



Change Management Assessment

info@evergreensys.com
703.262.0968

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Change Management Assessment

Change Management as the Key to Enterprise Transformation

I. Executive Summary

A. Engagement Background

ABC Inc. released an RFP soliciting proposals to provide consulting services in support of a Change Management improvement project targeted at establishing a foundation for Configuration Management. Evergreen Systems provided a response and was selected to provide ABC change and configuration management consulting services. Our response recommended a multi-phased approach to improving change management processes and tools, the first being an assessment of ABCs' current change and configuration management environment.

This Change Management Assessment document is one of two primary deliverables of this assessment engagement. The other primary deliverable being a Statement of Work for additional consulting services to provide change and configuration management guidance and expertise as s progresses forward with their change management initiative. This Assessment includes Evergreen's Findings and Recommendations pertaining to ABC'S current IS change and configuration management environment. It also includes a recommended Road Map for moving forward with the change management initiative.

B. Why Change Management

ABC maintains a rather complex IT infrastructure supporting many different entities and their associated business applications and services. In the past, customer services have been negatively impacted due to changes to the IT environment. One of the impacted technologies was a critical customer facing system (CFS).

The inability to accurately and efficiently assess the potential impact of changes is a primary cause of undesirable change results. This is generally due to a lack of configuration data. ABC has initiated both a configuration management project and a change management project, and realizes that configuration management and a Configuration Management Database (CMDB) cannot be achieved without change processes in place to maintain current and accurate configuration data. In addition to maintaining configuration management data, concise change management processes can significantly improve the quality of IT service delivery in the following ways:

- ❖ Reduced negative impact on IT services as a result of changes
- ❖ Improved prioritization of proposed changes based on cost and value
- ❖ Fewer reversed changes and more efficient back-out processes when necessary

- ❖ More efficient problem diagnosis as a result of improved data on recently implemented changes
- ❖ Improved productivity of end-users due to improved stability of the IT services
- ❖ Improved IT productivity due to reduced corrective action activities
- ❖ Ability to implement changes to the IT environment more efficiently
- ❖ Improved proactive regulatory compliance

C. Findings and Recommendations Summary

The table below summarizes our key findings and recommendations based on interviews conducted with over three dozen ABC IS managers and staff members. These findings and recommendations are separated into topic areas covered during the interviews.

Organizational Findings
<ul style="list-style-type: none"> • Entities making up ABC have varying levels of autonomy, and thus forcing IT process compliance is a challenge • ABC Information Services (IS) resources may have limited bandwidth to dedicate to change and configuration management improvements • Business changes are frequent, and often impact the IT infrastructure. Not clear whether infrastructure support is appropriately funded to support the agility required of IS • Complete consensus exists with respect to need, importance and value of improved change and configuration management improvements

Organizational Recommendations
<ul style="list-style-type: none"> • Market the importance and value of improved IT service management processes through the ABC universe • Ensure IS service support and delivery infrastructure is afforded appropriate levels of prioritization and funding by building an effective business case, with specific, short duration phases

Change Governance Findings
<ul style="list-style-type: none"> • ABC understands the importance of change management and has taken strides to define and market policies, and improve processes • Change Management policies and processes today focus on production implementation, not accounting for the IT change lifecycle. • Informal review of severity exists, but lacks true governance.

Change Governance Recommendations

- Establish a Change Advisory Board (CAB) and define responsibilities of the board
- Establish corporate Change Management policies and guidelines aligned with corporate and IS business objectives
- Establish a corporate change process and data requirements in-line with policies
- Establish a change management dictionary or glossary of terms
- Establish change management improvement objectives and milestones
- Define metrics for measuring business value associated with milestones
- Establish and execute a change management marketing campaign focused on the benefits of change and configuration management
- Create user training and user adoption strategies

Change Process and Technology Recommendations

- No centralized process and tool exists for submitting Requests for Change (RFCs)
- No standard centralized process exists for reviewing and approving changes
- Changes are often entered into the Change Management Process (CMP) too late to perform proper planning and impact analysis
- Several department specific tools and processes exist for capturing and evaluating change requests (RFCs)
- Change coordination processes exist to the extent they are managed in CMP, but should be reviewed and enhanced
- Change management is not integrated with configuration management, problem management, project management or release management processes or tools
- No standard process exists for evaluating and closing changes
- IT reviews changes resulting in negative impacts via "Incident Reports" but the process for following through on incident report action items is loosely defined
- CMP notifications have helped, but notification processes need to be improved

Change Process and Technology Recommendations

- Define RFC data requirements, submission and classification processes
- Define RFC review and approval processes
- Define change coordination processes
- Enhance change notification processes to improve data and reduce perceived noise level
- Implement a technology for centralized management of RFCs
- Incorporate processes for updating CIs and documentation within the change coordination processes
- Define integration points to project, release, configuration and problem management within the change processes
- Define standard processes for evaluating and closing changes
- Improve processes related to following up on change related problems and ensure lessons learned are incorporated into a process for continuous improvement
- Integrate the Change Management and Configuration Management efforts
- Ensure the Change Management pilot solution is process driven

Configuration and Problem Management Findings

- An IT Asset Management tool and process is in place for IT hardware establishing a basis on which to build configuration management data and processes
- Configuration management is done within many IT silos using many different tools
- No corporate standards, policies or procedures exist for configuration management
- ABC has begun a configuration management initiative and is piloting an application mapping tool to assist with collecting configuration data
- Problem management processes are being managed via "Incident Reports" which are not integrated with ABC'S incident management tool (Technology Tool)
- Problem management is not a proactive endeavor within ABC
- Problem evaluation can be tedious due to lack of configuration and change data

Configuration and Problem Management Recommendations

- Establish configuration management governance, policies, procedures and requirements driven by business objectives
- Align the configuration management initiative with the change management initiative
- Define specific configuration management data and process requirements
- Conduct a configuration management tool assessment to evaluate the role and abilities of existing tools to assist with configuration management, and identify gaps that must be filled with new technologies
- Expand IT Asset Management to business applications
- Conduct a limited technology pilot of Inventory and Configuration Management functionality within the Change pilot
- Take a more proactive approach to problem management
- Incorporate problem management processes into Technology Tool
- Look to integrate with other service management processes such as Service Level

D. Final Thoughts

As ABC proceeds forward with Change and Configuration Management perhaps the most critical aspect of ensuring success will be the management of organizational change. Implementing process changes for Change and Configuration Management, and the other processes that will be impacted, must be viewed and managed as an organizational transformation and not merely a project, or they will fail to be adopted by the organization. This effort will require cultural change and likely IS organizational realignment in some areas. Managing the transformation of how IT services are managed will present greater challenges than defining processes and implementing technology.

In order to manage this cultural change, emphasis must be placed on:

- ❖ Effective planning and execution
 - Defining business objectives and clear plans to meet them
- ❖ Building and documenting consensus
- ❖ Setting and maintaining executive expectations and involvement
- ❖ Establishing metrics to measure objectives
- ❖ Verifying the achievement of the objectives
- ❖ Marketing that success throughout the organization at every step

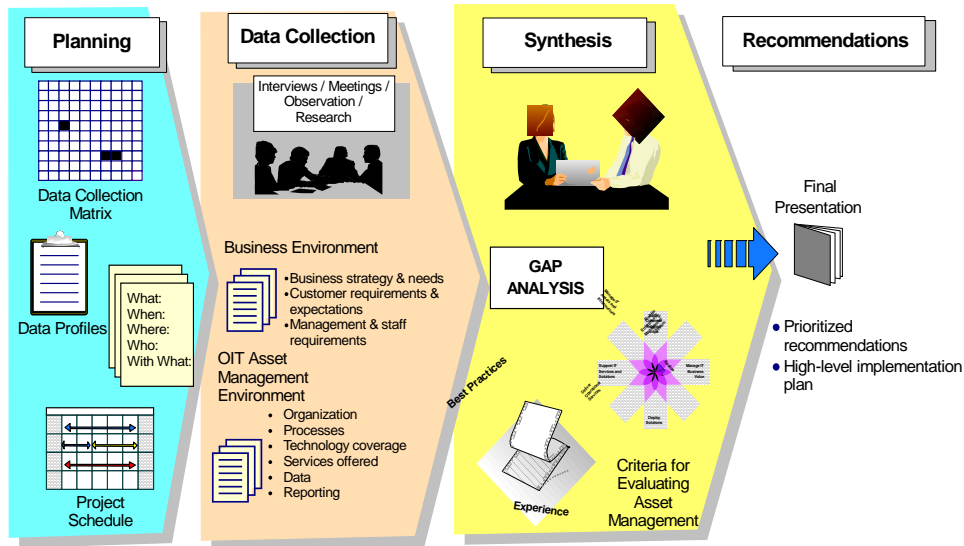
Marketing and communication of the organizational changes and their associated purpose is essential to success in any organizational change effort.

This assessment provides a Roadmap section that summarizes a suggested approach for proceeding forward with Change and Configuration Management, and lays the groundwork for gaining executive commitment and adequate funding. The roadmap provides a measured and logical approach, allowing ABC to achieve incremental improvements associated with milestones in relatively short timeframes. It also highlights the dependencies between change and configuration management and other IT service processes critical to success.

II. Analysis

A. Approach

The Evergreen team completed the engagement using a four-phased approach that included planning, data collection, information synthesis, and recommendation development. Figure 1-1 highlights the engagement approach.



During data collection, the Evergreen team:

- ❖ Interviewed ABC staff from appropriate departments within IT and the company
- ❖ Reviewed documents provided by ABC
- ❖ Facilitated discussion regarding Change and Configuration Management strategy with key ABC stakeholders.

The focus of the document reviews and interviews were to understand the current ABC change management environment and to surface issues. Another purpose of the assessment was to understand the current state of consensus on the vision, goals and guiding principles that would be the foundation for change management.

During the synthesis phase, the Evergreen team analyzed the as-is findings, generated conclusions and identified potential improvements. From there, the team developed recommendations to implement industry accepted best practices into ABC'S IS change management environment. Additionally, a high-level implementation roadmap was developed to integrate the recommendations within ABC environment.

B. Key Findings and Recommendations

This section summarizes the key findings with respect to IT Change and Configuration Management identified during the workshop and interview process. We begin with the process of planning and structuring a Change program and then follow the stages of a

typical change lifecycle including; request for change (RFC), RFC review and classification, change planning, change implementation and finally evaluation and close. Within each of these stages we identify key findings and then propose recommendations for addressing the issues identified to improve change management within ABC.

1. Organization

Organizational Structure

ABC Inc. is a large conglomerate of many operating Divisions. Due to the relative autonomy of various ABC entities, managing an effective centralized IT service presents many challenges. Given the complex organizational structure and diverse set of ABC entities, many with their own IS organizations, ABC has done remarkably well so far.

Organizational Findings

The entities within ABC have varying levels of autonomy depending on their roles and size. These varying levels of autonomy make it difficult to define and enforce IS standards. Often standards and processes are viewed as impediments restricting an entity's ability to move quickly.

Many of the organizations that make-up ABC has their own IT staff supporting applications specific to their businesses. ABC has made significant strides to consolidate the hardware supporting these various services into a single Datacenter. By providing a centralizing, highly controlled datacenter ABC has begun to demonstrate the value of centralized IS services. Nonetheless, ABC network control environment is relatively decentralized, such that the security of any server added outside the datacenter may be at risk.

Strategically valuable special projects can require rapid and sometime extensive changes and growth to the IT infrastructure, but justification for increased IS staff and supporting technologies can be difficult. Many of the individuals interviewed identified the primary challenge facing change and configuration improvements as limited availability of IS staff to help define, document and test new processes and tools. Nevertheless, we discovered there was an overwhelming consensus on the need for improved change and configuration management processes during the interview process.

Organizational Recommendations

The organizational challenges impacting ABC'S ability to deliver consistent, quality IS services are not likely to change. The way in which ABC goes about managing these challenges can absolutely help to minimize potential risks and improve the quality of service delivery. As an organization it is apparent that ABC understands the challenges and has begun to take strides to improve IT Service Management processes. Organizationally, a continued marketing initiative providing regular updates on ABC IS initiatives and intended benefit to all impacted entities is critical to obtaining buy-in and getting various entities to conform. ABC IS must become a world-class organization in the eyes of all of their employees. Improving enterprise change management processes is a logical and valuable first step.

Becoming a world-class IS provider may require significant increases in ABC's IS budget. ABC should perform a formal baseline analysis of their IS budget against similar organizations to determine whether they are in-line. Findings indicated that the

general quality of IS employees to is excellent, and given their size of the organization, IS resources are 'lean' and effective. Although staffing levels and efficiency is to be commended, additional IS activity emanating from new initiatives impacts the ability of corporate IS to support the infrastructure at the same level of customer satisfaction as exists today. IS may want to consider instituting a fee for service approach for new initiatives beyond the current baseline activity level, in order to address the additional service requirements.

ABC's business mission relies heavily on an advanced, flexible, highly reliable IT infrastructure. It is important that ABC as a whole understand that the people, processes and technology dedicated to supporting the infrastructure be viewed as strategically vital.

2. Change Governance

Implementing an enterprise wide process and tool for capturing and managing change across the entire IS infrastructure requires a governance structure be established and adhered to. Change Governance defines the corporate objectives related to change management and the policies and procedures by which those objectives should be met. Policies and guidelines must be defined at a corporate level and incorporated into the specific processes by which change is conducted within each IS Department. All IS Departments involved in the change processes should be included in helping to define corporate change policies.

Establishing corporate enterprise change policies and guidelines is the first step toward implementing a unified change process. Establishing such policies and ultimately processes will undoubtedly lead to significant change. Governance also involves building a framework to manage organizational change. New policies and procedures must be marketed throughout the IS organization. It is critical that the entire IS organization understand the benefits of change management process improvements both to the organization as a whole and to their areas of responsibility. Championing new processes and creating user adoption and adherence to strategies is another key responsibility of a change governance entity.

A single centralized process for capturing RFCs and reviewing, approving and implementing change across an entire IS organization requires direction from the highest levels of a company, which Change Governance provides.

Change Governance Findings

ABC has begun to realize the importance of Change Management and over the past year has taken steps to begin creating policies to enforce the documentation and notification of impending IS changes. ABC has created a Change Policies Guide and User Guide and posted these on the ABC IS website. Moreover, IS management has taken great strides in marketing the change procedures throughout the IS organization and taken a harder line on enforcing creation of change records via a web-based Change Management Process (CMP). The IS Managers currently hold weekly meetings to review critical upcoming changes.

These initial steps have by most accounts provided better knowledge of upcoming production changes and reduced the number of incidents as a result of poorly managed change. These records of production changes have also been helpful in troubleshooting incidents that might have resulted in change.

The primary shortcoming of ABC's Change Management system is that it fails to address a significant portion of the change lifecycle. By definition, change begins with Requests for Change (RFCs). RFCs can come from almost anyone that interacts with the ABC IS infrastructure. Today there is no single centralized process or tool for capturing RFCs and thus no processes defined for reviewing, classifying, approving, routing, executing, or closing changes. ABC change policies are currently focused solely on implementing changes to the production environment.

Expanding change management to encompass the entire lifecycle of a change will be a significant undertaking. To do so will require guidance from a Change Governing body.

Change Governance Recommendations

The first step toward implementing improved enterprise wide change management processes must be the establishment of a Change Governing body or Change Advisory Board (CAB). The CAB should be made up of a representative from each of the major ABC IS Departments who are responsible for change within their area, as well as a chairman. The CAB will be responsible for defining corporate change policies and guidelines focused on achieving defined business objectives and covering the entire change lifecycle.

Included in the policies and guidelines should be high-level data and process requirements for submitting RFCs and managing them through the change lifecycle. This Policies Guide should also include:

- ❖ Definition of the scope of change management
- ❖ A glossary of change management terminology and clear guidelines for how to classify change urgency and impact
- ❖ Business objectives these new policies aim to achieve including metrics to help measure whether the business objectives are being met.

CAB marketing communications responsibilities should include:

- ❖ Responsibility for marketing the new change policies and procedures throughout the organization
- ❖ Education and training programs
- ❖ Communication plans, both created and executed
- ❖ Development of user adoption, adherence and enforcement strategies, defined and communicated at the direction of the CAB.

3. Change Initiation

Change initiation ideally starts by submitting a Request for Change (RFC) to a centralized database where it is automatically routed to the appropriate Change Manager for review. RFCs can be driven by virtually anyone interacting with an ABC IS service. Typically, RFCs are a result of customer enhancement requests, internal IS projects, improvement initiatives, or a necessary action to resolve an incident or problem. Regardless of the RFC driver, all RFCs should be recorded in a single centralized system.

Once an RFC has been submitted a Change Reviewer/Manager should review the record to ensure it adheres to RFC submission policies. Changes not adhering to said policies (i.e., missing data) should be rejected. Changes adhering to standard submission requirements should next be classified, which involves categorizing a change based on potential impact to the existing infrastructure and then prioritizing the change based on its potential business value. This classification system should provide for emergency changes that must take place in an expedited manner to resolve system failures.

Change Initiation Findings

ABC has no centralized tool for submitting RFCs. A web-based Change Management application may be employed for recording changes to be carried out in a production environment. These changes often follow a typical change lifecycle, but are not recorded until they are ready to be released to production. Many of the various IS department representatives spoken with had their own department specific processes and tools for managing change requests.

Not capturing RFCs in a centralized database earlier in the lifecycle prevents the ability to perform standard processes such as review and approval based on business value. These processes are often done informally at a department level with little if any corporate guidance or oversight. Additionally, even though production changes are entered, many departments reported not having enough time to properly evaluate and prepare for upcoming changes.

Change Initiation Recommendations

The first step in defining improved processes for change management is to determine the scope of Change Management. What rules will constitute the need to create a RFC and at what point in the process should an RFC be entered into a centralized Change Management system? This should be determined, documented and communicated by the Change Advisory Board (CAB).

There should be a standard process for filling out and submitting RFCs and data required for constituting a valid RFC should be defined. New roles should be created to review and filter RFCs, ensuring that they are both complete and directed towards the appropriate reviewing parties for classification, review and approval. Once RFCs proceed past this initial gate-keeping process they will be classified. Clear policies and procedures should be defined for classifying RFCs, based on Priority and Risk. To the extent possible, this classification should be standardized and quantitative.

Obviously, the processes described above require a centralized change management application and database. Given the current limitations of the CMP, ABC has already undergone an evaluation of various change management technologies and has decided to implement the Technology Tool Change Management module to assist with facilitating improved change management processes. It is important to keep in mind during this technology implementation that corporate policy and process requirements must drive the implementation of technology, and not vice versa. This is not to say that certain concessions won't be made during the implementation to minimize tool customization, but overall, defined processes should determine functional requirements. To the extent practical, the technical implementation should adhere to the functional requirements.

4. Change Review

Change Review and Approval

Once an RFC has been initially accepted and classified, based on priority and risk, the next step is to determine whether the change should be implemented. This is the review and approval process. In order to make an educated decision on implementing a change, an organization must understand the intended benefits, potential risks and associated costs. Approving RFCs is a process of doing cost benefit analysis and determining whether the change is of value to the organization. All these factors should be readily available within the change processes and, to the extent possible, should be quantifiable.

Costs and benefits are often relatively easily understood when evaluating changes and may take place within a project or portfolio management process that prioritizes new IT projects and results in RFCs. Risk is the area with which organizations struggle the most. Assessing potential risk/business impact requires that changes be associated with Configuration Items (CIs). At the highest level, CIs define IT systems or services that help run the business. CIs also include items that makeup services such as applications, modules, servers and the infrastructure that delivers the service to the users' desktop.

Without knowledge of the complex relationships between CIs which makeup a business service and the inter-relationships between CIs supporting services, companies cannot accurately or efficiently assess the potential impact of change. As a result, review and approval should focus on the ability of the organization to reverse the change should it result in an unintended problem.

Change Review and Approval Findings

ABC does not currently have a centralized process for review and approval of RFCs. Change Requests are filled out for all production changes, but the Change Request is designed to be a notification of an impending change and no formal review and approval processes are defined to related to Change Requests. It is assumed that Change Requests entered through the web form are going to be implemented.

The Change Requests entry and notification process does provide the opportunity for various IS personnel to review changes and raises concerns should they believe a Change Requests will negatively impact the environment. The Change Request template does contain a Severity rating and a list of IS change categories or groups that define the type of change being implemented. Users filling out a Change Requests must identify both the severity and the change category/group.

IS personnel are notified of impending changes based on voluntary subscription to the various change categories/groups and rules can be applied based on Severity level. For instance, only send a notification if the Severity level is 3 or greater. While the Change Request process has provided a centralized notification process for upcoming changes, and has significantly improved change information distribution, the following limitations related to the current process and tool have been identified by many of the users interviewed:

- ❖ Change Severity rating is confusing and left to the discretion of the user entering the Change Request
- ❖ Subscription to groups is optional so there's no process that ensures users are notified of changes that might impact their area

- ❖ Change descriptions are written in terms of the user making the change and often other IS personnel do not understand the change being made and how it might impact them
- ❖ Change category/group definition is at a high level so users receive notifications on changes that may or may not be of interest to them. Too many non-relevant notifications received
- ❖ Change Requests are often entered too near the implementation date to properly prepare for the change
- ❖ Assets or CIs are not required or directly linked to Change Requests, so understanding what exactly might be impacted by a change is a challenge
- ❖ Reporting on Change Requests in a meaningful way is difficult
- ❖ Severity is a term typically used in incident and problem management and not consistent with commonly used Change Management terminology

Due to these limitations, much of the review and approval process for changes are done at a departmental level prior to the Change Request process. Each department has their own process for approving changes and there are centralized guidelines or oversight of approval processes. This often prevents areas or departments that might be impacted by changes to raise concerns or help define implementation procedures early enough in the process to prevent problems.

Change Review and Approval Recommendations

As discussed previously, review and approval improvements must begin with corporate guidance on policies and procedures. These policies and processes should ensure that change approvals are based on analysis of benefits, costs and potential risks. Guidelines should be set forth that make the approval process more or less rigorous depending these factors. The processes should ensure that the appropriate people that might be impacted by a change are included in the approval process.

Approval processes are typically managed through the change management tool to facilitate automated notification of pending approvals and an electronic interface to document approvals. It is important that the approval process and tool be designed to be efficient. Approvals should:

- ❖ Not be a deterrent or procedural burden that slows down the change process unnecessarily
- ❖ Be designed to ensure that changes are occurring for the right reasons
- ❖ Be in line with business objectives and pose minimal risk to the existing IS services

As with most of the change processes, approval often requires knowledge of the existing infrastructure to conduct impact analysis and assess risk. As discussed throughout, efficient impact analysis is contingent on reliable configuration data, including relationships between CIs. This data will not be readily available as change management processes are initially being established, as the effort to collect and maintain configuration data will be a significant undertaking. As the Configuration Management processes, data and tools are being implemented, approval processes

might rely more heavily on assessing back-out plans in order to mitigate any potential risk to the infrastructure as a result of change.

Configuration Management is a discipline unto it's own for which requirements must be defined, processes developed and facilitating technologies implemented. That said, Configuration Management and Change Management are closely linked. Change Management must play a key role in maintaining the accuracy of configuration data and thus it's important to establish change management processes either slightly ahead of or in lock-step with configuration management.

5. Change Coordination

Change coordination is the process of making the change to the IT environment and releasing the change to the customers. This is probably the most complex, time consuming and risky process within the change management life cycle. Coordination of change typically involves planning, building, testing and releasing the change. Large complex changes may be considered projects made up of many changes. The processes involved in coordinating a change are often handled using project management and release management disciplines and tools, some of which can be considered out of the change management process scope. While not strictly defined as change management, project and release management are closely related and typically integrated with change management processes. Often project management and release management tools are directly integrated with change management applications. This integration ensures that as projects progress and changes are built, the change record is appropriately updated to reflect the current status of the change.

During the coordination process change management is most directly involved in scheduling the release or implementing the change in the production environment. This involves ensuring resources are available to complete the change and ensuring changes are scheduled to minimize the impact to IT services, and do not conflict with other changes.

The implementation process should also include updating any documentation necessary to reflect changes to processes or CIs. The importance of documentation is often overlooked but is one of the most critical aspects of successful change process. Accurate documentation of CIs is critical to the change process itself and is also critical to several other IT Service Management processes, such as incident and problem management. Change processes should be designed to ensure that documentation is updated and CIs' data accuracy is maintained.

Change Coordination Findings

ABC's Change Management application helps to manage the Change Coordination processes. The Change Management application provides for notification of impending production changes and thus helps to plan for and schedule those changes. Many of the other aspects of change coordination, such as building, testing and releasing are handled by various departmental specific processes and tools.

None of the project or release management processes or tools is currently integrated into the Change Management tool. Due to the Change Management applications' limited scope, as it relates to overall change management, no integration is really necessary. Additionally, there is no integration between change management and configuration management. While certain departments do keep their own configuration management databases specific to their areas of responsibility, there is no centralized

configuration management repository providing an overall view of the IT infrastructure. There are currently no centralized guidelines specific to maintaining and updating configuration management data and documentation as part of the change process.

Change Coordination Recommendations

ABC should begin by defining change coordination processes at a high level that cover the process from beginning to end. This process should take into account change planning, building, testing, scheduling and releasing. The processes, and in some cases the tools used for planning, testing and releasing changes should be integrated into the change management process and tool.

Guidelines should be established for updating documentation and CI data as part of the change management process. These guidelines will initially be high level, as standards and tools for documentation and configuration management have not yet been established. As the documentation and configuration management standards mature, change management processes must be reviewed and enhanced to incorporate the specifics of maintaining such repositories.

From a scheduling perspective, ABC should strive to identify and document changes in a centralized database earlier in the change process. This will facilitate more time for planning and impact analysis with the intent of reducing service disruptions resulting from change. Implementation of a service center application should help facilitate and enhance these processes. Improved notification processes and identification of the specific CI undergoing change should also be an objective of the improved processes. ABC Change Management users frequently reported receiving an abundance of unnecessary change notifications. They equated this to a noise level in the sense that the high volume of unnecessary change notifications drowned out the few notifications that are pertinent, making it less likely that the relevant notifications would be reviewed. One primary objective of implementing a new Change application and process would be to reduce this noise level.

6. Change Evaluation and Close

An often neglected part of the change management lifecycle is evaluation and close. Most organizations close changes once the change has been made to the production environment, but unless the change results in some unanticipated, negative consequences changes are rarely evaluated. Evaluating changes is often perceived as an extra administrative task, providing little value compared to the extra effort, assuming the change was made without negative impact. However, this ignores the original reasons that the change was made in the first place.

IT changes should result in a positive affect on the IT infrastructure, resulting in improved efficiency, less risk, more accuracy or some other value added result. Moreover, this result should be measured to verify that the change has resulted in the intended improvement. While this process is often more critical if a change clearly resulted in a negative impact, assessing all changes is important to demonstrate the value of the investments made in IT infrastructure improvements. Regular evaluation of changes should result in improved processes and greater efficiency. Evaluation is the key to capturing lessons learned, incorporating those lessons back into the process and fostering a culture of continuous improvement. Additionally, the evaluation and close phase should ensure that all documentation and configuration data impacted by the change is accurately updated.

Change Evaluation and Close Findings

The Change Management application used to document production changes does not provide a change record that can be managed through a lifecycle and ultimately closed. Change Requests are assumed to be implemented on the date entered and closing the ticket is not necessary.

When changes result in problems, ABC does have a process in place to determine what went wrong and take corrective action. This process uses "incident reports" that are written up and reviewed regularly. The "Incident Reports" include action items assigned to individuals in an effort to understand and rectify the root cause of the problem. "Incident Reports" are often created at the request of the customer experiencing the problem.

7. Configuration Management

Configuration Management is the process of collecting and maintaining accurate documentation of the Configuration Items (CIs) that make-up your IT infrastructure including relationships between CIs. CIs can be defined as any item within your IT infrastructure for which change must be managed. This can include PCs, servers, network hardware, applications, services, databases and documentation.

Most all organizations maintain this type of data, but few if any today have a fully integrated process that maintains not only specific data about CIs but also the relationships between CIs across the various IS departments. Nevertheless, many organizations are beginning to understand the importance of configuration management and the power of an all encompassing Configuration Management Database (CMDB). Some of the benefits of a Configuration Management include:

- ❖ Improved management of IT components
- ❖ Improved quality and reliability of IT services
- ❖ More effective problem solving
- ❖ Increased efficiency of IT changes
- ❖ Reduced risk associated with IT changes
- ❖ Improved security
- ❖ Improved compliance with legal requirements

As companies begin to pursue configuration management improvements the reliance on change management quickly becomes apparent. It is virtually impossible to accurately maintain data on CIs without incorporating the maintenance of CI data into the IT change process.

Configuration Management Findings

ABC is not unlike most large IT environments where configuration data is managed within specific departments and includes only the configuration data directly managed by that department. Few if any standard processes or policies exist for managing configuration data, but many tools exist that track information within a specific area. Within ABC these various areas often have developed their own tools to manage

configuration data. Unfortunately, none of these tools are integrated with one another and therefore little information exists on how CIs managed by one department relate to CIs managed by another.

In addition to change management, another critical component of configuration management is IT Asset Management (ITAM). ITAM seeks to provide processes for efficiently managing IT assets from a financial perspective from procurement through to retirement, and thus is often an entry point for CIs. ABC has relatively standardized processes for procuring and receiving IT assets and has standardized on an ITAM tool to help manage these processes. The ITAM tool is receiving feeds from their IT hardware vendor which automatically generates asset records. ABC also receives the majority of their IT assets in a central location which simplifies the receiving process and is considered a best practice to ensure all IT assets are accounted for as they enter the organization. Currently, ITAM processes are limited to IT hardware and do not include software and applications.

ABC obviously understands the importance of integrated configuration management and its reliance on change management as evidenced by this initiative. The common theme throughout almost every interview conducted was the lack of configuration data available to conduct change impact analysis and help with resolving problems when they do arise. ABC understands that collecting configuration data without establishing processes to maintain that data is a futile effort and has thus chosen to begin with change management improvements. That said, change management alone will not bring ABC any closer to reliable configuration data.

Configuration Management Recommendations

ABC must embark on an enterprise wide configuration management initiative similar to the change initiative. That initiative must initially determine configuration management policies and procedures, define functional requirements, and conduct a technology assessment to determine what tools will be needed to assist with establishing and maintaining a CMDB.

IT Asset Management provides a solid foundation from which to begin configuration management. ABC has an established some solid processes for ITAM for hardware, and should expand those processes to incorporate applications.

Evergreen's focus during this assessment was change management, and thus our understanding of Partner's configuration management initiative is limited at this point. In order to ensure that change management meets one of the primary long-term objectives, (that being a CMDB) it is critical that ABC integrate the configuration and change management initiatives and address each from a strategic enterprise view.

8. Problem Management

Problem Management is the process of investigating the IT infrastructure to determine and eliminate the root cause of an undesirable situation. It is different from incident management in that incident management seeks to restore service to the end-user, while problem management seeks to eliminate the underlying cause of the disruption. The problem management process involves:

- ❖ Evaluating the incident management database to identify potential problems
- ❖ Investigating to determine the root cause of the problem

- ❖ Creating RFCs to remedy problems once the root cause has been determined.

Based on the problem management process description, it is clear to see that problem management relies on both configuration management and change management. Configuration management provides data critical to the investigation process and recent changes can also help to determine root causes. Once the root cause has been identified, an RFC is typically submitted to address the problem and then the change management process takes over to correct the problem.

An obvious benefit and primary purpose of problem management is to eliminate underlying IT infrastructure problems resulting in incidents, thereby decreasing the frequency of incidents and improving service availability and reliability.

Problem Management Findings

We have chosen to address problem management specifically within this change management assessment, due to some of the processes described during our interview sessions. ABC currently holds weekly IS Operations meetings to review upcoming high severity changes and to review problems, often resulting from change. Problems are often documented and managed via a form referred to as an "Incident Report". Incident reports are created at the discretion of the service representative or at the request of an impacted customer. Incident reports are used to document the problem and establish action items for correcting the problem. The form and subsequent incident report are located on a shared platform and can be viewed by the customer.

Incident reports are essentially used to manage ABC problem management processes. They serve as a useful tool to help communicate and coordinate problem resolution processes, but lack the proactive nature intended in true problem management processes. Typically, problem management begins with proactive evaluation of incident database in an effort to identify recurring incidents that could potentially be prevented in the future. This is not the case with ABC "incident report" process in that incident reports are not directly integrated into ABC's Incident Management process and tool. Within ABC, "incident reports" are most often created after the end-user has already been impacted.

Evaluation of problems to determine the root cause can be a tedious and time consuming process in ABC's existing environment due to the lack of configuration and change data. ABC'S incident reports are also not linked back into a change management process. An RFC is not necessarily created to address the problem once the root cause has been determined. Incident reports contain action items, but no formal process exists for following up on and ensuring the action items are completed to eliminate the problem.

Problem Management Recommendations

ABC'S view and process for problem management should be expanded to take a more traditional, proactive approach to problem management. Long-term problem management should be incorporated into the other service management processes, such as incident management, service level management and change management. ABC should consider using Technical Tools to manage their problem management process since it is inherently integrated into the tool that ABC currently uses for incident management. Problem management can be made much more efficient once reliable, integrated configuration management data exists.

III. A Road Map for Success: Action Plan

A. Overview

This section identifies the phases and tasks for a suggested approach to establishing and maintaining a comprehensive ABC IS Change Management program. Based on our findings and recommendations we have broken down the effort to establish a unified Change program into several phases. This phased approach will enable ABC to define achievable and measurable milestones that can be attained within relatively short time-frames (3-6 months). Our experience has shown that a phased approach allows organizations to focus on critical short-term objectives that demonstrate iterative successes. Through periodic reviews of both short and long-term objectives, short-term results that add true business value can be achieved without compromising the long-term vision.

The phases we have developed below identify the specific steps we feel are necessary to implement a successful change initiative. Since the long-term goals and objectives will likely change over time as ABC'S business and technology changes, we have kept phases 3 and 4 at a high level. Phases 1 and 2 have been detailed with specific descriptions of each task, resource requirements estimates, cost and time estimates.

B. Phase 1: Change Governance

Phase 1 involves establishing corporate goals and objectives for a Change program and defining policies and procedures that will help to achieve those goals. Because a IS changes typically impact the entire organization, a successful Change Management program must have visibility, guidance and oversight at the highest levels of a corporate structure. As such, the first order of business should be to establish and document Change Management corporate goals and objectives that align with ABC's business objectives. These goals and objectives should be established with the input and support of the CTO and CIO. This will create a basis for guiding Change Management policies and procedures. This document will be referred to as the Change Management Corporate Guidelines.

A governing body or Change Advisory Board (CAB) should be established for the purposes of; periodically reviewing and refining goals and objectives, and assigning accountability to enable enforcement of the change policies, procedures and guidelines. The CAB should include representation from all departments within ABC IS.

Once the Change Management Corporate Guidelines have been established, policies and procedures should be defined and documented covering all change management phases including request for change (RFC), acceptance and classification, planning, coordination and closure. These policies and procedures should be standardized to the extent practical, but must also take into consideration the fact that different types of changes may be managed differently. Deviations from standard processes should be documented by change type. Defining policies and procedures typically involves requirements input from the various IS departments and reporting requirements set forth by executive management. Business Analysts acting as the liaison between technology managers and business managers typically translate various requirements

into policies and procedures aligned with change management best practices. This document could be an extension of the Change Management Corporate Guidelines.

Phase 1 Change Governance Task Summary

- Establish co Develop Change Management Corporate Guidelines Document that includes:
 - Change Management Purpose
 - Change Management Scope: What IS changes will require an RFC
 - Change Advisory Board (CAB) structure
 - Process for Periodic Review of Goals and Objectives
- Form CAB and appoint Chairperson
- Define responsibilities of the CAB
- Schedule Periodic CAB Meetings
- Create and publish a Change Management Policies and Procedures Document that includes:
 - Policies and Procedures for RFC Initiation Processes
 - Policies and Procedures for Acceptance and Classification Processes
 - Policies and Procedures for Change Planning
 - Policies and Procedures for Change Evaluation and Closure
 - Policies and Procedures for Change Terminology
 - Policies and Procedures for Classifying Changes
 - Policies and Procedures for RFC Initiation Processes
 - Policies and Procedures for Acceptance and Classification Processes
 - Policies and Procedures for Change Planning (Priority and Impact)
 - Standard data elements required in the Change Management repository
 - Guidelines for integration with other systems
 - Structure for Assigning Accountability and Enforcement of Policies
- Establish marketing plan and communication strategies
- Develop user adoption strategies and enforcement policies
- Define Key Performance Indicators (KPIs) and success criteria and measurements by phase

Phase 1 Resource Requirements

- Executive Level – Guide Change Management Goals and Objectives. Assist with establishing metrics and data required to facilitate improved IT asset investment strategies. (40 Hours)
- Change Advisory Board (CAB) Chairperson – Initially coordinates the effort to establish policies and procedures. Enforcement, review and improvement thereafter. (50% for 2 months, 20% thereafter)
- IT Department Managers – Constitute the CAB members responsible for identifying asset management requirements and ensuring policies and procedures meet their respective needs as related to Change Management. Often held accountable for Change Management process adherence in their area. (10% during planning phase, 5% thereafter)
- Process Analyst – Responsible for defining specific Change Management processes to ensure Change Management data is captured and maintained. (1-2 fulltime resources during planning phase)
- Business Analyst –Responsible for acting as the liaison between the individual business units and the project team. The business analysts will help interpret requirements and gain consensus on whether or not the proposed solution truly meets these requirements. (1-2 fulltime resources during planning phase)
- Change Management Expert/Business Analyst – Acts as the liaison between ABC Executive team and IT Managers to ensure Change Management policies and procedures are developed in-line with corporate business goals and align with Change Management best practices. Assists with translating technical requirements into Change Management vision, policies and procedures. (1 fulltime resource)

C. Phase 2: Change Implementation

Phase 2 involves using the Corporate Guidelines and Policies as a baseline to gather detailed change process and data requirements for the Alpha (Exchange), Beta and Pilot (CFS) business areas. These requirements will be used to drive the pilot implementation of SC Change Management.

During this stage, Evergreen will work with ABC resources to assess and document current state processes, define the future state vision, and lay out a plan and associated requirements documented to address the gap. These business specific change process requirements will be used to drive out functional tool requirements, which will be used to develop System Design documentation. During this phase Form and Data requirements for both the Change and Configuration components of the system will be defined. Integrations to configuration management tools will also be designed and piloted to the extent possible, given the current state of configuration management initiatives.

As Process and Functional Tool requirements are defined for the Alpha, Beta, and Pilot areas of this project, planning and strategy documentation will be developed for Reporting, Testing, Training, and Deployment. This will include helping to refine and execute against marketing and user adoption strategies initially defined in Phase 1.

It is important to note that the Alpha, Beta, and Pilot sections of this project can be implemented in overlapping timeframes, in order to shorten the timeline. This will require an increase in the number of process and technical resources required for this phase of the project.

Phase 2 Business and Process Related Tasks
<ul style="list-style-type: none">• Baseline impact of change on problems and incidences for pilot areas• KPI and Business Value Metrics- In addition to reports that help ensure process adherence, Evergreen will work with ABC to develop KPI's and metrics to also help measure achievement of specific business goals. Progress towards these goals will be an important input to marketing• Process and Data Workshops<ul style="list-style-type: none">-Alpha (Exchange)-Beta-Pilot (CFS)• Alpha, Beta and Tool Functional Tool Workshops<ul style="list-style-type: none">-Gather requirements for Change Types- Gather requirements for Change Forms/Data- Gather requirements for Configuration Items- Gather requirements for Configuration Forms/Data- Policies and Procedures for Change Terminology- Gather requirements for Integrations and Interfaces- Gather requirements for Reporting• Build Design Materials<ul style="list-style-type: none">- Change Management and Configuration Management• Initiate Planning Strategies<ul style="list-style-type: none">-Marketing-Reporting-Testing- User Adoption-Training- Deployment

Phase 2 Technology Related Tasks

At this time, ABC is planning to implement the alpha, beta and pilot change management solutions on their technology tool. During the technical implementation activities, Evergreen will also ensure that the functional solution is in-line with the defined process and data requirements.

Phase 2 Resource Requirements
<ul style="list-style-type: none">• Project Manager – Oversees Technical Tool Change and Configuration implementation. Responsibilities include project planning, project timeline, resource scheduling, scope management and risk mitigation.• IT Department Change Managers – Managers responsible for change and configuration management processes within their area specific to the alpha, beta and pilot groups (20% for each area representative through Phase 2)• Process Analyst – Responsible for defining specific Change Management processes to ensure Change Management data is captured and maintained. (1-2 fulltime resources during planning phase)• Business Analyst –Responsible for acting as the liaison between the individual business units and the project team. The business analysts will help interpret requirements and gain consensus on whether or not the proposed solution truly meets these requirements. (1-2 fulltime resources during planning phase)• Change Management Expert/Business Analyst – Acts as the liaison between ABC Executive team and IT Managers to ensure Change Management policies and procedures are developed in-line with corporate business goals and align with Change Management best practices. Assists with translating technical requirements into Change Management vision, policies and procedures. (1 fulltime resource)• Technical Tool Implementation Consultant – Responsible for translating process requirements into functional tool for Technical Tool. Responsible for interfacing Technical Tool with other systems. (1 fulltime resource throughout implementation project)• Data Analyst – Responsible for analyzing data, mapping data between systems, transposing data sets and creating technical plans for importing and/or exporting data between Technical Tool and other systems. (1 fulltime throughout project)• System Architect- Fulfills role of technical lead/project manager, designing a solution to meet the requirements and ensuring system stays true to ABC Change Management objectives and Change Management best practices. Coordinates efforts of the process analysts, technical tool consultants and data analysts. (Fulltime for duration of the project.)

D. Phase 3: Change Management Rollout

Phase 3 will include the go-live for the Pilot groups as well as work required to implement structure and processes for establishing a culture of continuous improvement. It will involve leveraging lessons learned during the alpha, beta and pilot implementations to review processes and functional requirements, and adjust plans for rolling out the change management tool to the rest of the IS organization. Key to

executing during this phase will be the level of involvement, understanding and buy-in from the user community. Specific areas of focus will be:

- ❖ **Marketing** – marketing project progress, success, and business value is crucial to ensuring long-term support for transformation initiatives.
- ❖ **Organizational Change Management** - Preparing for and effectively dealing with organizational change issues is a constant focus during Evergreen engagements. Anticipating and dealing with change issues as they arise requires the project team to be cognizant of existing boundaries, politics, and individual personnel issues.
- ❖ **User Adoption** – closely related to the above activities, ensuring user adoption is an obvious but often elusive project objective. Specific targets will be set here and a strategy put in place to achieve the highest adoption rates possible.
- ❖ **Quality Assurance and Control** – As part of continuous improvement, we will work with ABC to develop methods and measurement criteria to ensure processes and policies implemented as part of this solution are consistently followed and adhered to. KPIs established in Phase 2 will be measured against objectives to determine whether the pilot is achieving business objectives.

Rolling out a new change management solution will be a significant undertaking and should be done in stages. ABC should prioritize deployment of the enhanced change processes and tool based on the applications and services most critical to ABC'S business. ABC has identified over 40 most critical business applications against which they would like to apply improved change management. Evergreen agrees that this is a wise approach and suggests these be broken into logical groups and deployed in stages.

As the configuration management processes and tools mature they should be integrated into the change management process. From a technical perspective, this will likely involve additional and enhanced tool integration as the projects progress.

Phase 3 Task Summary

- Rollout of enhanced change processes and tool for the pilot areas
- Apply marketing plan and user adoption processes
- Measure KPIs for pilot against objectives
- Use KPIs to assess new process and tool and make adjustments as necessary
- Adjust plan as necessary for change rollout to additional areas

Phase 3 Resource Requirements

- Project Manager – Manages System Change and Configuration implementation for ABC. Responsibilities include project planning, project timeline, resource scheduling, scope management and risk mitigation.
- IT Department Managers – Constitute the CAB members responsible for identifying asset management requirements and ensuring policies and procedures meet their respective needs as related to Change Management. Often held accountable for Change Management process adherence in their area. (10% during planning phase, 5% thereafter)
- IT Department Change Managers – Managers responsible for change and configuration management processes within their area specific to the alpha, beta and pilot groups (50% for each area representative through Phase 2)
- Process Analyst – Responsible for defining specific Change Management processes to ensure Change Management data is captured and maintained. (1-2 fulltime resources during planning phase)
- Business Analyst –Responsible for acting as the liaison between the individual business units and the project team. The business analysts will help interpret requirements and gain consensus on whether or not the proposed solution truly meets these requirements. (1-2 fulltime resources during planning phase)
- Change Management Expert/Business Analyst – Acts as the liaison between ABC Executive team and IT Managers to ensure Change Management policies and procedures are developed in-line with corporate business goals and align with Change Management best practices. Assists with translating technical requirements into Change Management vision, policies and procedures. (1 fulltime resource)
- System Implementation Consultant – Responsible for translating process requirements into functional tool for Technical Tool. Responsible for interfacing System with other systems. (1 fulltime resource throughout implementation project)
- Data Analyst – Responsible for analyzing data, mapping data between systems, transposing data sets and creating technical plans for importing and/or exporting data between System and other systems. (1 fulltime throughout project)
- System Architect- Fulfills role of technical lead/project manager, designing a solution to meet the requirements and ensuring system stays true to ABC Change Management objectives and Change Management best practices. Coordinates efforts of the process analysts, technical tool consultants and data analysts. (Fulltime for duration of the project.)

E. Phase 4: Configuration Management Requirements Definition

Although identified here as a Phase 4 effort, configuration management from a timing perspective should run in parallel with Change Management. One of the primary drivers of ABC'S current Change Management initiative is a desire to improve configuration management data. ABC is currently engaged in a configuration management improvement initiative. This effort must be aligned and coordinated with the change management project in order for the processes to be integrated.

The configuration management initiative should begin by defining configuration management business objectives and determining configuration management data requirements based on those objectives. During our change management assessment process we identified many disparate sources of configuration management data. Once ABC has clearly defined configuration requirements, Evergreen recommends conducting a technology review to determine what existing tools might be leveraged to meet the configuration management requirements and what gaps exist. ABC must then evaluate whether existing tools can be enhanced or whether there is a need to procure a configuration management solution. That decision may drive a tool selection and procurement process.

While a change management process and tools is critical to the maintenance of configuration data, it is difficult to build specific configuration data maintenance processes into change management without some knowledge for the anticipated CMDB. Thus, it is important to coordinate the timing of these parallel efforts to ensure processes and ultimately functional integrations are effectively developed.

Phase 4 Configuration Management Task Summary

- Establish Configuration Management Governance
 - Establish Configuration Management (CM) governing body
 - Identify CM Stakeholders
 - Define corporate CM business objectives
 - Define CM Policies
- Configuration Management and CMDB Requirements Definition
 - Assess current CM processes and tools
 - Define CMDB data requirements
 - Define CM user requirements
 - Define CM reporting requirements
 - Analyze existing technologies and define their role in CM
 - Identify gaps in existing technology and address gaps
 - Establish "to be" CM process to integrate with Change Management

Phase 4 Resource Requirements

- Executive Level – Guide Configuration Management Goals and Objectives. Assist with establishing metrics and data required to facilitate improved IT asset investment strategies. (40 Hours)
- Configuration Management Steering Committee – Initially coordinates the effort to establish policies and procedures. Enforcement, review and improvement thereafter. (50% for 2 months, 20% thereafter)
- IT Department Managers – Constitute the steering committee members responsible for identifying configuration management requirements and ensuring policies and procedures meet their respective needs as related to Configuration Management. Often held accountable for Configuration Management process adherence in their area. (10% during planning phase, 5% thereafter)
- Process Analyst – Responsible for defining specific Configuration Management processes to ensure Configuration Management data is captured and maintained. (1-2 fulltime resources during planning phase)
- Business Analyst –Responsible for acting as the liaison between the individual business units and the project team. The business analysts will help interpret requirements and gain consensus on whether or not the proposed solution truly meets these requirements. (1-2 fulltime resources during planning phase)
- Configuration Management Expert/Business Analyst- Acts as the liaison between ABC executive team and IT managers to ensure Configuration Management policies and procedures are developed in-line with corporate business goals and align with Configuration Management best practices. Assists with translating technical requirements into Configuration Management vision, policies and procedures. (1 fulltime resource)