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Regis University
School for Professional Studies Graduate Programs
Final Project/Thesis

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Corporate Policy Management for a Financial Organization

Corporate Policy Management for a Financial Organization
Mavourneen W. Ballard
Regis University Master of Science in Computer Information Technology

Abstract

Business Problem

A large financial organization has intent of deploying a framework to support Corporate and Business Policies and Procedures. Internally, the policies and procedures lack the standardization and consistency necessary to publish policies across a large diverse organization. Additionally, the organization needs to ensure quality in the protocols and templates, products and practices as well as provide a framework to automate the support of policy and procedure administrative aspects related to content management, document retention and destruction and increased search efficiencies. Additional challenges exist external to the organization in the form of Office of the Comptroller of the Currency (OCC) requirements to comply with the Sarbanes-Oxley Act.

Technical Solution

The technical solution that will be proposed will attempt to determine how and if the application framework can resolve the business problem. This will include a proposal for a policy and procedure framework that will support the overall strategy of the organization. Specific deliverables will be the solution proposal including the hardware. Proposals will be made as to what (if any) specific functions and architecture of the framework would most effectively support the organization.

It has become overwhelmingly clear that an existing framework purchased from Archer Technologies is not only suitable for applications specific to Information Security

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but a great number of other opportunities exist within the organization where the framework, which is extremely customizable and flexible, would be used appropriately. The opportunity exists, given the appropriate hardware and deployment, for the organization as a whole to utilize this application to manage all corporate policies and procedures and other regulated areas of concern within the realm of the Sarbanes-Oxley Act which requires organizations to provide proof of internal controls. The task will be to analyze the business processes required to manage the organization's policies and procedures, analyze the Archer Technologies framework application along with the required infrastructure, and determine how the application can be built to solve the organization's policy and procedure presentation problems.

Business Case

The Archer application currently exists in-house with a team of seasoned support professionals who are well-versed in the framework. The framework currently houses a number of processes and policies that are required by various regulatory agencies. It would be to the benefit of the organization to explore the expanded use of this product to facilitate a cohesive policy life cycle development, facilitate regulatory compliance and reporting as well as provide a central location for a number of Governance related activities. Additionally, due to the flexible structure of the framework, the organization will realize benefit from integration with other, larger repositories of information.

This project must ultimately be successful in some form. The organization has many disparate sources of policy, controls and procedures. It is very difficult to determine which source is the voice of authority and very difficult to determine whether or not the organization is, in fact, in compliance with the regulators.

Acknowledgements

Jim, Jamie and McKenna Ballard
The Committee
Pam Weems
Policyworks Project Team

Project Paper Revision/Change History Tracking page

Release	Date	Changes
1.0	05/02/06	Initial Draft
2.0	06/01/06	Changes to formatting, elimination of bulleting as well as limiting of project discussion
3.0	06/14/06	Revision of formatting and abstract
4	06/15/06	Final formatting.

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1. Introduction / Executive Summary

1.1. Define the problem statement and business requirements

Large organizations have a great need for policy that guide the manner in which the company performs business, educate the company on appropriate conduct and offers a means for the company to evaluate compliance. Financial organizations are extremely regulated perhaps more so than many publicly held organizations in the United States. The Office of the Comptroller of the Currency (OCC) performs multiple audits on these banking organizations in an effort to ensure that they are solvent enough to meet the needs of their customers and communities they serve. One of the great concerns to the OCC recently is that of how corporate policy is managed within the organization. The term Policy refers to the overall statements that govern how an organization does business. Not only do policies need to be published and made available to the organization; compliance to these policies needs to be validated and measured (Office of the Comptroller of the Currency, 2006, Legal and Regulatory Section).

The need for a more comprehensive policy program is perhaps a direct reflection on the recent Sarbanes-Oxley regulations that were passed in response to corporate failures of organizations such as Enron and World Com where financial reporting misrepresented; either deliberately misreported or due to lack of education on the part of the high executives. Sarbanes-Oxley regulation puts forth requirements for all publicly held companies to instill internal controls and provide the facility to report and monitor compliance of those controls. These controls are intended to protect the organization from fraud and misuse of data. Controls are reflected at a high-level in corporate policy.

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These controls are intended to protect the organization, its employees and shareholders.

The financial organization is governed by the OCC which governs banks held at a national level; the OCC and Sarbanes-Oxley are large contributors to the policy requirements of the Bank.

In order for the business to meet the policy requirements of the OCC and Sarbanes-Oxley, it needs a central location that is readily available to the entire organization in which to publish and deploy policies, policy changes, line of business procedures and other information that is of interest to the OCC. Additionally, it is desirable for the Bank to be able to measure or provide a measurement or baseline to measure against to be able to determine compliance and exceptions to policy. Further, it would also be advantageous for the corporation to provide a centralized tool to assist in the policy exception management process and risk impact analysis process. It needs a central location that is available to entire organization to answer some of the internal challenges to the organization around quality and streamlining administrative processes.

In order for the Bank to meet the environment of ever-changing requirements, both internal and external and policy change, the policy life-cycle process must be housed within a tool that is easy to use for all users from executive-level users to teller. This process and tool must be developed to provide adequate reporting, change notification, workflow management to facilitate development and approvals as well as archival techniques that meet regulatory requirements. The tool must be flexible enough to provide a dynamic element to what has historically been a very static process.

1.2. Relevance of project

This project came to a conclusion at the end of 2005. Initially the full deliverable of this project included developing a proposal that will address the needs around policy life cycle management and associated processes. This particular project would attempt to define the business requirements of the corporation and provide, within the proposal, a suggested technical solution.

The need for a central solution to policy management prevails; the external and internal challenges have not gone away within that the organization continues to be required by the OCC to produce, publish and measure compliance of the corporate policies. A tool that supports policy development and deployment not only provides an organization with compliance to regulations but adds knowledge to the organization as a whole. The organization overall will benefit by all employees being made aware of policies and new policy changes. Further, a tool that is able to integrate policies into other business processes provides support and credibility for other processes. The ability to provide cross-references to corporate policies within the tool may provide opportunity for future expansion of the tool as various initiatives are required to show compliance with specific policies.

1.2.1. Regulatory requirements

At the publication of Sarbanes-Oxley, all companies which were held publicly are now required to provide evidence of financial review and approval as well as data integrity (American Institute of Certified Public Accountants, 2006, Summary of Sarbanes-Oxley Act of 2002). The term data integrity refers to the state of the data;

integrity requires that the data remains unchanged in storage, retrieval and transfer; additionally data may be required to have appropriate access permissions to ensure that specific company information is not exposed. . The Office of the Comptroller of the Currency (OCC) has taken this regulation to heart and now, upon reviewing various facets of the banking world, requires evidence of policy existence, their deployment as well as an effective training and awareness program (Office of the Comptroller of the Currency, 2006, Legal and Regulatory Section).

Governance can be defined in the context of the organization as a way for lines of business in the organization to manage risk through policies, guidance and support tools. Sarbanes-Oxley requires that the organization show evidence of internal controls which can be in the form of policies and procedures; Sarbanes-Oxley also intends to relate to governance to validate that the executives that are in fact governing or managing the organization with integrity.

1.2.2. Business requirements

The business is tasked directly with responding to the criticisms of the OCC which include evidence of policy development and compliance measurement as well as developing policy content that, at the time, did not exist in the Bank's policies. The Bank is quite large (120,000 employees nation and world-wide) and has the need to communicate these policies and any change to these policies to either specific businesses or the organization as a whole. The repository of policies and procedures needs to be centralized and easily accessible; users need to be completely aware of whether or not a

policy pertains to their particular role in the organization and need to be able to direct other users to one central location.

1.3. Review of current solution

Currently, the Bank has more than one solution in place to manage corporate and line of business policies; many business lines have developed their own solution for policy deployment and the project group was not aware of the extent of these different approaches. A problem resides in that different business lines tend to build their own standards to meet their needs which loses the benefit of coherence which is supposed to align with corporate strategy and compliance and accountability not to mention time savings and knowledge management. The top level solution resides at the corporate level and is a very general web site where various business lines post their policies for review. The current solution is not well organized. Users are unable to determine whether or not a document is a policy or something as trivial as minutes from a long ago meeting. Additionally people have no sense of when data is old and out of place or when the policy was first published. Additionally, there appears to be no forum available to provide firm guidance on any policies in place. These postings can take the form of an attached document or an embedded link to, most frequently, a document. Upon receipt of this posting, the corporate policy office distributes notification to all those responsible for policy review and deployment within the organization. A second method for housing and deploying policies and procedures exists in the form of a simple web site that has the ability to search attached policies. The collection of policies in this site is quite extensive and extremely out of date. Additionally, when browsing the documents, one frequently

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finds documents that are not in fact, policies but are minutiae related to the development of policies such as minutes of meetings, etc. There is very little conformity in notifying those impacted of a policy change or a policy replacement. Additionally, there is no single methodology for archiving policies and terminating policies. Further, there is evidence of a great deal of confusion over what is a policy and to what degree the policy in question governs a line of business.

1.3.1. The Bank's Policy/Procedure Process

The Bank's Policy/Procedure process provides the framework for business policy/procedure and operating procedure development, implementation and maintenance of business policies/procedures and operating procedures. It includes:

- ✓ Definitions (Corporate Policy, Business Policy, Business Procedure, Operating Procedure)
- ✓ Roles and Responsibilities
- ✓ Development, Format and Implementation
- ✓ Confirmation Process
- ✓ Exception Process
- ✓ Implementation Activities

1.4. Definition of terms

Bank: Will refer to the large financial organization that needs to determine a solution to the policy development needs.

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Governance: Refers to the way in which an organization manages its operations at a high level and in the case of a financial institution, how an organization manages to mitigate risk of loss through policy, procedures, regulation compliance and reporting.

OCC: Office of the Comptroller of the Currency

Policy: A policy is a statement of management's expectations that directs team members toward achieving business objectives. Policies establish the business' operating principles that help management attain a proper balance between risk and reward and enable team members achieve business goals. There are two areas of policy:

- ✓ Corporate Policy - Corporate policies and procedures apply enterprise-wide wherever the relevant activity is carried out.

- ✓ Business Policy - Business policies and procedures apply to one or more of the business groups such as banking, investments, mortgage, diversified financial services, technology, or operations and can apply to the entire group or to one or more lines of business within the group.

Procedure - Procedures describe the process by which policies are executed. Procedures reflect management's expectation of how the work should be performed.

Operating Procedure - Operating procedures provide instructions to team members to help them fulfill and correctly carry out their responsibilities. Operating procedures reflect management's expectation of how the work should be performed.

1.5. Roles and Responsibilities:

The **Executive Business Policy and Procedure Owner** appoints a group executive manager to oversee The Bank's business policy/procedure and operating

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procedure process. Additionally this role is responsible to receive notification when confirmation processes are completed for all of The Bank (see Section 1.5.4 below).

The **Group Executive Business Policy and Procedure Owner** reports to the Executive Business Policy/Procedure Owner for purposes of managing business policies and procedures, authorizes and approves initial development of business policy and/or procedure, and approves new business policy and/or procedures and significant revisions prior to implementation. The role is also responsible to prove business policy and/or procedures exceptions and receives reporting notification when confirmation processes are completed for all of The Bank.

The **Lines of Business** are responsible for the Business Policy/Procedure and Operating Procedure Propagation which includes the responsibility to assign resources with adequate skills and knowledge to develop, implement and maintain business policies/procedure and operating procedures, defines and develops in standard format, involving appropriate partners during development, and identifies scope based on type of policy (Business Policy/Procedure and/or Operating Procedure). The Lines of Business also obtain approvals, respond to questions as required, publish the content to the website and communicate and implement the policy. From a policy confirmation perspective, the Lines of Business review and update all existing business policy/procedure and operating procedure documentation, identify obsolete documentation, create business policy/procedure and operating procedure documentation for new processes.

The **Corporate Policy Program** is responsible for compliance and facilitates the policy posting process which involves the review and comment process where all policies are submitted through the applicable Risk Management Support Group. The Corporate

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Policy Program provides support for the posting, review and comment process which requires that all corporate policies/procedures be submitted on behalf of the Bank's line of business/EVP for posting, review, and comment. The comment process provides assistance to each of the Bank's line of business/EVP with the dissemination, interpretation, and consultation in the review process of proposed corporate policies and procedures prior to implementation.

The Corporate Policy Program ensures the Business Policy/Procedure and Operating procedures are developed and published with the following guidelines in mind. The Business Policy/Procedure and Operating Procedures must align initiatives with The Bank's environment and as such solicit input from the Risk Management Groups. The Corporate Policy Program will administer the Bank's Policy/Procedure Website, maintains the "central repository" for all The Bank's business policies/procedures and operating procedures, add, update, and delete data in website tables (approvers, division managers, EVP's, AU codes, initiators, etc.). Additionally the Program will manage and maintain "user" access, ensure database integrity, troubleshoot any user or website problems. Other administrative tasks include website development/enhancements, testing and release management. This program ensures a record retention of 6.25 years, manages, monitors and tracks confirmation reports as well as monitors progress and escalates issues to management. Reporting includes roll-up confirmation reporting (business policy/procedures, operating procedures and exception status) to Group Executives as well as status of initiatives and issue escalation.

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Additionally the Program acts as the primary liaison between The Bank's and the Corporate Policy/Compliance Office and provides support to the Risk Management Support Groups for the posting, review and comment process.

The Bank's **Risk Management Support Groups** are responsible to educate line of business/EVP group on Business Policy/Procedure and Operating Procedure processes, administer the process and acts as the key focal point for their assigned line of business/EVP. Additionally the Risk Management group hosts meetings as appropriate to disseminate process and system requirements, to clarify roles and to answer questions, interprets requirements & initiatives, aligns with their line of business/EVP environment, consults on impact of regulations, develops, posts, reviews, implements and communicates business policy/procedures and operating procedures. These groups are also responsible for the validation of website entries, dissemination of all confirmation requests and completion of follow-up with the line of business. This follow-up includes the responsibility to report status on initiatives and escalates issues and maintains record retention. Additionally, this role provides feedback on programs and approves the publishing of new business policies/procedures and operating procedures for their assigned line of business/EVP to the website.

1.1.1. Policy Development, Format, and Implementation

Business policies/procedures and operating procedures are to be developed following established procedure for the criteria, creation, modification, reviewing and approval process. All business policies/procedures and operating procedures must be placed in the required template formats. Business policies/procedures and operating

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procedures are to be developed following procedure established for the implementation, review and communication process.

1.1.2. Confirmation Process:

The purpose of the Business Policy/Procedure Confirmation Process is to ensure that all business policies/procedures for each of The Bank's line of business have been identified and provides the Bank's Group EVP with a current status of compliance regarding the business policies/procedures for their organization to ensure that the Group EVP is aware of the many activities of the reporting groups. Once completed, this confirmation is then rolled-up and provided to the Group Executives for The Bank to confirm that the semi-annual business policy and procedure confirmation process has been completed.

The entire confirmation process is to be completed on a semi-annual basis and each line of business manager must confirm twice each year that their business policies/procedures have been reviewed and updated as required. This confirmation could be manual or could be completed the automated solution proposed to facilitate record keeping and reporting.

The purpose of the Bank's Global Policy/Procedure Confirmation Process is to ensure that all of the lines of business are aware of and are following The Bank's global policies/procedures.

The purpose of the Website User Confirmation is to ensure that all authorized website users have appropriate access to the policy and procedure website. This confirmation is a means to ensure that the users authorized to input/modify business

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policies, business procedures, and operating procedures are current and that they are associated to their applicable business. This confirmation is to be completed on a semi-annual basis each year. This confirmation will be completed via an automated solution.

1.1.3. Exception Process

It is inevitable that in this large organization exceptions to policy will occur for a variety of business reasons. These exceptions need to be tracked and monitored and resolutions documented or exceptions reapproved. The Business Policy/Procedure Exception Process is completed between the semi-annual business policy/procedure confirmations to verify business policy/procedure exceptions are being tracked to resolution. This exception process follow-up is not forwarded out to all lines of business; it is only provided to the lines of business who have confirmed that they have exceptions.

1.1.4. Implementation Activities

The project implementation activities were intended to ensure that there are clear guidelines and roles/responsibilities around the business policies/procedures and operating procedures, to create a “Procedure” within The Bank that provides a step-by-step process for the criteria, creation, modification, reviewing, approval and confirmation of business policies/procedures and operating procedures documents. The project was intended to work with the lines of business to transition all existing business policy/procedures and operating procedures to the new template formats and set realistic achievable timeframes to complete the task and complete an entire clean-up/scrub of the existing website using the standardized criteria of what constitutes a “Business Policy”,

“Business Procedure” and “Operating Procedure”. Documents not fitting this criterion were to be either purged and held for retention purposes or eliminated altogether. This clean-up effort needs to be completed prior to the transition to a tool to ensure that problems of the existing website are not transferred to the tool

1.6. Goal of project

This project will research the requirements of Sarbanes-Oxley as well as the Office of the Comptroller of the Currency. This research will be blended into the requirements of the organization to determine specific processes that should be in place to satisfy requirement of the financial institution. Following the business requirement definition, an existing tool will be evaluated to determine whether or not it is an appropriate mechanism to house and support the recommended processes. The end-result of this project will be the presentation of a proposal to the business on process and a tool to support those processes.

The vision is to create a significantly enhanced policy and procedure environment that meets the following business objectives for The Bank which will ensure Corporate Policy & Compliance Program Office requirements and guidelines are adequately communicated to all The Bank’s business units, establish and maintain a common framework to create, manage, retain and locate The Bank’s business policies, procedures and operating procedures, provide a mechanism to align business procedures to business policies and/or corporate policies. Every business procedure must map to either a business or corporate policy. The project was to provide a recommendation for a web based repository to record and maintain The Bank’s business policies, procedures and

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operating procedures and establish a common retention process for The Bank's business policies, procedures and operating procedures to ensure conformity with corporate guidelines. Finally, the project was to provide consultation, training, and interpretation for The Bank's line of business in regard to corporate/ business policies, procedures and operating procedures.

1.7. Scope of project

This project will attempt to define processes related to policy lifecycle development; including policy initiation and change request; business impact analysis and policy change distribution and notification. These process requirements will be weighed against the capabilities of the Archer Technologies tool already utilized in the organization for appropriateness and feasibility. The final deliverable of this project is a proposal that will provide suggested solutions to the process and tool selection.

This project will not attempt to make any determinations related to content definition, appropriateness of audience of policies. Nor will it attempt to deal with compliance measurement of the policies.

1.8. Challenges to the success of the project

Outstanding Issues/Concerns are related to the location and handling of the existing Business Policies/Procedures and how that will be incorporated for the entire organization. Most importantly the largest challenge to this project was related to executive directive; and whether or not the proposal was submitted to the executive

committee for approval. As one of the major stakeholders in the project announced his pending retirement, it was not clear whether succession planning supported the direction of this project. This is a project that has been discussed by many executives and lines of business over the past few years with little result. The climate of corporate America lends itself to multiple reorganizations in an attempt to better align lines of business to business strategy. The ability of the organization to determine or define the requirement or need is always questionable in the ever-changing needs of the business world. Despite the challenges of ever-changing organization issues, the requirement to comply with Sarbanes-Oxley and the OCC remains.

1.9. Summary

The result of this project was to be a proposal that provided solutions to the business and regulatory requirements in the area of the financial business' need for policy development, deployment, retirement and review. The result of this project actually was a significant scope change which impacted the technology development; a proposal was submitted regarding the actual process requirements and a prototype was developed.

2. Review of literature and research

The direction of the research is as follows; first an attempt to understand the regulators of national financial institutions using a number of related web sites. This was followed by a summary overview of the Sarbanes-Oxley regulation as well as a general understanding of standards that offer guidelines to organizations to present and monitor their internal controls; COSO and COBIT respectively. Then a discussion on what a policy is and how it relates to content versus knowledge management and an articulation of why this project is suitable for a knowledge management solution. The discussion continues with a review of Archer Technologies, its functionality and reputation in the industry of compliance management. Following this is a review of two project management methodologies, the first is the traditional project management approach and the second is the adaptive project framework. Finally a review of various development methodologies was completed to attempt to determine which was potentially easier to manage given the requirements and the tool. Additionally, a few interviews with key players in the project were completed in an attempt to further analyze the project outcome.

2.1. Regulators of Financial Institutions

The organization is a national bank and is governed by the Office of the Comptroller of the Currency (OCC) which is a Bureau of the Treasury Department. According to the OCC web site the OCC supervises the national banking system and requires frequent audits of the banks as well as detailed reporting. The OCC is in charge of licensing any national banks and requires evidence that the bank is in compliance with

numerous rules and regulations such as fraud protection (Office of the Comptroller of the Currency, 2006, Legal and Regulatory Section).

2.2. Sarbanes-Oxley

The Sarbanes-Oxley (SOX) regulation was passed in 2002 and is owned by the Securities and Exchange Commission (SEC). Sarbanes-Oxley existence is in direct response to corporate debacles such as Enron and World Com incidents where organization financial reporting was either deliberately misreported or from lack of education on the part of the high executives. The AICPA offers a brief summary of the regulation (American Institute of Certified Public Accountants, 2006, Summary of Sarbanes-Oxley Act of 2002). Sarbanes-Oxley sets review and reporting standards for publicly held companies. The SOX is managed by a Board of Directors who are responsible directly to the SEC to ensure that the goals of the regulation are met. The meat of the regulation seems to be in Section 404: Managing Assessment of Internal Controls. Each SEC registrant is required to discuss their internal controls in the annual report and be able to show responsible internal control by top level executives. Should these registrants not be in compliance, executives could be imprisoned with severe penalties to the organization and the individual executive.

In an article entitled “Darning SOX: Technology and Corporate Governance Elements of Sarbanes-Oxley”, Daniel Langin discusses the premise of SOX in that it is in place to ensure that top level executives get accurate financial information to be reported to the SEC. It mandates systems, operations and assets, corporate governance and change auditing are managed appropriately to track an organization’s

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financial well being. To do this, an organization is required to put into place policies and practices that ensure that all electronic media and transactions are kept safe and that the history of the transactions remains accurate and not changed due to either error or deliberate misrepresentation. It also attempts to prevent undocumented transactions and instill information security rules.

Langin goes on to review of the main standards that are published in order to support SOX. The first is an accounting standard of the Committee of the Sponsoring Organizations, Treadway Commission (COSO) which addresses five areas of internal controls: control the environment; risk assessment; control activities; information and communication and; monitoring. The second is Control Objectives for Information and Related Technology or COBIT; the COBIT standard is used to address parts of the COSO standard that impact information technology. COBIT offers 34 processes that address four domains within an organization: plan and organize, acquire and implement, deliver and support, monitor and evaluate.

Of the 34 activities COBIT addresses a few are directly related to policy development and deployment within an organization. The first is to demonstrate compliance with external regulations, the second is the development and maintenance policies and procedures, the third is to educate and train users and finally to review the adequacy of these internal controls. As policies, standards, and procedures are developed and deployed the required internal controls are to be propagated throughout the organization and periodically assessed for effectiveness or ongoing adequacy over time (Langin, 2004).

2.3. Policy and Associated Terms

Another definition of policy that may be more reflective of a generic environment is offered by PMOStep (a clearing house for project management ideas) and states that a policy is “a guiding principle designed to influence, decisions, actions, etc. Typically a policy designates a required process or procedure within an organization.” (PMOStep, 2006, Terms and Definitions) The definition in the requirements documents in the project says much the same and offers detailed descriptions of the hierarchy of policies, standards, procedures, etc. These requirements are attached as Exhibit A.

Any policy in a large organization, whether the statement be corporate policy around human resources and how to terminate employees or information security policies on how to install a specific operating system, is simply content or rhetoric stipulating how a company is to do business. Policies and other statements with similar names as standards, and implementation goals are in place so that an organization has leverage around the integrity and facilitation of the business; additionally organizations are able to measure compliance with its policies to provide evidence of good housekeeping to many audit and regulatory agencies. Many policies in place in publicly held organizations are published to meet regulatory requirements based on the recent Sarbanes-Oxley Act or are based on executive mandates. Most large organizations are subjected to internal and third-party audits based on these policies. (American Institute of Certified Public Accountants, 2006, Summary of Sarbanes-Oxley Act of 2002). Therefore it is imperative that not only is a policy published and available to the intended audience but that it is changed on an as-needed basis to keep up with ever-changing regulations and executive strategy changes. These requirements to meet regulatory standards require that certain

business processes be in place to support, track and report on the changes in process and the impact of those changes.

Some of the business processes that need to be addressed include the development, review and published form of a policy. Additionally, the business needs to employ mechanisms to facilitate requests to change certain policies for specific reasons as well as an impact analysis tool for pending changes. So, why would an organization not invest in a simple content management system that would address the distribution and creation of the policy and why would an organization evaluate a knowledge management system and are the two systems very different from each other.

2.4. Content Management vs. Knowledge Management

So then, a policy is simply rhetoric or content. Alan Jock's article "Knowledge vs. Content Management" suggests that content management is only a part of Knowledge management and refers to document control or the process of managing the development, publishing, version control and archival of content. Knowledge Management is more about where and how employees of an organization utilize the content. Content Management is very different from Knowledge Management, in fact, Sarbanes-Oxley requires that content in the form of policies not only exist, but be evidenced in the actions and confirmations of the various lines of business (Jock, 2004).

Susan Conway and Char Sligar discuss Microsoft's approach to Knowledge Management in "Unlocking Knowledge Assets". Sharing information, or knowledge, is one way an organization meets its business goals. It is in the reuse of knowledge and the ability to map to other points of information where the value enters the equation. As

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knowledge is reused the experience and knowledge level of an organization as a whole strengthens. Content management to Conway and Sligar is the management and development of unique pieces of knowledge assets which could be documents, diagrams or some other artifact. Conway and Sligar also discuss the difficulty of measuring the actual value of a knowledge management system and suggest a KM Value assessment framework. The initial point made is that the company sets its strategy and supports it with performance goals. These goals are measurable and tangible. The goals are supported by activities which are often enabled by tangible (machinery, etc.) or intangible assets such as employees and utilization of computers. The goals can be measured by the output of the activities. Where the challenge is in determining what behaviors (such as working in teams or reusing some technology) are utilized while performing the activities. These behaviors and how they are measured allows an organization to enable behaviors that positively support the goals of the organization (Conway and Sligar, 2002).

In order to implement a knowledge management system around policy implementation and policy lifecycle management, it was necessary to take a step back and reconcile the notion of a policy and why it would be beneficial to house policy in a Knowledge Management system. It appears that the research should initially be based on content management and how both through research and observation how a content management system can employed to support or integrate with a knowledge management system of a large organization.

2.5. Benefits of a Knowledge Management Solution in Policy Management

To speak to the benefit of a knowledge management solution that manages a policy life cycle development (for any kind of policy type) would be threefold. The first is that content provides guidelines for individuals to craft their business and departments. This content is necessary to support compliance in any audit, around when the content is validated by specific regulatory content (as it should be) the policy is established as credible and worth adhering to within the corporation. Secondly, the world of policy management has changed from a very static environment to one that is required to be dynamic responding to the needs of the business as well as external requirements. Gone are the days when an organization can publish a 200-page document that sits in every employee's desk. Thirdly, the content of any policy needs to be not only accessible to each employee but it is important for employees to 'engage' with the content or rather to be interested enough in the content to evaluate, critique and respond to the content. This is a change from past base content management; employees who interact with content tend to take pride and a sense ownership in their organization. These employees have a fundamental understanding of why the content is important to the organization, thus, in the case of policies, are more likely to work in compliance with the policies and share their knowledge with others..

The statements within policy itself are not knowledge but simply statements. Knowledge evolves when these statements are interpreted and put into action. It is desirable for an organization to facilitate this knowledge through the use of discussion forums and best practice discussions; additionally, it is desirable that an organization get

subject matter expert input and interaction on any policy around its processes and any decision process.

2.6. Content Management versus Knowledge Management

When one researches web sites related to content management and knowledge management, it appears that content management involves the life cycle management of content (similar to policies) in the process to create, update, publish, translate, archive and retire. Managing content through these phases requires a multitude of individuals with unique roles such as reviewer, editor, approver and so on.

James Robertson's article, "Where is the Knowledge in a Content Management System", adds that it is not the content itself that provides knowledge to an organization but the knowledge is found in the processes that support the content management system. He views a Content Management System (CMS) as an 'enabler' of knowledge and stresses that if content is easily accessible by the organization and written in a way that is understandable and easily kept up to date, then the content becomes knowledge available to the organization. An example of this is in the policy world. Policies themselves have been historically static documents not changing without an inordinate effort on the part of the authors. Often content of this type is not at all useful to the organization; it is typically out of date, any changes that are in place to be addressing required changes are frequently in review and because of the nature of the content housed in a document, it is difficult to locate specific information required to answer specific questions. One option is to take these monolithic documents and break them down into statements where each statement relates to a policy as a whole but addresses a specific

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topic. It would be important to facilitate this break out of policy statements in such a way that an entire policy could be reassembled as needed. As the information is transformed, an organization is then able to determine any gaps in the knowledge as it relates to policy requirements and determine the best way to present the information. There are often different user requirements in a policy environment related to either specific topics i.e. what is the encryption policy requirement or what does the information security policy look like for the entire corporation. These two requirements are based on the same information but need to be presented in entirely different manners.

Robertson continues to address the knowledge within content management by suggesting that subject matter experts be encouraged to share their ‘best practice’ ideas and process of knowledge. As this knowledge is housed within the content management system it is traceable to an owner which gives a user a point of contact for information. Additionally, the author points out that if the specific content is identified with an ‘owner’ the owner is seen as an expert in the particular field of the content which begins to build an experts list often utilized in a Knowledge Management system.

Robertson continues in his discussion to ponder the benefits of metadata. This metadata can be used to identify relationships between individual pieces of data, such as a policy statement to a regulatory requirement or a policy statement to a policy creator or owner. This cross-reference of information leads to further formulation of corporate taxonomies or topics of association. Additionally, search results of a tool utilizing metadata then are able to provide related issues based on the classification of information and information owners.

Another feature of both Knowledge Management Systems and CMS is workflow functionality. Behind each policy development process is an associated approval process or as Robertson points out a flow of the data through the organization. Using a workflow mechanism provides the ability to emulate the flow of data electronically. These workflow rules should be able to change quickly and easily as the organization changes. Workflow is the ability to move content through various stages to satisfy a step in a business process. Some of these requirements in policy development are related to review and approval of the content. Each particular review stage should have the ability to identify any comments and any changes made at any particular point in the process or stage. Additionally, the workflow can be utilized to provide evidence of approval and review as well as the ability to report on the status of an item in workflow and the associated discussions around the development of the content. As workflow is set up and information collected, the supporting documentation provides an extra level of knowledge to the content regarding the thought process in the development of the content, again the subject matter experts and owners of the information. This is beyond simple content management and lends itself as yet another layer in the knowledge management base of the organization.

If the system is utilized by the entire organization and if there has been some success in engaging the appropriate employees in the development and implementation of the policies, elements such as discussion forums and usage mechanisms are priceless to determine the future direction of the tool. Robertson suggests that usage stats, search engine logs can indicate the requirements and to some extent the corporate language of

the organization which is helpful in any necessary rewrites of the content to address specific taxonomies (Robertson, 2003).

Any content or knowledge system must be used by employees within the organization. One facilitator of use is that it must be easy to use and provide an intuitive interface. Should users find a system cumbersome and slow, regardless of how much good information is available, they will not be disposed to utilize the system. A knowledge management system evolves as it is used, as users begin to provide feedback and add knowledge, and as the administrators begin to determine tweaks and future enhancements that build on the existing system and provide more value to the organization.

2.7. Archer Technologies

Archer Technologies was founded in October of 2000 as to address organizational needs for Enterprise Security and Compliance Management in software solutions. The overall suite of Archer tools addresses policy management, threat management, asset management, risk management, incident management, vendor management, SOX compliance management. Each of the solutions is customizable and the framework is developed to allow customers to either use the solution ‘out of the box’ or to customize the solution or simply build one from scratch. In October 2003 the framework achieved the BITS Tested Mark which certifies that the software was tested by BITS to ensure it was safe to use within financial institutions. The BITS criteria covers a number of areas related to data and system integrity, documentation, security administration and functionality. Since 2003 Archer Technologies has won a number of

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awards from the SC Magazine most notably “Best Policy Management Tool” and “Best Security Solution for Government.”

The portion of the framework that will be utilized in the prototype development is the functionality in the Policy Management tool. While the module set will be built completely from the beginning it is important to review the functionality that the Policy process will rely on. This tool will allow users to author and review new policies using wizard driven events, import existing policies, provide cross linking functionality to other relevant pieces of information such as Industry Standards and regulations and will use workflow features to maintain version information, management approval and a history of the development process. Users will be able to view policies in an understandable manner and will be allowed to receive alerts on any pending policy changes. Other features that will be important in the policy development process are listed below:

- Access Control (Role Based Security)
- Users; Groups; Application; Modules; records and field level permissions
- Alerts
- Notifications based on selected criteria
- Ability to customize the overall look of the application: colors, fonts, etc.
- Discussion Forums
- Structured environment to maintain and archive comments
- Simple one word searches to complex cross module searches
- Reporting Content Management

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- Save these searches as personalized or global reports (email links to reports)
- Cross Referencing
- Content can cross link to another piece of content i.e. Policy to Regulatory

Synopsis

- Open Architecture
- Ability to integrate with most external systems

(Archer Technologies, 2006).

2.8. Development Methodologies

The Archer tool lends itself very well to rapid development techniques. The methodology the team chose to utilize was the Joint Application Development or JAD technique where a set of meetings are designed and facilitated to develop the initial product.

JAD session participants have various roles and responsibilities. The first is a facilitator who, doesn't necessarily know the organization or the product, but is familiar with the JAD process. The rest are either representatives from the business or developers. The idea is that the two areas are responsible for coming up with a solution but cannot work isolated from each other.

During the session the roles and responsibilities are articulated as well as the potential system requirements and a review of the current solution. System requirements are documented and models and prototypes are developed.

Some criticisms around the JAD methodology are related to the number of people involved in the process. If there are too many people attending the session, the session gets bogged down and very slow; however it seems that users who are involved in the development of a system tend to take ownership of the tool and generally the results are mutually beneficial.

2.9. Related to Project Management

The chosen method of project management was the traditional project methodology; which appeared to be the tool of choice for the organization. The definition phase produced a problem definition document, identified requirements, determined the development methodology and identified risk. The planning phase produced a project plan and resource requirements. As the plan was executed, 3 JAD sessions were scheduled and attended. The project was tracked using weekly status meetings, monitoring the project plan and budget. As the project was closed out it should have ended with client approval, installation of deliverables and proper documentation.

An alternative style of project management was reviewed, namely that of the Adaptive Project Framework as discussed by Robert Wysocki in *Effective Project Management*. This is an iterative project management approach with 5 general phases.

The first is a Version Scope which states the opportunity and details the objectives. It also places priority on time, cost, resources, scope, quality which is useful for later decision making. Additionally, the functional requirements are created and prioritized along with a high level work break down structure. Secondly is a 'Cycle Plan' which develops the cycle build plan. The third is the cycle build where the build is

scheduled, and created, as well as monitored and adjusted. Following the build is a client checkpoint where the customer reviews the work and reports any issues. The process then reverts to the cycle plan, then cycle build and then checkpoint for as many times as necessary until the project is agreed to be complete. The important thing to note is that the cycle build is for a limited time and when the time is up, anything that may be left undone is scheduled into the next cycle. At each cycle plan, the priority of the functionality development must be reviewed (Wysocki, 2003, p).

2.10. Summary of what is known and unknown about the project topic

The project was completed at the end of 2005 and the outcome is a known factor. Some of the greater questions relate to what went wrong and how the project could have been improved. The analysis in Chapter 5 attempts to reconcile the existing issues.

2.11. Contribution potential of this project

This project must ultimately be successful in some form. The organization has many disparate sources of policy, controls and procedure. It is very difficult to determine which is the voice of authority and very difficult to determine whether or not the organization is, in fact, in compliance with the regulators. Should this project come to a successful conclusion, all users in the organization will have access to a set of knowledge where the status of policy development is available, status of approvals, notifications of pending and existing changes as well as discussion forums can be utilized to enhance the knowledge of all employees.

3. Chapter 3: Project Approach

3.1. Project Management Approach

The organization utilizes a version of the traditional project management approach that is referred to as Enterprise Project Management. There are 5 phases of the project management which comprise of the Ideation phase is where the project is given a charter or an overall objective; an Initiation phase results in the project definition document; the Planning phase involves the business requirements definition, success factors, risk assessment, a test plan, a communication plan, an implementation plan, project plan, resource plan, roles and responsibilities and status reporting plan. The Execution phase involves the functional system design, the project readiness review, requirements traceability and an architecture specification. Closing the project involves grading the project against corporate standards.

As the project initiated a high level plan including 3 phases was developed. To prepare for the 3 phases of work, the project group was introduced to Corporate and Business Policies and Procedures, regular meetings of the team and other sub-teams were established and the Archer Technologies tool was introduced to the team; this is the tool which is currently in place and housing Information Security policies in the organization and was to be considered as the proposed solution for the Policy and Procedure solution.

A first phase was envisioned to develop the process where the policy life cycle management would be facilitated. This process phase additionally included the formatting of the vision of the project, formal definitions of what policies would be managed as well as what the processes around Corporate, Business Policy and Procedure development, confirmation of policy implementation and policy exception processes

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would be defined. Templates for the policies, procedures were also to be determined. The end of the first phase would result in a final draft for review and approval of the project team and corporate stakeholders.

The second phase, or the Implementation phase intended to clean up the existing policies and procedures that were housed on an obsolete web site. The clean up effort requirement established that a temporary clean up tool was needed to manage the effort; this temporary tool was managed as a small project within the overall project with steps included to analyze, complete, review and accept requirements as well as complete a prototype, develop the tool, and manage training and testing of the product. Following the completion of the temporary tool, the team intended to complete the clean up of the existing documents and prepare the content to be moved to a new policy and procedure repository.

The policy and procedure repository, the subject of this paper, was a third phase where the actual repository would be developed for proposal. This repository was to be developed to support the predefined requirements of the processes and templates from the first phase. Additionally, the repository would support policy reporting and archival requirements.

The entire project was to be complete when the proposal for the policy procedure repository was presented for executive review and approval.

3.2. Ideation Phase

The Ideation phase is new to the organization and was not formally implemented with this project although a project vision was articulated.

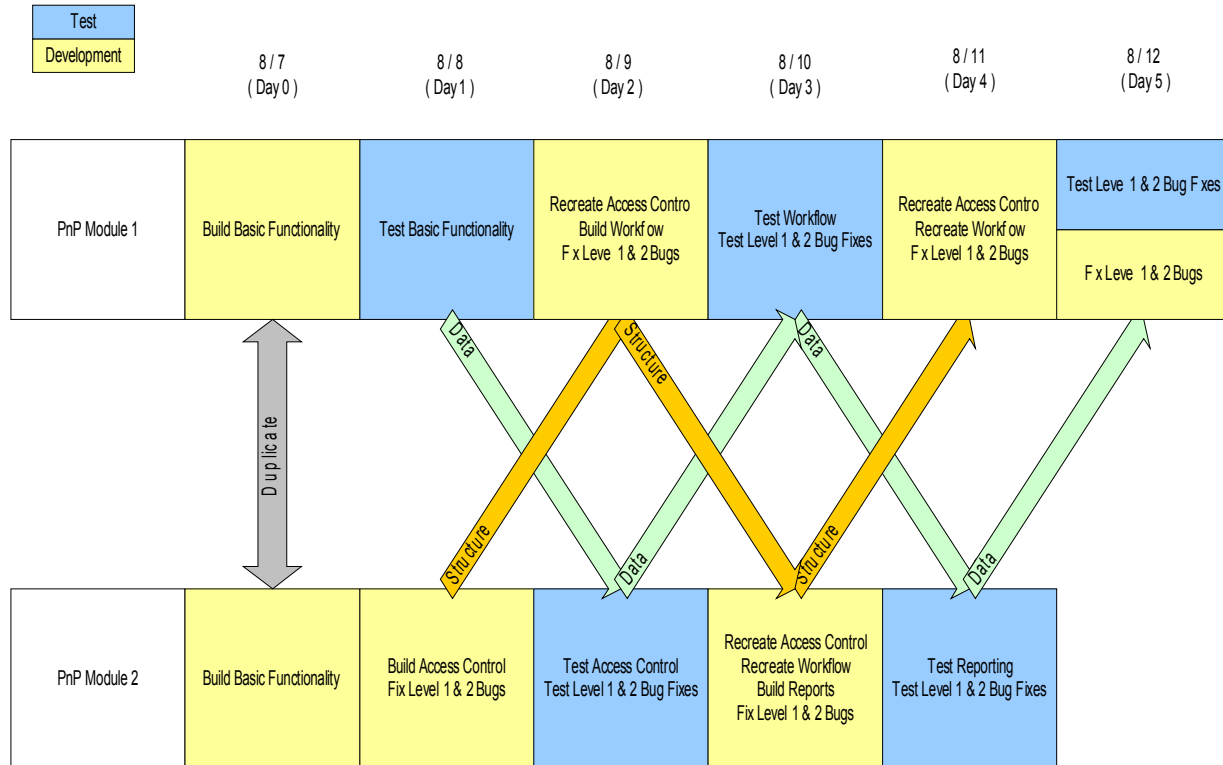
3.3. Initiation Phase

A single requirements document was generated rather than a separate project definition document and a business requirements document. The requirements document has been attached as Exhibit A. The project overview indicates that a policy and procedure tool is required to support a centralized repository to maintain the corporate and business policies and procedures of the Bank. A high-level overview of the requirements detail a tool that has enhanced searching, notification functionality, record retention and provide an easy to use environment for the user. The timeline for the project was to last from March, 2005 through December, 2005. The requirements document details the roles and responsibilities and permissions, defines fields to be created in the tool, discusses data conversion requirements from the temporary tool created previously, defines reporting requirements, workflow requirements to support the development process and other processes and covers a records retention requirement for the policies. Additionally a risk assessment was completed and is attached as Exhibit B. At the top of the risk document is that no funding had been approved for this project beyond 2005.

3.4. Planning Phase

The decision was made to attempt to utilize the Joint Application Design methodology (JAD). The scope of the project was to be completed in 4 1 week-long sessions; the first would be a requirements session and the remaining 3 sessions would be JAD sessions. Below is a diagram of the planned activities for each of the JAD sessions.

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Prior to the JAD the basic functionality of each module would be created. On Monday the group would test the basic functionality with specific test scripts they had already created while the developers worked on additional coding. On Tuesday the group would test the new coding from the previous afternoon and the coders would fix any reported bugs (with a high severity level) and the process would continue through Friday.

A requirements document was generated for the entire project along with a risk evaluation at the outset of the JAD development. Weekly meetings were set up for the team to review outstanding issues and new items of discussion. Test scripts were created by the testing team for use in the pending JAD sessions. Additionally, a project plan and funding plan were also generated. Documentation was to be placed on the corporate site for project documentation as well as shared with the team.

3.5. Execution Phase

As the project was executed, the enterprise architecture group approved of the design and a functional design document was created along with basic screen shots. The 3 week-long JAD sessions took place and the tool evolved. The proposed tool was developed using the Archer Technologies framework and comprised of a set of modules within the framework that housed the required fields with the required permissions. Additionally, preliminary development was completed to support executive-level reporting and more granular level reporting capabilities. A proposal and initial development was also completed to manage the record retention requirements.

3.6. Closing Phase

The project was to have ended with a proposed solution for the policy and procedure repository for the organization followed by project review and closing documentation.

3.7. Resource requirements

Funding was required for 2 contract developers in addition to the team of 2 application developers. Additionally, a project manager was required for the entire project as was funding for travel for the pending JAD sessions. One new PC needed to be purchased for a developer along with the associated software.

3.8. Outcomes and Summary

The prototype for the policy and procedure framework was completed with no outstanding issues. However, due to organizational issues and redirection of the project team, the proposed solution was not formalized. The project ended with a proposal of the processes that support policy life cycle development. However, the work remains and will hopefully be unearthed with another project.

4. Chapter 4: Project History

4.1. How the project began

The outset of the project was really the result of the Americans with Disabilities Act. The existing web site did not meet the usability standards of the Bank and was going to be shut down. It came to light that many of the documents on the web site were not current, nor were many of them policies. The initial thought for this project was to have Archer do a mass import of all the documents into the Archer Framework which is named Policyworks internally.

At the same time, other departments in the organization were reviewing the actual process of developing and deploying policy and procedures. Many efforts were underway to articulate a process that would be beneficial to the whole Bank and ultimately centralize many of the policy repositories. As the processes were being discussed so were the formats of the policies. The effort to standardize all documents into a same template was underway. The project team then began to plan not to move all the documents but to have the documents cleaned up and reformatted to fit the new template; and as this thought process transpired, the team decided that since all of the documents needed to be cleaned up, they should ultimately reside within the Archer framework rather than simply attachments.

In addition to corporate initiatives to streamline and standardize the policy development and deployment, an executive directive singled out another team to research and present the best method and alternatives to policy development and deployment. It wasn't until both projects were underway that one found out about the other and they began to investigate the possibility of combining the projects. There was nothing that

could be done other than try to salvage pieces of the project that could be addressed together. Ultimately, the project took a huge swing from developing a solution to determining what the best processes were to manage these policies; this was not only in response to the executive directive but to pending organizational changes. The team lost momentum as they lost someone to manage the decision making process.

4.2. How the project was managed

The project was managed by a contracted project manager who did his best to keep up with the changing environment at the Bank. However, documentation was not kept up-to-date, nor was it filed in the required central location. The business unit that sponsored the project had a number of priorities to meet, the first was moving the documentation off of the obsolete web site, the second was attempting to understand the processes that were being developed to manage policies and the third, and most volatile, was attempting to manage the changes required by the executive directive as well as the looming organizational changes. As the organizational changes approached, the team began to lose morale and lost the focus on the tool.

The technology team had not experienced a JAD model in the past and was pleasantly surprised at how well it worked. The tool lends itself to rapid changes and development on the fly, it is extremely easy to make a change to a field or change where it displays on the screen. However, that ease of development may have hindered the JAD sessions in that it was very easy to lose focus on the task at hand; the days had a tendency to slip into discussions on process rather than the solution. Perhaps this is where it

became evident that the project needed to focus on the process as there seemed to be a number of conflicting requirements.

The JAD sessions themselves were successful, following the three sessions, the team was able to demonstrate a solid prototype to any interested business units.

4.3. Significant events/milestones in the project

The final approval of the requirements document was a large milestone; from there the team could move on to functional design and other project deliverables. The JAD sessions were also each a significant milestone in that users were now able to see the product grow and evolve which lent itself, initially to an enthusiastic group.

Another significant event was the change in direction of the project; due to the change in organization as well as the fact that the funding ran out at the end of the year, the business decided to focus solely on process and not on the tool for development.

4.4. Changes to the project plan

Significant changes to the project plan should have occurred as the executive directive began to be taken into account. The organization had been notified that the executive sponsor for this repository was going to retire; it was felt that the direction of the project was now unclear. There was no one who would be willing to commit to the acceptance of the proposed processes and templates. Significant time was now required to focus on the process changes or evaluation which was not accounted for in the project plan. Additionally the JAD sessions caused a large change to the project plan; the project

manager did not understand the concept of iterative development utilizing the sessions and the technology group needed to revamp the plan.

In addition the project depended on a vendor release (version 3.5) to manage some of the requirements and extended reporting capabilities. The vendor release was significantly late and the features that depended on the release were not implemented. The project timeline should have been changed at this time, with funding and resources to reflect the delay.

4.5. Evaluation of whether or not the project met project goals

Even though the project did not end on a positive note, it did meet many of its goals. One goal was the policy and procedure prototype and that certainly was complete. The tool was able to support the requirements for the template and supporting processes around exception and policy confirmation management. Additionally, the customized reporting that was developed met and exceeded the stated requirements. The Archer tool was evaluated and deemed appropriate to the required processes. Finally, the archival process would definitely maintain accurate archives of the policies.

However, one of the project goals was to develop the proposal to house these policies and procedures. This proposal was not completed due to the executive directive change; the team chose to focus on providing a thorough analysis of the processes supporting the policy and procedure development within the organization rather than the tool itself. Although funding is lacking at present, the tool and the research on the proposal to house these policies and procedures remains available when executive management is available.

4.6. Interviews

Lessons learned interviews were conducted with the program manager who was responsible for the project manager, the technical lead and the lead business representative. All three were in agreement that the retirement of the executive stakeholder led to decisions to be withheld on overall process and template definitions; this resulted into the inability for project stakeholders to give approval to the prototype and the project team began to focus strictly on the processes in place.

The technical lead agreed that the traditional project methodology did not support the development methodology fully and suggested that other project methodologies would be able to support the iterative development approach more efficiently. The business representative felt that once the project initiated, that other lines of businesses involved began to interject other priorities. She says that the project definition document should not have been completed until all these areas comprised of the Governance group, the Operations group and the Policy group joined to discuss requirements.

Overall the group felt that the technical team successfully completed their objective in that a prototype supporting the requirements was complete and successful. It was the lack of senior stakeholder commitment that leaves development not implemented.

5. Chapter 5: Project Analysis and Next Steps

5.1. Discussion of what went right and what went wrong in the project

Much of what went wrong in the project was not avoidable. The organization went through a large structure change; which naturally leads to process changes. An executive, determined, to solve the problem, once and for all, essentially had a second side project that began to run in tandem and opposite to the initial project approach. As a rule, the majority of the team was inexperienced with software development techniques and JAD sessions. Two of the developers were almost brand new to the framework itself. This inexperience most likely caused lags in the development process and lack of focus in the facilitated meetings. The funding for the project was structured so that it ran out at the end of the year, whether or not the project was complete; the impression was that rather than cause a failed project a change of direction would be feasible and provide some deliverables.

The things that went right on the project will probably have a long-term value. The development team now has some solid experience and understanding of the JAD process which will be of value for future projects. Additionally, the prototype that was developed along with some custom coding around archival and reporting still exists. There is still opportunity for the development to meet the requirements of future policy management processes or perhaps another content-related process.

5.2. Analysis of project process

The overall management of the project was disjointed at best. Documents were not updated regularly nor were all appropriate documents completed for a complete project. The scope of this project grew extensively from inception to project definition; the magnitude of these changes was not communicated adequately nor was resource needs fully considered in light of the pending development. When the group decided to convert the documents to records in the framework, the hardware environment should have been examined to determine if the processing was adequate. Hardware was required to manage the existing processes along with the other processes already existing in the system.

5.3. Roles and Responsibilities

While it was not possible to stop the momentum from the executive directive, it would have been helpful to know about the changes to the scope before they occurred. Since the change in direction came from the ‘top’, the group was obligated to wait and see which way the decisions went before proceeding with the development within the Archer framework.

5.4. Team Members

The JAD was facilitated by an internal team member with no hands-on experience in the JAD development life cycle. The team members were inexperienced not only at JAD development but with the overall software lifecycle development. Additionally, it was generally felt that there were far too many members of the overall

team; we found that there were many competing motivations as well as far too many discussions related to process and philosophy. Toward the end of the project, due to the pending reorganization and executive directive, no team member was enabled to make appropriate decisions.

5.5. Traditional Project Approach vs. Adaptive Project Framework

The traditional project approach did not work seamlessly with the Joint Application Development methodology. The traditional approach is very linear it was difficult to articulate the iterative development methodology within the parameters of this approach.

The Adaptive Project Framework methodology is more appropriate to the JAD iterative development schedule. This framework allows for change while still managing constants such as specific time and budget constraints.

Deliverables from the APF would include from the Version Scope phase, a project overview statement, conditions of satisfaction, a priority weighting of cost, time, or quality, priority of functional requirements and a high-level WBS. The three stages of Cycle Plan, Cycle Build and Client Checkpoint would work well with JAD session planning and facilitation. Allowing for multiple cycles, would facilitate reevaluation of functional priority as well as evaluation of small pieces of work that will continually build on each other. Specified times for development ensures that time and financial resources are managed; an extremely important factor to the organization.

5.6. Development Approach

Development processes should be different for different for different types of Information Systems. This is dependent on the complexity and scope of the system. If the system is relatively simple, if the system has not interact with other systems and will not be managed by anyone other than that employee or one or two employees then it is appropriate for the development to be End-User development. Use of application packages needs to be considered very carefully. If there is no customization required, such as using Word to process simple templates then it is appropriate to deploy a package and associated files for an organization to utilize. However, if there is customization required to a package, it is easy to make the decision that the package can be deployed and managed by users on an as-needed basis but the scope and audience of the package must be evaluated. In the case of the Archer framework, adequate analysis was completed and the customization required of the application was feasible. Additionally, if the data integrates with other data and is viewed and managed by many individuals within the organization, it is necessary to use a prototype method of deployment. The more users a system has is cause for more opportunity for miscommunication of requirements and project definition. It is beneficial to have the users participate in the definition of requirements and development. Traditional system development, which uses the fixed sequence of steps, has many valuable aspects which include complete documentation and user acceptance; however, this approach may not be suited to an iterative environment. It may be useful to combine an adaptive project framework with an iterative approach that mitigates project risk throughout the development cycle; utilizing JAD sessions involves

the users in requirement definition and ensuring the communication of these requirements is successful.

5.7. Resource Requirements

It came to light that one of the major issues fundamentally was the hardware environment of the existing applications; should have been addressed initially or at least funding approved earlier on. Additionally, it was decided that an internal team member should facilitate the JAD sessions; this team member was not a seasoned facilitator; the JAD sessions tended to lean toward process discussion especially as the direction of the organization changed.

5.8. Project Dependencies

Additionally, many of the requirements were dependent on a new version of the framework, 3.5. The vendor was significantly late in delivering 3.5 so proposed development would not have been able to be completed until 2006. Many of the functional requirements specified by the project were wholly dependent on the new release. Should the project have continued to pursue a solution, the timeline would have been longer than proposed due to the vendor. Change Management processes would have had to be implemented to change the length of the project as well as extend the funding over the year end.

5.9. Change Management Process

The project team didn't fully understand when the scope changed or why. The team heard that the focus of the project was going to change from the tool to the process development; no change was published nor was the technical team actively involved in the project going forward.

5.10. Risk Management

Risk is one element of the development process that was not given enough consideration. Every project has some level of risk, some greater than others, and this needs to be evaluated in conjunction with deciding the type of development process required.

Risk management was not continually addressed throughout the process. There should have been regular review of the risk list at least prior to each pending JAD session to determine if any of the high priority risks had been mitigated, existing risks had become greater priority or if new risks existed. Clearly, one of the risks that should have been managed to was the pending reorganization and executive directive although it is unknown how these may have been mitigated.

5.11. Communication

The weekly update meetings were effective especially relating to issue resolution. The project manager kept a working issues list. Each issue had a responsible person who was to provide an update as to the status of the issue or whether or not it had

been resolved. The project manager was diligent and listened carefully for new issues that required management. The format of the meetings was also informative, a review of the project status as well as existing progress developments were consistently addressed. It would perhaps have been effective to implement some form of requirement traceability where particular activities were directly related to a requirement.

5.12. Quality Assurance

The quality of the solution to be delivered was adequate; the module set was understood to be a prototype that would require further development. The prototype was adequate to communicate to other groups how the functionality would be implemented.

Prior to discussing how quality is measured and maintained for a project it is necessary to determine exactly what the term quality in relation to a product means. In *On Time Within Budget*, E.M. Bennatan refers to a paper by Wesselius and Ververs (1990) whereby the term quality is given three measurements: the first is objective and assessable and directly related to the requirements of the project; the second is subjective and assessable which refers to the extent user expectations are met; and the third is non-assessable where a system responds as expected in situations that have not been expected. It is desirable to move as many of the subjective and non-assessable characteristics to the first category which is measurable. Although this example is speaking of quality of software development projects, it is advantageous in all projects that the measures of quality be defined and in some way measurable and directly corresponds to the stated project requirements. This type of planning avoids many conflicts and ambiguity as the project proceeds.

Overall quality management of a project involves three processes; quality planning, quality assurance and quality control. Once the quality planning is completed and the requirements of a project are taken into account and attempt is made to measure and determine the success of the tasks in relationship to the requirements (both objective and subjective) the next process is quality assurance.

The process of quality assurance is an ongoing effort to ensure that a project is on target meeting requirements. What must be taken into account are the results of the measurements developed in the quality planning phase and these weighed against the stated requirements. These results lead to recommendations for quality improvement. Frequently the measurements of quality can be built into the work breakdown structure by defining checklists and testing procedures that line up with the appropriate milestones. Quality improvement recommendations may result in initiating the change request process to implement the change (Bennetan, 2000, pp 170-175).

It is important to not only review the criteria for quality and associated measurements but to review the assurance plan itself including content and implementation to evaluate for such changes as contracts, new standards, changes in documentation, stakeholders and team members, etc.

5.13. Definition of next steps

There continues to be a need for a centralize policy and procedure repository. The team has been asked to participate in another project which has been expanded to a number of subprojects which include process definition (yet again), roles and responsibilities, and technology selection. The team anticipates that it will be able to

demonstrate the existing prototype with a few minor changes to reflect the change in organization and direction.

5.14. Conclusion and recommendations

As the new projects kick off, existing work should be taken into consideration. It will be the responsibility of the new team to envision the potential of the development as it pertains to the redefined project. The existing work should be changed to incorporate the newly installed Archer release that addresses significant usability enhancements, performance improvements and functionality changes. Archer is currently working on another release that will implement an N-tier solution and allow a distributed processing environment. Although this is desirable functionality, it is recommended that the existing solution be used to scope and plan for the policy and procedure product to eliminate any vendor dependencies.

Should the new project determine that the Policyworks solution should be utilized, a sub-project needs to be implemented that will expand resources and address the risks outright especially hardware related. At a minimum, 2 new web servers need to be added to the environment and load-balancing utilized for web server requests.

As the new project unfolds, the team should be made aware of entire methodology and deliverable requirements prior to the kickoff of the project. The project of 2006 took over 5 months to develop and approve the requirements; should requirement definition take that much time, the project start must reflect that timeframe. The project documentation needs to be regularly and thoroughly updated. Methodology should be

adhered to rather than adjusted as the project progresses; this will allow for a complete lesson's learned and reflection by all teams involved.

5.15. Summary

The need for a centralized policy and procedure repository has not changed. The Archer framework is a potential solution that should be carefully evaluated not only because of the flexible framework to manage policies and procedures, but because of the additional facets of the application, such as the SOX compliance management, risk management and other pieces that will add knowledge value.

Once again, we return to this notion of knowledge versus information. If an organization has one place to go to verify procedures that have been linked to policies which are in turn linked to industry best practices and regulations; the organization as a whole is empowered to make educated decisions and correct implementations during the course of doing business.

The project path for this type of collaborative tool needs to be flexible and needs to engage the customer in order to ensure changing organizational environments and requirement changes are satisfied. It also needs to provide a framework for creation of company standards to ensure compliance and quality and ensure that company decision makers have control of the processes and are aware of the status of all processes.

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Exhibit A: Project Requirements Document

1. PROJECT OVERVIEW

Our current policy and procedure repository application within the Bank is no longer meeting our business needs. The Bank's Risk Management organization requires a robust repository tool that can provide significantly enhanced search capabilities, event triggering, record retention and a user friendly and more intuitive design. This new tool must be scalable to meet future business needs. The Bank's strategy suggests that we should continue to utilize a centralized repository to maintain the corporate and business policies and procedures of the Bank.

2. DOCUMENT PURPOSE

The purpose of this document is to establish a common understanding of the detailed user requirements for the Policy and Procedure Repository and gain approval from all appropriate parties.

3. BUSINESS OBJECTIVES

This project seeks to create a significantly enhanced central repository of policy and procedure information that meets the following business objectives:

3.1 Provide users with an accessible and user-friendly repository to maintain their Corporate and Business Policies and Business Procedures within the Bank.

3.2 Provide a tool that supports a business methodology to increase standardization of policy and procedure documentation, retention and maintenance.

3.3 The tool will align with the corporate policy process, including automation of applicable workflow items such as impact assessment, review, and approval.

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3.4 Repository must comply with the Bank Intranet and Website Standards as outlined in the Bank Communications Business Policy.

3.5 Improve productivity through ease of data collection and retrieval. The goal is to be able to locate policies and procedures in 3 clicks or less.

3.6 Provide event triggering workflow to tools outside of the Policy and Procedure Repository.

3.7 Provide secure, real-time, web services for Operations to access policies, procedures, desk procedures, and relationships among these items given a variety of input parameters (Document Id, User-id for authorization, Effective Date, etc.). Additionally, Operations will require notification when any of these changes.

3.8 Provide enhanced security to restrict the modification/deletion/viewing of policies and procedures to individuals based on user access and document security classification.

3.9 Repository must be developed to support data retention for 6.25 years and support user driven review for the removal of "inactive" and/or "expired" policy and procedure documents based upon calculated expiration dates. This process must be automated for "policy owner/ initiator" notifications and allow manual interventions for changing retention periods.

3.10 Improve data retention by utilizing centralized storage.

3.11 Manage Policy and Procedure changes through a workflow process.

Notification and triggers must be present, including triggers/notifications to external systems. Ensure that RCBP is included in the process to review new and updated domain policies and guidebooks prior to posting.

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3.12 Facilitate Policy Lifecycle Management leveraging appropriate modules. Revisions to Corporate Policies and Business Policies and Procedure will be managed through workflow. The extent of review and/or workflow path will be determined by whether the change is deemed significant or non-significant.

3.13 Consistently apply and standardize the use of terminology.

3.14 Link/point Policies and Procedures to each other; ability to align Corporate Policies to Business Policies and Procedures.

3.15 Provide Help functionality assistance at the data field level.

3.16 Load/attach documents to their appropriate records in mass (supports implementation activities).

3.17 Provide standard and ad-hoc reporting, as well as predefined views for the un-trained General User/guest.

3.18 Support an automated validation/confirmation process.

4. PROJECT PARTNERS

To yield the greatest benefit for customers and users, the Bank Risk Management should partner with several lines of business and technical support/development teams. The team supporting this project should include the business and technical partners listed below.

4.1 Policy/Procedure Repository Business Partners

Audit

Various Lines-Of-Business Representatives

The Bank Governance

Operations

4.2 Vendor Technical Partners

- Internal Partners:

Web Technology Services

Enterprise Architecture

Network Support

Policyworks

- External Partners:

Archer Technologies

5. PROJECT ASSUMPTIONS

The Policy and Procedure Repository project team is operating under the following assumptions (some of these assumptions are further detailed within section 7 – Application Requirements):

5.1 Application needs to be available to users across the organization through web-based technology. Active directory will be the primary domain and users will be added to The Policy and Procedure Repository automatically as they access the system. Users from other domains will have to be added manually through existing processes and within standard timeframes as outlined in existing service level agreements.

5.2 Timing of this effort has moderate dependencies on integration with other tools involved in risk assessment and operations.

5.3 The system must support 5000 simultaneous users who would access or update the system at any one time. Policy/Procedure website currently supports approximately 8600 active (7100) and inactive (1500) policy and procedure

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records/documents. The project needs to plan for future growth up to 15,000 policy and procedure records/documents.

5.4 Clean-up and scrub of existing repository records must be completed prior to the migration of data to the new repository. To support the data migration, the Policy and Procedure Repository and internal technology teams will need to support import and download of repository data.

5.5 Policy/procedure repository will house corporate and business policies and procedures for the Bank and the Bank Enterprise Governance. Desk procedures will be stored on the tool for areas requiring access to them. Desk procedures will be initially housed in the repository as attachments.

5.6 The tool should be structured so that possible eventual tie-in of desk procedures (and possibly workflow diagrams for the processes) can be accommodated.

5.7 Nightly back-ups must be performed and follow the standard the Bank methodology. Transaction log shipping or other methods must be performed on a regular basis to ensure recovery and restoration on a timely basis with minimal loss of data.

5.8 All users must have access to active directory.

6. PROJECT MILESTONES AND TIMELINE

Milestone	Start Date	Completion Date
Analysis of Requirements	03/04/05	06/10/05
Complete Requirements	06/21/05	06/21/05
Review of Requirements	06/22/05	06/30/05

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Milestone	Start Date	Completion Date
Acceptance of Requirements	6/30/05	7/07/05
Deliver Prototype	8/1/05	8/15/05
Development		
Training		
Testing		
User Development Testing		
User Production Testing		
Implementation		
Production Support		
Project Closure		12/31/05

7. APPLICATION REQUIREMENTS

This section provides a description of concepts required for the Policy/Procedure Repository.

7.1 USER RULES

R7.1.1 The Bank employees will be authorized to complete modifications to policies and procedures and desk procedures based on their user access level (initiators, reviewers, approvers, and administrators). Access levels may vary by role.

R7.1.2 The Bank employees who are considered as “guests” can only view and print the various corporate and business policies and procedures in the repository that

they are not restricted from viewing. Desk procedure access will be addressed separately.
(This will dependent upon the “business need to know”)

R7.1.3 The Bank employees who are considered “guests” or “General Users” will be able to access the system in an interface that is user- friendly and has a “web-like” interface. The interface would provide the list of current policies with a navigation scheme that is intuitive and user friendly.

7.2 ADMINISTRATOR RULES

R7.2.1 Designated Bank employees will be authorized to administer/manage the policies and procedures through their lifecycle. Administrators will be assigned by the business to the appropriate administrative level and functionality. These administrators will function at two levels, application oversight (granting access and security to users within the organization, maintaining common data elements/ fields), and the content management administrator, with the ability to edit, delete or create records. See spreadsheet in section 7.5 under R7.5.9.

7.3 LOGON/LOGOFF RULES

The logon/logoff rules for the tool are listed below.

R7.3.1 Access rights need to be based on user roles (initiators, approvers, reviewers, administrators, and guest/General User access). The following roles are required:

R7.3.1.1 Initiator – Individual(s) who have the capability to add, edit, update policies and/or procedures for their designated business.

R7.3.1.2 Approver – Individuals who have the ability to participate in the workflow review of new/revised policies/procedures, and may provide input/comments to

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the initiator for consideration in the policy/procedure being reviewed in addition to approving or rejecting the Policy and/or procedure at various points of workflow.

R7.3.1.3 Administrator – (System, Application and Content) - Individuals who have the authority to administer the repository in the following manner:

Application Administrator:

- ✓ Daily Operations (start up, shut down, back up etc.)
- ✓ Add, update, and delete data in website tables (approvers, division managers, EVP's, AU codes, initiators, etc.).

✓ Hierarchical changes.

✓ Manage and maintain "user" access.

✓ Troubleshooting - Point of Contact for "user" and "website" problems.

Content Administrator:

✓ Content integrity.

System Administrator:

✓ Website development/enhancements.

✓ Completes development testing.

✓ Production release testing.

✓ Coordinates system releases.

R7.3.1.4 Guest User - Individuals who can only view the various policies and procedures and desk procedures in the repository that are not restricted from viewing (confidential and/or private).

R7.3.1.5 Reviewer – Individuals who have the ability to participate in the workflow review of new/revised policies/procedures, and may provide input/comments to the initiator for consideration in the policy/procedure being reviewed.

R7.3.2 Single sign-on will be available for active directory users.

R7.3.3 The application must support easy exit via logout button.

7.4 SEARCH CAPABILITY RULES

The search rules for the Policy/Procedure Repository are listed below.

R7.4.1 Must support searching on any of the fields associated to a policy and/or procedure. (See section 7.6).

R7.4.2 Must support searches on any combination of fields associated to a policy and/or procedure.

R7.4.3 All searches will return a list of published policies and/or procedures that meet the search criteria. The user can then select from the returned list and the details for that policy or procedure will be displayed if the user has been granted the proper access to view the policy/procedure or document.

R7.4.4 The capability to view and search archived versions of policies or procedures must exist. The user must have the proper access level to view archived version of policies/procedures. Refer to table under R7.5.9.

R7.4.5 Inactive Policies/Procedures – Once a policy or procedure is made “inactive” it should not be viewable when searching for “published” policies/procedures. The capability to search/review “inactive” policies and/or procedures must exist. However, it should be a separate type of search, and the user must have appropriate access. Clarification: Functionality must exist to support retrieval of a policy or

procedure and related metadata given a single date (i.e. point-in-time retrieval). This type of search must be implemented in a single request/query from the user perspective (so that the user does not need to perform repetitive filters to “narrow-down” policies and/or procedures in effect as of the date provided).

R7.4.6 Pertinent terms in the policies and procedures will be tied to a glossary defined by the business users within the tool. This glossary will contain links to definitions, and provide the ability to track, modify, delete and manage terms and definitions in a common Domain Glossary Functionality for the governance Domain Policies. It will also provide the ability to hyperlink a term in a Policy/ Procedure to its definition in the glossary, allowing the user to click on a hyperlinked term and have its definition to appear as a pop up.

7.5 ADD/ CREATE / EDIT/ VIEW RULES

Add/Edit requirements include rules associated with adding, editing and updating policies and procedures within the repository.

R7.5.1 Only Content Administrators will be allowed to delete records and attachments (ref R7.5.9).

R7.5.2 Only initiators will be allowed to create records and attach documents. They will only be allowed to modify data in records associated with their business unit.

R7.5.3 Policy/Procedure Establishment – An individual who has the capability to create/modify policies or procedures should only be able to establish/modify these documents based on their access levels and authorizations.

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R7.5.4 Confidential/Private Policies/Procedures –The ability to restrict the viewing of policies and procedures based on user access.

R7.5.5 Approver Assignment – When a policy or procedure is created, the individual(s) who are authorized to approve the policy/procedure should be pre-assigned by the system based on metadata associated with the policy or procedure.

R7.5.6 A reviewer can be automatically assigned to a newly added policy or a modified policy based on the group assigned to that record. The reviewer would first have to be assigned to that group.

R7.5.7 A policy or procedure would be viewable to all users after the status is changed to archived, provided that the policy and/or procedure is not determined to be confidential.

R7.5.8 Audit Trail – Audit trail capabilities to determine who, what and why changes were completed must exist both at the Policy Metadata and Policy Element level (Policy Statement, Internal Control, Standard, Procedures, Guidelines). The Audit History will have to be maintained for a length of time.

R7.5.9 Access

	Corporate				Business				Other		
Group	Policy	Statement	Control Standard	Procedure/ Guidelines	Policy	Statement	Control Standard	Business Procedure	Discussion	Workflow	Desk Procedure
Corporate Policy Initiator	M	M	AM	AM	R	R	R	R	AM	M	-
Corporate Policy Reviewer			R	R	R	R	R	R	AM	R	-
Corporate Policy Approver			R	R	R	R	R	R	AM	M	-

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	Corporate				Business				Other		
Business Policy Initiator			R	R	AM	AM	AM	AM	AM	M	--
Business Policy Reviewer			R	R	R	R	R	R	AM	R	--
Business Policy Approver			R	R	R	R	R	R	AM	M	--
Corporate Policy Admin	MD	MD	AMD	AM ^D	R	R	R	R	R	R	R
Business Policy Admin			R	R	AMD	AM ^D	AM ^D	AM ^D	AM	R	R
Everyone¹			R	R	R	R	R	R	--	--	--
Desk Procedure Initiator			R	R	R	R	R	R	--	--	AM
Desk Procedure Reader			R	R	R	R	R	R	--	--	R

Permissions

R = Read

A = Add

M = Modify

D = Delete

Superscript Legends:

1. Current Version Only

2. Record permissions

3. Iview to force the user into current version

4. Iview to search old versions

5. Workflow is restricted by Corp./

Bus

6. Dev. Team Access

7.6 DATA FIELDS/REQUIREMENTS:

7.6.1 The following Data fields must be present in the Policy and Procedure metadata record for all Corporate and Business Policies and Procedures, and Desk Procedures:

- ✓ Title – Name of the policy or procedure.

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- ✓ Category Identification – Differentiation between a Corporate and Business Policy and Procedure and Desk Procedure must exist. (Document level – corporate policy, corporate procedure, business policy, business procedure, and desk procedure).
- ✓ Documentation security level – Internal use, Confidential, or Restricted.
- ✓ Tracking Number – Number that identifies the policy and/or procedure. A tracking number should automatically be assigned by the system when a policy or procedure is entered into the website. This number cannot be changed or altered.
- ✓ Original Tracking Number – For converted records, this number represents the original tracking number assigned to the policy in the existing web site and also assigned to the associated attachment/document(s). This will allow the conversion/migration to attach the correct document to a policy.
- ✓ Revision Number – Number that references the number of revisions to the policy and/or procedure. The revision number should automatically update by the system when a new document is associated to the policy and/or procedure. This number cannot be changed and is assigned each time a policy and/or procedure is published.
- ✓ Text – Free form field to add any additional text regarding the policy and/or procedure.
- ✓ Implementation Date – Date the policy and/or procedure is to be implemented based on approval and publishing. This implementation date will be manually entered by the Policy/Procedure initiator.
- ✓ Expiration Date - Date the policy and/or procedure becomes expired.

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- ✓ Status – This field should reflect the current status (active, inactive, etc.) of the policy and/or procedure.
- ✓ Revision Type- Significant or Non- Significant - A revision type field will store a value related to a significant or non-significant (or new policy) revision used to determine the review and approval process required in the workflow.
- ✓ Assigned Unit/Group Name – The assigned unit/group name with which the policy and/or procedure is associated (For example: BCP, Information Security, Vendor Management, etc). The list is TBD.
- ✓ Metadata for business group to include the following:
 - ✓ Line of Business. Assumes that business groups are at a lower level than LOB.
- ✓ Initiators – Listing of individuals who have the capability to add, edit, and update policies and/or linked procedures/guidelines for their designated business, including the ability to add or edit policy elements for corporate policies to which they have access. The list of selections should be tailored to the LOB/unit.
- ✓ Note--Initiators (Primary/Secondary) – In our current environment we have primary and secondary initiators who are authorized to establish policies or procedures. We want the differentiation between primary and secondary initiators eliminated, because these individuals have the same functionality. When a policy or procedure is created and/or changed the system should automatically assign/delete the applicable authorized users (initiators).

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✓ Approvers - Individuals who have the capability to approve policies and/or procedures for their designated business. The tool must have the ability to have multiple approvers and multiple levels of approval in workflow.

✓ Division Manager – Name of the Division Manager to whom the policy and/or procedure is associated.

✓ Executive Manager - Name of the Executive Manager to whom the policy and/or procedure is associated.

✓ Last Review Date – Date the policy and/or procedure was last reviewed. This field must be maintained even if there is no change to the policy and/or procedure. This is related to annual/semi-annual reviews. The last review date should be a required field in workflow for any policy being reviewed. The date should be system populated as a date stamp

✓ Next Review date.

✓ Frequency – how often the policy/procedure will be reviewed i.e. annually, semi-annually, etc.

✓ Attachment(s) – The actual policy, procedure, or desk procedure (impact assessment may be stored as a separate document from Policy/Procedure/Desk Procedure). Attachments within the policy and/or procedure record must be allowed. In the case where an archived Corporate and/or Business Policy or Procedure is required, these attachments must also be allowed.

✓ Effective Date – the date a policy and/or procedure will become effective and procedures will be enforced.

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✓ Revision Driver – reason for the change (i.e. regulation change, corporate policy change, law, etc)

7.7 CORPORATE POLICY STRUCTURE REQUIREMENTS:

The repository tool will require the ability to create, store, modify and display corporate policy(s) & its elements as outlined in the requirements below.

R7.7.1 The tool will provide the ability to create, store and display corporate policy content in a 5 element structure as shown below.

1. Policy statement (core policy element)
2. Internal Control statement (core policy element)
3. Standard statement (core policy element)
4. Procedure statement
5. Guideline statement

R7.7.2 The tool will provide the ability to link each of the 5 elements to each other as outlined below (& displayed in the linkage diagram above)

1. Ability to link Internal Control statements and Standard statements to Policy statements
2. Ability to link Internal Control statements to standard statements
3. Ability to link Standard Statements to Internal Control statements
4. Ability to link Procedure statements to Policy statements, Internal Control statements and Standard statements.

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5. Ability to link Guideline statements to Policy statements, Internal Control statements and Standard statements.

6. Standard statements and Internal Control Statements are never “stand-alone” statements. They must be linked to a Policy Statement.

7. A Policy Statement may have no other elements linked to it.

R7.7.3 Other Sections of Corporate Policy- Ability to document, display and print other sections of a Policy document in a form in the system –

- ✓ Header (Corporate Policy Section)
- ✓ Footer (Corporate Policy Section)
- ✓ Overview (Corporate Policy Section)
- ✓ Purpose (Corporate Policy Section)
- ✓ Business Units Impacted (Corporate Policy Section)
- ✓ Policy Statements (Policy statements, Internal Controls & Standards,

Procedures have separate navigation and management requirements)

- ✓ Exception/ Override process (Corporate Policy Section)
- ✓ Implementation Period(Corporate Policy Section)
- ✓ Appendix(Corporate Policy Section)

These sections should print on the PDF formatted policy/procedure.

R7.7.4 The tool will provide the ability to restrict access to the policy elements and other policy sections by a combination of Permissions, User Role and Domain –

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- ✓ Policy Initiators must be allowed Read, Write & Modify to policy elements and other policy sections
- ✓ Policy Initiators belonging to one domain will not have access to the policy elements and other policy section content of another domain
- ✓ Policy Reviewers and Approvers do not have access to policy elements and other policy sections
- ✓ Policy Initiators have all other privileges as mentioned in other sections of this document.

7.8 CORPORATE POLICY NAVIGATION REQUIREMENTS

R7.8.1 The tool should have the ability to display the hierarchy of the linked elements in the navigation and main display window (as shown in the linkage diagram in R7.7.1). For e.g.

1. Display Internal Control statements and Policy statements linkage
2. Display Internal Control statements and standard statements linkage
3. Display Standard Statements to Internal Control statements linkage
4. Display Procedure statements to Policy statements, Internal Control statements and/or Standard statements linkage
5. Display Guideline statements to Policy statements, Internal Control statements and/or Standard statements linkage.

R7.8.2 Domains should have the ability to link regulatory synopsis and checklist requirements directly to specific Policy statements, Internal Control, Standards,

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Procedures and/or Guideline within guidebook verbiage that supports the individual requirements.

1. Link specific Policy, Internal Control, Standard, Procedure, Guideline statements and/or Guidebook verbiage that support the regulatory requirement/guidance to the regulatory synopsis “Requirements/Guidance Records” in the Regulatory Synopsis module in Policyworks

2. Link specific Policy, Internal Control, Standard, Procedure, Guideline statements and/or Guidebook verbiage that support the regulatory requirement/guidance to the regulatory checklist “Guidance/Information Records” in the Regulatory Checklist Module in Policyworks.

3. Link specific regulatory synopsis “Fulfillment/Compliance Records”, in the Regulatory Synopsis Module in Policyworks, to specific Policy, Internal Control, Standard, Procedure, Guideline statements and/or Guidebook verbiage that supports the requirement/guidance

4. Link specific regulatory checklist “Fulfillment/Compliance Records”, in the Regulatory Checklist Module in Policyworks, to specific Policy, Internal Control, Standard, Procedure, Guideline statements and/or Guidebook verbiage that supports the requirement/guidance

- ✓ Provide the ability to link to the following business processes:
- ✓ Change Request
- ✓ Policy Exceptions
- ✓ Glossary via hyperlinks
- ✓ Discussion Forums

✓ A master document repository (that may include things like training materials and FAQs for the application presenting the Policies and Procedures).

7.9 DATA CONVERSION REQUIREMENTS

7.9.1 Provide resources and support for the conversion of domain policies to the new tool, including all policies, standards, internal controls, procedures and guidelines.

7.9.2 Provide resources and support for conversion of the existing Policy and Procedure Repository and all related documents, data, and metadata.

8. REPORTS

The tool should have the capability to create standardized and ad-hoc reporting in order to take full advantage and view all of the data that is contained within the repository. The report rules for the Policy/Procedure Repository are listed below.

R8.1 Standard reports will need to be run to support management reporting. These reports are TBD.

R8.2 The Application Administrator will have the ability to create ad-hoc global reports.

R8.3 System will support the saving of ad-hoc report definitions.

R8.4 System will support the retrieval of previously saved ad-hoc report definitions. Retrieved report definitions can be submitted for re-processing of the report.

R8.5 System will support the modification of retrieved ad-hoc report definitions. The modified ad-hoc report definitions can be re-saved as the original report or a new report.

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R8.6 System will support routing of generated reports (standard and ad-hoc) to any printer available to the administrator.

R8.7 Application Administrators can add newly defined ad-hoc reports to the standard report list. Standard reports will be available to all users depending upon security access.

R8.8 Ability to pull related requirements from several corporate policies when all are needed to fulfill a particular business functions via a key word search. (E.g. data center evaluations will include requirements from all corporate domains. Users should be able to pull a single checklist with the relevant requirements.)

R8.9 Content Administrators/ Corporate Policy Initiators must have ability to generate ad-hoc reports, save them and send links to them to intranet users provided all users have sufficient security access to the data.

9. INTERNAL REQUIREMENTS

- Service Level Expectations -

The goal is to provide users with a repository that is consistent with existing system availability and transaction response times. To achieve this goal, the project is requesting that all applications supporting the Policy/Procedure Repository be available to process transactions 24 x 7 with the exception of scheduled downtime. Additionally the project is requiring no more than 2 seconds between the time a user initiates a request (i.e., presses ENTER or makes a screen selection) and the appropriate system response.

- Developers and support staff will be required to support the needs of the Policy and Procedure Repository

- The system will utilize an existing demonstrated internal infrastructure capable of supporting the Repository
- Existing network access and servers will be utilized in support of the Repository

10. WORKFLOW

R10.1 Event Triggering – Whenever there is a change to a policy and/or procedure there needs to be a trigger/warning that the risk assessment might need updating. This also needs to work in the reverse, if there is a change/update to a risk assessment there needs to be a trigger/warning that the policy and/or procedure might need updating. Workflow notification may also be needed for USM.

R10.2 Approver/User Notification – When a policy or procedure document is updated and/or created an automatic notification should be generated informing the approver that there is a policy or procedure pending review/approval.

R10.3 Reviewers will be provided with the changed section of the policy/procedure (If the structure of the tool is such that the policy, internal control, standard, procedure, and guidelines are stored as separate records or fields within records) as well as the policy document in its entirety for holistic review.

R10.3.1 Once the document is either approved or rejected notification to the reviewer(s) and/or initiator regarding the status (approved, rejected) should automatically be generated. TBD

R10.4 Validations/Confirmations (Policy/Procedure, User) – Develop an automated confirmation solution. Provide the ability for authorized users to perform a

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query to confirm their policies and/or procedures and user access as determined/scheduled (timing TBD). Reporting of these validations/confirmations would also need to be developed. A policy requiring an annual review will be placed in workflow to the appropriate parties.

R10.5 Policy and/or Procedure Approval Notification Automation – Develop an automated solution for approving policies and or procedures. This may include emails or discussion forums.

R10.6 The workflow will follow the paths detailed below.

R10.7 The tool will provide the ability to track, update, display, archive and print revision history of the corporate policy and its linked elements including items like Impact Assessment Form, Revision drivers and regulatory bases etc.

R10.7.1 Impact Assessment - The tool will provide the ability to track, update, display, archive and print Impact Assessment details/ form and rationale behind policy revisions and associate it with appropriate Corporate Policy/ Procedure/ Guidelines.

11. DOCUMENT STORAGE/ RECORD RETENTION

Document storage requirements include rules associated with storing and retrieving policy and procedure documents.

R11.1 Must support central repository of policy and procedure documents.

R11.2 Policy and procedures are never updated, only new versions are allowed.

When a policy or procedure or the associated document is updated and published the current version is first archived, along with any associated references to “Supporting

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Policies”, “Supporting Procedures”, etc., and then the new policy/procedure or document being added becomes the current published version.

R11.3 Updated and replaced policy and procedure documents will be archived for multiple years. Application administrators are the only group allowed to delete archived documents.

R11.4 Multiple Attachments – The ability for users to attach more than one document to a policy or procedure record must exist. The capability to load documents in mass must exist (supports implementation activities).

R11.5 If an application admin or other role allowed to delete a record/document deletes the policy record parent, all documents associated with that record are also deleted.

R11.6 Record Retention – A method for retaining and then purging “inactive/expired” policies/procedures must be developed. We need the capability to retain policies/procedures for a minimum of 6.25 years after the document has become “inactive/expired”. We also will need the capability to retain policies/procedures for different record retention periods. All versions of a document need to be archived, with the most current displayed first with an active status. Older documents should be displayed with an inactive status in chronological order backwards, with the most recent inactive document first. As a new document is published/attached, it should be assigned a status of active, the recently replaced document flagged as inactive.

This would be to support certain processes like BSA, OFAC, USA Patriot Act, etc. Once a document has passed the minimum retention timeframe it should be purged from the system. Prior to the purging (i.e.: 60-days), a report or some sort of notification

should be created from the system that reflects the documents that will be purged. This report/notification could then be distributed to users to inform them of what documents are being purged from the system. This 60-day lead time should provide the user with enough advanced warning if there are concerns regarding the removal of a particular policy/procedure. Once the documents are purged, they should then be retained for a period of one year where an administrator could retrieve the document if necessary. After this one year timeframe the documents could then be destroyed.

R11.7 We should have the most recent document attachment listed first, especially if we are not able to hide the expired or obsolete document attachments. They should be listed in chronological order from most recent to oldest.

R11.8 Document File Size – Policy or procedure documents tend to be quite large in nature. We would like the capability to attach file sizes of up to 10 mb.

12. PRINTING REQUIREMENTS

Documents will print as is in whatever format they exist. Depending on the structure of the policy/procedure record and the information contained in them, they may require specific templates and/or formats.

Document Types – The following are file types that the new tool must accept – this is only a partial list: .doc, .xls, .txt, .rtf, .pdf, .htm, .html, .ppt, .wpd, .mif, .vsd, .psd, .jpg, .zip.

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R12.1 When exporting a policy, procedure, guidebook, synopsis or checklist to a Word or PDF format the embedded links must be active in the softcopy of the document.

R12.2- Ability to display, export and print core Policy Document by concatenating all core policy elements, other corporate policy sections (specified in BR7.7.3) in the corporate policy template and associated Corporate Procedures and/or Guidelines in a user friendly manner clearly labeling the policy as policy and procedures/guidelines appropriately.

R12.3 Ability to print Policy Statements and linked Standards, Internal Controls and Regulatory Synopsis.

1. Ability to print policy mapping information contained in the policy and synopsis/checklist documents (i.e., synopsis/checklist requirements/guidance information, policy/guidebook verbiage, etc.)
2. Any links in the exported policy or synopsis/checklist documents must be active when exported for printing.

R12.4 Ability to display, export and print All or specific Procedures associated with a chosen Policy

BR12.5 Ability to display, export and print All or specific Guidelines associated with a chosen Policy

BR12.6 Export and printing only of standards, by subject.

BR12.7 Ability to print just the verbiage, directly from the tool. Or, easy export of just the verbiage into Word or Adobe for printing.

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13.1 Definitions

Term Definition

Regulatory Synopsis& Regulatory Synopsis Module

Inactive Policy & Procedure: A Policy or Procedure that is no longer current; a policy procedure that has been replaced by a newly published version

Expired Policy & Procedure: A Policy or Procedure that has reached the 6.25 year retention limit for inactive policies/procedures

Content Administrator: Personnel responsible for content integrity

Application Administrator: Personnel with responsibility for the following:

- ✓ Daily Operations (start up, shut down, back up etc.)
- ✓ Add, update, and delete data in website tables (approvers, division managers, EVP's, AU codes, initiators, etc.).
- ✓ Hierarchical changes.
- ✓ Manage and maintain "user" access.
- ✓ Troubleshooting - Point of Contact for "user" and "website" problems.

System Administrator: Personnel with responsibility for the following:

- ✓ Website development/enhancements.
- ✓ Completion of development testing.
- ✓ Production release testing.
- ✓ Coordination of system releases.

Significant Revision (Policy/ Procedure)

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- a) Changes to policies and procedures addressing critical legal/regulatory issues, and new procedures used to implement policies related to regulatory compliance.
- b) Any changes to existing policies and procedures which have an effect on the informational needs or work flow of other units or resources.
- c) Adding New Requirements of large magnitude, substantial complexity, needing large funding.

Non - Significant Revision (Policy/ Procedure): Changes in verbiage & grammar or any other changes that do not alter essence and meaning of policy. *A non-significant revision may also arise from the completion of impact assessment form.

Exhibit B: Risk Documentation

Risk Assessment was performed prior to the first JAD session and is below:

Risk #	Risk Description	Priority	Probability	Severity	Stability	Schedule Risk	Technology Risk	Business Risk	Risk Management	Risk Type	Impacts	Indicators	Mitigation Strategy
PPR-01	Iterative Development is a new process for this project team	High	Medium	High	High	High	High	High	Acceptance	Direct	Schedule slip		training, mentoring and process engineering
PPR-02	No funding is approved for 2006	High	Medium	High	High	Medium	Medium	High	Acceptance	Direct	Schedule slip, quality, etc.	Project not identified on 2006 Project list, or high Priority	training, mentoring and process engineering
PPR-03	Availability of Technology resources	High	High	High	High	High	High	High	Acceptance	Direct	Schedule slip, quality, etc.	Schedule slip, quality, etc.	realistic plans, milestones, escalation, etc.
PPR-04	Availability of Business resources (incl. testing, quality, communications)	Medium	Low	Low	Medium	Medium	Low	Low	Avoidance	Direct	Schedule slip, quality, etc.	deliverables delayed, schedule slip	identification of resources, assignment to project
PPR-05	Skill and experience level of Business resources	High	Medium	High	High	Low	Low	Low	Avoidance	Direct	Schedule slip, quality, etc.	deliverables delayed, schedule slip	training, mentoring and process engineering
PPR-06	Identification of policies/procedures and cleanup/scrubbing takes	High	High	High	Medium	High	Low	High	Acceptance	Direct	Schedule slip, quality, etc.	Schedule slip, quality, etc.	Team building, follow-up, relationship building.

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Risk #	Risk Description	Priority	Probability	Severity	Stability	Schedule Risk	Technology Risk	Business Risk	Risk Management	Risk Type	Impacts	Indicators	Mitigation Strategy
	longer than expected												
PPR-07	Delay in Archer release 3.1.5 (beyond end-of-August 2005)	High	High	High	High	High	High	Medium	Acceptance	Direct	Schedule slip, introduction of functionality, performance enhancement delays	schedule slip, necessity to reshuffle iterations/releases	
PPR-08	Breadth of Requirements scope	High	High	High	High	High	High	Medium	Acceptance	Direct	quality, delivery of product	Difficulty in meeting requirements ; delay in schedule	Develop iteration plan, break project into sub projects / phases
PPR-09	Functionality not available; security requirements not met; inability to limit confidential document access	High	High	High	High	High	High	High		Direct	development	redefinition of requirements ; development of workarounds ; limits placed on functionality in initial development to be enhanced at a later time; request for Archer enhancement	Develop modules that can be used by multiple or future projects.
PPR-10	Archival and retention process not developed or working	High	High	High	High	Medium	Medium	Medium	Avoidance	Indirect	Schedule slip, quality, etc.	Documents or older versions of policies procedures	Develop options

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Risk #	Risk Description	Priority	Probability	Severity	Stability	Schedule Risk	Technology Risk	Business Risk	Risk Management	Risk Type	Impacts	Indicators	Mitigation Strategy
	properly											not available	
PPR-11	new users-- Getting users to buy-in, use and keep up to date ; requirement for ease of use for general user	High	Medium	High	Low	Low	Medium	High	Avoidance	Direct	Users refuse to use system; users avoid system	low usage; complaints	design access to simplify displays and searches; Iviews
PPR-12	Complexity of project	High	High	High	High	High	Medium	Medium	Acceptance	Direct	Schedule slip, quality, etc.	multiple needs / links to systems	Break out into iterations and phases.
PPR-13	BCP structures not fully defined (SLA's, etc.)	High	Low	High	High					Direct	BCP planning		Backup is to use existing web site
PPR-14	Policies may have multiple layers; difficult to map to appropriate level	High	Medium	Medium	High					Direct	Mapping to appropriate layer within policies and between corporate policies and business policies	Mapping of policies/controls/standards taking longer than anticipated	
PPR-15	Communication to affected business units; clarity of scope amongst business units	High	Low	High	High					Indirect	Confusion and lack of acceptance	Lack of use; complaints;	Simplify access and displays
PPR-16	Workflow functionality doesn't entirely meet process needs....some	Medium	Medium	High	Medium	Medium	Medium	Medium	Avoidance	Direct	Workflow cumbersome and hard to use	Workarounds developed as means to bypass workflow;	Simplify

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Risk #	Risk Description	Priority	Probability	Severity	Stability	Schedule Risk	Technology Risk	Business Risk	Risk Management	Risk Type	Impacts	Indicators	Mitigation Strategy
	of it is offline												
PPR-17	Policy displays and prints not in correct format	High	Medium	High	Low	Low	Low	High	Avoidance	Direct	Policies not printing correctly - users avoid using system	complaints & low usage	Get it working correctly
PPR-18	Mass Loading of documents	High	Medium	High	Medium	High	High	High	Acceptance	Direct	Archer enhancement ; if not ready, then not able to load to existing documents to new tool		
PPR-19	Conversion of existing data	High	Medium	High	Medium	High	Medium	High	Avoidance	Direct	Inability to convert metadata from existing access database to new system		
PPR-20	Server Farm in place for Policyworks	High	High	High	Medium	Medium	High	High	Avoidance	Direct			
PPR-21	Archer training development and coordination	Medium	Medium	Medium	Medium	High	Low	Medium	Transference	Direct	Archer will have responsibility for coordinating and developing training materials?		
PPR-22	System not performing up to expectations for concurrent access	High	Medium	Medium	Medium	Low	High	Medium	Avoidance	Direct	Number of concurrent users limited by system performance	Slow response times, timeouts, inability to access system	Installation of Archer 3.5

