

Change Management: The Secret to a Successful SAS® Implementation

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Abstract

Whether you are deploying a new capability with SAS® or modernizing the tool set that people already use in your organization, change management is a valuable practice. Sharing the news of a change with employees can be a daunting task and is often put off until the last possible second. Organizations frequently underestimate the impact of the change, and the results of that miscalculation can be disastrous. Too often, employees find out about a change just before mandatory training and are expected to embrace it. But change management is far more than training. It is early and frequent communication, an inclusive discussion, encouraging and enabling the development of an individual, and facilitating learning before, during, and long after the change.

This paper not only showcases the importance of change management but also identifies key objectives for a purposeful strategy. We outline our experiences with both successful and not so successful organizational changes. We present best practices for implementing change management strategies and highlighting common gaps. For example, developing and engaging “Change Champions” from the beginning alleviates many headaches and avoids disruptions. Finally, we discuss how the overall company culture can either support or hinder the positive experience change management should be and how to engender support for formal change management in your organization.

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If you want to make enemies, try to change something.

~Woodrow Wilson

Introduction

I know of few people who actually like change. Yet, within the walls of organizations and across industries, change is inevitable. The impetus for change can come in many forms. For example, change can be brought on by a crisis such as disaster, deregulation, declining profits, government mandates, failed systems or public health scares.

On the other hand, if we view change as an opportunity for progress, then we might view change as *aspirational*. Examples might include modernization of processes to improve how work gets done or to spur innovation. In the world of data management and analytics, change has afforded entire industries the opportunity to transform how they operate. Take, for example, the case of the Oakland A's as depicted in the book *Moneyball* (Morris, 2014) and their use of analytics to drive competition. Major League Baseball has been transformed by analytics, and its decisions around players will never be the same.

No doubt, we've all been part of a change that has gone terribly wrong. While no one set out to intentionally "do change" poorly, we see these types of scenarios play out in our experiences every day. Mergers and acquisitions depend on two organizations with different cultures and personalities coming together to create a new company, which should theoretically create an organization with greater value than the individual entities. However, mergers rarely work well ("Why Do So Many Mergers Fail?," 2005). In fact, depending on which study you read, mergers have a failure rate of anywhere between 50 and 85 percent. One KPMG study found that 83 percent of these deals hadn't boosted shareholder returns, while a separate study by A.T. Kearney concluded that total returns on M&A were negative. (as seen in (Heffernan, 2012))

So what do M&A activities or industry deregulation have to do with data and analytics? At the heart of any successful change, whether transactional or transformational (we will explore these concepts later) how you lead the change effort will largely determine whether your change will be successful.

In the remainder of this paper, we will highlight the importance of change management and how you can help transform your organization. In the following pages, we divide our treatment of change management into three areas of discussion:

1. **An Overview of Change Management** – defining change management, why it matters and examples of change for data and analytic projects;
2. **Best Practices for Leading Change** – an approach for how you can lead a change initiative and the notional steps involved; and
3. **Troubleshooting Change Initiatives** – a discussion of some of the common threats that we see in our advisory work.

An Overview of Change Management

Up to this point we have talked about change as an ethereal concept. Most often this is something that happens to cause angst for people. As we discussed earlier, change can be born out of a struggle

“Change does not roll in on the wheels of inevitability, but comes through continuous struggle.”

Martin Luther King, Jr.

or change can be part of the natural evolution that we call progress.

To improve is to change; to be perfect is to change often.

~Winston Churchill

The management of change (or “Change Management”) is more than just “training” or communications, but rather a systematic approach that helps facilitate the transition of organizations and people from a current to a future state.

When we talk about organizations changing, we are really talking about the creation of a mindset that helps individuals make a personal transition in the context of technology and processes wrapped inside an organizational culture. It is often said that a future state is only achieved when people do their jobs differently and *make their own transition* from their current state to their future state. Change management is not about forcing change but rather helping people prepare for the change (awareness), understanding the rationale and impact (knowledge), helping them with the tools that allow for skills development (adoption) and skills integration (commitment.)

The process that we follow to manage change should depend on the impact of the change and should be scaled accordingly (see Section **Choosing the Right Approach**.) While there are a number of change management methodologies available, both commercially and otherwise, we believe that the eight step process that John Kotter characterized in the seminal work Leading Change (Kotter, 1996) stands the test of time. For our work in healthcare analytics, we have developed six best practice areas that include:

Change Management Best Practice Areas
1. Create a shared change purpose
2. Establish a visible and engaged leadership coalition
3. Enable engagement and communication
4. Support strong individual performance
5. Build a supportive organization and culture
6. Create a measurement strategy

Table 1: Best Practice Areas

Not all projects will require every one of the processes contained within these six best practice areas. The processes should be right-sized according to the breadth, depth, impact and criticality of the change.

Choosing the Right Approach

As we alluded to in the last section, the level of Change Management effort often depends on the context of the change. Here, we outline each of these dimensions with representative questions that help quantify the impact to the organization. This serves as the basis for our impact assessment and drives the level of governance and effort required to support the change.

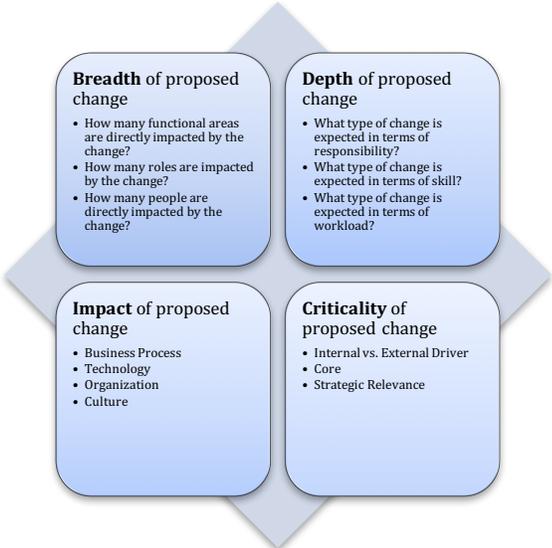


Figure 1: Dimensions of Change.

Change can be measured by a structured evaluation of the following dimensions of change:

- **Breadth**—Change applies to a large number of user groups and roles;
- **Depth**—Involves moderate changes to the way people will work;
- **Impact**—Moderate impact to processes and tools and to organization and culture; and
- **Criticality**—Driven by an internal need to change, impacts core functions and ties directly to a corporate strategy.

In organizations, we can determine the impact and change strategy through examination of these factors. For departmental SAS applications that have a limited number of users, the impact could be minimal and the change management strategy should be scaled accordingly. However, keep in mind that the number of users is only one dimension by which we evaluate this. The criticality of the proposed changes and the impact to business processes must also be considered, along with the depth of the change.

When assessing different types of change in organizations, they are scored and put into one of three types of change:

- Transformational – affects a large number of people across the organization where the change is critical and fundamentally affects how people do their everyday job.
- Operational – not as wide-spread as a transformational change, but does affect how one does their job and retooling of process is required.
- Transactional – limited to a single department with a small number of users.

For example, a *transformational* change in the context of an analytic platform would be characterized by the breadth of its impact (number of departments/ organization and number and types of roles that are affected), the depth of change (changes to responsibilities, skills and workload), the impact to culture and organization, and finally, the criticality of the change. We've seen a number of organizations fundamentally transform how they use data and analytics, and know that transforming how work is done requires attention to change management. After all, if you're asking people to use different tools to do their jobs, you need to make sure they are supported and have the necessary skills, training and leadership support to make that transition.

Why Change Management Matters

The proper leadership of any change initiative is critical. Without it, it begs the questions of whether the change is worth doing. Change management assures that people, processes and technologies are in optimal working condition. All too often, there is focus is on the technology without regard to what the impact to people and process might be – or worse, just assuming that people are smart enough to figure it out.

BENEFITS OF CHANGE MANAGEMENT

Change management improves the effectiveness of planning, mobilizing and ultimately executing a change program. Specifically, change management is used to help us:

- Achieve unity of purpose around the need for change and what the future organization should look like (sense of urgency or aspirational vision)
- Establish clear decision making authority/governance outlining how change will be managed
- Understand the impact of the change on different stakeholder groups (positive or negative)
- Develop a purposeful and defensible change management strategy and plan
- Develop and support the change leaders best placed to successfully deliver the program
- Conduct a stakeholder analysis, build a change network, and create change specific communications that move people along the 'commitment curve'
- Identify competency strengths that can be used to support change, align performance and talent management processes with the direction of change, and develop training strategies to enable operational change
- Re-configure the organizational structure in line with the changed processes and coordinate the transition from old to new

- Define the organization's core values, cultural characteristics and reflect these in a specific behavior change plan
- Develop program-specific change metrics and track the value chain linking change management interventions with business benefits
- Establish business readiness criteria and checklists, determine when the organization is ready, and facilitate a smooth transition from old to new

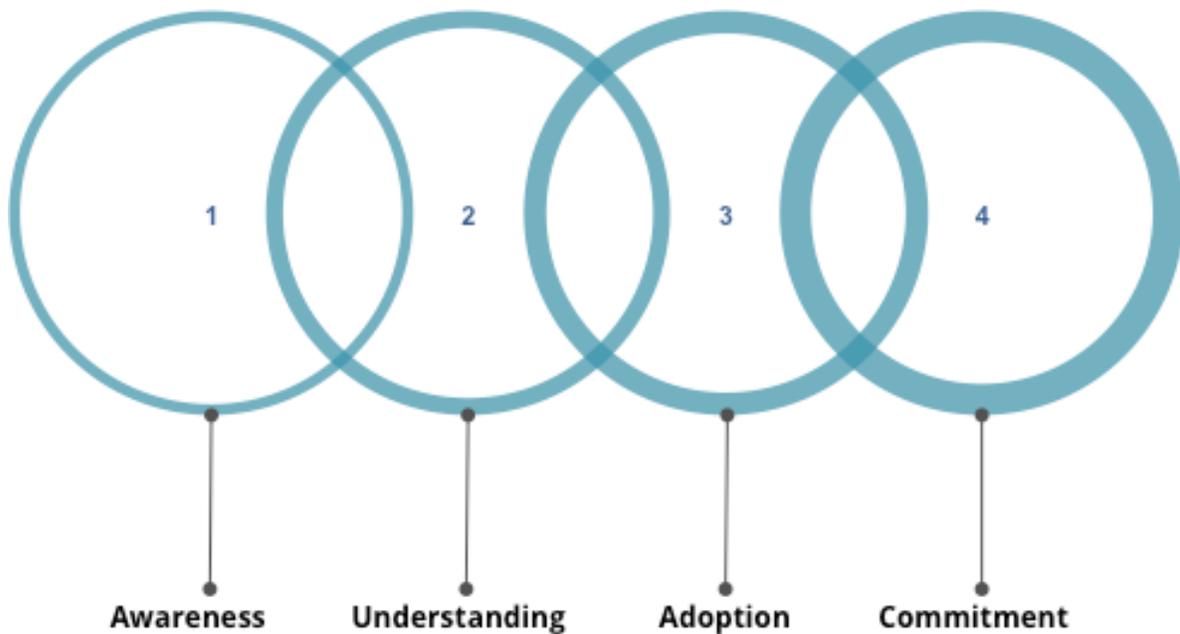
EMOTIONAL RESPONSES TO CHANGE

While there are a number of analytics, data management and visualization tools used across any given organization, our discussion here focuses on SAS. SAS is a leader in analytics technology and platforms, so any organization looking to modernize/augment/alter their analytics ecosystem undoubtedly has SAS parts or might be in the market for an enterprise solution but the change management strategy should be transferrable across technologies.

Often, a new implementation of a data or analytics technology platform includes a number of SAS components/solutions that may be new to the organization/ user base. As with any upgrade in technology, there is a learning curve for users, and there are always changes in business processes—all of which affect productivity, efficiency and morale. The implications and ramifications of introducing new software may not be critical in all organizations or industries. However, in a highly regulated, fast-paced or competitive environment, such as healthcare, change can be devastating.

The heart of a change management plan are the activities required to address the change impacts identified. These activities should move stakeholders along the commitment curve, facilitate adoption of the change solution, and achieve anticipated business benefits. The change commitment curve below visually illustrates the emotional stages of awareness, understanding, adoption, and commitment that stakeholders experience during the course of a change program requiring the adoption of new ways of working.

There are many variations in how users react to change, but most models depict the following four stages of emotional response to change:



- 
Awareness
 Knows that change is coming
 Has a high level awareness of what is driving the change the broad vision of change
- 
Understanding
 Understands what the overall future state (change solution) looks like
 Understands how new ways of working will impact them
- 
Adoption
 Is the change in his or her area in order to try out the change and become familiar with its implications
 Conveys message that new ways of working are soon to be reality
- 
Commitment
 Articulates the change as the new status quo and 'the way things are done around here'
 Demonstrates personal ownership and alignment with the change

Figure 2: Emotional Reactions to Change.

Stakeholders progress along the stages depending on their starting point (current state) and desired point (future state). Different stakeholders will, of course, start off at different points along the curve and mature at different rates. One factor that often drives this is “technical curiosity” that can help accelerate adoption. We know, for example, that the velocity for change will be fundamentally different for those who have been early adopters of new technology as well as those who have been privy to the conversations regarding the change and involved in process redesign.

The change commitment curve (depicted below) helps us understand how the four emotional responses to change mature to the point of full commitment and how each stakeholder group will be moved along the commitment curve at the rate most appropriate and critical for them.

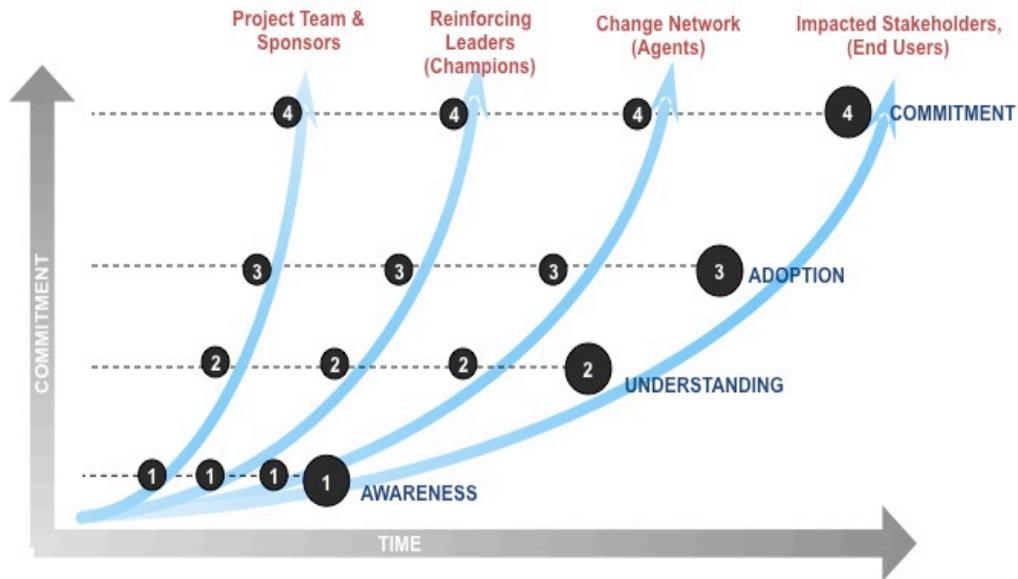


Figure 3: Change Commitment Curve.

Consider the potential pressures and anxieties for the users learning a new software who:

- Work in a very time-sensitive environment and therefore are not afforded the luxury of being slow or inefficient;
- Must produce quality work; and
- Must be able to respond to internal or external questions and concerns in a timely manner.

Further, there are a number of other issues that may plague the organizations, which can include:

- A history of inadequate communication that has brewed frustration among users;
- A stigma associated with certain software components such as SAS Enterprise Guide that the software is for “beginners” and not for seasoned or veteran programmers and has limited functions/capabilities; and
- Fragmented and inconsistent onboarding of employees.

If this process is done poorly, we fail to move people up the commitment curve and instead, spiral downward as shown in this figure.

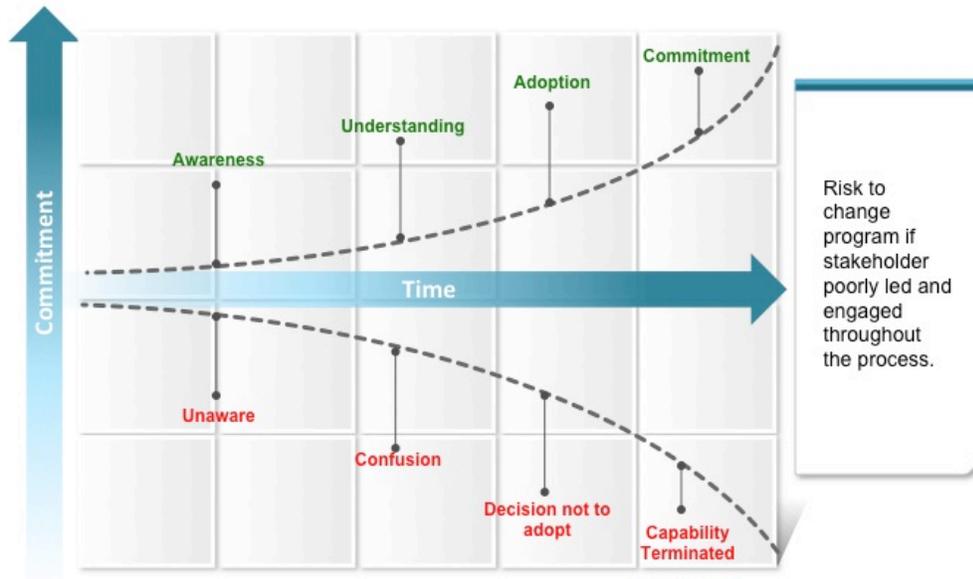


Figure 4: Well-Managed vs. Poorly-Managed Commitment Curve.

Taken together, the risk of doing nothing or managing change poorly can be devastating to a project. To bring this full circle, we began this section by discussing the notion of measuring the impact of the change. This should be used to clearly set the stage for why the change is important and to help create that sense of urgency.

Examples of Change Management for SAS

In the context of modernizing data or analytic technologies, we know from experience that change can have a profound affect on whether organizations realize the expected return on investment. Any change in SAS technology can have a great impact on those who use, manage or administer those systems. One of the common threads that we see among organizations is that they often don't recognize the potential impact of the change being considered as SAS can seem scary and complex. For example, if users go from using SAS Display Manager to SAS Enterprise Guide, managers will often perceive that the change is minor (as in going from Notepad++ to UltraEdit) and that users should be able to make the switch easily or believe that a demonstration will suffice as "change management."

In the table below, we have provided some examples of changes and their potential impact.

SAS Change	Potential Impact
Old: SAS Display Manager New: SAS Enterprise Guide (or SAS Studio)	<ul style="list-style-type: none"> • File system changes (navigation, right click options, invocation parameters) • Operating system changes (see below) • Nuances of the tool (current working directory, ODS graphics, default options, interface navigation, query/ filter data, managing projects, internal/ externalized code & logs)
Old: SAS Drug Development New: SAS Grid Manager	<ul style="list-style-type: none"> • Programming interface (Web to Client) • Versioning (automatic versus third party tool) • Monitoring jobs (RTM, Environment manager, third party tool) • Scheduling (integrated with SAS Management Console or third party) • Load balancing • Remote/ distributed access (VDI, Desktop, Citrix)
Old: SAS Foundation New: SAS Data Management (data integration, data quality, master data management, data governance)	<ul style="list-style-type: none"> • Understanding and appreciation of metadata • Moving from SAS programs to process flows • Alignment of roles and responsibilities • Transparency in data ownership • Data governance processes • Deeper integration with data system owners • Business users new to the process
Replacing or upgrading the operating system	<ul style="list-style-type: none"> • SAS specific OS coding changes • File system changes • Managing files (create, read, update, copy, delete) • Audit file system changes • Security/ authentication • Managing services • Versioning • Monitoring system and job performance • Third party utilities/ applications/ scripts • Impacts to data flows

Table 2: Examples of SAS Offerings impacting change

While not every SAS upgrade or new installation will be transformational in nature, often the unintended consequences of change can have a dramatic impact on the success of a project.

Best Practices for Leading Change

As previously discussed, our methodology for managing analytics change programs includes six key best practice areas. In this document, we wanted to highlight four of the areas that illustrate the importance of change management and its relevancy in analytic projects.

Create a Shared Change Purpose

Similar to John Kotter's philosophy on change, we believe that one of the most important things we can do in a project is to create a clear vision and strategy around why the change is important and what that means to stakeholders across the organization. A change management strategy should be compelling and consistent with a vision of the future business environment and the implications for the future state of the organization.

In SAS applications, this can be documented in a way that defines the mission, vision and strategy for the change. One example from a project that we supported required incorporating a company's vision for a common SAS operating platform. However, the company's current state had them utilizing literally hundreds of individual PCs and servers with varying SAS products spread across three continents. Their business objectives included standardization of processes to improve global sharing of resources and improved economies of scale.

By creating a shared sense of purpose, the company provided clarity of thinking and defined measurable targets for the change. In addition, it offered an opportunity to collaborate with employees across the organization so that the vision and strategies of the future state of the organization were a collective one and measures for success could be agreed upon and visible.

The leadership could have adopted a stance of "this is what we are going to do". However, by creating a shared vision they also created a shared sense of urgency which everyone understood. That is the value of a clear, articulated vision – it provides clear line of sight from what we are doing to why we are doing it – reinforcing the linkages for everyone involved.

In our work, we see lots of reasons why people change including the need to:

- Address current operational challenges
- Reduce costs associated with a growing user base and data volumes
- Take advantage of commodity hardware (minimize unused capacity on servers and optimization of computing power)
- Improve processes
- Reduce risks

Regardless of the reason, we encourage you to overtly champion the "why" of the change and make sure that the vision is clear, understandable and compelling. Often times this requires explicitly drawing the map that links the business strategy and the technology decisions. When we document the change strategy, we describe

the reasons for changing, what you want to achieve and how you will get there so that we can unite around a clear understanding of the change drivers and the change vision.

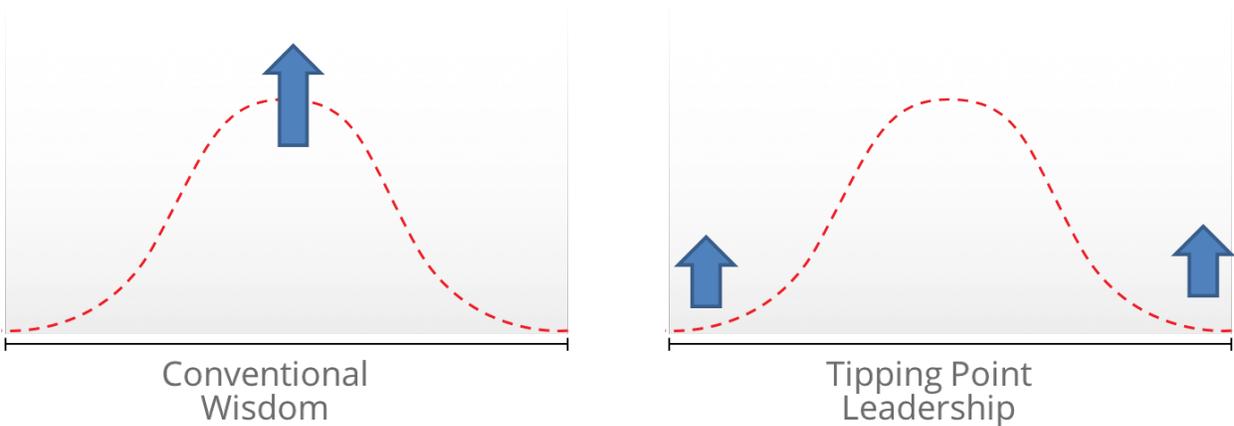
Similarly, we will compile a concrete business case describing both the financial and non-financial benefits of the change effort and describe the overall approach to managing the impact of change. This is especially important as we seek to engender support from various stakeholders so they don't feel like this will be another one of those changes that will leave them bruised and battered.

Establish a Visible and Engaged Leadership Coalition

Successful change leaders create a shared vision for the change, gain commitment on the change goals and lead their people through transformational change. This best practice area is about helping organizations overcome potential change challenges through leadership.

We don't recommend a "boil the ocean" strategy but rather something akin to "Tipping Point Leadership" (TPL). This theory suggests that conventional wisdom is incorrect in that traditional thinking around organizational change rests on transforming the mass - so change efforts are focused on moving the mass, requiring steep resources and a long time frame. Instead, TPL posits that "in order to change the mass, it focuses on transforming the extremes: the people, acts, and activities that exercise a disproportionate influence on performance." In other words, the leaders.

By transforming the extremes, tipping point leaders are able to change the core fast and at low cost to execute their new strategy. Combined with our approach to change management, strategy execution overcomes four hurdles that stand in the way of change: cognitive, motivational, resources, and political. That's the part of the message that we need to ensure gets communicated and is part of the change methodology that democratizes analytics, creates coalitions and pilot success without trying to boil the ocean.



Traditional thinking around organizational change rests on transforming the mass - so change efforts are focused on moving the mass, requiring steep resources and a long time frame.

In order to change the mass, focus on transforming the extremes: the people, acts, and activities that exercise a disproportionate influence on performance.

Figure 5: Agility in Change can occur by focusing on those with the most influence.

Change Leadership is the ability of those who direct, plan, and guide the organization through changes in order to accomplish its goals. The change leadership process is about developing leaders within the organization to effectively lead the change at various levels in the organization. It helps leaders to understand their roles and responsibilities and serve as role models for the desired behaviors in the workforce.

A great example of visible and engaged leadership working well comes from a project that was migrating their 1500 +/- users from a legacy Solaris UNIX SAS environment to a SAS Grid Manager platform where SAS Enterprise Guide would be the primary programming interface. In this project, as you might expect, there were a few hold-outs that wanted nothing to do with the change and insisted that they could find a way to work around the "imposed changes." One of the hold-outs was a very senior programmer who had grown up in the organization and had been personally responsible for many of the successes the organization had had over the years.

The Vice President who had approved the funding of this project was fully supportive of the team implementing the change and eventually advised the "squeaky wheel" that he would really need to get on board with the future direction. The programmer was eventually let go because it was clear that he was not able to change and presented too much risk to the organization as they were making massive investments in modernizing their business.

Enable Engagement and Communication

STAKEHOLDER ANALYSIS

One of the deliverables that we will maintain throughout the life cycle of a change program is a Stakeholder Analysis Map which documents the full list of stakeholders who may be impacted, influenced by or hold influence over the change program. It does this by segmenting stakeholders, evaluating their current versus desired levels of commitment and charting the distance between the two. This serves as a guide to manage the success of our change strategy throughout the life cycle of the change. The figure below depicts what this might look like.

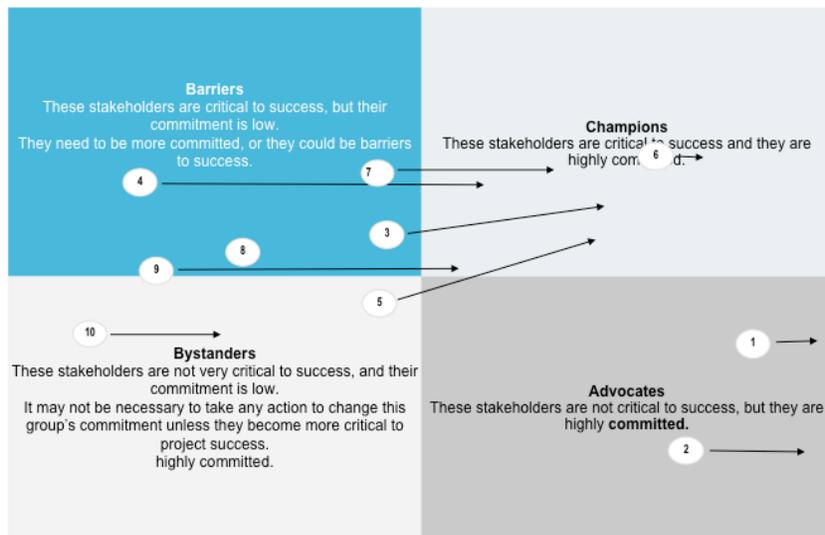


Figure 6: Stakeholder Analysis Map.

BUILD A CHANGE NETWORK

In addition to the stakeholder analysis, a critical process in this best practice area is the development of a change network. In SAS environments this is especially important, as there are natural or de facto leaders that hold referential authority in the organization. That is, the expert whom everyone knows and trusts when they have SAS problems.

A change network is a structure of motivated and effective sponsors and agents throughout the organization with a view to translating the central need for change into a broader willingness and ability to change. It rests on the fundamental idea that organizational members are typically less passive pawns unable to affect change and more individual actors capable of intervening in ways that can either support or undermine the change program.

Building a change network involves identifying and recruiting the best available talent—employees who are also respected and seen as representative of users, discovering and addressing change network training requirements, coordinating on an ongoing plan of activities, and evaluating and fine-tuning the performance of the change network throughout the change program.

Members of the change network can be deployed in a variety of ways, including serving as steering committee members, power users, influencers, surrogate trainers, role models and opinion leaders.

Further, you might charge the change network with:

- Assisting with communications activities, such as writing blogs, knowledge base articles, how-to documents and/or short videos;
- Providing special training; and/or
- Engaging in the design of business process to ensure that requirements are mapped back to the project plan and/or future features list.

- Participating in process redesign activities, including the exploration of process areas that feed or are fed by the core technologies that may otherwise be overlooked.

Given the potential pivotal and critical role of the change network, it is important to introduce the members early in the process, give them visibility with key activities, and listen to the perspective and suggestions they bring back “from the field”.

STAKEHOLDER COMMUNICATIONS

Communication is a central part of change management, and while it has almost become something of a cliché, we see identifying and 'managing' the commitment of key project stakeholders through effective communication as a critical component to the success of any project.

The processes here aim to ensure that the right message is delivered by the right people at the right time, using the most appropriate method. We know, for example, that there are opportunities for individuals to de-rail our project and there are likely many of those individuals that could be converted into champions for us if we only knew about them. Smart stakeholder engagement and communication makes clear what is happening, what is expected, how to get involved and can remove otherwise many unavoidable obstacles to change.

Earlier, we discussed what happens when stakeholders are actively disengaged and the risk that this poses to our change initiative. In this best practice area, the key activities include a detailed stakeholder analysis where we might develop a heat map, which gives us an indication of how the different organizations (departments) may be impacted as well as their current change readiness.

Finally, in the area of Enabling Engagement and Communication, we address the “communications” part of the process. Quality of communications can have a significant factor in the success or failure of a change program. Done poorly it can mean the need for change is never even fully recognized; done well it can mean a collective transformation in organizational capability.

Stakeholder Communication involves engaging and communicating with stakeholders in a way that facilitates movement along the change commitment curve. Engagement goes beyond traditional communication methods, which tend to focus on transmitting messages from leaders and to end users on a one-way basis, to winning the 'hearts and minds' of stakeholders through interventions that truly engage them.

A strong communications plan is designed to: foster understanding, facilitate acceptance and ownership of the change within the organization, positively sustain morale, increase the accuracy of the transmitted information, support the implementation, and reinforce the organization's vision. Further, it will help ensure that outcomes are met.

When implementing a communications plan, the project leaders must be strategic and must err on the side of over-communication. They must address stakeholders within all levels of the organization and use all possible channels to help support the communications plan.

The users need to be assured that leadership has listened to and considered their needs. Users need to understand—and believe—that the decisions made by IT were strategic and made in a thoughtful way.

Project leaders and supporting stakeholders must attempt to make each communication as individual as possible so that each person within the organization understands how:

- his/her work processes will be different,
- how to be successful in his/her role,
- what training is available, and
- how he/she is being measured.

With a strategic rollout of a new modernized platform and additional software, including strong change management, communications and training plans, the IT and business support sides of the organization can align and operate more efficiently and effectively. This will ultimately demonstrate that the shared sense of urgency and the shared sense of importance is real.

Depending on the phase of the project, the communications plan should be detailed down to the level of where individual users are in their transition from Awareness → Understanding → Adoption → Commitment. As you might expect, the communication goals will be different depending on where individuals are on their own journey. The stakeholder analysis map shown above can be a useful tool in determining this. The table below illustrates the adjustment in messaging depending on where the users are in their own change curve.

Awareness → Understanding	Understanding → Adoption	Adoption → Commitment
<ul style="list-style-type: none"> • Communicate vision and importance of project • Describe the project and anticipated changes • Share the timeline for the Project • Describe impact • Explain their role in the project and expectations • Build strong communication, support and trust 	<ul style="list-style-type: none"> • Celebrate new environment • Gain input and feedback from all stakeholders • Measure effectiveness and communicate results • Revise messaging as needed • Support users during the adoption phase so that they begin to demonstrate new capabilities and behaviors • Gain approval 	<ul style="list-style-type: none"> • Gain input and feedback from all stakeholders • Measure effectiveness and communicate results • Revise messaging as needed • Ensure that users have embraced change and are proficient in their work processes • Coach and support others as they adopt and adapt

Table 3: Examples of Communications Goals by Change Curve

Support Strong Individual Performance

Successful change allows for individual employees to adopt and own new ways of working to enable organizational change. Training may be needed to promote use of new products or adoption of the appropriate behavior. Performance management processes often need to be revisited and adjusted to make expectations of the staff clear and documented. The challenge is to ensure that the proper incentives, skills and processes are in place to enable people to perform appropriately and effectively in the future state organization.

We do this by focusing on two of the processes:

- **Knowledge and Skills Assessment** - assesses whether the users impacted by the change have the requisite knowledge and skills to change their ways of working in line with the business change objectives. The assessment documents the employee knowledge and skills with a view to understanding the gap between current and future capabilities.
- **Training and Knowledge Management** - seeks to ensure all employees impacted by the change have the requisite knowledge, skills and abilities required to deliver the change. Significant change may require training to support the behavioral, or just product elements of the change. This provides the right learning curriculum along with the right tools for 'on-the-job' performance support as well as updated processes.

The tools used in this process include a Performance Management Map, Training and Knowledge Needs Analysis and a methodology for evaluation. The benefits we see when properly executing these best practices include:

- A clear alignment of employee objectives with strategic direction of change
- Support is provided for people who need to develop knowledge, skill and competency in their new roles
- The right resources are allocated with the right skills assigned to roles critical to drive change
- A faster time to competency: employees more quickly able to perform in new jobs, use new systems etc.
- Realize benefits made from human capital investments
- Improved onboarding/ transition time

Troubleshooting Change

Regardless of which of the many change management gurus you follow (for example, John Kotter (Kotter, 1996) or (Heath & Heath, 2010)), change is hard. Following a prescribed set of steps is necessary but not sufficient for leading change. I cannot underestimate the importance of spending the time and energy in developing your change strategy, documenting the drivers of change and following good methodology.

With that said, there are likely going to be initiatives which just struggle. In this section, we'll explore just a few of the real world challenges that you may encounter.

The change management literature is replete with horror stories of why change failed. These cut across mergers & acquisition, IT, industry transformation and business model innovations. There are always excuses as to why the time, energy and money cannot be spent on these efforts. Potential barriers to success include:

- **The team members have competing priorities based on their job functions**
 - Leading change requires a commitment to doing it well.
 - If resources cannot be freed up to do important work, it won't be perceived of as being important.
- **Not involving the right people (either intentionally or through oversight)**
 - Honest and broad reaching stakeholder analysis is critical to ensuring that the impact is understood (by all).
 - Technology change is not merely a technology project. If you hear of a project where someone says that this is simply a technology refresh, be wary.
- **A number of major change projects are currently taxing the organization and involving/affecting many of the members of this project**
 - Change management requires experience leadership.
 - Transformational change requires commitment.
 - If you don't have seasoned change management experts inside the company, find help outside from those that fit your culture and approach.
- **There is a legacy of less than desirable technology rollouts**
 - Leadership won't solve everything, but a strong, visible leadership coalition will go a long way to ensure that your change management initiative is different from what they may have seen before.
- **Lack of an effective communication strategy**
 - Fix it. This is where experts in communication, psychology and behavior change are essential.
- **An implicit culture that change is good as long as it doesn't get in the way of people doing their day jobs.**
 - This is akin to saying that this is important, but get back to work. This strategy will fail. While the project may get to a completed state, there is little doubt that the quality bar will not have been met. It doesn't take a monumental effort to do change management right, just a commitment.

- **Lack of a clear, unified and shared sense of why the change is being made.**
 - The project should be put on hold until everyone has clear line of sight as to why this is important and what their role is in ensuring its success.

Summary

Change management is a systematic approach that helps facilitate the transition of organizations and people from a current to a future state. Change management as a methodology includes best practices, process, tools, and techniques to help deal with the people and organizational side of change.

Change management incorporates the methods that can be utilized to help individuals make successful personal transitions resulting in the adoption and commitment to the change, thus yielding the business benefits of change.

In this paper we discussed the definition of change management and why it is an important component for any organization that seeks to transform itself. Modernizing data strategies and developing analytic mindset supported by technology changes is an important area where change management should be considered essential to success.

While there is no simple solution or off-the-shelf answer, change management does not have to be expensive. It should be right-sized in accordance with the breadth, depth, criticality and impact to the organization.

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Biography

Greg Nelson, President and CEO, Thotwave Technologies, LLC.

Greg is a global healthcare and Business Intelligence (B.I.) executive with over two decades of experience and leadership in the field. Greg is a prolific writer and speaker interested in healthcare analytics and the strategic use of information technology.

He received his BA in Psychology from the University of California at Santa Cruz and advanced his studies toward a PhD in Social Psychology and Quantitative Methods at the University of Georgia. Recently, Greg completed his Masters degree from Duke University in Clinical Informatics from the Fuqua School of Business. His academic and professional interests include helping organizations mature their analytic capabilities. Founder, President, and CEO of ThotWave Technologies, a niche consultancy specializing in healthcare analytics, Greg is particularly interested in how lessons from across other industries can be applied to help solve the challenges in healthcare.

With certifications in Healthcare IT, Project Management, Six Sigma and Balanced Scorecard, Greg is also a prolific writer and has presented over 200 professional and academic papers in the United States and Europe. He won the Best Paper Award in 2013 at the Pharmaceutical SAS Users Group Conference and sits on the board of the SAS Global Users Group. In 2011, Greg was selected by SAS into their loyalty partner group. "This program acknowledges and supports individuals who are recognized experts in their fields and have a long-term relationship with SAS."

Married to wife Susan and living on a small "farmlet" in rural North Carolina, Greg is an avid woodworker, enjoys photography, rides a Harley-Davidson Motorcycle, and strives to be a lifelong learner.

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References

Heath, C., & Heath, D. (2010). *Switch : how to change things when change is hard* (1st ed.). New York: Broadway Books.

Heffernan, M. (2012). Why mergers fail. Retrieved from <http://www.cbsnews.com/news/why-mergers-fail/>

Kotter, J. P. (1996). *Leading change*. Boston, Mass.: Harvard Business School Press.

Morris, B. (2014). Billion-Dollar Billy Beane. Retrieved from <http://fivethirtyeight.com/features/billion-dollar-billy-beane/>

Why Do So Many Mergers Fail? (2005). Retrieved from <http://knowledge.wharton.upenn.edu/article/why-do-so-many-mergers-fail/>