

CREATING THE LEAN ORGANIZATION

THE PROCESS OF WHOLE-SYSTEM ARCHITECTURE

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What is an organization?

If you were asked to improve the organization, what would be your first impulse? What would you look at to find the needed changes? Many would go right to the organization chart and start counting the levels; the numbers of boxes reporting to each manager; and, counting spans-of-control. Is this organization? Will changing these improve the organization? Do these pictures represent the reality of relationships and behavior?

The word “organization” is related to “organism” and “organic.” Both of these imply something alive, something into which has been breathed the mysterious spirit of life. And what matters if you want to improve performance is not the organization chart, but that spirit of life. If you improve that, then you have really done something useful.

I honestly don’t care very much about the lines and boxes drawn on paper. They are rarely up-to-date and almost never describe how anything actually works in an organization. And, that is a good thing. Because if those lines and boxes actually described what is or what could be, the organization would be dead. No diagram can describe the full complexity and chaotic nature of most organizations. Although diagrams or visual models can be useful, they create a myth of order that almost never is.

What must be improved differs for every organization. The exact process required will again differ for every organization. Just as every human being learns in a somewhat different manner, beginning at a different point of departure, and will proceed at varying paces; organizations will be equally unique as they develop. The best approach is to start with broad principles and a general process. Then be willing to change everything.

Broad-Slicing the Organization

We form organizations to accomplish things that individuals alone cannot. The very purpose of any organization is to bring unity to diverse talents and capabilities – to unite energy and effort toward a common purpose.

In his book *Blink*, Malcolm Gladwell used the term ***thin slicing*** to describe a focused intuitive knowledge that allowed an apparent unthinking judgment. There is another kind of judgment, another intuitive mental faculty that is even more important quality of leaders in today’s world. I will simply call it ***broad slicing***, the ability to slice across an organization and see the connections, the need for solutions that deal, not with a very narrow area of knowledge, but with knowledge of the whole, knowledge that unifies effort. The behavior of

great leaders is rarely that of thin slicing, it is much more commonly that of creating broad unifying effect, the ability to create broad slices that serve as mechanisms around which diverse groups and individuals can form unified effort. It is the unity of effort, as every great coach or general has understood, that wins in the competitive field.

It is *broad slicing* that is the glue that holds companies and societies together in a unified whole. The failure to recognize or create broad slices is one reason both companies and societies fall apart. Corporate strategy went through a period during which *portfolio management* was the preferred corporate strategy. This was the logical (or illogical) basis for conglomerates such as ITT under Harold Geneen who believed that there didn't need to be any link between business units owned by a corporation other than financial. These corporations were, essentially, diversified mutual funds. It is generally accepted that this approach depleted shareholder value. The absence of broad slices resulted in division and disintegration. The added value of a conglomerate today, a multi-business unit corporation, is precisely in the sharing of core competencies or capabilities - some core technology or market that can add value across business units. Devotion to common markets or technologies is a broad slice that gives a reason for unified effort.

In the political world it is the difference between the liberation of Poland and the liberation of Yugoslavia, and possibly Iraq. The people of Poland were keenly aware of the broad slices that linked them as a people - language, religion, common history and culture. In Yugoslavia these unifying mechanisms operated in reverse and we know the result. Today we are witnessing the struggle to create broad slices across Iraq that can hold the three primary populations together in some form of unified whole. Any country must be held together by either authoritarian force (former Iraq, Soviet Union, etc.) or by the existence or creation of broad slices, common desires, interests, needs, philosophy or religion, that create an internal desire for affiliation.

Broad-slices in the corporation are of two types: functional and cultural. The functional broad-slices are common markets, products and core competencies. The most successful companies are well aware that they succeed because they maintain a unifying focus and avoid the distractions of businesses that are not cohesive with their core markets or competencies. Johnson & Johnson maintains a focus on the health care market. Intel maintains its focus on semi-conductors. Dell maintains its focus on direct marketing of computer and entertainment technologies. It is a lot easier to succeed in business if you know what holds the business together.

The second set of broad-slices is cultural and includes the dedication to values and the "way of life" in the company. The development of a culture of high trust across individuals and groups; a defined purpose that is ennobling; a culture of open dialogue; and a well trained discipline are all cultural values and behavior that enable common effort.

But, it is not enough to know what unites the organization into one force. The organization must be designed to create unity of energy and effort and this requires an understanding of complex systems and a process of design that builds a united organization.

Whole-System Architecture: A Model of a Complex System

I would like to briefly explain two terms that I will use more than once: *whole-system* and *alignment*. They are important conceptual ideas that will help us think about organization.

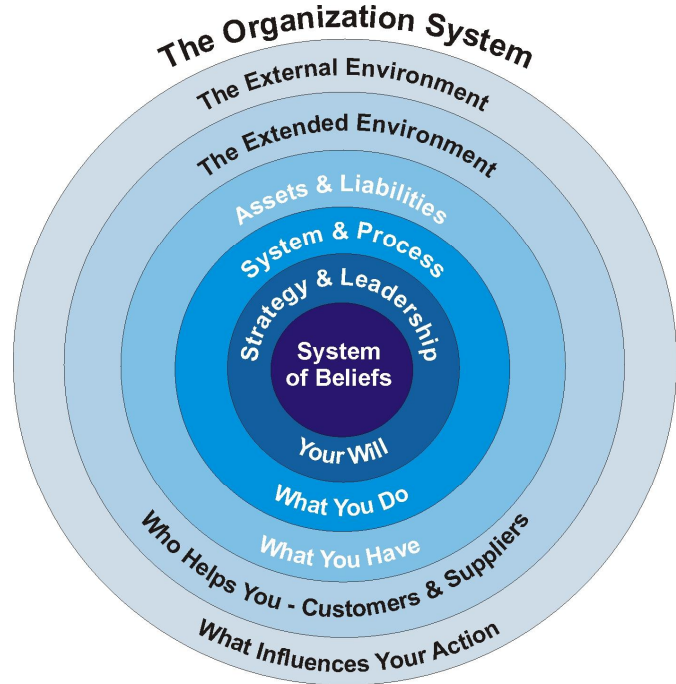
The organization's systems are much like the systems of the human body. The human body is a complex *whole-system*. Yet, it has various sub-systems – the nervous system and brain, the respiratory system, the digestive system, the cardiovascular system and so forth. Each of these can be described as a separate system, but they are not really separate. Each is dependent on the other; they are inter-dependent systems of a whole. If one of these systems is suffering, it will impact all of the others. Often it is difficult to tell which system is the root cause of a problem. If the digestive system is malfunctioning it will quickly affect the nervous system and that may then impact the cardiovascular system. This exact same interdependency exists within the systems of an organization. For example, if the information systems do not provide effective information to work teams, it may appear that the work team structure is not effective. If incentives contradict (individual vs. team) the structure, it may appear that the team lacks the proper skills. It is obvious that a team's performance will be “optimized” if all of the systems support the same performance; in other words, if they are *aligned*.

In order to create alignment and continuous learning it is helpful to have a mental model, an organized way of thinking about the system. This diagram can help discover the components of your organization. Think about this series of circles as what you might find if you put that original circle representing the organization under the microscope.

Circle One – Our System of Beliefs:

Performance is rooted in a system of beliefs. Cultures that perform well are characterized by the Eight Pillars of Unity described in the first part of this book. Emerging cultures have a strong value system with an optimistic view of their future, their destiny as a people. Like a good athletic team with common values and bonds formed by their belief in their ability to win; corporate cultures with strong common values, a strong commitment to a mission, and a firmly optimistic belief in their future are likely to perform well. Creating this belief system is the primary function of leaders.

We all have beliefs about ourselves and the rest of humanity that guide our behavior. When someone holds the belief that human beings are created evil and are naturally devious than 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 intentionally exert efforts to shape these beliefs.

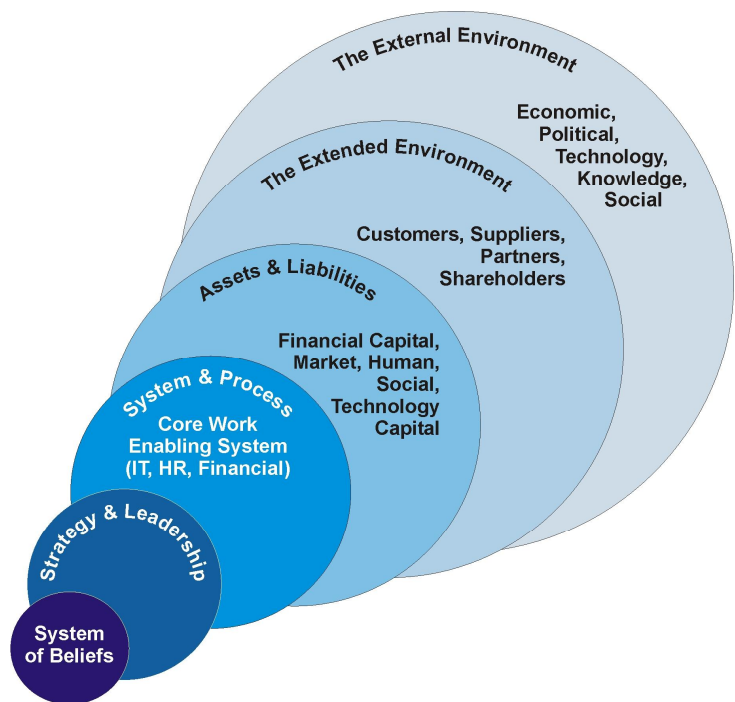
Circle Two: The Power of Will – Strategy and Leadership:

Beliefs are transformed into action through will. Will power is the internal energy, the force that enables you to influence events in your life. Organizations are motivated by the will of the leadership.

Much has been written on the subject of leadership but the keys to leadership are not complicated or hard to understand. They may be hard to do. *Leadership is the process of creating clarity and consistency of direction and making that direction important, exciting, and worthy to others.* This is generally articulated in what we like to call strategy. Strategy defines where we are going, why and what is important about getting there. It also defines the path, the journey to the desired future. It is really that simple.

There are four issues that are particularly worthy of assessment and planning when considering how leadership and strategy will determine change in the organization: *over-arching purpose, desired market position, asset creation and financial targets.*

- The first is the definition of an *over-arching purpose*, the mission that is a worthy and ennobling purpose. Every other aspect of the design of the whole-system must support this over-arching purpose. If the mission is not clear it will lead to misalignment.
- Desired *future market position* for a company is like the question “what do you want to be when you grow up?” for an individual. How do you want to be regarded by others? In what businesses do you want to be recognized as the leader? Understanding market position, at least in simple form, is essential for all those who manage in an organization, not merely those responsible for marketing. If your goal is to be the value leader in the entry-level market then you will develop different competencies and systems than if your goal is to be recognized as the highest quality



builder of custom homes. Rolex and Casio both make watches – yet have very different market positions, different internal capabilities and different external marketing messages. You can succeed in either the “Rolex” or the “Casio” market, but everyone in the company better understand which goal you are pursuing and align all of your processes to achieve your desired market position.

- *Future assets* identify more precisely why you are seeking improvement. Any improvement process should seek to improve business performance and that performance will be reflected in financial targets as well as the creation of assets. All assets are not on the financial balance sheet. There are also market capital, technology and innovation capital, social and human capital. It is assets that enable growth and represent the security of the business. A goal of an improvement process may be to enhance competencies in a technical area that is essential to growth. It may include increasing trust and relationships with suppliers and customers. It is these “soft” as well as “hard” assets that are the strength of the organization.
- *Financial targets* motivate most organizations and most individuals. There is nothing wrong with this as long as financial targets are complimented by larger purpose. Financial targets alone soon become a hollow and repetitive exercise. But, managers are often hesitant to be forthright in the necessity of achieving financial targets and many organization design processes are clearly intended to achieve these targets.

Circle Three – What You do – Systems, Structure and Process:

To achieve a strategy requires aligned structure, systems, and processes. A process defines the steps required to achieve performance and every process is enabled by systems and structures. The systems and processes are what must be improved and aligned to achieve better performance.

- Improvement generally begins with an analysis of the current state of the *core work process* and the design of a future or “ideal” work process. The other systems should be aligned to support the work process since this produces the output that results in financial performance. Both reengineering and quality programs often failed, or were not as successful as they could have been, because they did not address the other systems that support or enable the work process.
- An improved *work process* often involves the elimination of unnecessary steps, combining steps, reducing in-process inventory, or outsourcing parts of a process. Any of these changes are likely to require alignment of the organization, the *structure* around the work. Lean production is a complete redefinition of work processes, but must be accompanied with structures and systems that enable horizontal communications and rapid decision-making at the lowest possible level.
- The *people systems* will have to be aligned to the changes in process and structure. Changes in the process often require new skills on the part of the people who do the work. To speed cycle time and reduce quality problems it is often necessary to create teams that take responsibility for managing their work and making improvements in the process. Each of these requires changes in the people

systems such as training and development, hiring, promotion, feedback and motivation.

- Similarly, the *information systems* are a key enabler of performance. Information systems are often changed without carefully analyzing the work system or who makes what decisions, therefore who needs what information. Information systems should be designed after the definition of the best possible work process; otherwise the information system may actually inhibit improvement in the work.
- The *financial system* is the totality of the movement of money in and out of the organization. A key issue is “who has what information about costs and revenues?” Who needs to know? Financial transparency, making known the real costs, the real revenues and the true financial status of the organization to all those who participate in achieving its financial success, is an increasingly well accepted principle.

Each of these systems drive performance, each must be designed in a way that supports the organization’s strategy.

Circle Four – What You Have – Assets & Capabilities:

In order to design the best possible organizational system you must know what you have and what you lack that would enable performance. In other words, you need to know you assets and liabilities. Performance both requires assets and has the affect of creating assets. Assets enable you to perform - capabilities are assets. Relationships are assets. Competencies are assets. Respect in the market place is an asset. The real value of an organization, just as the real value of an individual, is not in their bank account alone. Financial assets are important. But the real value that will determine future success is the human and social capital and the capital of the marketplace.

The following types of assets or liabilities should be identified:

- Of course corporate leaders must work to build *financial assets*. But, they often fail to realize that financial assets aren’t built by focusing on financial assets. Financial assets are built by the capability to create new technology, new products or new services. This “*Innovation and Technology Capital*” can quickly turn into financial assets.
- *Social capital* is the value of trust. The degree, to which other people trust you or trust your team or organization, is social capital. 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, rather, they completely lost the trust of those who read financial statements, they lost their social and market capital. This quickly translates into the loss of financial assets.
- *Market capital* is the recognition and respect in the market place – brand equity, which is almost as good as money in the bank. If Honda produces a new car, without any direct knowledge of that car, it will have a high degree of respect, simply because it is produced by Honda which has developed a strong image for quality and performance. This is market capital.

- *Human capital* is the sum of all of the skills or competencies of the people within the organization. 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 and investment in these assets is likely to pay off in the creation of other classes of assets such as market, innovation and financial capital.

Circle Five – The Extended Environment:

We are used to thinking of those within the legal boundaries of our organizations and then those outside, customers and suppliers. However, the reality of life in organizations today is not so simple. Work often gets done through a network of people who share knowledge, or of customers and suppliers who cooperate on the design of a solution. This is the extended environment, an extension of our work and organization, our partners who help us succeed and without whom our performance would be impossible. The ability to manage our relationships with these partners, to create trust and loyalty, is a key to our own success.

Virtually no one works alone. Even the individual artist working in their own studio must find a gallery interested in his work. He needs a source of supplies, clay or paint or canvas. He also needs critics, friends whom he trusts to give him feedback on his work. In a sense these are all partners, whether paid or not, who help him do his work. In a large organization the network of partners, customers or suppliers is even more extensive. Every team depends on other teams to supply information, resources or materials.

All these close relationships upon which we depend are the extended environment. They are not “external” because they are inside the work system or process, not outside. Most organization design efforts ignore these relationships that are so critical to success. The flow of work and the system that supports this work must be designed because it may well be a cause of either competitive advantage or disadvantage.

Circle Six – The External Environment – The Big System:

Every system is a sub-system of a larger system. The Earth is a sub-system of the solar system. The oceans are a sub-system of the larger eco-system of the planet. And in the same way, every company is a sub-system of the economy and of an industry. This larger system defines the external environment in which a company must operate.

We all are influenced or have constraints imposed by the larger system. For example, a family in a village in Tibet gives birth to a child. No matter what DNA is found in their genetic code, no matter how determined they may be, their learning and development will be dramatically different (not necessarily worse) than the average citizen of the United States or Europe. The system imposes constraints. Similarly, a company born during the Internet technology explosion of the 1998-2000 years had to be influenced by the free flow of capital, the assumptions of rapid growth, and the virtual discounting of normal market economics. A company born in the year 2005 is born into an entirely different social and economic system and their operations adjust to this different environment.

Organizations often fail because they do not respond to changes in the external environment, changes beyond their control. If you produced typewriters and the market for typewriters is disappearing because of the advancing technology of the semiconductor you

have no choice but to respond to these changes that are beyond your control. The external environment includes not only technology, but economic, political and social forces. Sensing and responding are keys to survival. It is why we have eyes, ears and a sense of smell. But we often fail to use our senses because we fall into predictable patterns and habits. It is helpful to systematically plan a scan of the environment, turning on the radar to sense what is out there, enabling a sensible response.

Unfortunately, we cannot control everything that has influence on our performance. Major changes in the economy seem to be beyond the control of even the most powerful world leaders. Every company has to adjust its plans to changes in market trends and conditions. New technologies put companies out of business or create new ones. What is important is to have one's eyes open, to be realistic, to see changes coming and have the will to change in response to the environment.

Whole-System Design: A Process of Managing Change

There is a long history of improvement theories and practices, beginning with Frederick Taylor one hundred years ago and continuing today. Rather than becoming overly infatuated with one method it is wise to seek to combine the best practices of a variety of methods. I began my journey on this path infatuated with the potential of positive reinforcement and then became very involved in employee involvement, teams and the quality movement. I was also very influenced by socio-technical systems design which led to the development of the first self-managing team based organizations. My firm and I developed a process we called whole-system design or whole-whole system architecture. Appreciative Inquiry has now helped shape and refine that process.

The most important single idea underlying whole-system design is the simple idea that an organization is a complex system, like the human body, with different organs and sub-systems all of which interact and influence each other. Attempts to change one system without considering its interdependence with other systems frequently lead to failure.

The whole system of the organization includes everything described in the model presented earlier. Designing the whole-system does not mean changing everything, but it does mean the ability to discover the relationship between the systems, to find constraints, the sources of interruption in the work flow, and to imagine improvement though out the whole system. Both Mike Hammer and Jim Champy, authors of *Re-Engineering the Corporation*, both wrote subsequent books in which they confessed that they had not sufficiently considered the interdependence between the work flow and the human systems in the organization. They had both concluded that this was the most common source of failure. Socio-technical system design, pioneered by Eric Trist and Fred Emery, and which was the basis for the design of the first "self-managing team" plants at Gains Topeka and Proctor & Gamble, proved to create long lasting and radically different systems. Proctor & Gamble considered this to be such a competitive advantage that they redesigned all of their plants using this methodology and companies like Corning and Kimberly-Clark followed suit. In the rapid turnover of management fads and theories much of this good work has been ignored, however, it is a foundation of whole-system design.

Another foundation of whole-system design is the Toyota Production System, or “lean manufacturing.” Many years ago I had the good fortune to be involved with Honda America Manufacturing as they adopted their methods to the American culture. Honda readily admits that their production system is “the Toyota Production System” with their modifications and continual improvements. When Americans first went to Honda or Toyota to study how they could produce cars at both low cost and high quality, they often came away with superficial understandings. They would see the teams and think “that’s it!” Or, they would see control charts and Kanban, the common uniforms or the small lot inventory system. Often based on the background and biases of the observer, they would conclude that the explanation lay in one or two specific techniques. When they came back and tried to apply these they would usually fail. They would then conclude that “Japanese management doesn’t work in the U.S.” But, Honda America Manufacturing and Toyota’s Nummi experience, in which they took an old General Motors plant, with older workers and a strong union, and turned it into an effective high quality plant, disproved that nonsense.

You cannot understand lean manufacturing if you think about one technique. It is a whole-system! It is comprised of a hundred different things from the behavior and attitudes of executives to the process of hiring new employees. You can’t get them without a redesign of the whole system.

Principles of Whole-System Design:

Experience has shown that the following principles lead to successful whole-system design:

1. Discover Beyond the Village:

If you went into a Chinese village and got the ten smartest villagers and asked them to design the ideal house, what would they design? Would they design a contemporary or a Williamsburg Colonial, even if they were given a blank check and encouraged to design the “ideal” house? No. They would design a house that looked a lot like other Chinese village houses, because those are the mental maps they have. We are all “Chinese villagers” in our tendency to design the future based on our own maps of our past experience. This inevitable limitation can be broken by deliberate efforts to “get out of the village” and seek the ideal without boundaries. It is important that the design team benchmark companies who may represent best practices for the process they are redesigning. Often the best practices are found outside of the industry of the company going through a redesign process. A hospital emergency room might find that they could learn a lot from fast food restaurants; government offices can learn a great deal from best practices in private enterprise; and, a taxi cab company could learn a lot by studying overnight package delivery companies. It is important to inquire and appreciate the best in nature of the processes, whether the exact business is the same or not.

2. Dream Big

If you aim low, you will not go very high. If you aim high, you may not get their, but you will end up higher than if you had aimed low. When those participating in the change begin to discover best practices within the organization and beyond, they should look for incredible, fantastic, out of this world, examples that may at first seem impossible to achieve. Look for the WOW! factor; practices that would absolutely delight your customers.

Several times I have participated in efforts that sought, for example, to reduce the cycle time in half for a process that historically had taken eight years and hundreds of millions of dollars. At the outset everyone thought it was impossible. But, when they aimed for it, they actually found it could be done in less than four years.

Creative dissatisfaction is the gap between where you are and where you believe you could be. You are not satisfied with this gap, you are dissatisfied. This dissatisfaction is not a fear or negative feeling; it is the feeling of potential gain, inspired confidence to achieve.

3. Design an Adaptive, Open- System

Open-systems interact and learn from other systems. Imagine the worst dictatorship in the world. That government is most likely a closed system. Closed means that the leaders of that government are all talking to each other, reinforcing the same ideas, and outside views that may disrupt the internal views, are not allowed. Learning rarely takes place in a closed system. Closed systems consume but do not generate new energy and therefore achieve what is called entropy, a process of degradation leading to the disintegration of the system. Many companies have failed because they have developed the characteristics of closed systems and were not discovering or imagining based on the exploration on external ideas. As you design changes in the system of an organization, you should look for opportunities to deliberately build in learning from external sources.

Because open systems are constantly impacted by the external environment, there is an element of chaos, an apparent lack of control. But just as in the free economy, the apparent chaos of this constant interaction leads to adaptation and the speed and ability to adapt leads to durability.

5. Maximize Involvement – Gain Commitment:

The success of change efforts is due largely to the enthusiasm to implement the new design on the part of members of the organization. The worst way to do a redesign is to have consultants do it, then present it to the organization. This kills ownership and enthusiasm. Consultants can be helpful in guiding and facilitating a process, but it is the members of the organization who should design “their own house” and this will create a feeling of ownership and price in the new design. This is critical to successful implementation.

6. Inherent Stability Results from Internal and External Alignment

We all seek stability and security. We would like our business, government, or home to be stable. There are two types of stability: inherent stability in the design itself; and , dynamic stability that results from movement and energy.

Imagine a bicycle. How would you create the most stable bicycle? First, you might ask, “If you want stability why aren’t you designing a tricycle instead of a bicycle?” Good point.

The design of something with three points on the ground is inherently more stable than one with only two. The more grounding points, the more stable.

As governments are designed elements of stability are designed in. In the United States a system of three branches, with checks and balances was designed in order to create a more robust or stable system. Without the checks in balances, or with only two branches (bicycle versus tricycle) of government, the system would be less stable.

7. Dynamic Stability Results from Forward Motion

Dynamic stability results from motion. A sailboat moving through the water gains stability with speed. An arrow moving quickly forms a straighter path at high speed and becomes less stable at low speeds. Anyone who rides a bicycle has experienced the greater stability at speed. Organizations also become less stable if they are standing still and more stable if they are in motion.

Design the organization for rapid motion in a purposeful direction.

8. Design for Continuous Adaptation:

Never think you are designing a final result. You will fail if you think you are creating the ultimate end-state. The environment in which every organization finds itself is rapidly changing and requires continual and rapid evolution. When engaging in a redesign project, design the mechanism of continuous improvement into the design. It is much better and more likely to result in success if you say, "Here is the best design we can think of now, and we expect those who start to carry out the process, those who will live in the new design, to find what we missed and make improvements." Again, think of governments. Constitutions almost always, and wisely, contain provisions for their amendment and change.

9. Design to Customer Requirements:

The beginning of the design process should include a careful assessment of the market and customer requirements, as well as a study of all aspects of the external and extended environment. If it is possible, involve your customers in the actual design of your process and systems. This will strengthen your relationship with your customers and assure that your process meets their needs.

10. Design to Principles:

Organizations are a reflection of values and principles, intentionally or not. The traditional mass production assembly reflected a set of values and assumptions regarding the capability of front line workers. The organization designed to be a lean production, or Toyota Production System, must be designed with very different principles in mind. The leadership team, who will write a design charter, must think through their values and principles and be explicit in calling for the design to reflect those principles.

11. Design with the End in Mind

Assuming your organization is a business; design the organization with its business function in mind. A business has a purpose to meet the needs of its customers and market as well as to meet the needs of its owners and employees. If you are designing a business system

design its business function into the systems. For example, if you are designing a team structure, design business information and business responsibility into those teams.

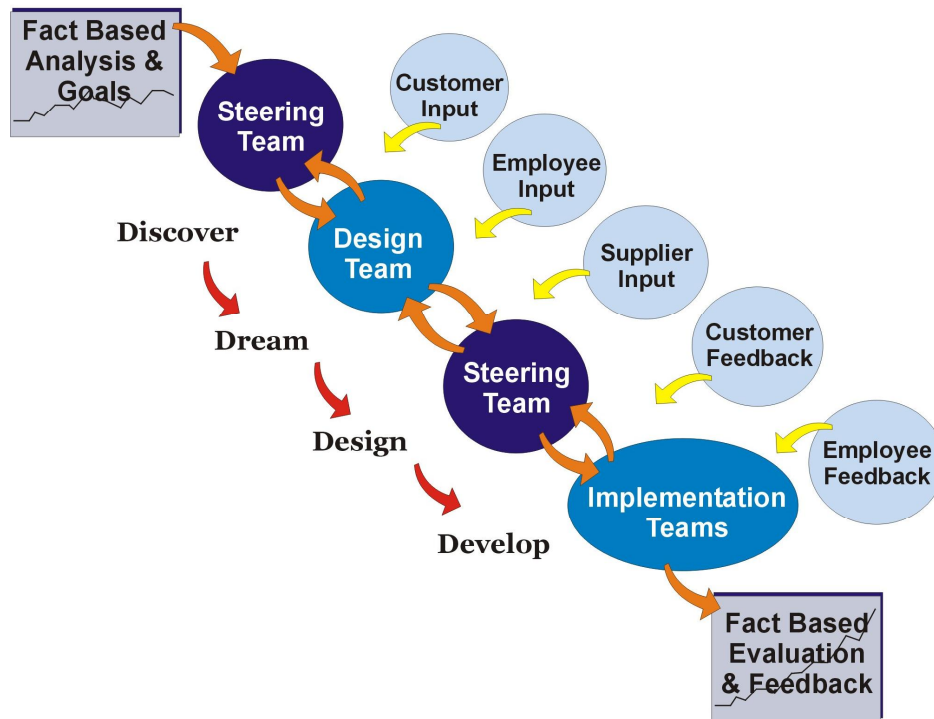
The Process of Whole-System Organization Design

No one can define the steps in a process of change without knowing the context - knowing what is going on in the organization, the size, the urgency and priorities, the strengths and weaknesses. In each case the process should be developed taking the contextual realities into account.

Below I will simply point to some of the common steps that have proven successful and point out why. It may appear that these steps are defined in a *linear* manner, meaning that A comes before B that is necessarily followed by C. It almost never works like that. Can you actually separate the Dream stage from the Discovery stage? Surely, when you are discovering best practices it is only natural to be thinking about what the ideal might look like in your organization. It is not necessary that the stages be neatly separated. They are presented in an order that generally makes sense and it will be desirable to plan them in this order. But, it will also be important to let the process flow down a path that unfolds before it.

It is recommended that this process be an “inter-active” planning process with an executive *steering team* who gives the process direction and authority; and *design teams* comprised of members of the organization who are responsible for the following four stages of *Discovery*, *Dream*, *Design* and *Development*. These two lead groups will seek ways to involve as many as possible in the organization to gain the broadest possible engagement.

Who Designs The Organizational System?



This design team will receive a “charter” from the steering team and this charter will provide clear guidance as to the objectives of their work and the boundaries of what they may and may not redesign. The design team will ultimately report back their design and recommendations for implementation.

The design team may do a number of things to gain even greater involvement from the organization, such as hold “design conferences” utilizing the Search Conference methodology developed by Marvin Weisbord¹ and others. These design conferences may involve hundreds of employees, customers, suppliers and other “stakeholders” who have an interest in designing the ideal process. There are often a series of design conferences. The first may be a “Discovery Conference” to search for those things that are done well in the organization and gain a shared awareness of strengths as well as needs. After other discovery there may be a “Dream Conference” to imagine the ideal future. It is possible to combine these two in some cases. There may be a third for the purpose of gaining broad based engagement in the design phase. And finally, after significant changes are approved by the steering team, there may be a Development Conference in which large groups become engaged in making plans for the implementation of the new design.

¹ Weisbord, Marvin R. *Discovering Common Ground*. San Francisco: Barret-Koehler Publishers, 1992.

Planning for Whole-System Design:

Identify Steering Team: The Steering team is the leadership team of the organization. It is very important that the team that assigns the design teams, and charters the design process, is the group that has the power to decide to implement the design. If the steering team does not have the authority to approve the design, it should not be chartering a design team to study and redesign the organization.

Write a Charter: A design charter is the output of the work of the steering team. This design charter is a very important document and will tell the design team exactly what their mission is, what is expected of their work and what they can and cannot do. Here are the key elements of a design charter.

- Objectives: Why are we doing this and what changes, either in process or performance, are expected?
- Principles: What principles should be considered when designing the organization?
- Timeline and Expectations: How long does the design team have to do their work? What presentations or benchmarks are there in the timeline?
- Boundaries: There are always things that are out of bounds, even though the design team may be charged with redesigning the whole systems. For example, can the design team redesign the compensation system? Whose compensation? You will quickly find a boundary. What are the boundaries of the work process, where does it begin and end? And, are there financial concerns or a budget that must be considered?
- Core and Enabling Processes: The steering team should know which processes are core and enabling and should make this clear to the design team. A design team should start with studying the flow of the core process and redesigning that, and then design the enabling processes.

Appoint a Design Team: It is essential that the members of the design team are expert in the processes they are going to redesign. Only those who have had their hands on, who have first hand knowledge of a process, are expert in that process. The design team members must also have the respect of both the steering team and the members of the organization if the result will have credibility and be implemented. Design teams should be from eight to twelve members and should be diverse in their experience. They should have good communication and problem-solving skills, should be courageous and creative, and should have the desire to participate in a significant improvement effort.

The Role of the Steering Team

- Become educated champions.
- Develop and communicate business system scorecard and strategy.
- Write charter.
- Meet as a team and practice team skills, improve your own processes.
- Meet regularly with design team.
- Serve as boundary managers.
- Promptly accept, modify or reject recommendations.
- Communicate regularly with the organization.

Stage 1: Discover

Many different activities can be employed during the discovery phase, but you can generally divide them into External and Internal Discovery.

External would include anything happening outside the organization that may impact the organization or that may generate ideas for a better future. In some methodologies this is called an *environmental scan*, which has nothing to do with the weather! The environment includes the market, the technology environment, social environment and other factors that are external; as well as the extended environment of customers, suppliers and partners all create requirements and opportunities for the organization.

The internal environment begins with clarification of the guiding values, mission, vision and strategy. These principles and ideas should give direction to all of the work of the design process. It is the responsibility of the steering team to provide this guidance.

The next step is mapping the core work process. This is the most important thing that happens in the organization, despite what many people may be thinking or feeling. Getting a solid grasp of this is an essential beginning. It is beyond the scope of this brief introduction to whole-system design to go into various mapping procedures, but the design team and conferences may spend a good bit of time developing this graphic depiction of the work of the organization. As they discover this map they will want to ask questions about the organizations strengths and discover stories about how individuals or teams have done heroic things to serve their customers and improve the product or service. These stories will be important in developing the dream of the future organization.

The design team will then want to identify all of the enabling processes, those that support and make the core process successful. Depending on the scope of their effort, they may want to map these processes and follow the same steps they did for the core process.

Three different types of discovery activities can be used in this and most of the stages: individual interviews, small focus groups, or large scale conferences. The design team members may develop a series of interview questions focusing first on the strengths and positive performance of the organization and then on wishes, desires, or needs. They may split up into pairs to go interview customers and suppliers, or they may schedule focus groups. It is desirable to invite customers and suppliers to conferences for employees. I have seen

The Role of the Design Team

- Be an active responsive member.
- Seek broad engagement.
- Discover best practices and strengths
- Define current state of work and human systems.
- Imagine the Ideal process and culture (quality, speed, cost, & principles).
- Design the future or ideal state for work and human systems.
- Make presentations to steering team and others.
- Plan for the Development or implementation of the design.

customers speak to conferences of more than a hundred employees at Corning and other companies to give their views on what the company does well and what they would like to see.

Stage 2: Dream

There are three BIG questions that can help members of the organization develop dreams about their future:

- Considering our mission as an organization, what would be the ideal service or product for our customers? What would this look like, be able to do, and how would it make our customers feel?
- What would make this the world's best place to work while we accomplish our mission? What would it feel like? What about the work setting would provide the most encouragement and development for the members of our organization?
- How would the first two questions make us a great business, and help us achieve great business results?

Around each of these three big questions it will not be hard to image many other questions. There are numerous exercises and fun ways to explore the dream. For example you can ask individuals or small groups to write an article for the Wall Street Journal that is doing a story on your company ten years from now. The WSJ is writing an article about your company as a success story that will inspire others. The story should reflect everything you want the company to be, what you hope you will be able to say about the company. You can also call upon the creative imagination of members of your organization by asking them to develop and act out skits that reflect the dream of your future company. These skits, for example, could be at a cocktail party. The President of the United States, ten years from now, is having a dinner and cocktail party for winners of the National Quality Award. As a member of the team who helped make this happen, you have been invited. Now write a script and act out the conversation where you are explaining to others at the cocktail party what you did that made your company worthy to win this award.

These are just examples of some of the fun things you can do to encourage the development of the dream. Remember that people dream in groups. In other words, one person's story stimulates ideas in another. Have you ever watched a group sitting around and imagining what could happen together? They feed on each other, laugh with each other, and from the dialogue comes a collective dream that none of them alone would have imagined.

Out of the discovery and dream stage it will be desirable to form a "consensus dream." Some elements of this may become clear in large group meetings, but it will probably take more clear form in meetings by the smaller design team. Out of all the dreams, some of which may be far out into left field, we now need to develop a dream that becomes our real target.

Stage 3: Design

Based on the discovery and the dream, it is now time to begin the design process. While the dream phase put practical concerns and all forms of skepticism aside; now is the time to begin to get practical. Now is the time to say, "Ok, what can we actually do that will make that dream come true?"

During the Discovery and Dream process you have generated a long list of things you would like to change. Now you have to organize those and start designing in some logical manner. The beginning point should be the core work process. It is best if they start with a clean sheet of paper and ask themselves the question “if we were starting a new company and had no restraint, what would we design to be the ideal process?”

This should include the following:

- Cycle time analysis: what would be the fastest, most interruption free path from beginning to end of the process?
- Quality – what do we do well and what are the variance from standards and customer expectations? Along each step in the process, how could we design features that would eliminate or reduce the potential for quality problems?
- Principles – where does the process either reflect or deviate from our principles? How can we design our principles into the process?
- Cost – where are the major costs in the process and how can costs be reduced while improving throughput and quality?
- Eliminate waste – are there any unnecessary steps? Are there ways to combine steps? Does the product or service ever stand still as it makes its way through the process? How can these delays be eliminated?

Since the organization exists for the purpose of creating the output of the core process, the enabling processes (human resources, information systems, etc.) should be designed to support and optimize the core work process. At this stage the design team may either redesign those processes (they may not have the right people on the design team and it may not be within their charter); or, they may create process requirements for the enabling processes. The core work process is the customer of those processes and should be clear in stating what it needs in order to optimize the core work.

Once the core work process is designed into its ideal desired state, the design team begins to address the structure and systems around the process. There is one BIG rule as they begin to do this. Design the organization from the bottom up! In other words, what is the organization of groups at the first level, where the work is done, that will maximize the probability that the work will be done in the best possible way.

This is the beginning of structure. The structure of society begins with the structure of the family. The beginning of organization structure should be the design of the small work groups who will manage and improve their work on a day-to-day basis. After the first level groups are formed, the question is then asked “What help do they need to do their work in the best possible way?” Think about how this question is different than asking “How many managers are needed?” If you ask what help is needed you will get a very different answer, and it will be a more “lean” answer. If the right training, information, tools, decision authority, and coaching are provided, you will find that far less management is needed.

Similar questions are then asked about all of the systems in the organization. For example:

- How can the information systems most help those who do the work?
- What method of presentation and delivery of information would be most helpful to the teams?
- What training systems would most enable teams and individuals to do their job in the ideal way?
- What methods and patterns of communication would be most helpful and encouraging to employees?

The design team will identify all of the relevant systems that support the core work, and will then develop a list of questions and issues to be addressed in their design work.

Design teams are always confronted with the issue of how much detail to get into. An analogy has proven helpful. You are designing a house. When designing a new house you need to decide where the walls go, where the staircase is, and where electrical wires need to run. But, you do not need to decide the color of the walls, or the carpet, or where the furniture is going to go. You can leave those decisions to the new owners who will move in. In fact, allowing them to make these decisions will give them a feeling of ownership for the new house, and encourage them to care for it and improve it. Similarly, there are “walls” and then there is “furniture” when doing an organization design. The design team should ask themselves, are we doing furniture or walls, when they begin to feel that they may be descending in to excessive detail.

Stage 4: Development:

Rather than think of any design as complete, or finished, it is best to acknowledge the inevitable reality that you have only done the best you could do at this time. In short order, as groups set about implementing the new design, they will quickly find ways to improve it. Rather than create any resistance to this, it is best to plan for it, encourage it and hope that the process of implementation is one of on-going development and learning.

Once the design team has completed their work, they will first present that to the steering team for their reactions and approval. They may have a large group conference where they present their design as a proposal, a tentative design, and then get the group to react to this and suggest improvements, point out possible concerns, and suggest ways they can help the implementation of the design. This again, increases the engagement and commitment of the organization.

How the new design gets implemented will depend entirely on the nature of the new design. However it is generally the case that one or more implementation teams are appointed to take responsibility for components of the design. Depending on the specifics of the design, the nature of the implementation and implementation teams will vary. There may need to be an IS/IT implementation team if there are a large number of information system issues. There may be an implementation team to focus solely on the physical relocation and set up of a manufacturing plant if that has been redesigned. Similarly there may need to be a training implementation team or one for other human resource issues. The implementation teams should be appointed by the steering team, should be given a charter based on the design, and should report back their progress to the steering team.

Having observed more than one hundred whole-system design projects roughly following this model, it has always surprised me that an enormous amount of energy is put into the process of design, and then there is a let down when it comes to implementation. The value of the design can be lost if similar energy is not invested in the implementation itself. The implementation must be managed. Good project management skills now need to be used.

It is important that everyone involved has an attitude of continuous improvement when implementing the new process, systems or structure. It will never be 100% right! It will be your best shot at this point in time. However, once you start implementing the new design you will start learning. You will find that some of the pieces don't fit together perfectly, or you may find you have not thought of some element of the process that also needs to be aligned with the new process you have designed. If you view these discoveries as mistakes or failures, you will stifle the learning process. It is much better to understand that these are inevitable and the natural process of learning that occurs during implementation.