STRATEGY RESEARCH PROJECT

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CULTIVATING CHANGE: PLANTING THE SEEDS FOR AN AFFORDABLE DEFENSE

BY

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USAWC STRATEGY RESEARCH PROJECT

Cultivating Change: Planting the Seeds for an Affordable Defense

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ABSTRACT

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Acquiring a new generation of weapon systems in an environment of highly constrained defense budgets, uncertain future threats, and fewer defense contractors poses one of the most formidable challenges to achieving Force XXI (U.S. Army circa 2006) and the Army After Next (circa 2025). Although many defense contractors have attempted dramatic transformations to improve performance, referred to as reengineering, most of these attempts have failed to attain the improvements needed to comprehensively modernize our defenses within current budget projections. Assessments are making it clear that reengineering is effective only when accompanied by a corresponding transformation of organizational cultures under skilled leadership. Senior Department of Defense and Army officials should collaborate with corporate leaders to transform their organizational cultures so that the seeds of innovation, efficiency, and creativity can thrive if Force XXI or the Army After Next are to become realities.

TABLE OF CONTENTS

ABSTRACT iii

LIST OF TABLES vii

WHY LEAD A CULTURAL CHANGE OF DEFENSE CONTRACTORS? 1

THE NEED FOR REENGINEERING 2

REENGINEERING DEFINED 4

REENGINEERING RESULTS 8

ORGANIZATIONAL CULTURE AS A TRANSFORMATIONAL POWER 10

CHANGING ORGANIZATIONAL CULTURE 13

OBSTACLES TO CHANGING ORGANIZATIONAL CULTURE 15

THE ROLE OF LEADERSHIP IN ORGANIZATIONAL TRANSFORMATION 17

ESTABLISH A "CASE FOR ACTION" 19

ARTICULATE A VISION 20

BUILD A POWERFUL GUIDING COALITION 21

DEVELOP A COMPREHENSIVE CHANGE PLAN 22

REDUCE THE ANXIETY OF CHANGE 23

WEED OUT RESISTORS 24

RECOMMENDATIONS 25

RAISE EXPECTATIONS OF ORGANIZATIONAL CULTURES 25

COLLABORATE WITH CORPORATE LEADERS 26

BUILD "CASES FOR ACTION" 28

OFFER COUNSEL ON LEADING CHANGE 28

CONCLUSIONS 30

ENDNOTES.....33

BIBLIOGRAPHY 41

LIST OF TABLES

Table 1. Characteristics of highly efficient organizations. 6

Table 2. Effective values in an environment of change. 14

Table 3. Characteristics of Effective Vision Statements. 21

Table 4. Key questions to determine the adequacy of preparation for cultivating change. 29

WHY LEAD A CULTURAL CHANGE OF DEFENSE CONTRACTORS?

> Leadership defines what the future should look like, aligns people with that vision, and inspires them to make it happen despite the obstacles.
>
> — John Kotter[1]

Can we afford to acquire Force XXI and the Army After Next (AAN)? Our inability to obtain the modernization budgets recommended by the Quadrennial Defense Review (QDR) and the National Defense Panel (NDP) indicates that the successful acquisition of Force XXI (the U.S. Army of 2006) and the AAN (the Army circa 2025) is in doubt unless the performance of defense contractors increases dramatically.[2] While many defense contractors have attempted extensive organizational transformations, referred to as reengineering, recent assessments conclude that most of these attempts fail to attain the dramatically higher efficiencies and productivity sought. Likewise, while the defense industry should get credit for absorbing many of the costs associated with the smaller defense business market of the 1990s, the dramatic cost reductions needed to acquire new weapon systems within our projected future budgets have yet to be demonstrated. As a result, our leaders must aggressively seek new, more affordable sources of military

technology. Thus the efficiency and productivity of our defense contractors is inextricably linked to our national security.

Two key lessons have emerged from the corporate reengineering experience: a supportive organizational culture is essential to success, and skilled leadership is necessary to encourage organizations to accept change. Like farmers who must cultivate their fields if they expect their crops to thrive, corporate leaders must till their organizational cultures so that the seeds of innovation, teamwork, and empowerment will flourish in the defense market. If our leaders expect better technology at reduced acquisition costs, they must offer incentives and, if necessary, stimulate these cultural transformations in defense contractors.

THE NEED FOR REENGINEERING

During the early 1990s, many commercial enterprises were dissatisfied with the results of traditional efforts to enhance productivity. Large U.S. corporations were often characterized as "inflexible and unresponsive." Critics cited their

> absence of customer focus, an obsession with activity rather than result, bureaucratic paralysis, lack of innovation, high overhead...[3]

Furthermore, the 60% reduction in Department of Defense (DoD) procurement budgets led to the departure of more than half of the companies which served DoD during the last decade. The U.S. defense industry is no longer robust, belying a superpower status.[4] Consequently, as procurement orders plummeted, prediction's of higher overhead and other indirect costs skyrocketed[5].

Defense contractors responded to the sudden decrease in their business base by seeking innovative methods to more effectively control indirect costs.[6] At the strategic level, these corporations merged, downsized, restructured, consolidated, and divested in order to attain economies of scale, to increase productivity, and to dramatically reduce overhead and other indirect costs.[7] Unfortunately, there is little evidence that the results of these activities have gone beyond compensating for the reduced defense business base. They have not, in fact, substantially reduced the cost of the acquisition. Greater savings are critical to the viability of our future defense modernization program.[8]

Although the drastic budget reductions of the early 1990s

signaled that the "winds of change" would howl violently for the defense industry, several optimistic executives and leaders believed their organizations could adapt. The former Chief of Staff of the Army, General Sullivan, sanguinely observed that

> it is possible to transform any organization so that creative adaptive behavior becomes embedded in its culture, so that it can be successful in a future that cannot be predicted.[9]

Obviously, such transformations must be more than the incremental improvement that results from traditional productivity enhancement programs. Instead, we need the tremendous leap in improvement that is the promise of reengineering.[10]

REENGINEERING DEFINED

The two most recognized proponents of reengineering, James Champy and Michael Hammer, define reengineering as

> the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed.[11]

What distinguishes reengineering from other transformations is the radical nature of the rethinking and redesign inherent in the process. The improvements sought by reengineering are at least a "70 percent decrease in cycle time, a 40 percent decrease in cost; [and] a 40 percent increase in customer satisfaction,

quality, and revenue."[12] These incredible goals cannot be realistically achieved by merely analyzing and changing business processes. Instead, the key to such dramatic transformation is to view a business as a "holistic system" comprised of

> business processes; jobs and organizational structures; measurement and management systems; and cultural norms. A major change to any aspect of this system must be supported by change in all others.[13]

The proponents of reengineering thus stress that the benefits of optimizing processes, structures, and management systems are strictly limited unless a corporation's cultural norms are compatible with those changes.

Characteristics of highly efficient organizations transformed by reengineering are shown in Table 1. Even though many defense corporations have recently downsized as a result of the end of the Cold War, their new structures and methods of operation often do not reveal cultural characteristics cited in Table 1. Cold War era management cultures linger probably because of the relative lack of need for corporate cultures to be flexible during this period.

During the Cold War, as weapon systems and government oversight grew more complex, defense corporations grew into

1. Processes are simple instead of complex.

2. Jobs grow and become more multidimensional, as people perform broader ranges of tasks.

3. People become empowered, rather than controlled.

4. The emphasis in a Reengineered environment moves from the individual to the team.

5. Organizational structure shifts from a deep hierarchy to one that is virtually flat.

6. The key figures in the organization are professionals, rather than managers.

7. The axis on which the organization turns is no longer the junction or department but rather the end-to-end process.

8. The basis for performance measurement shifts from activity to result.

9. The role of the manager changes from supervisor to coach.

10. People in the organization no longer focus on the boss; rather, their focus is on pleasing the customer.

11. The value system of the organization undergoes a profound and fundamental transformation from a protective to a productive orientation.

Table 1. Characteristics of highly efficient organizations.[14]

highly functionalized organizations structured around the control of budgets, resources, and new enterprises. Profitability was viewed as a linear function dependent on the amount of control that could be exerted over the expenditure of budgets. Within companies, departments were created with their own bureaucratic

hierarchies to further control each function. As the complexity of defense projects grew, more functional departments (engineering, quality control, manufacturing, industrial operations, marketing, finance, etc.) became involved with developing products. Additionally, there was a tendency for senior executives to delay aggressive cost cutting innovations and incentives until Fixed Priced Contracts were negotiated with the government in order to maximize profits.

Even though competition, acquisition reform, and other initiatives have compelled most defense corporations to form multi-disciplinary project teams (called Integrated Product Teams or IPTs), the effectiveness and creativity of these teams are often stunted by the old hierarchical management culture that concentrates control in senior managers, functional departments, and executives. This control ensures that IPT members act on behalf of the functional departments they represent; it also ensures that the "best interests" of the functional departments are considered when they conflict with the "best interests" of the project. For example, if an IPT is contemplating a design modification that requires an engineering analysis, the team representative from the engineering department is often tempted

to expand the analysis in order to increase the amount of hours his department can charge to the project. While such actions will please the head of his functional department, they would also dramatically increase project costs.

It is also not unusual for IPT leaders to compete for dominant control of their project teams. Team leaders who were previously line mangers are often reluctant to share control of the IPT with its members. Thus, instead of integrating talent, maximizing empowerment, and stimulating innovation, many "streamlined" IPTs are breeding grounds for inefficient and non-participatory decision making.

REENGINEERING RESULTS

Attempts to change bureaucracies have produced mixed results. Some highly successful reengineering projects such as MacroMed's (a medical supply company which has increased throughput by 400% while reducing cycle times by 67% and costs by 65%)[15] and the Electric Boat Corporation's (which increased profits by 300% while reducing the workforce by 75%)[16] have demonstrated the potential of reengineering. Unfortunately, Champy and Hammer estimate that 50% to 70% of reengineering

efforts have not achieved their goals.[17] Furthermore, reengineering projects in large corporations such as Siemens, Procter & Gamble, and AT&T have not only failed, they have also caused unwanted side effects such as lower efficiency, poor morale, and customer dissatisfaction.[18] Likewise, a planned two-year reengineering effort in the State of Oregon's Driver and Motor Vehicle Services department took an additional three years and overran its original $48M budget by $75M without improving productivity.[19] Reengineering undoubtedly poses considerable risk along with its promise of dramatic improvements.[20]

Although these risks indicate that the dramatic goals of reengineering have often not been achieved, many reported "failures" still produced significant improvements in their operations.[21] For example, Pacific Bell's reengineering attempt to lower order fulfillment costs by 85% actually achieved a 35% reduction in costs.[22] So, while not always achieving dramatic increases in efficiency and cost reduction, reengineering projects still offer the potential to reduce costs significantly enough to make defense modernization affordable.[23]

Although the reasons for reengineering failures are as

varied as the types of organizations attempting change, the reason most often cited is the incompatibility of a organization's culture to change.[24] Champy and Hammer conclude that

> in a reengineered environment, the successful accomplishment of work depends far more on the attitudes and efforts of empowered workers than on the actions of task-oriented functional managers.[25]

Furthermore, they state "...unless the [organization's cultural] values change, new processes, no matter how well designed, will never work."[26] Therefore, energizing an organization's culture so that it is adaptable to change is essential for harvesting the benefits of successful reengineering.

ORGANIZATIONAL CULTURE AS A TRANSFORMATIONAL POWER

Organizational cultures are complex, pervasive, and subconsciously rooted in the cognitive processes of its members.[27] A leading researcher in the organizational psychology of large organizations, Dr. Edgar H. Schein, describes organizational culture as

> a pattern of basic assumptions - invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration - that has worked well enough to be considered valid and, therefore, to be taught to new

members as the correct way to perceive, think, and feel in relation to those problems.[28]

Schein further states that an organization's culture is uniquely formed by critical events during years of shared experiences between individuals when their basic assumptions on how they perceive their environment becomes aligned.[29] A resulting "pattern of basic assumptions" is subsequently generated and "becomes the deepest and most strongly held level of the culture because of the human need for consistency and order."[30] During the Cold War, the highly stable defense environment allowed corporate cultures to become deeply rooted in the perspectives of the executives who run those organizations today.

As a "pattern of basic assumptions" becomes embedded in an organization's culture, important common beliefs, called values, emerge, serving then to guide the behavior of its members.[31] An organization often manifests these values through the overt behavior of its members, the work environment they create, the characteristics of the products the develop, and other artifacts.[32] Although employees can easily identify their company's cultural artifacts (like dress codes, expected decorum, ability to discuss problems openly with executives, etc.), the

subconscious nature of organizational cultures makes it very difficult for those employees to realize the basic cultural assumptions and values that underlie those artifacts.[33] Thus employee decisions are being determined by influences which they often do not readily recognize.

Organizational cultures exist at different levels. Large corporate cultures are typically comprised of three distinct subcultures: an "operator culture" (which focuses around functional departments); an "engineering culture"; and an "executive culture".[34] Each of these subcultures is distinguished by their common values and attributes, which are formed through similar education experiences, approach to problem solving, and backgrounds. While these subcultures served an important control function under the old hierarchical management systems, they also present a significant barrier to the integration of employees into highly effective project teams.

The importance of a company's culture on the outcome of a reengineering project cannot be overemphasized. James Champy and Michael Hammer conclude that

> a company's prevailing cultural characteristics can inhibit or defeat a reengineering effort before it

> begins. For instance, if a company operates by consensus, its people will find the top-down nature of reengineering an affront to their sensibilities. Companies whose short-term orientations keep them exclusively focused on quarterly results may find it difficult to extend their vision to the reengineer's longer horizons. Organizations with a bias against conflict may be uncomfortable challenging long-established rules.[35]

Therefore, although a prevailing culture may have served a defense corporation well for many years, that culture may now be counterproductive due to its resistance to change. This resistance discourages meaningful communications, constrains strategy alternatives, and limits expectations of productivity.[36]

CHANGING ORGANIZATIONAL CULTURE

A prerequisite to changing an organization's culture is understanding the culture that currently exists. Since organizational cultures are very complex and hard to identify from within, outside consultants should be employed to conduct comprehensive cultural audits, which can be far more reliable than self-assessments.[37] Additionally, as the instruments to assess an organization's culture have grown more sophisticated, their results have become more valuable in providing insight into a corporation's ability to adapt to change.[38]

Once the prevailing culture is understood, the desired characteristics of the new culture must be determined. Experience reveals that a culture which is strongly supportive of trust, respect, and teamwork is essential to successful reengineering.[39] Table 2 shows the values of a culture that James Champy proposes will thrive in a changing environment. The most important of these values to the defense industry is the capability to be truly open with information and knowledge. We need much less costly weapon systems, developed more quickly.

1. To perform to the highest measure of competence, always.
2. To take initiative and risk.
3. To adapt to change.
4. To make decisions.
5. To work cooperatively as a team.
6. To be open, especially with information, knowledge, and news forthcoming or actual "problems".
7. To trust, and be trustworthy.
8. To respect others (customers, suppliers, and colleagues) and oneself.
9. To answer for our actions, and to accept responsibility.
10. To judge and be judged, reward and be rewarded, on the basis of performance.

Table 2. Effective values in an environment of change.[40]

So, knowledge should flow unimpeded to people who need the information to function effectively, rather than via carefully controlled management channels. This information will not flow efficiently if our organizational culture fails to promote a relationship of trust between all stakeholders (including the government) and a culture tolerant of risk-taking.

OBSTACLES TO CHANGING ORGANIZATIONAL CULTURE

Cultivating organizational culture is difficult. It is a very complex phenomenon built on human relationships.[41] The leader of a recent reengineering project perceptively noted that "...reengineering does indeed create a sense of loss... Changing the way work gets done means giving up something that people have been comfortable with for a long time."[42] Furthermore, changing a person's job can also change their sense of self worth.[43] Managers may find redefining boundaries of authority and empowering subordinates extremely difficult: it means the loss of control and sharing power that they have spent a career earning.[44] On a personal level, loyalties to the current hierarchy, perceived relevance of their functional expertise, and uncertain career consequences often make senior managers

reluctant to change, even though they acknowledge the need for reengineering.[45]

Another major obstacle to cultivating cultures is getting managers to believe in the significance of the issue. Schein warns that corporate cultures will not improve without forceful intervention since "managers view culture discussions as boring and irrelevant, especially if the company is large and well established."[46] Moreover, it is often very difficult for a management team which established the old culture to be interested in transforming to a new one.[47]

Even if overtly supported by managers and employees, new cultural values, such as teamwork, are often very difficult to accept. Placing individuals from different functional disciplines and subcultures on teams causes dysfunctional stress until the team develops its own subculture based on mutual trust nurtured by shared experiences.[48] Additionally, emphasizing teamwork under most current corporate compensation and evaluation polices causes a conflict of interest in team members since "teams aren't promoted, individuals are, and individuals need unambiguous track records to advance their careers."[49]

Such internal resistance ultimately means that change must be forced down from senior leaders to managers and employees.[50] Since this process typically takes an extended period of time, cultural change is usually the last stage of a reengineering process.[51] Like enriching soil to support robust crops, cultivating organizational culture often takes many years.

THE ROLE OF LEADERSHIP IN ORGANIZATIONAL TRANSFORMATION

What can be done to accelerate a successful transformation of organizational culture? The answer is traditional enough: the skillful application of leadership. Dr. Schien's decades of experience leads to his assertion that "the unique and essential function of leadership is the manipulation of culture".[52] His finding is consistent with the U.S. Army's definition of leadership as "the process of influencing people by providing purpose, direction, and motivation to accomplish the mission and to improve the organization."[53] Schein further concludes that

> the most powerful primary mechanisms for culture embedding and reinforcement are (1) what leaders pay attention to, measure, and control; (2) leader reactions to critical incidents and organizational crises; (3) deliberate role modeling, teaching, and coaching by leaders; (4) criteria for allocation of rewards and status; (5) criteria for recruitment,

> selection, promotion, retirement, and excommunication.[54]

Most importantly, the leader's personal values "must be consistent with the organization's shared values in order for the power of shared values to be realized."[55] For example, what a leader doesn't respond to (like ignoring problematic behavior of a senior manager) is as important as a what they do respond to.[56]

Although large U.S. corporations are usually run by excellent managers, management and leadership require different skills. The former Chief of Staff of the Army, General Meyer, clarifies that

> leadership and management are neither synonymous nor interchangeable. Clearly, good civilian managers must lead, and good military leaders must manage. Both qualities are essential to success.[57]

Thus, to excel in the 21st century's environment of rapid change, successful corporate executives must be proficient in both.

Recent literature on the role of leadership in changing organizational cultures has delivered a consistent message. In Hope is not a Method, General Sullivan advises corporate leaders to get personally involved with cultural change projects since

> transformational leadership requires a personal and very hands-on approach, taking and directing action, building the confidence necessary for people to let go

of today's paradigm and move into the future.[58] Furthermore, the work of Champy, Hammer, Kotter, and Schein reveals a common set of the most critical functions of a leader during a cultural transformation: establishing a sense of urgency and reason for change (what they refer to as a "case for action"); articulating a vision; building a "guiding coalition"; developing a comprehensive change plan; reducing the anxiety of change; and confronting resistors to change. These essential activities cultivate organizational cultures so that the seeds of teamwork, empowerment and creativity can flourish and produce a more affordable defense.

ESTABLISH A "CASE FOR ACTION"

Leaders must establish a sense of urgency to overcome complacency towards change.[59] The most successful companies have the clearest message: unless they abandon the status quo and undertake dramatic, fundamental changes, an impending disaster (such as losing major contracts, closing plants, etc.) or some other "significant emotional event" will occur.[60] As Schein's research indicates, only when a client is highly motivated to change will they dramatically alter basic cultural assumptions.[61]

ARTICULATE A VISION

While a "case for action" convinces members that its organization must change, the leader's vision portends the results of that change. This vision then becomes the impetus for cultural change.[62] The vision serves to "clarify the general direction of change; motivate people to take action in the right direction; and help coordinate the actions of different people."[63] If effectively communicated, a clear vision can alleviate much of the need for a leader to resort to extensive management and control processes.[64] The most compelling visions are created and communicated with the conviction that comes only from the leader's personal involvement in its creation and articulation.[65]

After having consulted senior executives on hundreds of corporate transformation projects, John Kotter concludes that organizational change projects "never work well over the long run unless they are guided by visions that appeal to most of the people who have a stake in the enterprise: employees, customers, stockholders, suppliers, and communities."[66] Table 3 summarizes Kotter's research on the characteristics of effective vision statements.

1. Imaginable:	Conveys a picture of what the future will look like
2. Desirable:	Appeals to the long-term interests of employees, customers, stockholders, and others who have a stake in the enterprise
3. Feasible:	Comprises realistic, attainable goals
4. Focused:	Is clear enough to provide guidance in decision making
5. Flexible:	Is general enough to allow individual initiative and alternative responses in light of changing conditions.
6. Communicable:	Is easy to communicate; can be successfully explained within five minutes

Table 3. Characteristics of Effective Vision Statements.[67]

BUILD A POWERFUL GUIDING COALITION

Due to the high level of sustained energy necessary to transform cultures, a leader needs assistance from a team of individuals with power, expertise, credibility, and leadership who comprise a "guiding coalition" that oversees the change process.[68] If a leader cannot justify the assignment of his best, brightest, senior, most articulate people to the guiding coalition, then the leader must reconsider whether his organization is sufficiently prepared (or is desperate enough) to make the sacrifices required for successful cultural change and reengineering.[69] Although the participation of individuals

displaying innovation and creativity is a necessity, the guiding coalition should include information system experts to insure that change plans are effectively implemented.[70] Finally, the leader must provide consistent support for the guiding coalition especially during periods of disenchantment that are typical during an extended project.[71]

DEVELOP A COMPREHENSIVE CHANGE PLAN

For change to be successful, a consistent link must exist between visions, strategies, plans, and budgets. Fortunately, many sophisticated tools have recently emerged that can greatly assist formulation of change strategies and plans. These tools deal with complexity and large number of factors that can affect a reengineering project. For example, tools have been developed to alleviate the amount of change absorbed by a culture by limiting changes to only the business processes which have the greatest leverage to increase productivity. Matrices have also been developed to comprehensively determine the systemic interactions of critical business processes (to determine if these processes are complementary or competing), the transition interactions of those processes (to determine the degree of difficulty to change to new processes), and the reaction of all

stakeholders to determine the optimum focus, scope, and pace of a reengineering project.[72] Finally, scenario analysis methods have been developed to determine if all the critical risks of a proposed reengineering project have been identified and mitigated.[73]

REDUCE THE ANXIETY OF CHANGE

A leader must plan resources and set expectations in anticipation of mistakes that are the inherent consequence of change. Schein warns that "the key to both unfreezing [cultural assumptions] and to managing change is to create enough psychological safety to permit group members to bear the anxieties that come with reexamining and changing parts of their culture."[74] The leader of a recent reengineering effort at Arizona Public Works states that a fine line exists

> between heaven (that's the opportunities that reengineering brings) and hell (that's the stress and strain and fear of change). Leaders have to be able to tip that emotional scale, both physiologically and in a real sense, in favor of the positive.[75]

One of the best ways for a leader to reduce the anxiety of change is to be accessible to his employees and to foster an environment of authentic listening and open communication.

WEED OUT RESISTORS

Of course, some individuals are unwilling to change. If these individuals are senior managers, uniquely skilled, or strongly politically supported, they can use their influence to effectively sabotage an effort to change organizational culture.[76] Although organizations are often reluctant to confront this issue, it is not unusual for changes in organizational culture to cause an exodus of traditionally thinking managers unwilling to change.[77]

Corporate leaders who are committed to successful reengineering must plan on how they will confront individuals who oppose change. Any tolerance of subversive behavior will send a signal to other employees that the change is not inevitable. Leaders must be prepared to swiftly counsel, confront, and, if necessary, remove even very senior managers who have contributed significantly to an organization in the past but cannot cope with current change.[78]

RECOMMENDATIONS

RAISE EXPECTATIONS OF ORGANIZATIONAL CULTURES

Why should the Army be involved in the internal affairs of defense contractors? Although Norman Augustine's proclamation that "the process of change should be invisible to customers" is representative of the attitudes of many senior executives, those attitudes were formed during an era when competition between numerous defense contractors was the driving force for innovation, quality, and efficiency. Today, the dramatic reduction in the number of defense contractors and the unprecedented mergers of the remaining survivors have left the Army with too much at stake not to be involved with the outcome of reengineering projects.

The QDR warns that the primary threat to meeting Department of Defense (DoD) procurement needs "occurs when the savings planned to accrue from initiatives like competitive outsourcing or business process reengineering fail to achieve their expectations fully."[79] Furthermore, with overhead and other indirect costs growing to approximately $90 billion of the $170 billion total DoD work-in-progress [53%] at all defense

contractor plants, DoD is now spending more money on how contractors operate than on the direct costs of the products produced.[80] Thus, understanding assessments of a contractor's culture and plans to improve it is as important as understanding any other business aspect of a project. To totally rely on contractors' discretion in the planning of reengineering projects (to include cultural transformations) is to fail to acknowledge that contractors' profit potential takes precedence over the Army's needs when the two are in conflict.

COLLABORATE WITH CORPORATE LEADERS

A proven approach for effective senior Army and corporate executive interaction is partnering relationships.[81] Pilot partnering programs in the Army Materiel Command have shown a dramatic improvement in government-to-contractor communications, resulting in fewer contract disputes and an alignment of the goals of the Army and its business partners.[82] However, this partnership should be extended to collaborative efforts to change corporate cultures to be more supportive of change.

Through effective relationships with corporate leaders, senior Army officials have an opportunity to promulgate

compelling rationale to persuade corporate executives to conduct assessments of their cultures and make the necessary changes. First, since it is unreasonable to expect the culture of a company to transform when its senior managers are unwilling to change, the Army should notify corporate leaders that it will ultimately abandon companies whose leaders resist change and defend the current levels of efficiencies.[83] James Champy warns corporate executives that

> there is hardly a government left in the world, whether communist, socialist, or free-market conservative, that isn't openly or wishfully committed to a policy of "tough love" towards its business sector...Governments, with few exceptions, now realize that protecting business enterprises creates bloated companies unable to compete in global markets.[84]

Second, due to its complexity and dependency on numerous intangible variables, a corporation's culture is a unique asset which cannot be easily copied by other companies. Therefore, investments in developing more productive corporate cultures are inherently more beneficial to a corporation over the long term than investments in new capital, business processes, financial relationships, or other assets that can be readily duplicated by their competition.[85] Third, cultivating their cultures to be more adaptable to change will increase the long term survivability of their companies in the next century when rapidly

changing defense and business environments are likely.[86]

BUILD "CASES FOR ACTION"

Senior Army officials can add great credibility to corporate leaders' "cases for action" by ensuring that solicitations, source selections, and performance evaluations require corporations to demonstrate aggressive actions to dramatically increase productivity. Furthermore, senior Army leaders should require that corporate executives substantiate claims that they are cultivating their organizational cultural to adapt to change when they announce reengineering plans. Based on a relationship of trust and mutual assistance, Army leadership should ask tough questions such as those listed in Table 4, to educate the leaders and promote the use of best practices in cultivating organizational cultures.

OFFER COUNSEL ON LEADING CHANGE

John Kotter warns that modern executive development programs focus exclusively on management. He claims they are often "institutionalized in corporate cultures that discourage employees from learning how to lead."[87] In contrast, Army leaders have benefited from intense leadership education and

1. What is the "case for action" you used to convince your employees that change is necessary?

2. Do your corporate officials, senior managers, and other influential individuals unanimously agree that change is necessary? How will you handle resistors to change?

3. What is your vision statement of the result of the transformation project? (see table 3 for ideals)

4. What cultural artifacts, values, and fundamental assumptions do you need to change to realize your vision?

5. What tools did you use to determine the cultural characteristics or business processes needed to be changed?

6. What are your cultural, organizational, and political obstacles to achieving your vision?

7. What is your transformation strategy?
   - How does it address the obstacles to change?
   - What metrics will you use to assess progress?
   - How will you know when your objectives are achieved?

8. What is your participation in the transformation process?
   - Do you have sufficient authority to effectively support the transition plan?
   - How much of your time do you plan to spend communicating your vision and assessing progress?
   - How accessible are you to your guiding coalition?

9. Who comprises your "guiding coalition"?
   - What are their qualifications?
   - How much formal and referent authority do they possess?
   - How much influence do they have?
   - What personal stake do the members of the guiding coalition have in the outcome?
   - How are stakeholders perspectives accounted for?

10. What are the risks to this transformation? How do you plan to mitigate them?

Table 4. Key questions to determine the adequacy of preparation for cultivating change.

development of cultural awareness throughout their careers.[88] The Army views the ability to lead change as a critical strategic leadership skill and stresses this ability in cultivating cultures and embedding the values on which cultures are based.[89] The military is especially adept at developing teams like those which corporate reengineering projects need for building new, more efficient structures.[90] Therefore, a corporation which realizes that creating adaptive organizational cultures has been the Army's business for some two hundred years and should eagerly tap into that knowledge. Such collaboration will give receptive corporations a great advantage in the environment of rapid change that will dominate the next century.

CONCLUSIONS

The national security environment of the 21st century will be dramatically different than that of the Cold War. A smaller force structure, rapid technological growth, and emerging asymmetrical threats will require the acquisition of new military systems, even though our defense modernization budgets are the lowest in decades. Although many government and private industry initiatives to lower acquisition costs (acquisition streamlining,

integrated product teams, corporate downsizing and mergers, quality efforts, etc.) have been initiated, their results will be strictly limited unless the attitudes, assumptions, and perceptions of the people doing the work in the defense industry are compatible with those initiatives. It is as important to change the organizational culture of the project team leader who refuses to share power with his team as it is with the chief financial officer who seeks to delay aggressive cost reduction incentive programs until after fixed priced contracts are negotiated with the government in the later phases of weapon system development.

We cannot afford to let the seeds of cost reduction initiatives wither in the barren soil of Cold War organizational cultures of defense contractors. Changing those cultures causes the same personal anxiety and resistance typically associated with any major change in a person's life. Therefore, corporate leaders must aggressively initiate change to transform moribund organizations.

Corporate leaders can take specific actions to greatly improve the success of cultural transformations. It is in the

best interest of the Army to assist these executives in leading their cultural transformations. Chief of Staff of the Army, General Reimer, in his vision of the future Army, Army Vision 2010, anticipates closer cooperation between the Army and corporations:

> we will team with private industry and the academic community at every opportunity as a means of assuring future vitality in the science and technology base, the industrial base, and the power projection base of our Army.[91]

Not only our vitality, but the very feasibility of acquiring Force XXI and the Army After Next is at stake. If corporate leaders begin the long process of cultivating their organizational cultures to become more adaptable to new ways of operating, the seeds of innovation, empowerment, and renewal of energy will flourish. This tillage will lead to a harvest of much more affordable weapon systems for the future defense of our nation.

Word Count: 5,624 words

ENDNOTES

[1] Kotter, John P., Leading Change (Boston: Harvard Business School Press, 1996), 25.

[2] The 1997 AAN project annual report predicts that countering the threats of the next century requires the U.S. Army to acquire weapon systems with greater speed, mobility, lethality, and advanced knowledge attributes than today's systems. **U.S. Department of the Army, The Annual Report on the Army After Next Project (Washington, D.C.: U.S. Department of the Army, July 1997), 24 - 25.**

Additionally, the development time of new weapon systems must be dramatically reduced in order to counter the rapid proliferation, technology growth, and uncertain nature of new and diverse threat capabilities. **Secretary of Defense William S. Cohen, Report of the Quadrennial Defense Review (Washington, D.C.:U.S. Department of Defense, May 1997), 61.**

Furthermore, the loss of competition resulting from a smaller defense industry removes a major motivation for contractors to reduce these development times and to foster innovation. **National Defense Panel, Transforming Defense: National Security in the 21st Century (Washington, D.C., December 1997), 59.**

The QDR recommended an annual DoD procurement budget goal of $60M but warned that this goal was predicated on yet to be realized savings from acquisition reform initiatives and is constantly threatened by unprogramed military operating expenses. **Cohen, 14-15.**

The NDP warned that an additional $5 to 10 billion is needed annually to transform the current army into the AAN by 2020. **National Defense Panel, iii.**

[3] Champy, James and Michael Hammer, Reengineering the Corporation (New York: Harper Business, 1993), 30.

[4] Augustine, Norman R., "Reshaping an Industry: Lockheed Martin's Survival Story," Harvard Business Review (May -June 1997): 84. Welch, John K., "Ready for the 21st Century," Sea Power 40 (August 1997): 37 - 39.

[5] Indirect Cost Management Guide (Fort Belvoir: Defense Systems Management College Press, 1997), 1-2.

[6] Ibid., 5-23.

[7] Augustine, 89.

[8]. Unfortunately, little quantitative data exists to precisely measure the success of these activities. **Indirect Cost Management Guide, 1-2.** However, Defense Logistics Agency estimates indicate that the current initiatives to reduce indirect costs have only been successful in avoiding the cost growth caused by the reduction in military production orders rather than generating real reductions in the baseline unit cost of military systems. A DLA assessment of six major defense contractors in 1997 indicates that despite numerous initiatives to reduce indirect costs, overhead and other indirect cost rates will remain stable over the foreseeable future due to the offsetting effects of an eroding defense business base.

[9] Gordon R. Sullivan and Michael V. Harper, Hope is not a Method (New York: Random House, 1996), 230.

[10] Welch, 40; and Augustine, 85.

[11] Champy and Hammer, 32.

[12] Champy, James, Reengineering Management (New York: Harper Business, 1995), 3.

[13] Hammer, Michael, "Understanding Reengineering," 1995, Available from <http:// www.forscom.army.mil/REENG/G1B.HTM>, Internet, Accessed 15 December 1997.

[14] Hammer, "Understanding Reengineering", 2.

[15] Brynjolfsson, Erik, Amy Austin Renshaw, and Marshall Van Alstyne, "The Matrix of Change," Sloan Management Review (Winter 1997): 50.

[16] Augustine, 89.

[17] Champy and Hammer, 200.

[18] Geisler, Eliezer. "Cleaning Up After Reengineering."

Business Horizons 39 (September - October 1996): 71.

[19] Hayes, Frank. "Beyond users: why one project failed." Computerworld (11 August 1997): 103.

[20] Clemons, Eric K. "Using Scenario Analysis to Manage the Strategic Risks of Reengineering." Sloan Management Review (Summer 1995): 62.

[21] Kiely, Thomas J., "Reengineering: It Doesn't Have to be All or Nothing" Harvard Business Review 73 (November - December 1995): 16.

[22] Ibid., 17.

[23] The Military Deputy to the Assistant Secretary of the Army (Research, Development and Acquisition) sent an open letter to industry asked for industry's support to achieve 20% or better cost reduction across Army procurement and RDT&E activities. This savings would "free up resources for reinvestment in urgent modernization priorities." **Hite, Ronald, "Army Cost Reduction and Reinvestment Initiative," Open Letter to Our Industry Partners, Washington, D.C., 6 November 1996.**

[24] Kotter, 148.

[25] Champy and Hammer, 79.

[26] Ibid., 76.

[27] Schein, Edgar H., Organizational Culture and Leadership (San Francisco: Jossey-Bass Publishers, 1985), 312.

[28] Dr. Schein is the Sloan Fellows Professor Emeritus at the MIT Sloan School of Management. He is a recognized leader in the development of modern theory of organizational culture. Schein, 9.

[29] Ibid, 83 - 84.

[30] Ibid., 244.

[31] Ibid., 15.

[32] Ibid., 14.

[33] Ibid., 312.

[34] Schein, Edgar H., "Three Cultures of Management: The Key to Organizational Learning," Sloan Management Review (Fall 1996): 9.

[35] Champy and Hammer, 207.

[36] Schein, Organizational Culture and Leadership, 31, 33, and 43.

[37] Champy and Hammer, 186.

[38] Redding, John., "Hardwiring the Learning Organization," Training and Development 51 (August 1997): 67.

[39] Champy, Reengineering Management, 80.

[40] Champy, Reengineering Management, 79.

[41] Schein, Organizational Culture and Leadership, 86.

[42] Champy, Reengineering Management, 52.

[43] Sullivan, 164.

[44] Champy, Reengineering Management, 25 - 26.

[45] Kotter, 106.

[46] Schein, Organizational Culture and Leadership, 283.

[47] Champy, Reengineering Management, 7.

[48] Schein, Sloan Management Review, 12.

[49] Kotter, 56.

[50] Champy and Hammer, 207.

[51] Kotter, 155.

[52] Schein, Organizational Culture and Leadership, 317.

[53] U.S. Department of the Army, Army Leadership (revised initial draft), Army Field Manual 22-100, (Washington, D.C.: U.S. Department of the Army, 1 November 1997), 1-9.

[54] Schein, Organizational Culture and Leadership, 224 - 225.

[55] Sullivan, 20.

[56] Schein, Organizational Culture and Leadership, 229.

[57] U.S. Department of the Army, Army Leadership, 8-6.

[58] Sullivan, 53.

[59] Kotter, 4.

[60] Champy, Reengineering Management, 42.

[61] Schein, Organizational Culture and Leadership, 279.

[62] Sullivan, 91.

[63] Kotter, 68.

[64] U.S. Department of the Army, 8-33.

[65] Champy and Hammer, 158.

[66] Kotter, 73.

[67] Ibid., 72.

[68] Ibid., 57.

[69] Kiely, Thomas J., "Why Reengineering Projects Fail," Harvard Business Review 73 (March - April 1995): 15.

[70] Martinez, Erwin V., "Successful Reengineering Demands IS/Business Partnerships," Sloan Management Review (Summer 1995): 60.

[71] Kotter, 13.

[72] Brynjolfsson, 37 - 45.

[73] Clemons, Eric K., "Using Scenario Analysis to Manage the Strategic Risks of Reengineering," Sloan Management Review (Summer 1995): 63 - 64.

[74] Schein, Organizational Culture and Leadership, 295.

[75] Champy, Reengineering Management, 57.

[76] Kotter, 114.

[77] Champy and Hammer, 175.

[78] Champy, Reengineering Management, 109.

[79] Cohen, 61.

[80] Indirect Cost Management Guide, 1-2.

[81] U.S. Army Material Command, "Partnering For Success: A Blueprint for Promoting Government-Industry Communications and Teamwork;" Available from Defense Acquisition Deskbook <http://www.deskbook.osd.mil>; Internet; Accessed 8 November 1997.

[82] Ibid.

[83] Champy, Reengineering Management, 94.

[84] Ibid., 18.

[85] Holland, Dutch and Sanjiv Kumar, "Getting Past the Obstacles to Successful Reengineering," Business Horizons, 38 (May - June 1995): 81.

[86] Kotter, 3.

[87] Kotter, 27.

[88] U.S. Department of the Army, Army Leadership (revised initial draft), 1-6.

[89] Ibid., 10 - 17 to 19.

[90] Ibid., 8-49.

[91] U.S. Department of the Army, Army Vision 2010, 18.

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