**SANDIA REPORT**
SAND2006-2228
Unlimited Release
Printed May 2006

# Enterprise Transformation: Lessons Learned, Pathways to Success

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Sandia is a multiprogram laboratory operated by Sandia Corporation,
a Lockheed Martin Company, for the United States Department of Energy's
National Nuclear Security Administration under Contract DE-AC04-94AL85000.



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**Abstract**

In this report, we characterize the key themes of transformation and tie them together in a "how to" guide. The perspectives were synthesized from strategic management literature, case studies, and from interviews with key management personnel from private industry on their transformation experiences.

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# EXECUTIVE SUMMARY

Over the past couple of decades, many organizations have found themselves in crises necessitating that they quickly and fundamentally change. The experiences of organizations that have weathered the storm of transformation (i.e., rapid and fundamental change) have much to teach those who may face similar challenges in the future. Our effort was motivated by the desire to arm Sandia National Laboratories and Nuclear Weapons Complex leadership with a compendium of industry lessons learned to position them to face the challenges of transformation.

We found no single resource that wove all of the diverse transformation-related topics (strategic and tactical planning, metrics, leadership, corporate culture, etc.) into a comprehensive "transformation guide." Although there are numerous illuminating references on a variety of transformation topics, none covered them all.

Our goal in this study was to characterize the key themes of transformation and tie them together in a "how to" guide. To this end, we studied a variety of books and articles, we analyzed case studies, and we interviewed key management personnel from private industry on their transformation experiences.

There are those who question whether lessons learned from commercial industry would be applicable to the Nuclear Weapons Complex. We found that there is commonality between the NWC and commercial industry in the majority of key transformation topics. Specifically, the NWC has customers who have expectations and influence funding. The NWC has products, organizational structure, leaders and personnel. Thus, we concluded that there are beneficial lessons that the NWC could learn from commercial industry.

In the course of our study, we relied upon a diverse set of information resources. Yet, we found that, despite this diversity, a consistent transformation thesis was apparent. The transformation thesis that emerged can be broadly stated as follows:

*For organizations facing a significant crisis, successful transformations can be characterized by an effective leader and a supporting coalition:*

- *convincing their organization that success depends on changing the way it does business,*
- *conceiving a new organizational paradigm to bring about this change,*
- *leading the organization down the path to the new paradigm,*
- *and utilizing metrics to guide the necessary change.*

This transformation thesis is built upon five key transformation themes: Leadership, urgency, vision of a transformed organization, execution, and guiding metrics.

*Leadership* – Without effective leadership, the other transformation elements will fail. Transformation leaders must be communicators who command respect and organizational resources and have the stamina to overcome resistance to change. Nevertheless, even a capable leader at the helm cannot single-handedly transform an organization – transformation also requires a strong guiding coalition. The guiding coalition is the transformation leader's power base and should include diverse representatives from key groups within the organization and even external stakeholders.

*Urgency* – Transformation is most effectively driven by a prevailing organizational sense of "change or die!" Change is difficult and threatening to any organization, with people tending to avoid it unless it is absolutely necessary. For an organization to be motivated to transform, its personnel must be convinced that the difficulties of change are, by far, preferable to the *status quo*.

*Vision* – The organization must have a clear vision of what changes it has to make to deal with its crisis. Herein, we define this vision to be a target state the organization must reach to address its crisis, and the strategic plans that will take the organization to this target state. We stress that organizational adaptability must be an element in this envisioned end state.

*Execution* – Once the organization has developed a vision of what it must do to address its crisis, it faces the hard part of transformation – execution. Execution marks the transition from planning to action wherein the divergence between the vision and reality become apparent.

*Guiding metrics* – Metrics are critical in guiding the aforementioned transformation activities from crisis characterization, through planning the vision, and ultimately to execution.

# 1. ESTABLISHING TRANSFORMATION LEADERSHIP

Without effective leadership, the other transformation elements will fail. Lockheed Martin Aeronautics Company VP, William Kessler, stresses that the absolute, unwavering, and sustained commitment of the enterprise leader to communicating, leading, and supporting transformation is required for successful large-scale transformation.[1] Thomas Kiely writes in the *Harvard Business Review* that, based on the experiences of more than 50 management consultants, having the wrong person lead the transformation was a major contributor to transformation failure.[2] In a review of more than 10 years of private equity firm[*] transactions, it was found that the key to successful transformation was managerial discipline.[3]

Organizations must never delegate transformation leadership to external consultants. Kiely notes that delegating transformation responsibility is an abrogation of leadership responsibility that typically leads to failure.[4] During transformation, executives must make hard decisions, and those who are eager to delegate this task are often unwilling to transform their personal management styles and priorities. Furthermore, in delegating transformation responsibility, company leadership is, in essence, saying that the effort is not important enough to merit their full attention.

Transformation leaders must be communicators who command respect and organizational resources and have the stamina to overcome resistance to change. Transformation leaders will face a host of challenges ranging from motivating the troops, to making tough choices, to changing the *status quo* and its associated vested interests that no longer serve the organization. Ideally, the transformation leader will be the highest ranking person in the organizational unit that is transforming. Kiely contends that, to be effective, the leader must have attained high management rank, must have demonstrated exceptional leadership skills, and must be "in it for the long haul" (i.e., not facing an imminent job change or retirement).[5] Former Siemens CEO, Heinrich Von Pierer, emphasizes that he was selected because Siemens needed leadership that was able to see the big picture and communicate effectively, both internally and externally.[6] Von Pierer describes his predecessors as introverted and arrogant and credits such things as his service on the local city council and membership in the labor union with broadening his perspective.

Even a capable leader at the helm cannot single-handedly transform an organization – transformation also requires a strong *guiding coalition*. John Kotter, of the Harvard Business School, examined transformations of more than 100 businesses and found that successful transformations included effective guiding coalitions that supported the transformation leader.[7] In the conceptual stages of transformation, a small coalition of select heads of the organization develops the vision for transformation. These key leaders must then grow their coalition to as many as a few dozen champions who share their transformation vision. Not surprisingly, coalition forming can be particularly difficult in companies that historically have not encouraged teamwork.

[*] Private equity (PE) firms buy weak or failing companies and transform them to enhance their performance with the intent of reselling them within a few years for a significant profit. The term "private" denotes that these firms are not publicly owned.

The heart of the organization lies in its line functions. Therefore, line management must be the driving force behind transformation. Former IBM executive, Randy Isaac, tells how IBM assembled a group of transformation managers who did not hold line roles, thereby externalizing transformation from the organization’s key business areas. Isaac stresses that, to be effective, line management must play a key role in transformation.[8] Thus, the guiding coalition must be comprised largely of line representation.

Diverse representation in the guiding coalition provides a more effective power base. While line management must form its core, the coalition might also include union leaders and key players from customer and supplier organizations. Furthermore, personnel from non-line functions such as human resources, information technology, and budgeting also provide valuable insights (and any of these groups could become opponents if they are excluded).[9, 10] Given their diverse backgrounds, attention must be paid to developing a sense of trust and communication between coalition members.

# 2. UNDERSTANDING THE CRISIS

Organizations must understand specifically what factors are causing their crisis. Shortly, we will see that convincing the organization of the urgency of the crisis is a key step in the execution phase. As leaders face the challenge of imparting urgency, it is not enough that they acknowledge an existing (or impending crisis), they must objectively explain the confluence of drivers that led to the crisis. Furthermore, the organization must also use metrics to baseline its initial state to enable it to measure its progress as transformation unfolds. At the end of this phase, the transformation leadership must have an objective characterization of what drivers led to the crisis.

Organizational crises are typically caused by both external drivers (those that the organization cannot control directly) and internal drivers (those under direct organizational influence). Examples of external drivers include decreasing demand for the organization's products, increasing customer expectations for quality, timeliness, and cost, or the rise of a strong competitor. Internal drivers include an organization losing touch with its customers, loss of key personnel, and rewards and incentives that are inconsistent with organizational goals. Internal crisis drivers are often difficult for organizations to acknowledge. For example, Siemens' management attributed their decreasing revenues to an external driver – globalization-induced price drops. Von Pierer notes that, in so doing, Siemens' management was ignoring a key internal driver – Siemens' products were not innovative enough to compete with lower cost foreign products.

Metrics can be used to bring crisis drivers into focus and to baseline the organization's state at the outset of transformation. For example, Pall has identified the following metrics that are geared toward assessing the value of an organization's business-areas.[11]

External Drivers

- *Customer impact* reflects the customer's perception of the value of the organization's products (or services) in terms of cost, schedule, quality, performance, and service.
- *Worth* measures how much revenue a business-area brings into the organization.

Internal Drivers

- *Relevance* is the degree to which a business-area differentiates the organization from its competitors.
- *Viability* is a measure of business-area sustainability and is proportional to stakeholder commitment and competence of the business-area leaders, and is inversely proportional to business-area breadth, resource demands, and technological risk.

Although some of Pall's metrics are qualitative, they provide both a degree of objectivity and a consistent yardstick by which to measure key organizational aspects.

Objective metrics notwithstanding, an organization can accurately characterize its crisis drivers only if it is willing to look *frankly* at its strengths and weaknesses. Absent frank assessment of organizational shortcomings, transformation will fail. Organizational special interests often militate against critical review as they fear the possible ramifications. Honest assessment also requires trust between stakeholders. William Rouse describes how critical assessment of government agencies can be abused to justify budget reductions.[12] Therefore, government agencies are often very wary of critical review. The unfortunate consequence of abusing critical assessments is that it stifles honest assessment aimed at identifying and addressing organizational weakness. William Powers, former Ford Motor Company VP for research, cites the PM/EI approach (participation management / employee involvement) used at Ford as a useful mechanism for employees to bring up suggestions.[13] In the PM/EI approach, employees provide suggestions to their management, who must either accept the recommendations or explain why they were rejected.

Inability of organizations to adapt can also be a crisis driver. Often, organizations find themselves in a crisis simply because practices that served them well in the past are no longer effective. So, while the organizational crisis might manifest itself in symptoms that can be described by Pall's metrics, the underlying illness is the inability to adapt.

Finally, organizations need not wait until they are engulfed in a crisis to begin instilling a sense of urgency in their employees. Former Lockheed Martin CEO Norm Augustine stresses that leaders must attempt to "read the tea leaves" and provide early warning of impending crises.[14] At Allied Signal, people were motivated to change by the decline of former powerhouses such as IBM and Kodak, realizing that they could be next.[15] Goodyear's Chief Technical Officer, Joe Gingo, echoes this sentiment but cautions that organizational complacency impedes crisis anticipation. Goodyear was able to anticipate two of the four crises that it faced over the past three decades. Nevertheless, while some at Goodyear were sounding the warning, many key players were initially not listening.[16]

# 3. DEVELOPING A VISION AND PLANS TO ADDRESS THE CRISIS

The organization must have a clear vision of what changes it must make to deal with its crisis. Herein, we define vision to be a target state that the organization must reach to address its crisis, and the strategic plans that will take the organization to this target state. The vision will serve as the guide for planning, decision-making, and trade-offs during the often-blurry execution phase of organizational change. At the end of this phase, the transformation leadership should have an objective characterization of what drivers led to the crisis and a clear vision to address the crisis.

## 3.1 Developing the Vision

The organization's vision cannot be a mere collection of slogans. The vision must be based on the understanding of the crisis and the organization's current state. Furthermore, the vision must be supported by a strategic plan that focuses organizational objectives on addressing the crisis. Since inability to adapt underlies many organizational crises, adaptability will often be part of the organization's future state.

Strategic planning should yield plans and associated metrics to guide the organization toward attaining its vision. We found that the Strategy Map, discussed in Appendix A, provides an example of a systematic strategic planning approach that links organizational activities to desired outcomes. The Strategy Map provides a host of metrics from growth and productivity measures, to customer satisfaction levels and staffing and capability targets. Nevertheless, organizations can use whatever strategic planning approach best serves their needs.

An effective strategy ensures that transformation efforts are targeted at key business-areas. Operational improvements sprinkled across an organization might yield lower costs and greater efficiency. Nevertheless, if the improvements are not directed at the organization's key business-areas, they will have no significant impact on the organizational crisis.[17, 18]

Once a strategy is developed, the organization can estimate the costs and benefits of its planned actions. Clearly, the benefits of individual transformation efforts must exceed the expected cost. Yet, in the face of prohibitive costs, an acceptable cost-benefit balance can be reached by scaling back the scope of transformation. Kiely wrote on a study of the relationship between the ambition of a transformation vision and the ultimate outcomes, and noted that for transformation to beneficial, either the depth or the breadth of transformation had to be radical, but not necessarily both.[19] For example, some organizations implemented radical changes, but only in a few locations or only to select processes (i.e., pilot programs). Conversely, some organizations implemented relatively modest process improvements, but did so across the whole corporation. Both approaches yielded modest improvements and could always be built upon in the future as resources became available.

Rouse cautions that, if the explicit or implicit goal of strategic planning is to maintain the *status quo*, then the effort is not truly transformation. Such an effort will, at best, yield only small improvements. Rouse identifies the following hallmarks of so-called strategic planning that is, in fact, only an exercise in maintaining the *status quo*:

- The planning is an exercise in justifying what the organization is already doing.
- Considerable effort is expended in ensuring that current efforts are all central to potential new directions.

- New goals look very similar to old goals.

Since transformation will involve preserving some elements of the *status quo* and discarding others, to prevent confusion, leadership should explicitly state what will stay and what will go. That said, while Rouse contends that, as difficult as it is to start new initiatives, killing old ones is even more so. Powers suggests that organizations have a formal "kill" process.[†] In an environment of flat or declining budgets, there can be no new growth unless some efforts are scaled back or terminated.

## 3.2 Keeping the Vision Relevant

The vision will probably need to be revised in light of the realities of execution. Rouse warns that once progress is made in executing strategies, disconnects between the vision and reality will become apparent. At this point, the vision should be refined to ensure it is consistent with newfound constraints and opportunities. For example, activities or approaches that were planned in the initial strategy may prove more costly than anticipated, or may not yield the expected benefits. As such, the strategy must be changed, and such changes and their underlying rationale should be thoroughly communicated within the organization. This approach is but one manifestation of the adaptability toward which organizations should strive.

Organizations should have consistent near-, medium-, and long-term plans. Powers suggests that organizations develop a detailed plan covering the following year's activities, milestones, and associated budgeting. Organizations should also have rough, visionary 10-year plans that attempt to keep the organization aligned with the dynamic external business environment. Intermediate 5-year plans bridge the gap and ensure that near-term activities are consistent with the long term vision.

[†] For example, Ford Motor Co. had an annual review process wherein managers would come armed with plans outlining what 20 percent of their program area they were willing to cut. The intent was to regularly replace unproductive efforts with new, more promising ones.

# 4. EXECUTION – TRANSFORMING THE ORGANIZATION

Once the organization has developed a vision of what it must do to address its crisis, it faces the hard part of transformation – execution. Execution marks the transition from the planning phase to the action phase. It is during execution that plans often run into organizational opposition and that cultural challenges surface.

During execution, the mix of players driving transformation shifts. Often the types of people involved in the strategic phase of transformation planning are not those best suited to the tactical nature of execution. Thus, the guiding coalition must identify tactically-minded people who will carry much of the burden of execution. Nevertheless, even though their role is less central, the guidance of the strategic planners remains vital as they ensure that the execution does not stray from the strategic path.

## 4.1 Transformation Kick Off

At this time, the leadership should have both a clearly-defined characterization of what drivers led to the crisis and a clear vision of how to address the crisis. Now, the guiding coalition is ready to present its case to the larger organization and kick off the transformation. Kick-off efforts should be aimed at ensuring that personnel throughout the organization fully understand both the crisis and the plan to deal with it. This approach was employed by Lockheed Martin Aeronautics in their recent transformation.[20]

## 4.2 Imparting a Sense of Urgency

Transformation is most effectively driven by a prevailing sense of "change or die!" Change is difficult and threatening to any organization, with people tending to avoid change unless it is absolutely necessary. Kotter notes that roughly half of transformation efforts failed because the leadership did not establish a sufficient sense of urgency, adding that the sense of urgency is high enough only when at least three-quarters of the company's management believes that the current state is totally unacceptable. Goodyear's Gingo, used the term "threat" instead of "urgency," and believes that an external threat is *the most* important element of change.[21] Highlighting that all Goodyear transformations occurred as a result of an external threat, Gingo explained that, without a threat, there is no urgency and people remain complacent. Similarly, Allied Signal's Bossidy firmly believes in the need for a "burning platform" to motivate change.[22]

## 4.3 Articulating and Communicating the Vision Statement

Once a vision has been developed, it must be clearly articulated in a *vision statement* that can be understood by the organization. The vision statement describes the target state and its underlying rationale, and must be supported by the strategic plan. Kotter identifies a clear and compelling vision statement as key to transformation success. The vision statement must be easily communicated and understood, compelling, and provide focus for transformation efforts. Kotter sums up with the following rule of thumb: "If you can't communicate the vision statement to someone in five minutes or less and get a reaction that signifies both understanding and interest, you are not yet done with this phase of the transformation process."

Even if a compelling vision statement is developed, it will have no impact if it is not effectively communicated. Kotter notes that most transformation visions are under-communicated and contends that even extensive management speeches and newsletters will not sufficiently convey the vision. To be communicated effectively, the vision must be woven not only into corporate communications, but also into the daily corporate business of programmatic goals, performance reviews, etc. IBM's Isaac echoes this view, noting that, in what he admits borders on "maniacal focus," leadership must continually communicate in every possible medium the transformation message.[23] Von Pierer favors frequent, small "town hall" meetings as an avenue to communicate, encourage, engage, and to reiterate the urgency. Most importantly, the vision must be communicated through the exemplary behavior of leadership personnel who consciously attempt to become "living symbols" of the new corporation.

Leadership must link crisis urgency to hope provided by the vision. Researchers have observed that a crisis environment can create fear and panic, which, by themselves, drive out the optimism necessary for successful transformation.[24] To combat this, as leadership beats the drum of crisis, it must also highlight its vision as the means for tackling the crisis. Goodyear's Gingo points out that once a leader has convinced people that there is a threat, and that he/she has a clear vision for combating it, the organization will eagerly follow the course the leader charts.[25]

## 4.4 Elements of Implementation

It will fall to the organization to determine *how* the strategy will be implemented. The strategy describes *what* must be done to address the crisis. We have discussed tools such as the Strategy Map to develop strategies. Nevertheless, the specifics of implementation and associated tools are scant in the literature. For example, transformation typically must occur while an organization continues to meet its ongoing obligations – that is, the organization must "transform in place." Lockheed Martin's Augustine uses the law of wing-walking, "never let go of something until you have hold of something else," as he suggests phasing in the new while phasing out the old to allow transformation in place.[26] The colorful metaphor notwithstanding, we found no concrete examples of how organizations accomplished this.

The number of ongoing transformation efforts should be limited. Powers suggests that planners pick key elements to implement first, and wait until they take hold before moving on.[27] A barrage of too many efforts risks creating a "flavor of the month" perception within the organization.

### *4.4.1 Customer Focus*

Despite the availability of metrics to characterize the customers' perspectives, absent a *culture* of customer focus, organizations will find that meeting customer expectations is a continual struggle. We have already discussed the importance of the customer perspective in characterizing the crisis and planning strategies. Yet, while customer focus appears to be an obvious concept, experience shows that organizations often lose sight of what the customers value and instead focus on their own priorities. For example Siemens engineers were notorious for insisting that their products would be "better" if they included sophisticated features that the customers in fact did not want.[28] Similarly, in the face of customer polls indicating an order-fill rate of only 60 percent – far lower than internal performance measurements indicating 98 percent – Allied Signal personnel attempted to demonstrate why the customers were wrong instead of working to address the problem.[29]

Organizations can quickly find themselves in a situation wherein their products and practices are no longer in tune with customer needs. Yet, because these products and practices have become central to the organization's culture, they continue to be valued within the organization despite the fact they have become irrelevant. IBM had an internationally recognized R&D capability that was central to its culture and image. Yet, IBM R&D, which included groundbreaking work in areas such as neutrino detection, was fast becoming irrelevant to the increasingly software- and service-centric demands of IBM's customers.

A culture of customer focus stems naturally from close customer interactions. Allied Signal's Lawrence Bossidy contends "the closer you come to the customers, the more you appreciate the need to change. And the more inwardly focused you are, the less you understand that need. As we get more and more customer focused, we don't have to preach about the need to change. People know it."[30]

### *4.4.2 Productivity Improvement*

Productivity improvement is often a critical part of transformation. Organizations can choose from several proven productivity improvement methodologies. "Lean" techniques reduce inefficiencies and waste. Six Sigma is a statistical methodology for reducing process variations and mistakes. TQM (Total Quality Management) is a methodology that is similar to Lean. Michael Hammer, who introduced reengineering, uses the term "process" to describe an integrated series of operations that lead to a customer-value-based end goal. Hammer's premise is that efficiencies are realized when organizations are structured and managed according to processes instead of according to functions (i.e., stove-pipes).[‡] Hammer's approach is not unique, sharing many features of Jones's and Womack's Lean concepts.[31] While tactical in nature, these tools can have profound effects not only on an organization's productivity, but on its whole culture.

### *4.4.3 Internal Processes*

Internal processes must support transformation goals. Existing policies or business practices can be inconsistent with the transformation vision, and might even inhibit new goals. As such, in transformation, organizations must guard against the tendency to automatically retain existing processes, and should instead reevaluate processes in the light of the newly-articulated transformation goals.

Business-areas within an organization might even work at crossed purposes. Cascella provides such an example for a bottle making company.[32] The bottle forming department made the bottles and transferred them to the selection department, which culled out bottles they deemed to be defective. The bottles were then shipped to the customer. The forming department was rewarded on the basis of maximizing the number of bottles shipped. The selection department was rewarded on the basis of minimizing the fraction of bottles rejected by the customer. These incentives worked against one another, driving the forming department to neglect quality in favor of volume delivered, while driving the selection department to do just the opposite. Alignment of internal processes led to shared quality responsibility and essentially rewarded both departments on the basis of the number of bottles accepted.

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[‡] Functionally-based organizations tend to be divided into stovepipes (e.g., marketing, design, manufacturing) wherein functional elements support organizational product lines.

### 4.4.4 Culture Change

Transformation will never take hold until it becomes part of the new organizational culture, leading IBM's Isaac to highlight culture change as the key element of transformation.[33] We have already discussed a culture of customer focus, but culture can also drive performance standards, corporate frankness, and technical focus. Nevertheless, Powers points out that, because culture cannot be readily measured, it cannot be changed directly. Instead culture is an outcome of organizational practices. For example, Kotter notes that culture change can be advanced through careful hiring, promotion, and personnel development to ensure that the next generation of corporate leaders truly embodies the transformation vision. Culture can also be changed through reward systems.

Allied Signal was able to overcome a culture of circumspection, tolerating mediocrity, *prima donna* employees, and poor cost and schedule performance during its successful transformation in the early 1990s. Former CEO Bossidy sought to increase employee support for the organization by fostering an environment in which employees spoke up, believing that people in the trenches are typically aware of issues and want to discuss them frankly.[34] It was internally perceived that mediocrity was tolerated, and poor performers were often just shuffled around the organization. Bossidy ensured that mediocre personnel were eliminated quickly. Similarly, employees complained that "lone rangers" were rewarded, even though their behaviors were often destructive. Allied Signal began to seek out talented personnel who could also work with other people. Finally, missing "the numbers" (i.e., cost and schedule) had become a more or less accepted practice at Allied Signal. Bossidy made it clear that "the organization would be known for meeting commitments. Period."

The guiding coalition must identify those cultural features that are valuable and that must endure throughout transformation, while shedding traits that have become detrimental. Back to the example of Siemens engineers, CEO Von Pierer realized that a culture of innovation was always a Siemens advantage, and was therefore a positive legacy that must be maintained. Thus, by striking a balance between innovation and customer focus, Siemens was able to deliver innovations that were relevant to customer needs. Since transformation involves preserving some elements of the *status quo* and discarding others, leadership must explicitly state what will stay and what will go, to avoid confusion.[35]

### 4.4.5 Organizational Design

Organizations might need to alter their fundamental structure to meet their strategic goals. Yet, as was the case with Lockheed Martin Aeronautics, they will likely find few tools to guide organizational design.[36] Lockheed Martin Aeronautics was formed from three formerly independent Lockheed Martin companies via an organizational design process that was established in-house. To capitalize on familiar concepts, leadership structured the organizational design process to emulate aircraft design wherein the individual business-areas or processes were analogous to aircraft sub-systems. The organizational design was broken into the following three phases, each culminating with a review:

- System Requirements Review (SRR): Use the strategic vision to define what future business-areas are needed.
- Preliminary Design Review (PDR): Illustrate top-level organizational design and define the roles and responsibilities of the leadership of the new business-areas.

- Critical Design Review (CDR): Provide a plan to begin operation of the new organizations. Identify any remaining issues and plan for their resolution.

Execution was tied to concrete yearly objectives that had been established in the strategic planning. For example, during its first year of transformation, Lockheed Martin Aeronautics established the following goals:

- In the first three months, top Lockheed Martin Aeronautics leadership would be in place.
- By the end of the year, the new organizational designs would be complete and the next three levels of management would be in place.

The transformation leadership team supported organizational design by ensuring that corporate perspectives (e.g., HR and personnel issues) were addressed in a consistent manner. Optimal integration of the individual organizations ("sub-systems") into the transformed Lockheed Martin Aeronautics (the "full system") was ensured via an organizational integration design team.

### *4.4.6 Short-Term Wins and Intermediate Phases*

Transformations can be expected to take about three to five years, but work must proceed quickly. Rogers contends that the private equity firm experience shows that focusing on the medium-term (3-5 years) strikes an optimal balance between avoiding counter-productive short-term decisions and maintaining a sense of urgency in transforming the business.[37] Not surprisingly, most transformations that we observed in this study were in the three to five year range. Since momentum loss can sap transformation energy and focus, Lockheed Martin's Augustine exhorts transformation leaders to announce an ambitious schedule and keep to it.[38]

Transformation leaders must plan and ensure that tangible transformation milestones ("short-term wins") are met within a year or so. Kotter's research shows that people will lose faith if they do not see tangible gains within the first year or two of transformation. As such, pre-planned short-term wins are an essential ingredient to a successful transformation effort. Kotter suggests that the wins be designed to be unambiguous, and not a judgment call that can be discounted by detractors. The short-term wins should fall directly out of the Strategy Map or should be apparent from whatever plan the organization has developed. For example, Lockheed Martin Aeronautics used Kaizen events to reduce assembly time, rework, and scrap on the Joint Strike Fighter production line.[39]

Although short-term wins are essential, declaring victory too soon can be disastrous. Kotter reports that transformations often fail simply because the temptation to declare success after a few short-term wins overcomes the need to maintain focus and intensity on the transformation effort. Thus, declaring victory too soon ushers in a return to complacency. Instead of declaring victory, Kotter recommends that the guiding coalition use the credibility gained through short-term wins to tackle more complex problems. Finally, even when the effort is ultimately successful, the organization must characterize and communicate that success and prevent erosion of its gains through continuous improvement.

### *4.4.7 Vetting the Plan*

The best laid strategies will amount to nothing if they are not effectively executed. Ensuring effective execution entails worrying about details that seem trivial by comparison to strategic planning. Yet, Rouse reminds us that it is through these details that the plan will either come to fruition, or fail. It is in execution that the detail-oriented personnel come to the fore. These personnel must understand the "who, what, how, when, and why."[§] Specifically,

- Who will execute the various tasks?
- What tasks will be accomplished and what resources are needed?
- How will the tasks be accomplished, and are the necessary resources available?
- When will the tasks be completed?
- Why are particular actions being undertaken?

### *4.4.8 Consensus and Obstacles*

Kotter's research shows that ongoing vigilance to identify and remove obstacles is essential to transformation success. Obstacles can be personnel who feel threatened and undermine transformation by words and / or deeds (with the resultant damage increasing with the rank of the oppositional individual). Alternatively, obstacles can be existing organizational practices that do not serve the vision. One interviewee noted that, once the vision has been identified, the guiding coalition should "shred" anyone who does not support the vision. Similarly, Bossidy contends that people must either change or "walk the plank."[40] Given that a key function of the transformation champions is to encourage employees to maintain a sense of urgency and to make sacrifices, the guiding coalition must resolutely remove obstacles if it is to maintain its credibility.

The transformation leadership must be able to distinguish organizational obstacles from constructive critics. Rouse contends that the quest for unanimous agreement often causes differing viewpoints to be buried. Constructive criticisms or misgivings can provide valuable insights into a plan's flaws. But if criticism is completely quashed, it cannot benefit the organization. Frank critique and peer review, *by individuals who are committed to improving the organization*, will ultimately yield a more comprehensive and successful product. The aforementioned Ford PM/EI approach is an avenue for eliciting constructive criticism.

### *4.4.9 Missteps*

Leadership should be undaunted by the fact that, in the course of transformation, mistakes will be made. Lockheed Martin Aeronautics leadership acknowledges that the speed with which they approached transformation led to some missteps.[41] Nevertheless, they contend that these missteps were preferable to the loss of urgency and focus that would inevitably have accompanied a slower and more methodical approach. Furthermore, the LM leadership is confident that they have been (and will continue to be) able to correct any errors.

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[§] Rouse's points are virtually identical to Ford Motor Company's 5W-2H checklist (Who, What, Where, When, Why, How, and How much).

## 5. METRICS – WHAT GETS MEASURED GETS DONE

We have left the discussion of metrics to the end of the transformation process because, as seen above, metrics are used throughout. Pall's metrics can be used to quantify crisis drivers. The balanced Scorecard and Strategy Map provide a host of strategic planning metrics. Finally, in the execution phase, the well proven productivity improvement methodologies such as Lean or TQM rely on process related metrics (time, cost, defects) to drive improvements.

The choice of metrics is application specific. Managers in private equity firms are careful to avoid imposing one set of measures across their entire portfolios, preferring to tailor measures to each business they hold. "You have to use performance measures that make sense for the business unit itself rather than some preconceived notion from the corporate center." [42] Powers stresses that metrics should tie to an organization's key processes and products. This tie-in is achieved in the planning phase by using rigorous planning tools and in the execution phase by productivity improvement tools. Finally, metrics must be chosen carefully to ensure that they do not work against one another, as was the case in the earlier example of the bottle-making company.

Organizations often seek leading indicators to forecast their state of health rather than relying on lagging indictors that are useful only after the fact. Nevertheless, accurate leading indicators have proven difficult to find. A compromise approach is to use metrics associated with tactical activities that support a longer term strategic goal as quasi-leading indicators. For example, an organization might have a strategic goal to be number one in its product area. To attain the strategic goal, the organization might set a variety of tactical goals such as productivity improvement in their production processes. The organization will only know whether they have attained their productivity goals after they have retooled their process (a lagging indicator). Nevertheless, once the productivity goal is attained, it is an indicator that the organization is on its way to achieving its strategic goal (a leading indicator). Thus, although metrics associated with these tactical activities are lagging indicators, they are leading indicators with regard to attaining the strategy.

# 6. CONCLUSION – A CAUTION AND A CHALLENGE

We close with a caution and a challenge. Transformation has many elements, and failure of any one can doom the entire process. Research shows that most transformations fall short of their desired goals, with many failing outright. Thus, if confronted with the need to transform, the organization and its leadership must be steeled for an arduous process that has bested many capable people and worthy organizations. As such, successfully transforming, and thereby maintaining relevance and securing continued existence, is one of the highest challenges to which an organization and its leadership can aspire.

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# APPENDIX A: STRATEGIC PLANNING USING THE STRATEGY MAP

We have selected Kaplan's Balanced Scorecard and Strategy Map and as the basis for our discussion of strategy development.[43, 44] Rouse explains that planning to get from the present to the future is a design task that should yield a map showing how and when people's work activities will transition.[45] Yet, Rouse does not provide approaches to develop such a map. The Balanced Scorecard / Strategy Map methodology explicitly links transformation activities to desired outcomes. Notably, Lockheed Martin Aeronautics EVP Tom Burbage endorsed the balanced scorecard.[46]

Kaplan's balanced scorecard identifies the following four strategic elements that support planning transformation strategy:[**]

- customer value
- financial
- internal process
- learning and growth.

Kaplan summarizes by stating "the Balanced Scorecards tell you the knowledge, skills, and systems that your employees will need (their learning and growth) to innovate and build the right strategic capabilities and efficiencies (the internal processes) that deliver specific value to the market (the customers), which will eventually lead to higher shareholder value (the financials)."

The balanced scorecard metrics are used in developing a Strategy Map which identifies organizational goals to address the crisis. The Strategy Map links the categories on the balanced scorecard in a cause-and-effect chain that connects desired outcomes to driving activities.

We will demonstrate strategy mapping using the example of an organization that produces power-generating equipment. The organization's competitors are able to produce products with comparable capabilities, but at a lower cost. The organization is facing a crisis due to shrinking revenues.

**High-Level Plan**

Developing a Strategy Map starts with articulating a succinct, high-level plan to address the crisis. The plan must consider the internal and external crisis drivers identified earlier during crisis characterization (customer impact, worth, relevance, and viability). Powers cautions that careful consideration must be given to what the plan says.[47] The plan must not be just "motherhood and apple pie" slogans. The plan must be challenging and uniquely applicable to the organization. An exemplary plan was "put a man on the moon by the end of the decade." Writing on the success of private equity firms, Rogers suggests a brief, qualitative plan such as, "return the company's focus to its core business of X." [48] GE articulated a plan to "Be number one or two in all business-areas. Fix, close, or sell businesses that are not."

A poorly considered plan can impede transformation and harm the organization. Xerox articulated a plan to "be the fiber optic company." In so doing, they deemed the still-necessary

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[**] Clearly, Kaplan's and Pall's metrics are quite similar, which allows using consistent metrics in both characterizing and addressing the crisis.

electronics organizations to be a thing of the past, pitting them against the optical organizations. In contrast, a later Xerox slogan, “the document company,” focused efforts and was more successful.

Our example organization decides that it will address its crisis by bringing more innovative products to the market. The organization articulates a plan to “Be the innovation leader in power generation.”

**Customer Value Proposition**

The plan must be supported by a customer value proposition. Kaplan points out that most organizations should strive to excel in one of three possible customer value propositions (operational excellence, customer intimacy, or product leadership) and maintain threshold performance in the other two. *Operational excellence* stresses high quality, competitive pricing, and on-time delivery. *Customer intimacy* stresses personalized service and long-term customer relations. *Product leadership* stresses innovative products that push the capability envelope. Choice of a customer value proposition will derive from an understanding of customer needs, which should have become apparent during crisis characterization (ideally, customers will have direct input into this choice).

A *product leadership* customer value proposition will support our example organization’s goal of being the innovation leader.

**Financial Strategy**

The organization must establish a financial strategy to support its customer value proposition. There are two primary tools to use in developing a financial strategy: *revenue growth* and *productivity increases*. Revenue can be grown by expanding the customer base (which is the number of customers who buy the product) and / or by increasing product value (which allows the products to be sold for a higher cost that is commensurate with the product’s superior capabilities). Productivity can be grown through improving operating costs and / or asset utilization. The financial strategy utilizes some combination of these two tools.

Our example organization elects to pursue a *revenue growth* financial strategy whereby they increase product value through innovation. The higher value products should command higher market prices and thereby increase revenue to the organization.

**Internal Processes**

The organization then identifies what internal processes are needed to support the financial strategy. For example, an operational excellence value proposition would be enabled by process improvement, asset optimization, and supply chain management. Customer intimacy would be enabled by partnering with customers to better understand their needs, and training personnel to improve their customer service skills. Product leadership would be enabled by a vigorous R&D effort.

Accordingly, in our example, the organization bolsters its R&D capabilities to foster value-adding innovation. In addition the organization establishes customer liaison processes to strengthen the tie between R&D and customer needs. Finally, the organization enhances its design and production capabilities to allow rapid prototyping that facilitates getting new products to the market more quickly.

### Learning and Growth

For the learning and growth element, the company must identify the core competencies, technologies, policies, and cultural aspects that best support the internal process enablers listed above.

Our example company strives to develop an "out-of-the-box culture" to foster innovative thinking. The company hires greater numbers of research oriented personnel. The company also encourages technical risk-taking to push the envelope of its products and increases funding for long-term / high- payoff research. The company strives to foster greater customer focus that keeps R&D tied to addressing customer desires. To this end, the company identifies technical personnel with good interpersonal skills and trains them to interact more effectively with customers, so that customer desires can be used to guide R&D efforts

Figure 1 shows a diagram of the Strategy Map, with the elements selected for our example organization highlighted.

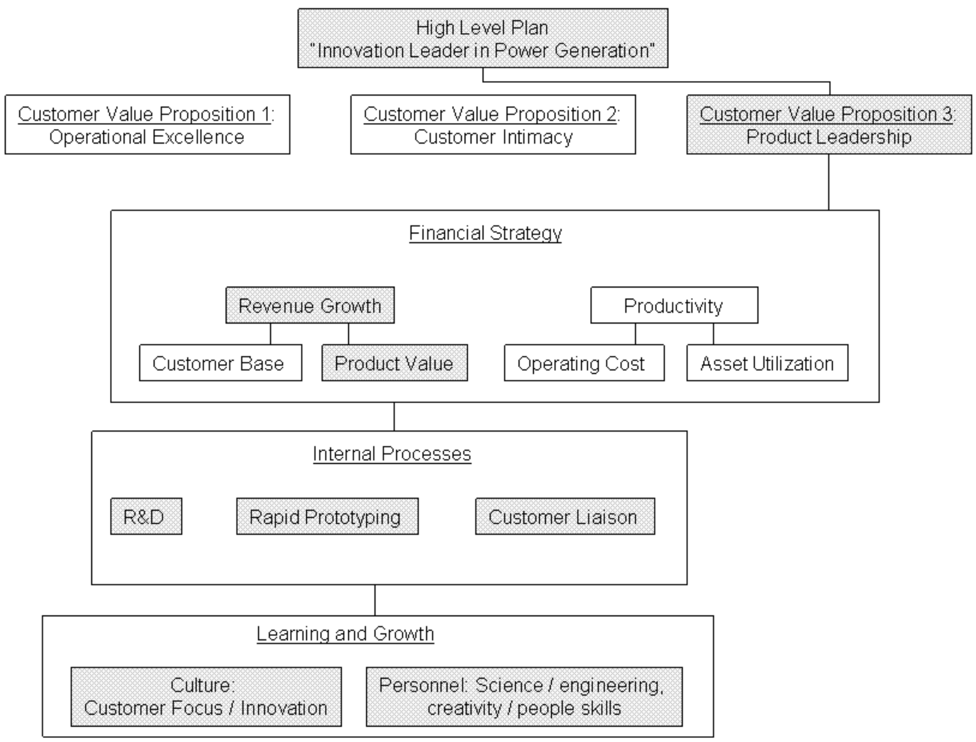


**Figure 1 Example Strategy Map for the Power Generating Equipment Company**

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