluralistic society, composed of many diverse groups, requires a lot of bridging social capital, but the problem is that bridging social capital is harder to create than bonding social capital. It is relatively easy for "birds of a feather" to flock together. It is not so easy to create bonds between diverse birds.

This same effect occurs within the corporation. Within a corporation you may have strong bonding social capital within the engineering or the sales organization. Within each department, employees have the same training, speak the same language and deal with similar problems. However, they may have few bridges or shared social capital with each other or with the manufacturing organization. While there is an obvious interdependency between engineering, manufacturing and sales, the three groups of employees are often located in different buildings, eat in different cafeterias, dress differently, and consequently, each group increasingly speaks a language that cannot be understood by the others and is likely to assign blame to the other groups.



You might ask "So what?" What does it matter if these three "flocks of birds" fly with their own kind and not with other flocks? Too often the engineering organization comes up with a solution that is almost impossible to manufacture. Sales people encounter problems in their discussions with customers that can only be solved by engineering solutions. Manufacturing can solve or create problems that show up at the customer and must be explained by the sales organizations. The ability of the larger organization to respond to customer needs and create improved solutions for customers is directly related to the degree of sociability between these three organizations. This bridging social capital is a primary determinant of the creation of brand equity and economic value. This is exactly why the

[9] Sabatini, Fabio (2006) *Does Social Capital Improve Labour Productivity in Small and Medium Enterprises?* Working Paper, Dipartmento Di Economia Pubblica, Rome.

[10] Putnum, Robert D. and Feldstein, Lewis M. *Better Together*. New York, Simon & Schuster. 2003. P. 2.

engineering organization at Honda is located in the manufacturing plant. It is why all engineers start their career by working on the assembly line. It is why assembly workers, engineers, and executives wear the same clothes. Bridging social capital takes priority over bonding within sub-groups. This is a value that requires deliberate attention by leaders in every organization. It is a result of organization architecture.

The case can be made that the ability to create bridging collaboration across dispersed organization units is a distinct capability that provides competitive advantage.[11] Hansen and Nohria list four barriers to inter-unit collaboration: 1) Unwillingness to seek input and learn from others; 2) Inability to seek and find expertise; 3) Unwillingness to help; and 4) Inability to work together and transfer knowledge. They then list three "management levers to promote collaboration." These are 1) Leadership values and goals; 2) Human resource procedures; and 3) Lateral Cross-unit mechanisms.

As a design team, it is your job to build the mechanism of both bridging and bonding social capital.

Brand Equity

External brand equity is the recognition and respect given to your firm by the market place. Just as the quality of an individual's life is largely determined by the quality of their social relationships, the same may be said of a company. The value of a company is directly related to its brand equity. The success of lean management is not only in the elimination of waste. For many years Honda and Toyota brands have had among the highest customer loyalty ratings and that translates directly to the sales of their products. The latest R.L. Polk study of brand and vehicle loyalty in the auto industry, found that 48% of people who bought a car in 2012 bought from the same brand they were already driving. Polk says the four brands with the most loyal customers were Ford, with 61.2% repeat buyers, Mercedes-Benz (57.7%), Toyota (55.5%), and Honda (54.8%).

Brand equity is almost as good as money in the bank. Some have measured market capital by subtracting the financial value of all material and cash assets from the firm's market capitalization. In other words, if the stock market values the total equity of the firm at $1 billion, and the firm has cash, accounts receivables, building, equipment, and other balance sheet items worth $500 million, it is logical to assume that the value of the brand, the trust of the marketplace represents the other $500 million. Of course, it can also be argued that this value may represent future cash flows but those cash flows are predicated upon trust in the marketplace.

If Honda, Toyota or any company with high brand loyalty, produces a new car, people without any direct knowledge of that car will have a high degree of respect for it simply because it is produced by a company to which they feel loyal. This is market capital. This brand loyalty reduces the marketing cost of each sale. The dollars that would otherwise be spent on marketing to acquire a new customer can be invested in new product development. Similarly, if Pixar comes out with a

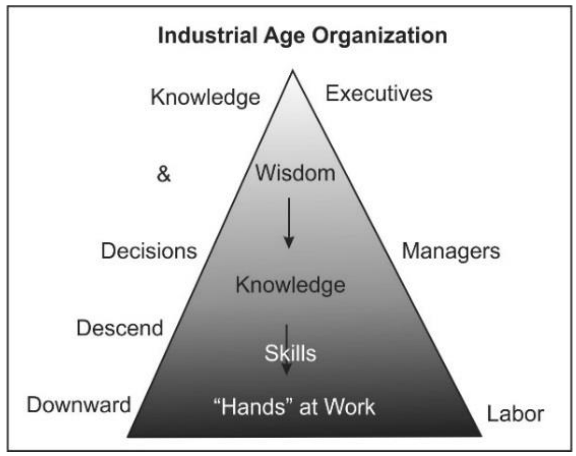
[11] Hansen, Morten T. and Nohria, Nitin. "How to Build Collaborative Advantage." MIT Sloan Management Review, Fall, 2004.

new movie, even without any reviews or promotion, families will have a positive bias that this will be a good movie to see with their children. This again, has direct monetary value.

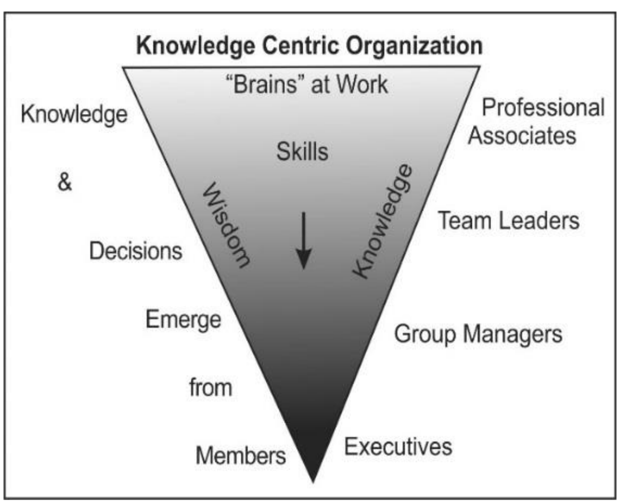
Arthur Andersen, the major accounting firm that sank in the Enron scandal, went out of business, not because they lost financial assets or human capital but because they completely lost the trust of those who read financial statements. This quickly translated into bankruptcy as customers fled to other accounting firms.

Human Capital:

Human capital is the sum of all of the competencies and motivation of the people within the organization. Human capital has always been a critical component of the performance of any business, but today's entrepreneur is likely to bring with him, not money, but *competency* and *motivation*, the two key ingredients of human capital. Attracting and retaining human capital will be one of the most critical challenges as a business grows.



It was assumed in the industrial age that the brains were at the top and the mindless labor at the bottom. In the feudal kingdoms of Europe the King was believed to have a divine connection, endowed by God with the "Divine right of Kings," and therefore, unquestioned authority. How could you argue or dispute with one appointed by God? But, the American Revolution began the process of turning the idea of authority on its head. "We the people… in order to establish a more perfect union… do ordain and establish this Constitution." With those words the revolution began, and it isn't over. With those words the bottom became the top, and the top depended on the bottom for its authority. From that moment forward, every kingdom of Europe, every despotic dictatorship, and every authoritarian corporate executive began to lose power and control. The democratization of education, the printing press, public schools, and now the Internet have made knowledge the property of the masses. And, knowledge is power!



In the Industrial Age the labor in the factory was referred to as "hands" employed on the "floor" of the factory: brains at the top, hands doing "labor" on the floor. But, that is now all changed.

In lean and other modern organizations expertise is at every level. The assembly worker at Honda is trained and expected to be "the world's greatest expert" who is "on-the-spot."

The worker's job may be to install the headlight or tail light assembly that is at the corner of every Civic or Accord. He or she is trained to inspect every headlight assembly and reject defective ones. If she finds a bad headlight assembly, there is a phone at the work station that she picks up, even with just one bad part. In the quality assurance department there is a first level employee at a desk with two telephones. The black phone rings. This individual gets out of his chair, goes out and takes the bad part. Only minutes have passed. This same individual then picks up the other phone, which rings at the supplier who is twenty miles away. At the supplier, a first level employee answers the phone. These two people know each other. The employee at the supplier has one hour to get back to the quality assurance employee at Honda and explain what they have just done to assure that they are not right now making parts with the same defect.

Several things are important in this story. First, the flow of parts is continuous and with minimal interruptions. There are small piles, not big piles, no warehouse, and in many cases the pile is a two hour pile. In other words, the part made at the supplier this morning is assembled this afternoon. This is "just-in-time." In order for this *technical system* to work successfully, the *social system* must provide for immediate feedback and immediate problem-solving. Every social system functions according to the capacity of the people, human capital. Second, notice that no manager got in the way to slow the process down. The process was entirely horizontal, not vertical. Nothing went up. No decisions came down. If you had inserted one manager who was required to approve or think about anything, you would have slowed the process down and immediately you would have to have a warehouse to store inventory of goods. The elimination of waste, reduction of inventory, wasted time, useless activity, meetings, etc., is directly related to the competence of the employees at the first level and the trust placed in them. These are not "hands," these are brains. It is the job of managers to assure that those who are on-the-spot are, in fact, the world's greatest experts in their work. To the degree that this is true, you have the competitive advantage of human capital.

This example is also important precisely because Honda is not what people normally think of as a "knowledge organization" such as an advertising firm, a medical practice, or research lab. No. This is good old fashioned manufacturing, and the idea of the separation of labor from knowledge is dead! It is obvious that in a hospital the most important competence is that of the surgeon in the operating room, or other medical professional. These are the first level "workers" in a hospital. But, in our world today, it is also true that the most important competencies are on the floor, on-the-spot, at the frontline of manufacturing and every other kind of organization. Recognizing this and acting on this recognition is the first step in developing human capital.

Motivation + Competence = Performance

Motivation has been the subject of hundreds, if not thousands of books. However, the keys to motivation are relatively simple: work that is interesting and ennobling; sincere recognition by peers and superiors, opportunities for career advancement, positive feedback that can guide performance, strong and supportive social interaction by a team and, of course, fair and attractive financial rewards. There is little reason to waste time in the endless debates about which is more important: money, recognition, or enriching work. They are all motivating and different personalities are more or less influenced by different types of incentives. The job of designing an organizational system is to optimize all of the various forms of motivation. Over-reliance on any one form is a prescription for poor performance.

Human competence is the only modern parallel to production technology of the past century. Modern production most often occurs in the mind, or the collective mind of a small work group. If you have highly trained marketing professionals, skilled sales men and women, great engineers and brilliant financial managers, you have an important form of capital. These competencies are a foundation of performance. Investment in these assets is likely to pay off in the creation of other classes of assets.

Those organizations that have exhibited the greatest dedication to the development of human competence have consistently outperformed those who have only given lip service to training and development. General Electric, Microsoft, Toyota and other companies that have grown into great economic powers have done so as a result of both attracting and developing the most competent people.

Competence can loosely be divided into the functional skills, managerial skills and social skills. While there are many important functional skills, the most important are those that enable the core work process in the organization. If the organization is a software development company, the competence of software design and engineering are the core competencies. Managerial skills – decision-making, planning, project management, etc., are all critical to every organization, as are the social skills of communication.

A Philosophy that Builds Human Capital

We have all heard the speech that people are our most important product. It seems that every company has a statement of principles that articulates the importance it places on people. However, in too many cases the reality of daily life does not conform to the stated value. Whether in our personal life or in our professional life, it is easy to take people for granted.

A former consultant of mine worked for Hewlett-Packard during the reign of Carly Fiorina. He met with her to discuss the state of the culture in the organization, which was not good, and to make recommendations for its improvement. What was her response to him? "Look, for every unhappy person here, there are six people out there who want to work here. If they don't like it they can leave and we will hire someone else." She seemed to think that the people of HP were little more than disposable units. This attitude toward people was reflected in her relationships not only with employees, but also with the most senior managers and board members. Her philosophy toward people determined her failure. Her personal attitudes and behavior were in stark contrast to what had traditionally been an excellent people centered culture. It turned out that it was the CEO who was disposable.

Toyota is the opposite case. From the founding of Toyota, its leaders have put into practice a philosophy upon which their quality and innovation has been built. When a company grows to the size that Toyota has, with its world wide scope, there is no single leadership practice, no information system, no system of reward and punishment, powerful enough to hold it together and keep it moving forward. It is only an overarching philosophy, a system of beliefs, which can be sufficiently powerful to create unity of energy and effort. Toyota's founders understood this at an early stage.

The following founding philosophies do much to explain the success of Toyota and its ability to create and manage human capital. There are four key elements: tomorrow will be better than today; everybody should win; customers first, dealers second, and manufacturer last; and Genchi gengutsu (go and see things for yourself, firsthand).[12] As you read these, consider what the overarching philosophy of your own company is because this is critical to the design of the social system.

Tomorrow Will Be Better

The extremely simple idea that "tomorrow will be better than today" may sound like some Pollyanna immaturity. However, it has significant meaning and psychological benefit. It defines the culture as fundamentally optimistic. Martin P. Seligman pointed out in his book *Learned Optimism*[13], that optimistic people are more successful, healthier, happier, and achieve more. Optimism is enabling and contagious. If you believe that tomorrow will be better than today, then you act on that belief, and that act is constructive. Optimism about the future of your company or your person is a self-fulfilling prophecy. If you are optimistic, you are thinking about the future. What will it be like? What are the opportunities? What do I need to do to take advantages of those opportunities? This is the thinking of an entrepreneur. All entrepreneurs are optimistic. You always start a company on the optimism of your idea and your ability to realize that idea. If an entire culture can be infused with the idea that tomorrow will be better than today, then it is very likely that the culture will produce innovation, continuous improvement, and financial success.

There is something that I have always called "creative dissatisfaction". It is an understanding of whom I am and where I am, as compared to whom I could be, and where I could be. It is an understanding of the gap between the current state and the potential future state. Knowing, or believing, that there is some future state, some better condition or place that I could be, creates the energy of creative dissatisfaction. This is present in the Toyota culture. Tony Fujita, Toyota Motors Sales, U.S.A., Vice President described it this way:

"I can't imagine Toyota being satisfied with any facts, any situation, any era, or any success. It's impossible. It shows in Mr. Watanabe's policies. I think it is Toyota's culture not to be satisfied, not to allow itself to be satisfied. The company always demands progress. Kaizen is not only a word; it is everything to Toyota. It's implanted."[14]

But this creative dissatisfaction is not unique to Toyota. It is present in every entrepreneur, every great athlete, every great scientist, artist or writer. It is the foundation of excellence. It is also the foundation for developing human capital.

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[12] Osone, Emi, Shimizu Norihiko and Takeuchi, Hirotaka. *Extreme Toyota: Radical Contradictions that Drive Success at the World's Best Manufacturer*. New York, John C. Wiley, and Sons. 2008.

[13] Seligman, Martin P. *Learned Optimism*. New York. Alfred A. Knopf, 1991.

[14] Osono, Emi, et al, Extreme Toyota. Page 128.

Everybody Should Win

The philosophy that everyone should win at Toyota is all encompassing. It includes suppliers, employees, customers and society. The mission of Toyota is "To contribute to society through the manufacture of automobiles." The idea of contributing to society, as well as to the well-being of the company, has always been at the heart of the Toyota culture. This, of course, is spiritual capital and is an antecedent to human capital.

The idea of everyone winning is hard for many managers in the West to accept. In the minds of many when there is a winner there is a loser. This is a zero-sum assumption. However, when it comes to economic matters winning is a non-zero-sum game.

Robert Wright, in his excellent book *Nonzero – The Logic of Human Destiny*[15], argues that human history and human evolution have a direction. That direction, simply put, is from simple to complex organization, requiring ever-wider circles of trust and cooperation. The challenge of unity grows as we move from the simple organization of the family to the complexities of modern organization. He also argues that genetic selection is hard-wiring a tendency toward what he calls "non-zero-sum" behavior. Just as we may focus on the competition in sports and fail to see the cooperation, we may fail to see the ever-expanding forms of cooperation required for us to survive, and even compete, as a human species.

The fact is that credit, or respect, is highly elastic, as are financial resources. Everyone can win. In other words, if the team performs extremely well, they win the NBA championship; consequently, the amount of credit expands greatly. Therefore, the real game is a win-win game in which the amount of credit is what Wright calls "non-zero-sum," or highly elastic. The goal of the player in sports is not only to win against his competition, but to increase the amount of total credit available to all team members. Our ability to see a sport as non-zero-sum leads us to develop cooperative relationships. Non-zero-sum games lead to unity; while zero-sum games, lead to disunity. The biggest sport of all is the sport of business, which is also a non-zero-sum game. Wealth is elastic.

As Toyota grew in complexity, the challenge of unity became more difficult and required constantly evolving sophisticated means of trust-building. The philosophy that *Everyone Wins* was critical to the development of this trust. Wright says this is an historical necessity, *"As history progresses, human beings find themselves playing non-zero-sum games with more and more other human beings. Interdependence expands, and social complexity grows in scope and depth.*[16]

Customers First, Dealers Second, Manufacturers Last

Keep in mind that this is the philosophy of the manufacturer. It is paradoxical. Do you come in last if you put your own interests last? By putting their customers and dealers first, does Toyota lose? This has been their philosophy since their founding. And they haven't lost!

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[15] Wright, Robert. *Nonzero – the Logic of Human Destiny*, New York, Vintage Books, 2000.

[16] Ibid. p. 19.

Good management is good listening, more than good talking. If you put your customers and dealers first, you listen to them. They are the boss. They buy your cars and send you money. It is good to listen to the boss. Toyota has always listened well to its customers as well as studying the future. Listening is a human capacity. It is not something that everyone does well. It must be trained and developed.

For many years it was an assumption at General Motors that they could drive marketing expectations, create market demand, and inform the customer what they should want. They should want big tail fins. They should want sleek and sexy cars. They should want more horsepower. If we can make it, we can create the demand. This push, rather than pull, philosophy destroyed the ability to listen well to customers. Even as customers were continually buying more and more foreign and smaller cars, GM believed they could drive market demand. It has cost them dearly.

Go and See For Yourself (Genchi Genbutsu)

At Honda this same philosophy is stated as "the world's greatest experts are on the spot." I have sat in senior level decision meetings at Honda and some manager will offer his opinion about what to do to solve a problem and another manager will ask "Have you been on the spot." If you have not been on the spot or spoken to the world's greatest experts, then you do not really know.

Dr. Deming preached that we should manage by the facts. Toyota is a fact based culture, constantly striving to learn from the facts. Continuous improvement based on studying the data is a scientific attitude toward management. Rather than convincing yourself and trying to convince others, go and see, and learn the facts. Then form your opinions.

This philosophy is not only the philosophy of scientists who are in the business of learning from experience, empiricism, but it is also the philosophy of the most practical managers. There is a popular story at Toyota: The CEO, Kiichiro Toyoda was on a tour of the manufacturing plant. He came upon an operator of a grinding machine that would not work. He was scratching his head and looking at the machine. Kiichiro Toyoda looked at the man, rolled up his sleeves and stuck his hand down into the oil pan, pulling out a handful of sludge. He said, "How can you expect to do your job without getting your hands dirty."[17]

The meaning of this story is not that workers should get their hands dirty. It is that everyone, from the CEO on down, should get their hands dirty. They should "go and see" even if that means rolling up your sleeves and sticking your hands into a pile of sludge.

The above four philosophies are just one example of a corporate philosophy that has promoted human capital. Of course, other companies have philosophies that have also proven successful. The important thing is that you know your philosophy, you train every employee in your philosophy, and you carry it out over the long term.

Innovation Capital:

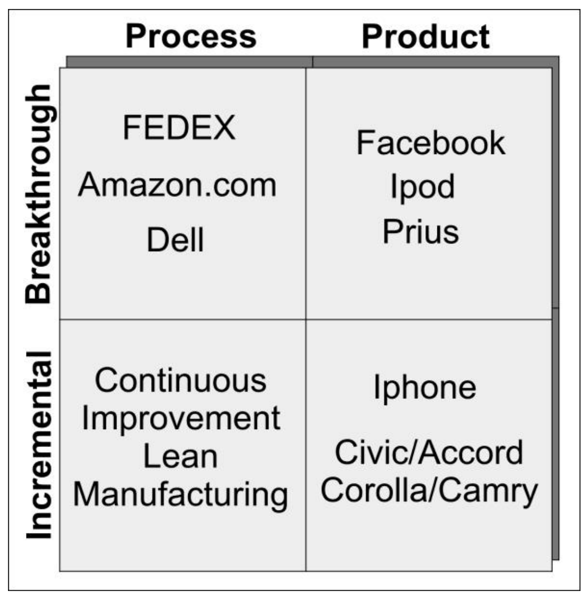
[17] The Toyota Way 2001 (internal Toyota Motor Corporation publication, Tokyo) April, 2001.

Nothing has greater benefit to a corporation than innovation. Innovation creates markets, establishes market position, and creates customer loyalty. Without innovation you will die for the simple reason that your competitors are innovating. The ability to innovate is both an imperative and an asset.

The architecture of organizations may stimulate or stifle innovation. Innovation grows in the soil of spiritual, social, and human capital. To the degree to which there is commitment to a worthy purpose members of the organization will engage in the discretionary effort of thinking, exercising their brain on a problem or opportunity. Many creative ideas occur on the weekend or in the evenings, when a member of your team is choosing, even unconsciously, to think about a problem at work or a customer's needs. This is discretionary effort, effort that cannot be forced, measured, or required. It only occurs when employees genuinely care about the success of the organization.

Innovation thrives in an environment of high trust, social capital. Most innovations are not the result of one person thinking alone. Rather they are the result of thinking together, sharing ideas, brainstorming and allowing your idea to be criticized by your associates. High trust cultures are high innovation cultures. If you examine low trust cultures, such as in the Middle East or the old Soviet Union, you will find very low rates of innovation. Companies in which there is a culture of fear, rather than a culture that celebrates successes, will have low rates of innovation.

The degree of competence and continual education of employees, lays the foundation for high innovation. When an individual is continually seeking the latest knowledge, the latest experiments, the latest inventions or theories, his or her mind is playing in the intellectual waters in which innovations float to the top.



The success of Honda and Toyota over U.S. automobile companies was the result of their fanatic dedication to process and product innovation. The successes of Wal-Mart, Home Depot, L. L. Bean or McDonald's were all about process innovation in their industries. Processes either create or minimize cost. They assure either consistency and reliability or the unfortunate alternative. Like other forms of capital innovation, creates a significant asset.

Types of Innovations – Big and Small

Innovations may be one of four types or a combination of types: They may be innovations in a product or service delivered to customers, or they may be innovations in process, how they are delivered or produced. Either product or process innovations may be small incremental improvements; or they may be large game changing breakthroughs. The way each of these is encouraged is different.

Process Breakthroughs

Federal Express is an example of a breakthrough in process innovation on which a company was built. There is no new product or service at FEDEX. Before FEDEX's guaranteed overnight delivery, you could still get packages delivered. But, Fred Smith, founder of FEDEX, studied the process of package pickup and delivery while in his MBA program. He studied all the potential technologies and processes and came up with a significant breakthrough. He changed the process, not the product.

There seems to be a pattern of major breakthroughs in process occurring among students. Fred Smith is joined by Michael Dell, Mark Zuckerberg and others in this distinction. Dell Computer had no innovation in product at all. The early Dell Computers were essentially IBM PCs, assembled from off the shelf components. However, the process of assembling and marketing was the innovation. Michael Dell understood the potential of Internet commerce as IBM and Apple did not. He decided to cut out all the middle layers of marketing and distribution, place his own ads in magazines and on the Internet, and ship the computers directly. It was a huge success although it would take only a nanosecond for dozens of competitors to catch on.

Amazon.com is also a business created as a breakthrough innovation in the process of marketing and distribution. Amazon was just a bookstore, nothing more. But, its founder also understood the potential of Internet commerce technology and how much less expensive it would be to simply ship the books out of a central warehouse while taking orders online. Many process innovations involve the elimination of steps in a process, thereby reducing costs and creating an economic advantage. This is market disruptive innovation and every business should be paranoid that some innovator is creating a business model that circumvents their own.

Product Breakthroughs

Many breakthroughs upon which new business are founded are new technologies, inventions, or products; rather than the process of how they are made or delivered. Facebook, once again, like Yahoo and Google, was born in a college dorm room by young people who struggled to find money for pizza. Facebook is an innovative service, one that is free, the idea of social networking online. Of course, there were predecessors, Microsoft's Instant Messenger, chat boards and email lists, and personal blogs. But, the idea of having your own space, where you share your thoughts, photos, and links with all your friends and where they can introduce you to new friends, is truly a new product simply using existing technologies.

The IPOD, not surprisingly from Steve Jobs and Apple, was also a breakthrough product innovation, taking some existing technologies and existing market for music in your pocket, but was so radically different in its ease of use and capability that it built a market where it had not been before.

Why is it that many breakthrough products are the creation of young people? What is it about their culture and the workings of their mind that allows them to imagine that Apple II when all the brilliance and wealth of IBM was blind.

I very well remember a trip I took to IBM's New York headquarters many years ago when I was working for Fran Tarkenton. Of course, we were hoping to sell them some consulting services, and they were interested in talking to the popular football player, much more so than to me about any need for consulting. Just a few months before this trip, I had purchased my first personal computer, a Radio Shack TRS80 Model III. It was terrific. I was mastering VisiCalc (which was the spreadsheet before Excel) and creating a spreadsheet that projected the billing days and dollars of my consultants forward for the year. I could figure out what would happen if we sold this client or that. And, I could do it all myself. Wow! That was my first experience with hands on computing.

When we met with the Senior Vice Presidents at IBM, in a casual conversation, I mentioned that I had just bought this Radio Shack personal computer and that I was pretty excited about what I could do with it. The moment I said that I was sorry. They looked at me as if to say "You child! How little you know about computers." What they actually said was that it was a toy. It would be fun for games and maybe for a few uses in the home, but it would be useless for business. Their business was selling huge million dollar mainframes to large businesses. They couldn't conceive of this silly little Radio Shack toy being of any use. About two years later, they were trying to figure out how to get into the personal computer business and meeting with the floppy haired Bill Gates. When they met with Bill Gates to talk about their adopting his MS Dos operating system, they still talked down to him as if he knew next to nothing about computers. As of this writing, IBM's market value is about 233 billion dollars; while, Microsoft's is around the same; and that ridiculous little company formed by two hippies and using an apple as a logo is now worth more than both.

This and a thousand other examples illustrate the danger of success, size and wealth. It makes the mind lazy; it reduces the ability to see the possibilities of new technologies. This is why Facebook was invented in a college dorm, and not by Microsoft. All this proves is that material wealth and resources has little to do with innovation. In fact, there is good evidence that the larger and wealthier an organization, the lower the probability of breakthrough innovations. Once you realize this, you realize how important the culture of the organization is.

Incremental innovation

Innovation is something like the race between the turtle and the hare. The speed of the hare is likely to gain more admiration, but it is often the turtle that creates more wealth over time. The value of innovation is not only in the breakthroughs of Facebook or FEDEX. Whether more wealth is created by these breakthroughs or by continuous improvement is very debatable. The dominant companies in retailing, manufacturing, hotels and many other industries are not the result of some dorm room breakthrough, but rather the result of continuous improvements.

Learning to Lead (and Innovate) at Toyota

In May 2004, the Harvard Business Review published an article by Steven J. Spears[18] that documented the education of one American manager hired by Toyota for a relatively senior position in their manufacturing organization. It describes in some detail how he is indoctrinated, not so much in the technical system of the organization, but in the mindset that drives continuous improvement. Bob Dallis (a fictitious name) is first assigned to the U.S. engine plant, where he is to help nineteen engine-assembly workers improve labor productivity, operational availability of machines and equipment, and ergonomic safety. He is also assigned a mentor who will follow his progress and provide feedback. In the first six weeks, Dallis identifies and implements 25 changes to individual tasks. For instance, a number of parts racks were reconfigured to reduce operator stress. Dallis and his work group also made 75 recommendations for redistributing their work, changes that required some reconfiguring of the work area equipment, wires, etc.

After 12 weeks of on-the-line work and improvement in the U.S. plant, his mentor then decided to take the student to Japan, where he will work in the Kamigo engine plant. To understand what follows, it is important to know that this is the plant where Ohno and Shingo developed the majority of their innovations. This plant is one of the best in Toyota and has been the subject of continuous improvement for forty years. There is nothing “wrong” with this plant by any standard. Despite this, Dallis was to work alongside first line employees in a production cell and was instructed to make 50 improvements, actual changes in how the work is done, in the short time he would be there. This worked out to one change every 22 minutes. By the morning of the second day he was there, he and his coworkers had built a list of 25 ideas for improvement.

Dallis found that his own ability to identify and make improvements grew with practice. This new American manager, who had held a senior position with a U.S. auto company and would hold a senior position in the Toyota manufacturing operations was just learning to make improvements, but not revolutionary ones. Rather his mind was changing the way it worked. He was learning that by being on the line, engaging in the actual work, he could find a large number of improvements even in a manufacturing plant with legendary quality. It is this mindset that Toyota was trying to instill. And the mindset he was developing is not one of superiority as a manager; rather he was developing the mindset of practical experimentation and respect for people.

Spears notes that *“Toyota’s real achievement is not merely the creation and use of the tools themselves; it is in making all its work a series of nested, ongoing experiments, be the work as routine as installing seats in cars or as complex, idiosyncratic, and large scale as designing and launching a new model or factory.”* Spears also concludes that the subject of this training learned, not to make changes himself, but rather to work through the workers on the line, to encourage them to experiment, and to monitor results of each experiment.

Incremental innovation is not only in the process of manufacturing or service. It may be in the product as well. But, there is a relationship between the two. It is not an accident that the Honda Accord and Civic, and the Toyota Corolla and Camry, have all been in production for about thirty years. No change in their names. No change in the market segment at which they are targeted. And, there has been no change in the reputation for excellent value and reliability in their market segment. There has been no dramatic breakthrough in these products, simply continuous improvement in their design, engineering and manufacture. There is no American manufactured

[18] Spears, Steven J. *Learning to Lead at Toyota*. Harvard Business Review, May, 2004.

equivalent to these products in terms of their market value, brand equity. U.S. auto companies do make comparable cars, but how many people can name them? U.S. companies have constantly been coming out with new cars, with new names, with little marketing, and little time to develop brand loyalty.

Lead with Questions, Not Answers

Leaders are supposed to have answers, not questions. Right? Wrong.

To stimulate innovation it is not essential that a leader have the answers, but more importantly that he or she knows how to ask the questions.

Shigeo Shingo and Taiichi Ohno are the fathers of modern production methods. In his excellent book Kaikaku,[19] Norman Bodek tells a Shingo story that may help understand the attitude of eliminating waste. Norman used to put on "Productivity" conferences at which I spoke for many years. These should have been called Lean conferences, but that term had not been invented yet. His conferences usually included talks by one of the masters of the Toyota Production System as well as lesser folks like me. Norman made trips to Japan and made it his mission to translate and bring to the United States the lessons from these innovators.

This story is from one of the trips to the U.S. he arranged for Dr. Shingo.

"On Dr. Shingo's first visit to America I took him to a Dresser, Inc. manufacturing plant, where they were producing gasoline fuel dispensing systems. After meeting the management team we walked around the plant floor with a small group of engineers and managers.

"Dr. Shingo stopped in front of a punch press. He asked us all to look at the operation and to tell us the percentage of *value-adding time*. He then took out his stopwatch to time the operation.

"We watched two workers in front of the punch press bend down and pick up a large sheet of thin stainless steel from the left side of the press. They placed the steel into the bed of the press. Then they removed their hands to press buttons outside the press, which indicated that their hands were out and clear of the press. The large press came down and formed the metal into a side of a gasoline pump. Then the two workers reached into the press, removed the formed sheet and placed the formed sheet at the right side of the press.

"'What was the value-adding percentage?'

"One engineer said '100%, the workers never stopped working.'

"Another engineer said '75%' and, another said '50%.'

"Dr. Shingo laughed and looked at his stop watch. 'Only 12% of the time was the process adding value. Adding value is only when the dies are pressing against the metal to create a formed sheet. The rest of the time is waste.'

"Dr. Shingo then asked 'what can be done to increase the percent of value-adding time?'

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[19] Bodek, Norman. Kaikaku: The Power and Magic of Lean. PCS Press, Vancouver Washington, 2004.

“An engineer immediately said, ‘You could place a table over here and put the raw inventory sheets on top of the table. This would help the workers. They wouldn’t need to bend down. They could just slide the sheets directly into the press.’

“Another engineer said, ‘We could install a leveler to automatically raise the sheet metal and keep it at a constant height, similar to what you might see in a cafeteria when you reach for a dinner plate.’

“A third engineer said, ’We could put a spring into the back of the punch press to force the formed metal to leap forward after the stamping.’

“Dr. Shingo laughed and said, ’Yes, you all know what to do, so do it!’”

An important point to notice in this story is that Dr. Shingo did not tell or instruct them to do anything. He merely asked the right questions and defined things as they really are. He knew waste when he saw it. This is the primary characteristic of successful managers in lean operations. They ask the right questions. They constantly seek to improve by eliminating waste. Also notice that Shingo never suggested that there was anything wrong with the workers or that they weren’t working hard enough. He did not blame the person; he assumed the improvement was in the process.

As you design your technical and social systems you will want to take into account the essential lessons and practices of continuous improvement.

- Teach managers to ask questions, rather than give answers. Questions stimulate thinking and innovations; answers do the opposite.
- Encourage constant experimentation. Define a shop floor, or frontline process for submitting ideas and experimenting with the implementation of those ideas.
- Make work visual (process maps), make cause-and-effect diagrams visual reminders to think, and make performance (graphs) visual so everyone is reminded how we are doing and is thinking about how we can do better.
- Make the submission of ideas as easy as possible.
- Review ideas quickly (24 hour turnaround from idea to feedback to the person who submitted it).
- Implement a very high percentage of those ideas.
- Reward both idea generation and idea implementation. Reward both tangibly with money, gifts, and socially with publicizing ideas and praising those who submit them.
- Eliminate criticism and fear of failure when submitting and trying out new ideas.
- Teach frontline managers to do their job in a systematic way. This should include designing a structure for their “Gemba walk”. Gemba means where the real work gets done, on-the-spot. Managers in operating organizations should take a Gemba walk each day and they should know what to do. What they should do is NOT criticize. Rather they should ask questions, recognize good performance, encourage their employees, and

study the process being used to see if it conforms to standard processes, and if not why not.

- Every employee and manager should be on a team that owns a value-adding work process. That team should consult together regularly on that process. They should have a visual graph, on the wall, of the key variables that define performance of that process. They should know the customers for that process and ask them for their requirements and level of satisfaction. They should continuously improve that process, and they should be recognized as the world's greatest experts in that process. They should keep account of the number of ideas they generate and implement for improving that process.

The questions that you must now ask are "How does our organization promote innovation? Is our organization and culture designed to promote both incremental and breakthrough innovation? How would its systems, structure and skill need to be changed in order to speed the process of innovation?"

Financial Capital:

Financial capital is the traditional understanding of assets. It may be measured as balance sheet assets or as the value of present and projected cash flows.

It is not our purpose in this book to redefine financial assets or accounting. Most companies already do that well. Our purpose is to identify and improve those things that create financial assets. Lehman, Bear Sterns and AIG did not collapse because of the lack of money. On the contrary, they had access to most of the wealth of the world. What they lost was not money. They lost the antecedents to money. They lost a system of values and purpose that had created trust with their clients. It then required only minor triggering events to cause a rapid loss of trust in the market place. This loss of trust then caused the immediate outflow of capital. It was the failure of spiritual, social and human capital that caused the collapse of these institutions.

My advice to design teams is to have a conference with the financial executive responsible for the organization which you are designing. Ask him or her to bring two documents as a basis for discussion. These two documents are the current income statement (also known as the profit and loss statement) and the current balance sheet. Then have a discussion around the following questions:

1. Regarding the Income Statement:

For those not familiar with financial statements, the income statement is the monthly statement that reports income, revenues received by the organization, and expenses; in other words, the money coming in and money going out during that month. Some income statements include a year-to-date or quarterly report, as well. One hopes that there is a bit more money coming in than going out, in which case there is a positive number on the bottom line. If not, there is a negative number, a loss.

What you want to understand is how the design of the organization and its processes can improve the financial picture. It may be that the steering team has given some targets for either revenue improvement or expense reduction. But, whether they have or not, you want to understand how you can help improve financial performance. So, here are some questions to ask about the income statement:

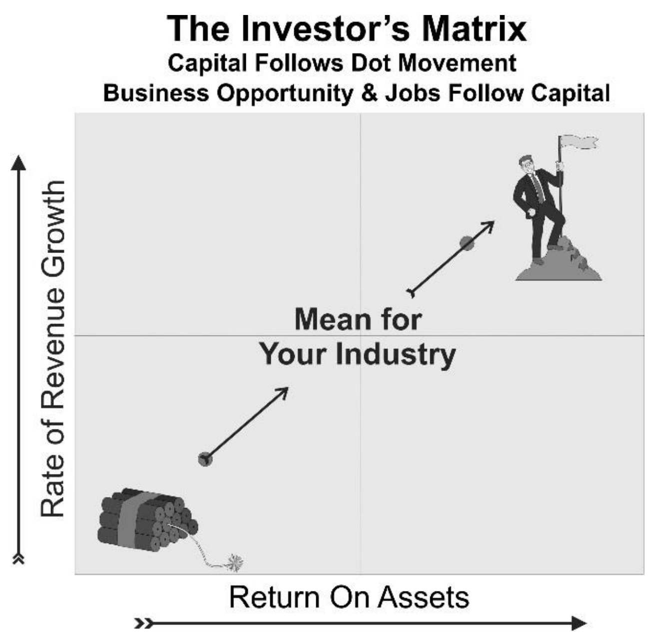
- Regarding the revenue or income side of the statement:
    - There are usually a number of different sources of revenue, based on different products or services or different regions. Which of these are currently trending up, increasing; and which are trending down or decreasing?
    - Do we know why they are trending up or down?
    - What do these trends tell us about the future of the business?
    - Given the strategy for the coming year, which of these income sources most need to improve?
    - If we designed a system that resulted in absolutely delighted customers, which revenue items would most likely improve?
    - Do we know how our firm compares to other similar firms in terms of revenue per employee?
    - Do we have a productivity number in terms of number of units of product or service delivered per employee? And, do we know how that compares to other similar companies.
    - Is there a productivity number for space utilization? In other words, if we utilize a million square feet of factory, warehouse or office space, if you divide that by the dollars of revenue, that would give you a dollar per space utilization figure. This would be a measure of the productivity of space.
    - Is there a computation for work-in-process inventory or materials per revenue dollar?
- Regarding the expense side of the income statement:
    - Some expenses are fixed and some are variable. In other words, you may pay rent or payment on loans that is the same every month. That is a fixed expense. On the other hand there are variable expenses that go up and down with the level of business activity. For example, business travel. What are the fixed expenses that are not likely to be affected by the design project, and which expenses could be affected by the design project?
    - If we designed the organization that was recognized as the best place to work, in which employees were most satisfied, what expense items would be affected by that?
    - Can we see material waste as an expense item?
    - Can we see wasted time as an expense item? In other words, if we designed a work process that got the job done in half the time, how would that appear as a reduced expense?

- Are there ways that making better use of technology could reduce expenses?
- Are there other efficiencies that could be achieved that would reduce expenses?
- Is there a cost of poor quality or rework that can be measured as an expense item?
- Is there a cost of accidents or safety violations?
- Is there a cost of environmental incidents that could be reduced?

2. Regarding the Balance Sheet:

To put it in very simple terms, the balance sheet reports the value of the "stuff" you own. While in our homes we are used to thinking that the more "stuff" I have the better, in a business there is a different idea. This has to do with the concept of "return-on-capital employed" in operations. In other words it is good business to do more with less. This is important because most companies borrow some amount of money or they are holding the assets of stockholders. In either case, the owners of the company, the owners of the assets want to know that their capital is productive. Therefore, if you can deliver the same amount of goods and services, but while employing less capital, you are increasing the return on assets, which is an important measure of financial success.

Larry Selden of Columbia University did research on what causes stock prices to move upward or downward, in other words, creating value for shareholders. Of course there is short term "noise" that affects every stock, but he factored that out to discover the important factors that could be counted on to move shareholder equity over the long term. The two most powerful variables are revenue growth and return on operating assets. In other words, investors are willing to pay more for a company, value it more highly, if revenues are increasing rather than staying the same or declining. They are also willing to pay more if the return on the assets employed in operations is high.



One of my clients, a petroleum company, took this matrix and applied it to every business unit, down to the level of a small team at a well-head drilling for oil. Every team plotted the growth or decline in revenue and the growth in return on operating assets. They soon realized that if instead of buying a piece of equipment, they could share that equipment across several sites; they would improve their return-on-assets by producing the same with less. The CEO of the company was held accountable and rewarded by the Board of Directors for "moving the dot" northeast on this matrix. Every team in the company was playing the same business game, of moving the dot northeast. You can imagine that if you are the

CEO it is a thing of beauty to have every employee in the company playing the same game that you are playing. That's how you win!

With that understanding as background, ask your financial manager the following questions:

- What are the different types of financial or material assets (space, etc.) employed in our business?
- Do we have a measure of productivity, or return on these forms of capital?
- Can we compute a return on operating assets, those assets actually employed within the operations?
- Can we create a matrix similar to the one illustrated here?
- What does he advise may be the assets that we could reduce or utilize more effectively?
- Does he see other ways, that if we designed the "ideal" organization and work process, we could improve the balance sheet?

The above analysis of financial capital and performance will help the design team understand the goal, which is almost always to improve financial performance. Of course this will best be achieved in a sustainable manner by designing your operations to satisfy the needs of your customers, to generate both internal and external trust, and to have the human capital and social relationship that will result in continued product and process innovation.

When you present your design to the steering committee it will be most helpful in "making the sale" if you can explain why your new design will improve cash flow and improve return on operating assets. It is most likely that your senior management is held accountable for these measures and you want to help them win their game.