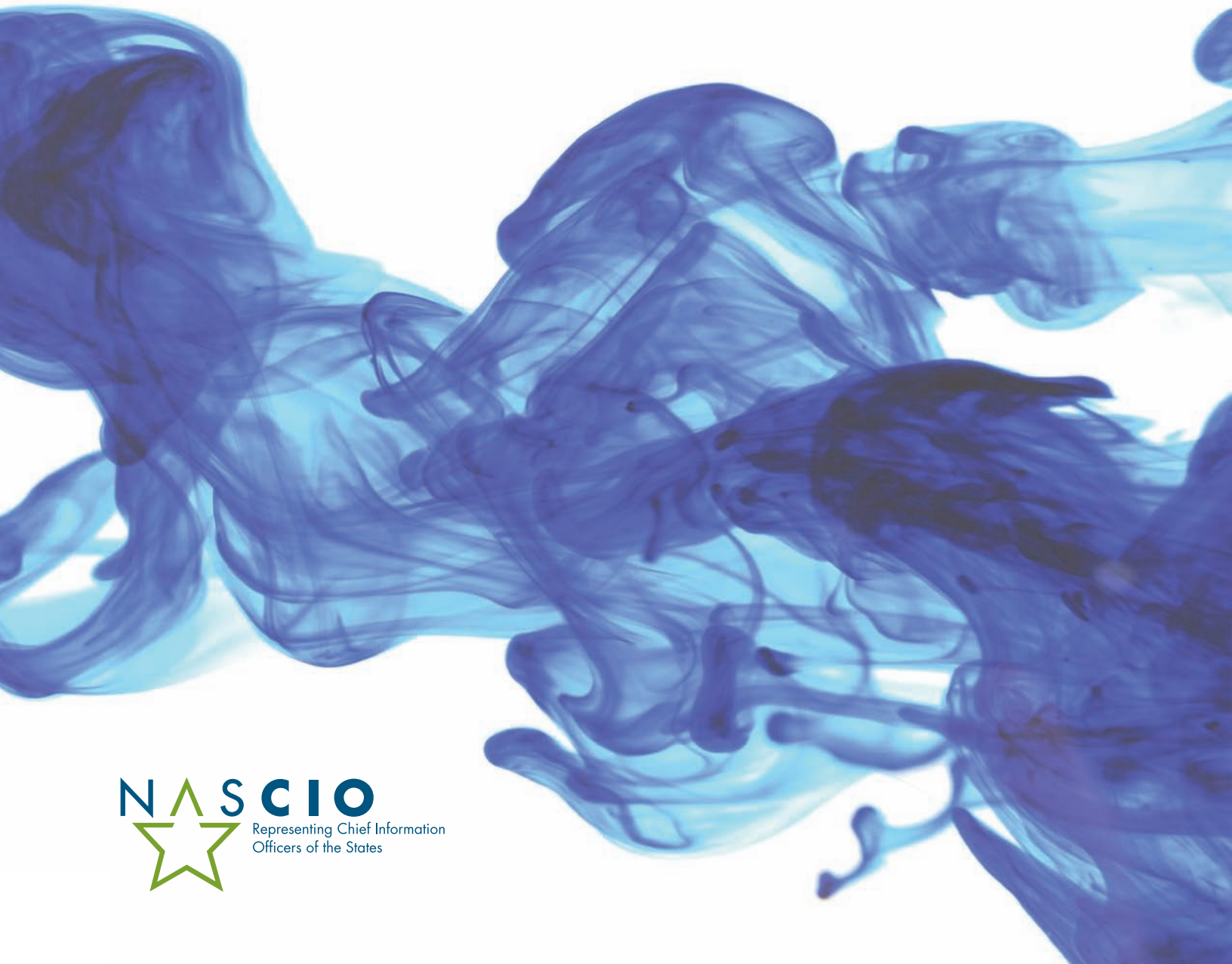




Transforming Government Through *Change Management*:

THE ROLE OF THE **STATE CIO**





Transforming Government through Change Management: The Role of the State CIO

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I. Introduction

This white paper is presented as a reference on change management and organizational transformation for the state Chief Information Officer. The intention of this reference is to recognize some of the current thought regarding change management and enterprise transformation. The work of John Kotter, Shawn Burke, et al., the U.S. Government Accountability Office and others will be reviewed. The common points of these expertise centers will be summarized. This report is not related directly to change management from an infrastructure perspective. Rather, significant organizational transformation will be studied with the intent of gleaning “take aways” for the state CIO. The CIO will most likely not implement all of the approaches presented, but will pick and choose concepts most relevant for his or her specific circumstances. Organizational Transformation is a new management discipline. Consider this white paper to be an introductory survey of the subject of change management and organizational transformation.

Why should states care about change management and organizational transformation?

First, there is an immediate opportunity facing states with the transitioning

processes now underway. Second, as Bill Eggers had presented in the November, 2006, issue of *Governing's Managing Insights*, if change is going to happen, it will most likely happen at the state level.¹ According to Eggers – a rare opportunity now presents itself. He recommends that states not reform – rather **transform** – in order to address major issues such as:

- An education system that is **out performed** by foreign competitors
- **Under-funded** public pensions
- \$1.6 trillion in infrastructure **deficits**
- Medicaid costs that are **out of control** – affecting 53 million Americans
- An **Aging** population
- **Globalization**

The article by Eggers drew comments from Jerry Mechling that also present the idea **that the time is now**. And ... the path to transformation is enabled by information technology.² NASCIO will make a further qualification – the path to government transformation is through enterprise architecture.

II. Change – Fast and Continual

State government is facing a number of dramatic changes from Medicaid reform and burgeoning regional health organizations (RHOs), an aging workforce, *an aging population*, more and more need to do more with less, changing expectations



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¹ *A Window of Opportunity for New State Leaders*, by Bill Eggers, GOVERNING.com, November 22, 2006, retrieved from <http://www.governing.com/manage/mi/6ins1122.htm> on February 28, 2007.

² *The Transition: a Dark- Horse Opportunity*, by Jerry Mechling, GOVERNING.com, December 6, 2006, retrieved from <http://www.governing.com/manage/mi/6ins1122.htm> on February 28, 2007.

from citizenry, more collaborative relationships with federal government. Change is the norm and its velocity is increasing. States are responding with a variety of solution paths including, outsourcing, insourcing, shared services, consolidation, and potential intergovernmental collaborations, partnerships and purchase agreements. Collaborative relationships that cross lines of business are on the rise. All states are facing dramatic change. In many cases, the state CIO is still in “sell mode” - communicating the anticipated benefits of proposed significant change / transformation. How is significant change / transformation, or *organizational transformation*, achieved?

As state government faces new challenges it must recognize that change has become an inherent characteristic of any organization. As information technology, and knowledge management capabilities arrive on the horizon, change will become even more rapid. Global economic dynamics are having an impact on every facet of American life. And citizens are looking to government to provide leadership and vision in an uncertain world.

Government exists to protect and maintain national security, public safety, and to provide public services and other institutions that benefit American society. Beyond this basic list, government is in place in the United States to maintain an *environment of opportunity*. Various roles are played by federal, state and local government. We can't forget the citizens' part in this relationship. The citizen responds with national *loyalty, allegiance, and participation in the democratic process*.

In order for government to fulfill its role, it must continually *transform* itself within the bounding of the constitution to deliver on its mission within an environment that is more and more uncertain. Macroeconomics are continually transforming the landscape. These transforma-

tions have secondary and tertiary effects on the lives of every citizen. What are these effects? Can we continue to operate effective government in increasingly uncertain times? This uncertainty is reflected in national defense, the war on terror, global economics, environmental protection, public health, healthcare, and the quality of life.

Newt Gingrich and Nancy Desmond have described what they term as “profound changes” we can expect between now and the year 2030 that will require seven *significant transformations*.

Seven Profound Changes

1. **National Security**
2. **Health and Healthcare**
3. **Education in general and, math and science in particular**
4. **Government Management**
5. **Taxation**
6. **Litigation**
7. **Energy and the Environment³**

Gingrich and Desmond go on to describe the current crises, and the need for government to transform itself into an enterprise that can change from a bureaucratic public administration to a *21st Century Entrepreneurial Public Management* based on a new “information-age” system of transformation.

The state CIO has risen to and must be seen within state government as a *change leader* who leads and facilitates government organizational transformation efforts in support of and in coordination with the agenda of the governor, the state legislature and the state judiciary. Those agendas must in turn reflect the agenda of the citizens of the United States.

³ Gingrich, N., Desmond, N., *The Art of Transformation*, CHT Press, 2006. ISBN 1-933966-00-9, p. 12

Therefore, the state CIO must acquire and continually hone skills in *leading* change and organizational transformation initiatives. The state CIO must be able to assimilate a myriad of information regarding the aforementioned uncertainties, and deliver government capabilities that protect the interests of the citizens. So, how is this done? How is government organization transformed? And how is this transformation perspective embraced within an ongoing operation that reshapes itself as necessary to effectively *identify* challenges, understand the *impact* of these challenges, and launch appropriate *response*?

This white paper presents that more than any other skill, the change leader must be a *communicator*. Characteristics of effective CIOs include the following. Exemplary communications skills are inherent in each of these characteristics.

- *Listening* more than telling.
- Managing *relationships* one at a time.
- Establishing *trust* within the organization.
- Maintaining a *sense of mission* that is focused on *ultimate outcomes*.
- *Motivating* associates who are dedicated to serving state citizens.
- Providing the *capabilities* to associates to initiate change.
- Engaging the necessary *resources*, wherever they may be found
- *Delivering* results

And all of this must be done within the limited tenure of a state CIO.

III. Kotter's "list of 8"

Among the premier experts in change management is John P. Kotter. Kotter presents a culmination of practical experience in his book, *Leading Change*. Kotter originally published an article in the summer of 1994 titled "*Leading Change: Why Transformation Efforts Fail*." In this book as in his often cited Harvard Business Review article Kotter presents his experience in consulting with over

100 organizations that have launched transformation initiatives.⁴ He states that many of these initiatives were successful and many were total failures. Most of these initiatives were somewhere in between producing some successes and carrying some failures. Based on this experience, Kotter developed an 8-step process for avoiding the errors he has observed.

Kotter also makes a strong case for properly sequencing these process steps. Skipping steps in this sequence has proven to be problematic. The process steps are listed below with further interpretation and summarization. Detail descriptions and anecdotes are presented in John Kotter's book, *Leading Change*. (See Figure 1)

1. **Establish a Sense of Urgency**

Examine market forces facing the organization and the impact of these forces. Identify and discuss the impending crises, and market forces including opportunities. Examine what factors are contributing to complacency and eliminate them. Modify internal performance measures and metrics that create barriers to change.

2. **Create a Guiding Coalition**

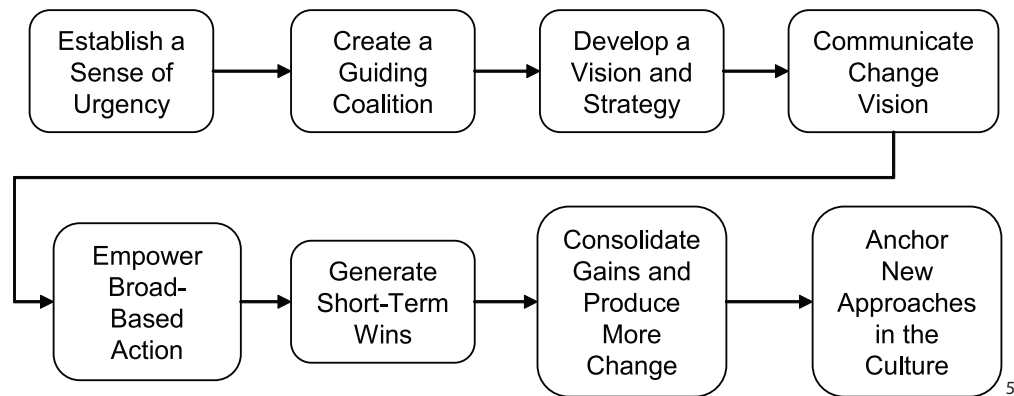
Establish a team of leaders that are credible, have authority, have expertise in the area of focus. This coalition must work as a team. There needs to be the proper mix of management and leadership skills. Try to avoid large egos and people who create mistrust. Trust is a foundational characteristic of any change or transformation initiative. Humility is another important characteristic of effective change leaders.

3. **Develop a Vision and Strategy**

Establish the target vision and the strategies for reaching that vision. The vision must be succinct – a five minute elevator speech. Visions must be compelling, appealing to customers, take advantage of fundamental trends such as globalization and new technology, should not exploit anyone or any group, and must possess *moral power*. Strategies are the "how to" reach the vision. Strategies may trigger projects,

⁴ Kotter, J.P., *Leading Change*, ISBN 0-87584-747-1, Harvard Business School Press, 1996

Figure 1: Kotter's Eight Step Transformation Process



"Guiding change may be the ultimate test for a leader." - J.P. Kotter

programs and management initiatives.

4. **Communicate the Change Vision**

Develop a communication plan to present and re-enforce the change vision. Leadership must emulate the new vision in their behaviors. Nothing will communicate intent as effectively as incentives - so incentives must support the change vision. Continue to repeat the change vision. The Communication Plan may be the most important ingredient of successful transformation initiatives.

5. **Empower Broad-Based Action**

Identify and remove barriers to change. These barriers may include HR policies that are outdated, and systems and structures that undermine the change vision, and outdated skills. Some middle managers may not embrace the change vision and can inhibit employees from fully participating. Find out why. Avoid criticism – create a communication environment where contrary opinions can be expressed. Encourage risk taking, nontraditional ideas and innovation. Provide the necessary training to build new skills that enable the change vision. Carefully think through what knowledge, skills, attitudes and behaviors are needed. Design training to effectively develop these new attributes.

6. **Generate Short Term Wins**

Plan milestone achievements. Create these "wins." Visibly recognize and

reward contributors to these "wins."

Transformation in state government will be achieved through well planned and executed discrete steps. Communicate the path and the milestones along that path. This will help achieve commitment and demonstrate that the change vision is possible.

7. **Consolidate Gains and Produce More Change**

Build on past successes so that change becomes permeated throughout the organization, touching systems, structures, and policies. Continue to evolve human resources practices to hire, promote and develop people who can implement the change vision. Continue to re-vitalize the change process through new program themes, projects and change agents.

8. **Anchor New Approaches in the Culture**

This must be done after the previous 7 steps have been completed successfully. Stakeholders must see effective results come out of a change effort which prove the new approaches are superior to the old ones. Communication *and lots of it* is critical to successfully changing culture. Succession plans must support movement to the new culture. Culture changes only occur after modifying actions, new behavior produces tangible benefit over some period of time, and stakeholders can see the cause-effect relationship between the changes and the benefits.

⁵ Adapted from John Kotter's Eight Stage Process for Creating Major Change, Ibid., page 21 and the foundation-concept of the entire text.

Kotter begins with the necessity of creating a crisis without creating panic. The importance of this is presented by Burke, Shawn and Wilson in their study of *Highly Reliable Organizations (HROs)*.⁶ In their research, they call this step “unfreezing” and it is characterized as a precipitous *jolt* to the organization. Something must occur to convince the organization that *business as usual is not working*. This can often be the result of political, social or economic pressures. In state government, this jolt may be the anticipated loss of workers through retirement, or anticipated ongoing effects of the trade deficit, outsourcing, an unfunded federal mandate, significant loss of revenues, etc.

State government is already facing serious economic pressures. However, as Kotter presents, the organization may be suffering from complacency due to the fact that it is not necessarily feeling the pain of this jolt yet. Burke, Shawn and Wilson attribute non-reactivity within the organization to the existence of internal pressures to maintain the status quo. However, the jolt can also come from within the organization and be tied to a mounting performance crisis or a need to innovate. We'll return to Burke, Shawn and Wilson, later in this report. The main take away is there must be something to trigger a transformation effort – and the organization must be convinced that the *jolt* is serious and that the organization must change and *can change*. So there must also be this element of *hope*.

Assess your own reaction to the following “jolt” regarding the current balance of trade in the United States

An example of a *jolt* that indicates the desperate need for transformation of *multiple*

national policies in the United States is the ongoing, growing trade deficit. (See Figure 2) There are multiple contributing influences creating this deficit including:⁷

- **U.S. Trade Policy**
- **Current Corporate Tax Incentives**
- **Global Trade Agreements**
- **Advanced Technology Trade Imbalance**
- **Lagging Underlying Telecommunications**
- **Manipulation of exchange rates by foreign governments**

One of the drivers of the trade deficit is the lagging telecommunications network capability in the U.S. This has led to major spending in R&D to move offshore.

R&D Heading Offshore

- **The lack of ultra high-speed networks in the U.S. makes it impossible for U.S. companies to enter key new business sectors. U.S. venture capitalists are pressing start-up firms to move R&D to Asia.**
- **Declining market shares and revenues have caused many U.S. telecom and technology companies to cut vital R&D spending by 10-40 percent.**
- **Federal R&D spending in these areas has also fallen by over 30 percent.**
- **Foreign companies make up the majority of the top ten recipients of U.S. patents.**⁸

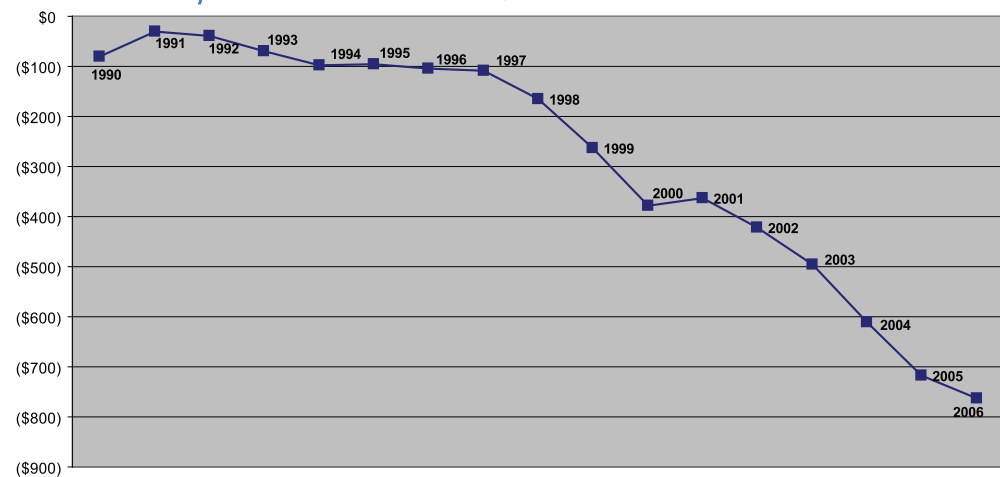
This set of facts effectively presents the need that something must be done in order to convey the current circumstances as *unacceptable* to the *economic viability* of the United States. It presents a *sense of urgency* combined with a *set of outcomes* that should create deep concern within

⁶ Burke, Wilson, Salas, “The use of team-based strategy for organizational transformation: guidance for moving toward a high reliability organization”, *Theoretical Issues in Ergonomics Science*, Vol. 6, No. 6, November 2005, pp. 509-530.

⁷ Interview of Tom Friedman and Senator Byron Dorgan retrieved on March 12, 2007, from http://www.pbs.org/newshour/bb/business/july-dec06/globalization_09-28.html

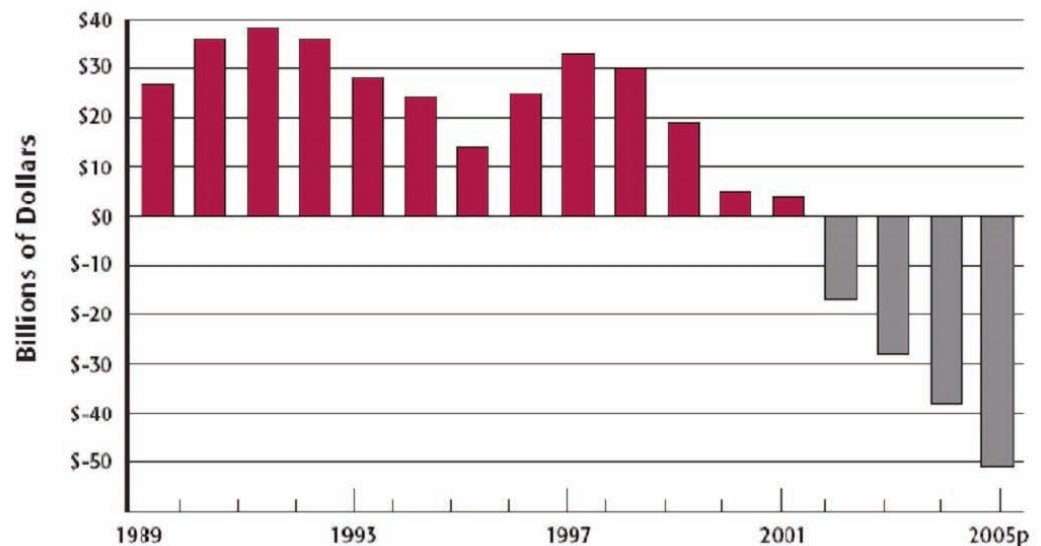
⁸ The Public Forum Institute, *Is America's Technology Future at Risk?*, March 15, 2006, Washington, DC, retrieved on March 12, 2007 from <http://www.publicforuminstitute.org/nde/2006/march/register.htm>

Figure 2: U.S. Trade in Goods & Services: 1991-2006
Balance of Payments Basis - In U.S. \$Billions



SOURCE: U.S. Census Bureau Foreign Trade Division, www.census.gov/foreign-trade/statistics/historical/gands.txt

Figure 3: US Trade in Advanced Technology: Traditional Large Surplus Now Even Larger Losses



government and the citizens of the United States. It presents that foreign governments are purposely manipulating the exchange rates to keep the U.S. Dollar high in order to benefit their own economies.

This presentation of the facts takes up little more than a page in this report – and yet

- does it get your attention?
- does it grip your sense of moral right?
- is it compelling – a serious circumstance?

- does it appeal to your sense of national pride?
- and are you thinking, “we’ve got to do something, and fast!”?

If this is *your* reaction – then this is an effective jolt – and by the way – *an actual one.*

(See the related sources for more background on this specific challenge to long term viability of the U.S. economy.)

This scenario also emphasizes that transformation must be constantly vigilant regarding what is going on in the world around us – it requires dedicated public service motivated, accountable public officials and professionals who are *long term strategists* leveraging *short to medium term policy*.

The last step in John Kotter's process deserves additional treatment. It has been reported in many sources that the biggest barrier to change and indeed, organizational transformation, is the *organizational culture*. This was demonstrated in the NASCIO report, *PERSPECTIVES – Information Sharing: Calls to Action*.⁹ John Kotter discusses the challenges and approaches for changing culture in Chapter 10 of *Leading Change*. According to Kotter, culture change is not what should be addressed first. Rather, "Culture Change Comes Last, Not First."

The rationale is that culture is *very hard to change*. Organizational culture has been established over a long period of time. It is *reinforced* through incentives, human resource policy, and management style. As John Kotter points out, people become so engrained in the culture that it becomes part of them. Further, organizational culture is probably what made an organization *highly successful* in the past. However, the strengths and capabilities that have made an organization successful in the past may become irrelevant or even *inhibitors* to future success. There is a parallel occurrence when a project in mid-stream becomes irrelevant and should be stopped so resources can be released and reapplied elsewhere. However, in the case of culture, it has been producing effective results for some time and under different circumstances. That culture becomes irrelevant or even creates a barrier to effectiveness when circumstances change.

The economy changes. Markets change. Expectations of citizens change.

That change requires new organizational models that better serve the public and government customers. *Successful transformation* demonstrates the *success of new approaches* – that are superior to old methods – or more appropriate given a new economic context. The challenge is: *culture does not change easily*.

IV. Culture Change – Requires New Incentives

Changing a culture must begin with *policies and incentives* that *drive behavior*. Incentives and human resources policy must align with new approaches that comprise a transformation initiative. One of the greatest challenges in implementing transformation is changing human resources policy. For example, establishing new job titles for new types of jobs can be so difficult, agency directors give up. The best situation is where the CIO encounters a director of human resources that is also a *change leader* that is not content with the status quo. Human resources should be an enabler, not a barrier.

In the past, transformation initiatives required moving key personalities out of the organization. However, because organizational transformation must now be seen as an *ongoing cost of doing business*, as a *normal part of operations*, such drastic measures cannot be seen as part of a successful formula for continual change. Most people can change and will change if they believe change is in their best interests and in the interests of the organization. Culture change must occur as an integral part of organizational transformation.

"No business survives over the long term if it can't reinvent itself." - J.P. Kotter

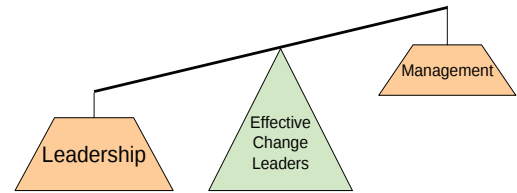
⁹ See <http://www.nascio.org/publications/>

According to a survey by Accenture, 66% of government respondents are engaged in outsourcing efforts *in order to achieve transformation* of a department or agency.¹⁰ The question is – was that truly a more successful approach than developing existing associates? Outsourcing can build mistrust – break continuity of vision and commitment. And so dilute ownership to the extent that loyalty to the organization essentially disappears. The question is, can the CIO and other change leaders facilitate change in a way that associates see transformation as positive and exciting? Creating an environment where people aren't threatened by new roles and scopes of responsibility – but view transformation as an opportunity for personal development. Reinvention must be seen as necessary and even desirable.

V. Leadership and Management – A Balancing Act

Kotter goes on to report that what is needed in organizational transformation initiatives is more emphasis on *leadership*, and less on *management* – without abandoning good management. Leaders are visionaries. Managers are operationally oriented focusing on planning and budgets, organizing and staffing, controlling and problem solving. *Leadership* on the other hand involves itself in establishing direction, aligning people, *motivating and inspiring*. The former produces *predictability* and the potential for *producing short-term results*. The latter produces *dramatic change*. Both are required for *organizational transformation*. But the ratio Kotter presents is 70 to 90 percent *Leadership* and only 10 to 30 percent *Management*. Kotter's final point is the need for an organization to continually learn, and adapt. This is the *Learning Organization*. This concept has its challenges as well.

Tom Newcombe reports in his editorial



from the January 2007 issue of Public CIO that government is becoming more and more *outcome oriented*. This resonates well with NASCIO's goals. This intent has been articulated many times within NASCIO's publications and discussions. Even as state CIOs look at potentially innovative ways of conducting business – this question continues to loom as the ultimate objective. The CIO responds to potential innovations and transformation with, "...and the citizen is better because...?" As CIOs lead transformation initiatives they must do the same for government employees – they must explain what is precipitating a transformation initiative - how the citizen is better served – and how associates are better enabled - once the transformation has taken place. Maintaining and communicating this vision of *service to citizens* is part of the leadership role of state CIOs.

Gingrich and Desmond describe seven characteristics of leaders.¹¹

Moral Responsibility

An effective leader has to be prepared to bear the moral responsibility of undertaking something others may not have undertaken or may not believe needs to be undertaken.

A Vision of Success and Achievement

Gingrich and Desmond quote Solomon – "where there is no vision, the people perish" – Proverbs 24:18

Energy

Energy to motivate. Energy to inspire. Energy to communicate.

Learning Ability

Leaders are constantly learning – Gingrich

¹⁰ Newcombe, T., "Embracing Value," Public CIO, December 2006/January 2007. Retrieved on January 2, 2007, from http://www.public-cio-digital.com/publiccio/200612/?sub_id=DSIDjQjPKyWLZ

¹¹ Gingrich, N., Desmond, N., The Art of Transformation, CHT Press, 2006. ISBN 1-933966-00-9, pp. 208-213

and Desmond quote Albert Einstein – “The significant problems we face cannot be solved at the same level of thinking we were at when we created them.”

Ability to Listen to and Rely on Others

We’ve made both of these points already. Leaders can’t be experts in everything. Leaders must be active listeners.

Resilience and Persistence

Leaders don’t give up when they encounter failure and frustration.

Awareness of Strengths and Weaknesses

Leaders know their limitations.

VI. The Trust Organization – Connecting Associates and Partners

It is important to understand what transformation requires versus process improvements which only create more efficient execution of existing processes. Transformation as defined by Charles Garfield in his book *Second to None: How Our Smartest Companies Put People First*, is as follows:

...[Transformation is an] ongoing process that permeates the entire organization, and represents a sharp break with the past. This break is a major difference between transformation and simple reform. While reform is an attempt to go down the same path more efficiently, transformation involves the development or discovery of entirely new paths.¹²

This definition supports the idea of transformation and in most contexts the work of transformation as it is tied to *innovation*.

Dr. Steve Else embraces this definition of transformation as a foundational concept in his PhD dissertation on organizational theory. Dr. Else presents his observations and conclusions from a study of the U.S. Department of Defense Transformation initiative led by Donald Rumsfeld. A major conclusion in this study is that there are major *blind spots* in leaders or organizations due to a lack of understanding of this new *management discipline* – *Organizational Transformation*. Individuals and organizations have limits on their understanding of the dynamics of transformation. And, transformation as a management science is immature. Nevertheless, *organizational transformation* is anticipated to be key to *innovation management* and is a necessary discipline that must be learned and learned well in the 21st century. Further, organizational transformation must be managed within a proper governance model that includes the traditions, institutions and processes that determine how power is used, how associates are included in the decision making process, and how decisions are made at an enterprise level. Without first establishing appropriate governance, it will be difficult to initiate and sustain *ongoing organizational renewal*.¹³

Dr. Else describes the need for *establishing trust* within the organization as it goes through the transformation process – and the ongoing iterative transformations necessary to remain productive in an ever-changing environment. Trust must include openness and inclusion and is a necessary ingredient to cultivate an *innovative culture*.

This idea of openness and inclusion is a strong point made by Anne Firth Murray who is credited with being an innovator and pioneer. Murray established The Global Fund for Women which funds change and transformation initiatives

¹² Charles Garfield, *Second to None: How Our Smartest Companies Put People First* (McGraw-Hill, New York, NY, 1991), 50. Referenced in Dr. Else’s dissertation.

¹³ Dr. Steve Else’s doctoral dissertation: Organization Theory and the Transformation of Large, Complex Organizations -- Donald H. Rumsfeld and the U.S. Department of Defense, 2001-04 retrieved on January 10, 2007, from <http://www.public-private.org/>

globally. The model used by Murray is to enable women locally to solve their own problems by providing resources necessary to accomplish change.¹⁴ Murray emphasizes *connecting with others* as necessary in building trust within her own organization as well as with potential partners and stakeholders.

Burke, Wilson and Salas present that organizations that are successful in achieving change and transformation must employ the participation of the organization staff. First, employees want to understand *why* change is happening or needs to happen. Second, employees are a well spring of ideas and solutions. Third, employees want to have control over their work (an inherent characteristic of human beings) and more control leads to embracing change rather than resisting it. If people know and feel they are part of the change process they will create the necessary momentum to make it happen. Connecting with employees or associates in the organization, bringing them into the process, ensures success.¹⁵ This fact is emphasized in this NASCIO report by avoiding the term *employees* – rather emphasizing the term *associates*.

The lessons are there for us to apply within state government. If it is hard to initiate and sustain transformation within state government – *how much more important must it be?*

VII. Transformation – Establishing Scope

It is obvious from the literature that - trust, communication, the need for a “jolt” - are necessary ingredients for a successful transformation initiative. There are areas where there is less than consensus about what must be in place to enable a successful transformation. One issue is *scope of*

effort. Ralph Killman presents the following list of seven useful, searching questions to help *scope* a transformation initiative.¹⁶

1. ***How much top management commitment and involvement are necessary in any transformational effort?***
2. ***Is charismatic leadership required for successful transformation?***
3. ***Where should transformation start? Does it matter?***
4. ***Must transformation involve changes in all aspects of the organization?***
5. ***Can organizational transformation take place without personal transformation?***
6. ***How can top managers and others be encouraged to anticipate change instead of reacting to crisis situations?***
7. ***What is the role of the human resources function in transformation?***

Vincent Barabba, formerly an executive at GM and there during its 1992-2002 successful transformational journey, states that successful transformations take time and very much depend on the *context* of the particular transformational initiative. He suggests that there are general lessons learned from GM’s transformation that warrant consideration by any large organization undertaking anything similar:

1. Minimize or avoid the “zone of disorder” felt by employees when the enterprise is required to change from where it is now to where it needs, or wants, to be.

¹⁴ Murray, A.F., *Paradigm Found: Leading and Managing for Positive Change*, ISBN-10: 1-57731-533-2, ISBN-13: 978-1-57731-533-9, Chapter 3 (Publishers Group West, 2006)

¹⁵ Burke, Wilson, Salas, “The use of team-based strategy for organizational transformation: guidance for moving toward a high reliability organization,” *Theoretical Issues in Ergonomics Science*, Vol. 6, No. 6, November 2005, pp. 509-530.

¹⁶ Ralph H. Kilmann and others. *Corporate Transformation: Revitalizing Organizations for a Competitive World* (San Francisco: Jossey-Bass Publishers, 1988), xiii.

2. Think about the potential of an extended enterprise system to expand the vision of the current business, starting with determining the destination.
3. Plan how to get the enterprise to the targeted destination.
4. Develop an effective dialogue with selected customers using the most effective technology.
5. Stare a complex and uncertain future directly in the eye and develop a business design that increases the chances of favorable future conditions.
6. Create and nurture a strong and effective relationship between and among information providers (market researchers) and information users (decision makers).
7. If possible, identify the “right problem” to work on rather than finding out later that the effort solved the wrong problem.
8. Develop teams that sort out the conflicting issues underlying the multiple perspectives of functional organizations.
9. Create awareness of the interaction of the parts of the system in order to anticipate whether the outcomes of decisions will be different from initial expectations.
10. Understand the encompassing environment in which the enterprise operates and determine how to interact within that system.
11. Reveal the implicit assumptions of the plans and how to go about assessing their likelihood of actually occurring.

12. Ensure that the knowledge of what is known (or known to be unknown) by the enterprise is made available to all who need access to it.
13. Determine the enterprise destination in the face of an uncertain future and identify ways to think about getting the enterprise to that destination.¹⁷

The recommendations from these experienced change managers should provide the governance elements within which the change process should be planned. These elements provide the considerations to be evaluated as part of chartering a change management / organizational transformation initiative.

VIII. High Reliability Organizations – Useful Lessons

Organizations including state government have become more and more complex. Government must do its best to anticipate change, assess risk, and establish plans for implementing change – while also maintaining the ability to change course quickly when and if the environment changes yet again. Change must be seen as a continual, never-ending behavior. As NASCIO has stated in past publications – the enterprise must be viewed as a fluid moving through time. These are characteristics of the *agile enterprise*. How can an organization achieve this agility?

Some organizations are employing the team approach of High Reliability Organizations (HROs) in order to deal with unpredictable environments.¹⁸ The emphasis is on *resilience* – the ability to respond to new dynamics, to *continually learn*, to employ expertise wherever it is found. HROs accept mistakes as part of the *innovative process*. They are continually developing their personnel through

¹⁷ Vincent P. Barabba, Preface, *Surviving Transformation: Lessons Learned from GM's Surprising Turnaround*, published in New York by Oxford University Press, Summer 2004.

¹⁸ Burke, Wilson, Salas, “The use of team-based strategy for organizational transformation: guidance for moving toward a high reliability organization,” *Theoretical Issues in Ergonomics Science*, Vol. 6, No. 6, November 2005, pp. 509-530.

constant skill development. The foundational principles of HROs are credited for the differentiation seen in HRO performance in complex environments. While some organizations cannot cope with uncertainty, complexity, and continue to attempt strategies fraught with error, HROs maintain an expertise in minimizing error by “making sense” out of complexity.

The objective here is to try to gain some insight from these highly successful organizations that can be gleaned to enable transformation initiatives in state government. So, what is an HRO? The most widely used example of an HRO is the US Naval aircraft carrier fleet.

Operating conditions are extremely complex and unpredictable. Flight operations must be conducted under conditions that can change in a moment. There is a high rate of turnover in personnel, yet morale, productivity and team cohesion must be maintained. Some CIOs are not necessarily facing such conditions ... yet. However, other CIOs are facing unbelievable complexities and pressures to perform. Again, it is presented that there are lessons to be learned from organizations, like the US Navy, that are characterized as HROs. Going forward, the business of government will become more and more complex, more unpredictable, and require a capstone characteristic of HROs - *resilience*. That is, the ability to respond effectively to changing conditions through *continual transformation*.

Some characteristics of an HRO are worth listing and considering as potential characteristics for state government. There are eight primary characteristics of HROs: (1) hypercomplexity (i.e. there is a wide variety of components, systems and levels), (2) tightly coupled (i.e. there is reciprocal inter-dependence across the units and levels), (3) extreme hierarchical differentiation (i.e. each level has its own mechanisms for control and regulation), (4) many decision-makers working in complex communication networks (i.e. systems are redundant), (5) high degree of accountability (i.e. less than optimal performance results in severe adverse consequences),

(6) frequent, immediate feedback regarding decisions (i.e. many decisions are time critical affecting operations immediately resulting in continuous feedback), (7) compressed time factors (i.e. many operations or activities can be measured in seconds) and (8) outcomes that are synchronized (i.e. for success, more than one outcome must occur simultaneously).

The challenge presented by Burke, Wilson and Salas is HOW TO move an organization toward the HRO model. Our interest is to examine the attitudes that pervade HROs and the process for creating an organization that maintains *ongoing transformation*.

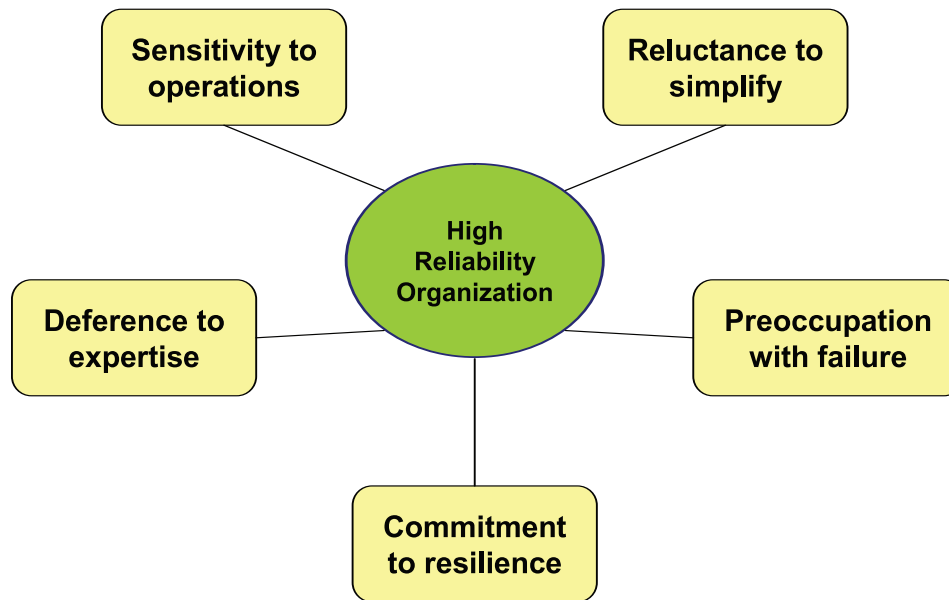
There are five attitudes that prevail in an HRO. We'll examine each one briefly and offer suggestions for CIO action.

Sensitivity to operations – this is a recognition that operations have *inherent error* - which are latent - and which will not appear until the organization faces the right combination of adverse events. So the organization is on the constant look out for these errors. It never assumes business processes are going to work correctly every time. There is a constant vigilance – looking for that failure point. This vigilance is most effectively carried by the *operations personnel*. The necessary *communication, relationships, and attitudes* exist in the organization so that observations and experience at the operations level effectively moves to decision makers so corrections can be made *quickly*. Operations staff and strategists work in a collaborative way to evaluate alternatives and make corrections. This is viewed as a normal activity – the normal way of operating. Some of this behavior is comparable to behaviors promoted by the Balanced Scorecard approach to management where scorecards are presented in a non-threatening environment and peers assist peers with interpreting results and developing solutions.

CIO Action: ensure collaborative relationships and ongoing communication between architects and operations; strategy and operations; visionaries and implementers.



Figure 4



Reluctance to simplify. HROs recognize complexity and embrace it. Too much simplification can limit creativity and innovation. HROs keep a very open perception to problem solving and opportunity identification. HROs achieve this partially by admitting people with diverse backgrounds into the team environment. This ensures multiple perspectives and provides a wide portfolio of “brain power” that can be engaged for innovation. HROs will select people with non-typical experience, employ job rotation, and retraining in order to achieve this diverse thinking and avoid organizational stagnancy.

CIO Action: create diversity on the CIO team; hire associates with non-IT backgrounds that can bring other perspectives to the team; employ job rotation to keep staff continually exposed to new situations while bringing diversity into other areas of the organization; maintain an environment of ongoing training; consider cooperative relationships with other state cabinets and rotate staff to achieve cross-pollination in thinking, attitudes, problem solving, and process improvement.

Preoccupation with failure – this is a strange term – but it refers to constantly

evaluating errors – no matter how minor in order to fully harvest learnings. HROs constantly combat the “liability of success” which is *organizational complacency*.

Some things can’t be taught – they must be caught.

This refers to the fact that every possible scenario cannot be anticipated. Some things must be observed, or caught, when they occur so the learning value can be harvested. HROs maintain this ongoing learning attitude that is ready to “catch” opportunities to learn – *in real time*.

CIO Action: Change managers or performance managers should be tasked with carefully evaluating movement toward and out of control limits – discovering root cause for such movement; create an online solution knowledgebase that is available to the organization; institute review meetings similar Balanced Scorecard reviews; identification of failures should not be punitive; maintain a learning environment.

Commitment to resilience. HROs recognize the absolute existence of the “unexpected.” In parallel with continually honing the predictive skills of proactive

management, HROs recognize errors will still occur. The organization must maintain the ability to react to problems, mitigate the effects of errors, and recover back to baseline. This is termed resiliency. The ability to take a “hit” and recover. This characteristic then feeds into the continual learning associated with “preoccupation with failure.” Again, when errors happen, the organization is interested in learning, not punishing; employing *operating discipline*, not panicking.

CIO Action: create an environment that anticipates mistakes, problems, and unforeseen events; as much as possible, anticipate and have in place operating discipline for dealing with predictable events; but add to this operating discipline for action when the unexpected happens; this discipline may include leveling of events on a severity scale and employing collaborative activities that involve specific roles depending on the level of severity.

Deference to expertise – in a nutshell this is essentially engaging the right expertise wherever it may reside. This requires a team oriented attitude across the organization. “That’s not my job” doesn’t exist in an HRO. Rather, everyone is willing to get involved when it is appropriate. The organization is willing to engage expertise in and out of the organization. This is an attribute of leadership. Leaders aren’t expected to know everything about everything. Rather, they know who to call and how to tap the right expertise.

CIO Action: maintain a directory of expertise centers; establish relationships with expertise centers in advance so they can be engaged when needed.

There are many more learnings to be gleaned from the report by Burke, Wilson and Salas which we hope to explore in future publications.

Sufficient for now, the CIO must communicate that change and continual transformation is now the norm. The extent and velocity of change will continually increase. And there are lessons to be learned from other organizations such as High Reliability Organizations that have already pushed many of the frontiers in managing change. There are characteristics to be emulated - mimicked - in order to be effective in managing change and organizational transformation in state government.

IX. Transformation is Ongoing – Relevant Metrics

It is important to see transformation as an ongoing process rather than a one time initiative. Therefore, metrics created to help stimulate an organization toward change and to measure progress toward that objective must be continually reviewed for *relevancy*. It may be that the change or desired behavior that prompted the original metric has been achieved. Subsequently, new objectives must be established with appropriately defined *new metrics*. An example of this is provided by the Occupational Safety and Health Administration (OSHA). In 1993 Joseph Dear was named assistant secretary of labor and also the head of OSHA. What he encountered as “measures of success” were metrics related to the *number of inspections made* and *fines assessed*. Though these metrics may have had meaning at one time the contextual conditions that prompted those metrics had long since changed. Under Joseph Dear’s leadership, the organization revisited its intent with a view toward ultimate outcomes. And, these metrics were not contributing to that intent.¹⁹ This scenario also presents that change must be a *continual renewal*. Frank Ostroff describes the need for the organizations to establish performance metrics that support the

¹⁹ Ostroff, F., Change Management in Government, Harvard Business Review, Vol. 84, Iss. 5, ISSN 0017-8012, May 1, 2006

organization's mission. NASCIO continually presents the need to evaluate actions, projects, programs and management initiatives based on ultimate outcomes. *Are citizens better off? Are streets safer? Is there more economic opportunity for our citizens? Is our educational system providing what we need now?* In the case of OSHA, the ultimate outcome sought is "protecting worker health." Metrics and incentives within OSHA must contribute toward that aim.

The Occupational Safety and Health Act was enacted by Congress to, "... assure so far as possible ... safe and healthful working conditions ..."²⁰ The intent of OSHA is presented in the preamble to the act and in the "general duty clause." The challenge Joseph Dear presented to his organization was to determine what incentives and metrics must be in place to accomplish *that* mission within the *current contextual* environment. Metrics and performance measures must continually be evaluated against *current conditions*. When Dear arrived at OSHA, established metrics were out of sync with the current strategic intent of the organization. Frank Ostroff has described this scenario as being "captured by metrics." Ostroff goes on to describe four more principles for managing change in government. The following list of recommendations is adapted from Frank Ostroff's article in the Harvard Business Review.

Win Over Stakeholders

Stakeholders fall into two general categories: external and internal. Understand their issues and perspectives. Because agency staffers have typically a fairly long tenure, fully leverage their experience and history with the organization. Revisit the organization's mission and demonstrate that the intent of the change effort is to more effectively deliver on that mission.

Create a Roadmap

Don't treat transformation as a black box.

Rather *design the box*. Establish performance objectives. Involve a wide cross section of associates. Establish a change team with membership from people who are respected by their peers. Prioritize areas of performance improvement. Identify barriers. Conduct fact finding / root cause analysis. Review past change efforts to learn what worked and what didn't – and why. Establish recommendations for change. Evaluate existing processes. Establish priorities (use an impact / difficulty 2 X 2 matrix). Roll out the change program in an area that is most receptive to the change initiative. Establish a steering committee whose members come from government leaders, senior managers that are directly impacted by proposed changes.

Take a Comprehensive Approach

Leaders don't limit their solution set to tools, techniques and approaches with which they are familiar. Organizational success requires proper leverage of leadership, structure, processes, infrastructure, people and *performance management*.

Be a Leader, Not a Bureaucrat

Find ways to see over and around barriers. You may have more flexibility than you think. Follow the rules – but don't limit yourself by what has been done in the past.

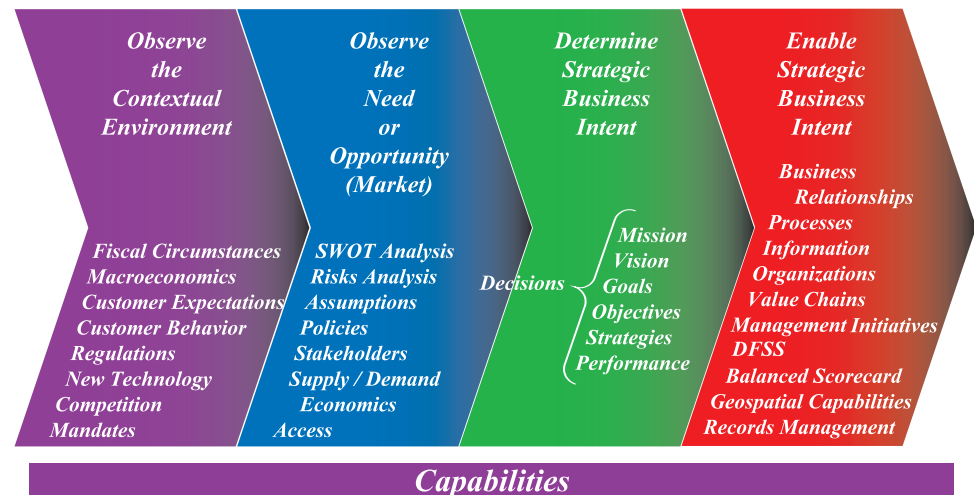
Metrics must be seen as a necessary tool to assist in the implementation of change. Gingrich and Desmond make the case for metrics as an essential element for transformation in their chapter on The Emerging Revolution in Metrics-Driven Leadership.²¹ Metrics will provide the control chart to ensure the outcomes sought are achieved, and will also help to defend or justify the change management initiative.

Find ways to see over and around barriers. You may have more flexibility than you think.

²⁰ Public Law 91-596, 84 Stat. 1590, 91st Congress, S.2193, The Occupational Safety and Health Act of 1970, General Duty Clause, retrieved on January 17, 2007, from http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=OSHACT&p_toc_level=0

²¹ Gingrich, N., Desmond, N., *The Art of Transformation*, CHT Press, 2006. ISBN 1-933966-00-9

Figure 5: Enterprise Architecture Value Chain



Employ enterprise architecture as the path to organizational transformation and for managing continual renewal.

X. Enterprise Architecture – the path to transformation

The General Accounting Office, GAO, conducted a survey of 27 major federal departments and agencies regarding transformation efforts and reported the results.²² GAO makes the point in this report that enterprise architecture is the necessary discipline to employ in transforming organizations. The effectiveness of this approach is dependent on how well the organization has embraced their enterprise architecture, and the capability of the organization to comply with that architecture.

NASCIO has presented this same perspective regarding transformation and the necessary employment of enterprise architecture. Enterprise architecture takes a broad view of the organization which encompasses every facet of strategy, research, operations, technology, human resources, and relationship management. Enterprise architecture is a comprehensive view of the enterprise. This view is essential especially during transformation and change leadership.

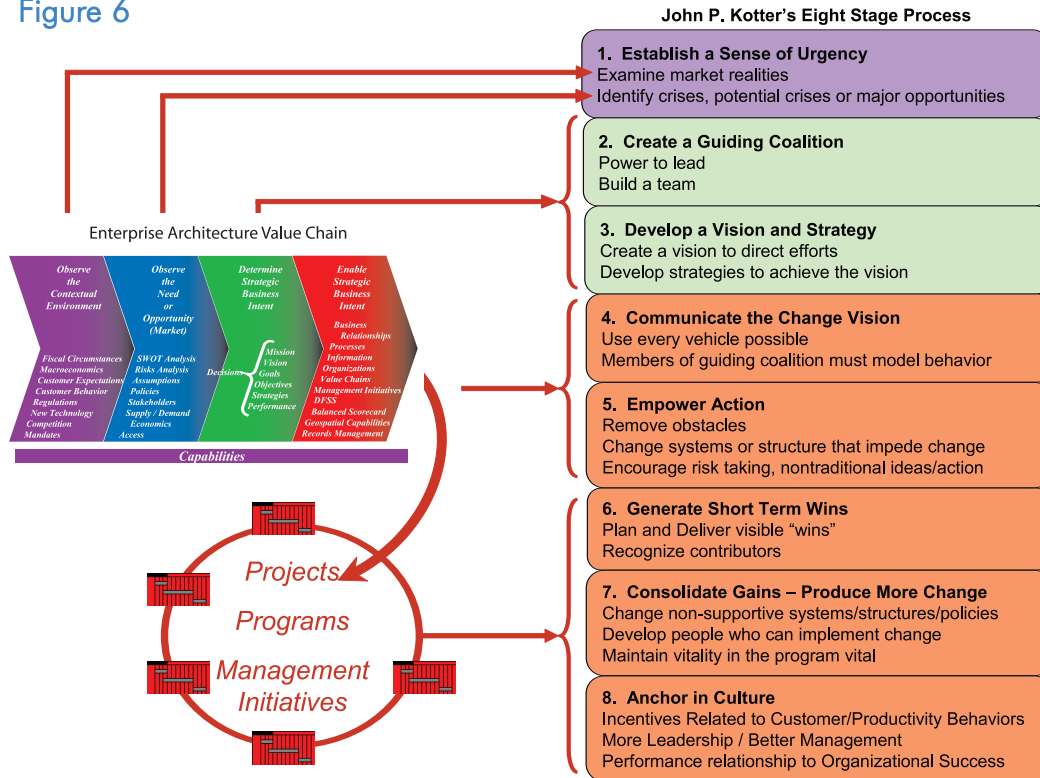
The NASCIO Enterprise Architecture Value

Chain was created in order to communicate the concepts of environmental analysis, supply / demand economics, strategic planning, capability management, and program/project management and the relationships among these disciplines. This ongoing iterative process begins with continual monitoring of the environment in which state government resides – fiscal circumstances, policy, global economic and political shifts, changing citizen expectations and needs. It is within this context that state government examines markets and needs and determines how to respond. That response is articulated in the way of strategic intent. That intent is enabled through leveraging existing capabilities or creating new capabilities. Capabilities can be engaged through internal development, contracting with an outside provider, or through collaborative networks involving federal, state and local government. Capabilities are delivered through programs, projects and management initiatives.

The relationships between the Value Chain and Kotter's 8 Processes are depicted here in order to show the ongoing linkage between the Value Chain and the transformation process that is engaged in a

²² ENTERPRISE ARCHITECTURE Leadership Remains Key to Establishing and Leveraging Architectures for Organizational Transformation, Government Accountability Office, Report GAO-06-831, August 2006, retrieved on January 19, 2007, from <http://www.gao.gov/cgi-bin/getrpt?GAO-06-831>

Figure 6



Learning Organization.

These types of initiatives must examine the current state, establish the future state, and carefully design the delivery process to move to that future state. This requires recognition of the interconnectivity of organization, business processes, and operations. It also requires consideration of secondary and tertiary effects of change. Making a change in a process will affect every other process that interacts with it including the information exchanges, personnel duties, procedural steps, etc. How much more the effects of organization transformation?

In order to avoid collisions, and ensure "all the parts fit together" when complete, a comprehensive plan must be established and followed. This point is made by Bruce Hallowell in an article published in *Healthcare Financial Management*. Hallowell states that many failed efforts to effect transformation can attribute that

failure to not fully understanding or taking account of the "domino effect" change in one area will have on other areas within the organization.²³ This is part of the value of leveraging enterprise architecture in implementing transformation efforts. The enterprise architecture should document the inter-connectivity within an enterprise and include consideration of *inter-enterprise architectures* – i.e., how one enterprise is *connected* with other enterprises.

The GAO report summarizes the intent of the federal reference models for enterprise architecture.

...These models are intended to facilitate government wide improvement through cross-agency analysis and the identification of duplicative investments, gaps, and opportunities for collaboration, interoperability, and integration within and across government agencies.

²³ tips on transforming an organization. By: Hallowell, Bruce. *Healthcare Financial Management*, Jun2003, Vol. 57 Issue 6, p64, 2p; (AN 9973672)

Figure 7: Federal Enterprise Architecture Reference Models

Reference model	Description
Performance Reference Model	Provides a common set of general performance outputs and measures for agencies to use to achieve business goals and objectives.
Business Reference Model	Describes the business operations of the federal government independent of the agencies that perform them, including defining the services provided to state and local governments.
Service Component Reference Model	Identifies and classifies IT service (i.e., application) components that support federal agencies and promotes the reuse of components across agencies.
Data and Information Reference Model	Describes, at an aggregate level, the types of data and information that support program and business line operations, and the relationships among these types.
Technical Reference Model	Describes how technology is supporting the delivery of service components, including relevant standards for implementing the technology.

SOURCE: GAO

Without an enterprise architecture, it is unlikely that an organization will be able to transform business processes and modernize supporting systems to minimize overlap and maximize interoperability

Enterprise architecture is not established for its own existence. It has a purpose in the overall management of an enterprise. The intent of the Federal Reference Models is to facilitate movement toward an intended outcome as articulated in the above statement.

Change leaders have at their disposal this discipline for defining, organizing and executing on organizational transformation.

The table above is presented in the GAO report.

Each reference model addresses a different aspect of enterprise architecture. These reference models provide views of the enterprise that must be coordinated in order to achieve transformation. Intent and functionality is established in the Business Reference Model. The Performance Reference Model provides the ongoing feedback on how well the enterprise is delivering on that intent. The Data and Information Reference Model describe the information that must be generated and shared in order to deliver the intent described in the Business Reference Model, and to enable measurement of perform-

ance as articulated in the Performance Reference Model. The Service Component Reference Model describes the services that can be leveraged in order to meet intent within the parameters of performance targets. The Technical Reference Model then describes the technical capabilities necessary for enabling intent.

Enterprise architectures are a recognized tenet of organizational transformation and IT management in public and private organizations.

Without an enterprise architecture, it is unlikely that an organization will be able to transform business processes and modernize supporting systems to minimize overlap and maximize interoperability.

-GAO August 2006²⁴

An enterprise architecture is a blueprint for organizational change defined in models that describe (in both business and technology terms) how the entity operates today and how it intends to operate in the future; it also includes a plan for transitioning to this future state.

-GAO August 2006²⁴

²⁴ ENTERPRISE ARCHITECTURE Leadership Remains Key to Establishing and Leveraging Architectures for Organizational Transformation, Government Accountability Office, Report GAO-06-831, August 2006, retrieved on January 19, 2007, from <http://www.gao.gov/cgi-bin/getrpt?GAO-06-831>

Enterprise architecture must always be presented as an ongoing iterative process. It is never complete, and the organization is never done developing it. Even as the organization must see itself as a fluid – modifying itself continually – the enterprise architecture that describes it must also be fluid.

This GAO report was preceded by a July 2003 report titled *RESULTS-ORIENTED CULTURES: Implementation Steps to Assist Mergers and Organizational Transformations*.²⁵ This report echoed much of what John Kotter has stated. The results of that study are presented in the following table (Page 20).

Suter has described enterprise architecture as the “blueprint” for organizational transformation.²⁶ Suter presents the following:

The Case for Enterprise Architecture

Enterprise architecture enables the transformation of organizations into efficient users of capital, be it human/intellectual, organizational, or technical.

It does so by identifying capability and resource requirements of the agency mission before resources are committed to development, thereby minimizing the risk of costly rework and schedule overruns; identifying reuse; and streamlining opportunities for technologies, processes, procedures, and information assets.

During subsequent development, architecture also enables the management of out-of-scope changes which, however meritorious, would derail subsequent modernization efforts.

For some years, NASCIO has emphasized the importance of *enterprise architecture* as a necessary management engineering

discipline for *business and technology leaders* to employ in managing state government. Enterprise architecture must be understood as *that* discipline entailing a holistic view of the enterprise. If enterprise architecture is seen only as a technical discipline it will not provide the necessary scope for managing ongoing organizational transformation as described in this report. Its relevance to the CIO has been presented within the scope of *transformation*.

XI. The soft side of transformation and change leadership - people

All that has been presented here regarding transformation and leading change has as its most significant linchpin – *people*. Nothing gets done without people. And in the end, it is people that are served by state government. All the theories, modeling techniques, analysis, and technology will mean nothing if adequate attention is not given to the real authors and benefactors of change – people.

Leadership in organizations must be *leaders*. This does not mean they must be experts in every facet of the organization. Leaders know how to employ the talent of their associates and staff in carrying out the necessary initiatives to effect change. So, how can a transformation initiative, or change management initiative, engage its people resources effectively?

It begins with trust. Mutual trust must be established. Trust must be earned. In order to establish a *trust organization*, management must first be trustworthy. Management must create an organization that embraces open communication. This openness means that critics and supporters have equal voice in any transformation or change initiative.



²⁵ *RESULTS-ORIENTED CULTURES: Implementation Steps to Assist Mergers and Organizational Transformation*, Government Accountability Office, Report GAO-03-669, July 2003. Retrieved on January 19, 2007 from www.gao.gov/cgi-bin/getrpt?GAO-03-669

²⁶ *Securing Strategic Benefit from Enterprise Architectures*. By: Suter, R.. Defense & AT-L, Jan/Feb 2007, Vol. 36 Issue 1, p20-38, 3p

<i>Combined Table Showing Recommendations from GAO 03-669, RESULTS-ORIENTED CULTURES Implementation Steps to Assist Mergers and Organizational Transformations and John P. Kotter's 8 Step Process</i>		
GAO Practice	GAO Implementation Step	8 Principles from John Kotter
Ensure top leadership drives the Transformation.	- Define and articulate a succinct and compelling reason for change. - Balance continued delivery of services with merger and transformation activities.	2. Create a Guiding Coalition
Establish a coherent mission and integrated strategic goals to guide the transformation	Adopt leading practices for results-oriented strategic planning and reporting.	1. Create a Sense of Urgency 3. Develop a Vision and a Strategy
Focus on a key set of principles and priorities at the outset of the transformation.	Embed core values in every aspect of the organization to reinforce the new culture.	8. Anchor in Culture
Set implementation goals and a timetable to build momentum and show progress from day one.	- Make public implementation goals and timeline. - Seek and monitor employee attitudes and take appropriate follow-up actions. - Identify cultural features of merging organizations to increase understanding of former work environments. - Attract and retain key talent. - Establish an organization wide knowledge and skill inventory to exchange knowledge among merging organizations.	2. Create a Guiding Coalition 4. Communicate the Change Vision 6. Generate Short-term Wins 7. Consolidate Gains – Produce More Change
Dedicate an implementation team to manage the transformation process.	- Establish networks to support implementation team. - Select high-performing team members.	7. Consolidate Gains – Produce More Change
Use the performance management system to define responsibility and assure accountability for change.	Adopt leading practices to implement effective performance management systems with adequate safeguards.	7. Consolidate Gains – Produce More Change 8. Anchor in Culture
Establish a communication strategy to create shared expectations and report related progress.	- Communicate early and often to build trust - Ensure consistency of message - Encourage two-way communication - Provide information to meet specific needs of employees	4. Communicate the Change Vision 8. Anchor in Culture
Involve employees to obtain their ideas and gain their ownership for the transformation	- Use employee teams - Involve employees in planning and sharing performance information - Incorporate employee feedback into new policies and procedures - Delegate authority to appropriate organizational levels - Adopt leading practices to build a world-class organization	2. Create a Guiding Coalition 5. Empower Action 7. Consolidate Gains – Produce More Change 8. Anchor in Culture
Build world-class organization		7. Consolidate Gains – Produce More Change 8. Anchor in Organizational Culture

The following quote comes from the Change Management Learning Center.

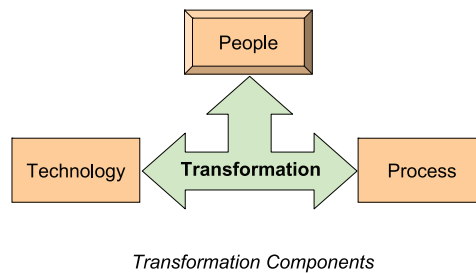
Consider that when a group undergoes a change, it is not the organization that changes, but rather the behaviors of individuals. This change in collective behavior is what produces different outcomes for the organization. For example, when a company reorganizes, it is not the restructuring that represents the change, but rather the shift in accountabilities and responsibilities for each person. New behavior results, and different business outcomes are achieved. In other words, organizations don't change, people within organizations change.

With this basic principle of organizational change, a simple connection can be made between change projects and business results. The link between any strategy, process or system change and the associated business results is the collection of individual changes that occur one person at a time.

Understanding how to achieve change at an individual level, therefore, is essential to achieving the objectives of any large-scale change. This is called individual change management. Organizational change management and individual change management must be used together to manage change successfully.²⁷

This description emphasizes the fact that effective change management is founded upon positive relationships with each individual that makes up the team, the department, and the enterprise. The *Change Management Learning Center* describes the process for implementation change using what is referred to as the ADKAR model. An adaptation of this

Figure 8: ADKAR Model



model is presented here. Change must begin with individuals which impact change in the larger organization. At all levels, the process is similar.

At the Association of Government Accountants' 13th Annual Leadership Conference, Washington, D.C., January 25, 2002, Comptroller General David Walker presented the GAO's views on "Transformation in Government." His presentation covered the basics of "what, why, who, how and when" regarding transformation in the federal government. He stated that *transformation* is basically an act, process, or instance of change in structure, appearance, or character; a conversion, revolution, makeover, alteration, or renovation. He described the case for transformational change in the federal government in terms of the government being on a "burning platform," and he noted that "the status quo way of doing business is unacceptable."²⁸

Walker cited rising public expectations for *demonstrable results* and *enhanced responsiveness* as one of two sources for *transformation imperatives*. The second source was *government performance/accountability* and *high-risk challenges*, including the lack of effective human capital strategies. Walker introduced the President's Management Agenda (PMA) in light of the need for transformation, citing the five government-wide initiatives it mandated:

Prosci ADKAR Model

A - Awareness of the need for change
D - Desire to support and participate in the change
K - Knowledge of how to change
A - Ability to implement the change
R - Reinforcement to sustain the change

²⁷ Prosci ADKAR model retrieved on January 19, 2007, from <http://www.change-management.com/tutorial-essence-of-adkar.htm>

²⁸ Walker, David M., "Transformation in Government," Presentation to Association of Government Accountants 13th Annual Leadership Conference (Washington, D.C., January 25, 2002), accessed 6 July 2004; available at <http://www.gao.gov/cghome.htm>.

1. **strategic management of human capital**
2. **competitive sourcing (public-private competition for federal jobs)**
3. **improved financial management**
4. **expanded e-Government**
5. **budget and performance integration.**

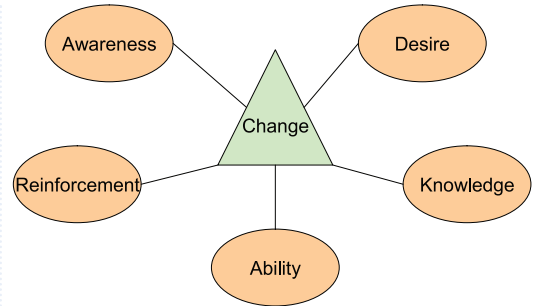
Of the three components of holistic business transformation—people, process and technology—captured in the PMA, Walker stated an agency's *human capital program* is the most important enabler for effective performance management.

The first step in effecting change is to build *awareness* among associates that change is *necessary*. Individual associates must embrace a *desire* to support and *participate* in the change initiative. That desire must in turn be supported by the *knowledge* of *how to change*. That knowledge is enabled by the *ability* to *implement change*. Finally, change must be *reinforced* in order to *sustain* the change, and continue to cultivate an attitude toward *continual change*.

This process will require effective and frequent communication. That communication must "listen" as well as "tell."

XII. The Learning Organizational Environment

Brian Fry and Samuel Griswold of South Carolina recommend pursuing a *Learning Organization* approach to change management.²⁹ Information technology advances have enabled organizations to make *rapid* and *continual change*. Challenges in *knowledge management* and *culture* are cited as the greatest barriers to effective change. The prescription put forth to manage effectively in an environment that is continually changing is to abandon



the pursuit of *stability* and *predictability* and replace those organization characteristics with *experimentation* and *innovation*. (*Isn't this reminiscent of what we learned regarding HROs?*) The *Learning Organization* continually challenges how things are done. Such an organization is continually trying to tap the *creativity* of its staff.

The Learning Organization abandons strict command and control approaches. It also is careful regarding embracing the latest "management theory." Many management theories that even gain high adoption become obsolete in an ever shortening lifecycle. Fry and Griswold quoted previous research that indicated the typical lifespan of a new management idea has recently moved from 10 years to 1 year. We're not sure that is truly accurate, but the observation highlights the idea that things are ever moving faster. Necessary *continual change* has become the norm.

Implementing this characteristic of *Organization Learning* within a government enterprise is going to be a significant challenge as was related in the case study described in their report. A Learning Organization is defined as,

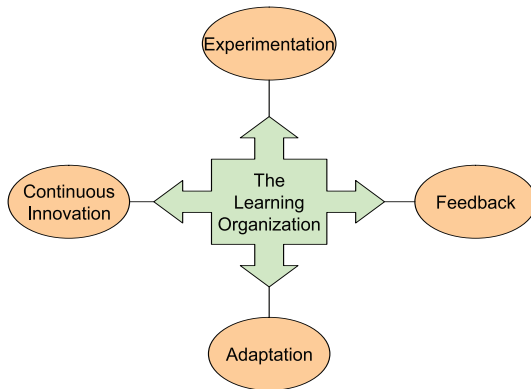
"...an organization skilled in creating, acquiring, and transferring knowledge, and modifying its behavior to reflect new knowledge and insights."³⁰

The authors described three strategies originating from Bob Willard's article, *3 Strategies for Learning Organizations*.

²⁹ Fry, Brian R.; Griswold, J. Samuel., *Defining and Implementing the Learning Organization: Some Strategic Limitations*, Public Administration Quarterly, Fall 2003, Vol. 27 Issue 3, p311-335, 25p

³⁰ Garvin, David A. (1993). "Building a Learning Organization." *Harvard Business Review* 71 (July-August):78-91.

...an agency's human capital program is the most important enabler for effective performance management...



These are: the *declared/marquee*, the *subversive/backstage*, and the *coincidental/accidental* strategies. The *declared/marquee* strategy is employed when the organization declares its intentions and publicly attempts to introduce the approach in its operations. The *subversive/backstage* strategy is employed when the organization is aware of learning organization ideas and consciously chooses to use them as background techniques. However, there is no public pronouncement regarding its intentions. The *coincidental/accidental* strategy can be identified when it is observed that an organization is doing the right things to implement the learning organization but is not explicitly aware that it is implementing a *learning organization*. The organization is simply trying to “get work done” and is intuitively employing good management practices.

The case study presented by Fry and Griswold presents the following take aways. We’ve offered potential learnings from these recommendations. These learnings or *Potential Adjustments* to change management or transformation efforts are offered as reactions to the conclusions of Fry and Griswold.

Lesson 1: Change will take longer than one thinks.

Potential Adjustment: Manage change in discrete steps with intermediate deliverables. Establish communication plans. Test the effectiveness of communication plans. *Think Enterprise*, but implement at the team level.

Challenges:

- short average tenure of state CIOs

- don’t over communicate – may turn into another big bang that never happens
- understand what barriers or rationale is causing the behaviors that resist change
- moving or *convincing* some recalcitrant workers may simply not be possible

Lesson 2: Technology (and Training) have limitations as a catalyst for change.

Potential Adjustment: As the authors stated, attitudes and behaviors are not modified through technology. Learning must first occur at the level of the individual.

Coaching individuals as part of their career planning process may be an alternative or a supportive activity to accompany any change management or transformation initiative.

Communication must be two-way. Listen to associates to understand the basis for behaviors and attitudes.

Revisit line of sight traceability from ultimate outcomes back to change / transformation initiatives to present the rationale for such initiatives.

Add incentives such as individual performance dimensions that will support the initiative. Work with staff and human resources to identify effective incentives.

Lesson 3: Grand strategies versus small steps.

Potential Adjustment: The authors described three strategies for creating a *Learning Organization*. Possibly the best approach is not to make a large campaign. Rather employ good management practices without stating explicitly that “we’re now going to create a Learning Organization.”

A similar approach has been followed by enterprise architects. When Tony Scott was the chief enterprise architect for General Motors, he was careful to never use the term “enterprise architecture” with business people. He simply followed enterprise architecture discipline. The

business client didn't necessarily need to know that what they were doing was "enterprise architecture" operating discipline.³¹

As the authors recommend – make changes in small steps – i.e., Kaizen – continuous and incremental.³²

The point has been made a number of times in this report that change must be *continual*. This concept is embraced in what has been termed a *change competent organization*.³³ One of the most important aspects of achieving successful ongoing transformation is striving to have a change competent organization. Change competency means that the people in the organization are so used to adapting to change that it becomes a routine part of their job. This requires definitive processes, resources, tools in place within the organization that are used on an everyday basis to effect change. At the state of Delaware's Department of Technology and Information (DTI), there is an established change management team that works with the project managers on all projects. DTI employs a defined methodology. Its success can be attributed to competent change leaders and top leadership support that requires consistent application across the entire organization.

As described by Pam Waters, Change Management Team Leader with DTI, this ongoing process can be quite painful at times – but it gets better – slowly but surely. The role of technologists is significantly enhanced within an organization that is becoming competent in change management. Some roles that have previously dealt primarily, or even exclusively, with technology must now include additional skills – working with people. In the past there has always been a 'build it and

they will come' attitude – but the success of that approach is questionable. *Business intent must drive technology solutions* not the other way around. Some associates who have a long history in technology can get frustrated because they are now required to follow established processes for *preparing people* for the new solution instead of just throwing it over the wall and saying "here you go – use it." Gradually, associates are seeing the value of an organized change management discipline and its contributions to the success of project implementations.³⁴

Delaware presents a success story for organizational transformation. The initiative was led by CIO, Tom Jarrett. In a recent interview, Jarrett highlighted some of the keys to success. He leveraged legislation that was passed just prior to his arrival which created his position as CIO and Secretary of Information and Technology. This legislation gave him the authority to transform the state department of technology and information. Jarrett maintains the significance of relationship management as a key skill for state CIOs. The transformation initiative was started and maintained through a partnership between his office, the governor, and the state legislature. Jarrett expanded the role and scope of the organizational transformation team from being restricted to ERP solution planning and implementation to include all technology projects. Every project must now include transformation considerations as a part of the delivery process – focusing on how the organization will be engaged in the planning of an IT initiative all the way through delivery and maintenance activities. Jarrett highlights the fact that he hired staff with business acumen to assist him in establishing a business centric approach to managing the information

³¹ *Architecture - GM's Cure for Complexity*, by Richard Pastore, Sep. 1, 2004 Issue of CIO Magazine, retrieved on January 22, 2007, from <http://www.cio.com/archive/090104/gm.html>

³² See definition of kaizen, http://www.google.com/search?hl=en&lr=&defl=en&q=define:Kaizen&sa=X&oi=glossary_definition&ct=title

³³ "Building Change Competency," The Change Management Learning Center. Retrieved on March 22, 2007 from <http://www.change-management.com/tutorial-change-competency-mod5.htm>

³⁴ Contributory writing from Pam Waters, State of Delaware, Department of Technology and Information. Pam's contact information is presented with the list of contributors to this report.

technology department. He has successfully applied sound business practices such as risk management, a robust communication plan, and relationship management approaches to ensure all stakeholders are part of the process for identifying and prioritizing technology initiatives. Thus, stakeholders feel ownership for the projects that are either in process or have completed.³⁵ Jarrett and Waters have worked collaboratively to cultivate a culture that embraces continual change – i.e., a *change competent organization*.

Gingrich and Desmond have described a *culture of transformation*³⁶ comprised of the beliefs, values, habits and behaviors that are practiced and transmitted to others – to create an environment that will either accelerate or interfere with organizational transformation.

XIII. Plan for incremental change – “short term wins”

In state government there have been multiple failed attempts to make change using the “big bang” approach. This has been consistently ineffective. Typically the next CIO coming in after one of these attempts is tasked with “smoothing things over” so everyone is working together again. State government is distinctly different from private enterprise. In many ways, it is far more complex in terms of organizational models, external relationships, motivations, and funding. This brings about certain *bounding* on how government establishes and implements strategic initiatives as well as operations.

Given the nature of state organizations, transformation efforts rely more heavily on stakeholder support than what may be experienced in the private sector. Stakeholders are primarily the agencies within the executive branch. Other critical stakeholder relationships include the gov-

ernor and the legislature. Most stakeholders will provide support along the transformation path – however, a significant concern within state government is interruption of services, disruption to the organization, and lengthy initiatives that don’t promise results within the short tenure of some officials. A large transformation initiative therefore presents significant *risks* related to completion of the initiative within the short time frames relevant to policy makers, and the potential disruptions to operations that span administrations. Large transformation efforts may be viewed as too chaotic to gain sustained support.³⁷

These concerns and perceptions naturally drive transformation efforts in state government toward an incremental delivery process. This approach provides the capability to properly manage risk, expectations, and relationships, ensuring transformation efforts have long term success.

Change management and transformation efforts gain additional support if they are tied to initiatives such as establishing best practices, or standards. The underlying rationale for these initiatives will be change management, and transformation – but establishing *this* intent can be challenging. Stakeholders will understand the benefits of standards and establishing best practices when they may not embrace outright transformation. This strategy then reiterates the tenability of an *incremental delivery process*. One step at a time, one department, one line of business, one agency at a time. This advice maps to Kotter’s step 6.

XIV. Conclusion – Calls to Action

State CIOs must see themselves as change leaders. In developing the strategies, and the management initiatives and projects that deliver on those strategies, the CIO

³⁵ Interview with Tom Jarrett, CIO for the state of Delaware.

³⁶ Gingrich, N., Desmond, N., *The Art of Transformation*, CHT Press, 2006. ISBN 1-933966-00-9

³⁷ From an interview with Steve Fletcher, CIO for the state of Utah.

will provide many of the enabling capabilities to deliver the goals and objectives of the governor, the state legislature and the state judiciary. This report was intended to summarize some of the most important aspects of organizational transformation and change management relevant to that end.

State CIOs must see themselves as change leaders.

Summary of state CIO Calls to Action:

1. Develop knowledge and skills in organizational transformation and change management in both self and staff. Maintain an enterprise perspective. Work toward a Change Competent Organization.
2. Establish a process for managing transformation in incremental steps. Leverage program and project management discipline in planning and implementing change initiatives.
3. Establish collaborative relationships. Internal relationships must include the director of human resources that will enable the ongoing development of associates. The importance of specific stakeholder relationships will change over time based on challenges, budget and legislative cycles, advent of innovation, etc. External relationships must include relevant expertise centers.
4. Emphasize leadership knowledge, skills and behavior in self and associates.
5. Create a “learning organization” that is continually adapting, learning from mistakes. Approach unforeseen events and even missteps like a High Reliability Organization – always seeing the learning value from such circumstances so the organization is always improving.
6. Encourage innovation.
7. Cultivate trust throughout the organization.
8. Leverage enterprise architecture as the enabler of continual transformation. Maintain a perspective of enterprise architecture as a management discipline not simply a methodology for managing technology.
9. Partner with the state legislature on transformation initiatives – share the credit with the legislature when progress is made and initiatives are successful.
10. Stay in contact with peers within the NASCIO community to share ideas regarding what works and what doesn’t. Be aware of what is happening in other states. Continually collaborate with other CIOs in order test ideas.

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Resources:

NASCIO Publications

<http://www.nascio.org/publications/>
*A National Framework for Collaborative
Information Exchange: What is NIEM?*

*Building Better Government through
Enterprise Architecture*

*Call for Action, A Blueprint for Better
Government: The Information Sharing
Imperative*
<http://www.nascio.org/advocacy/dcFlyIn/>

*Enterprise Architecture Development Tool-
Kit v3.0*

*Government At Risk: Protecting Your IT
Infrastructure*

*Harmony Helps: A Progress Report on State
Government Internet Presence*

*In Hot Pursuit: Achieving Interoperability
Through XML*

*IT Procurement and Enterprise Architecture:
Recognizing the Mutual Benefits*

*PERSPECTIVES: Government Information
Sharing Calls to Action*

*Staying Connected to Your Customers:
Strategies and Tactics to Grow Enterprise IT
Services*

*We Need to Talk: Governance Models to
Advance Communications Interoperability*

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*Catalog of Collaborative Information
Exchange*
<http://www.nascio.org/nascioCommittees/EA/catalog/>

List of NASCIO Committees
<http://www.nascio.org/committees/>

List of NASCIO Corporate Partners
<http://www.nascio.org/aboutNASCIO/corpProfiles/>

Washington Watch
<http://www.nascio.org/advocacy/washWatch>

State Government related websites

State of Delaware

<http://dti.delaware.gov/majorproj/changemgmt.shtml>

State of Oklahoma

<http://www.youroklahoma.com/coreoklahoma/change.html>

State of Washington

<http://isb.wa.gov/tools/pmframework/execution/changemgmt.aspx>

Web References

Change Management 101: A Primer

<http://home.att.net/~nickols/change.htm>

Free Management Library

http://www.managementhelp.org/org_chng/trnsform/trnsform.htm

The Change Management Learning Center

<http://www.change-management.com/>

Books

Change Management by Jeffrey M. Hiatt and Timothy J. Creasey. Prosci Research, Loveland, Colorado. 970-203-9332. ISBN 1-930885-18-0 paperback; ISBN 1-930885-19-9 hardcover; Library of Congress Control Number 2003111671

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