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Pepperdine University

Graduate School of Education and Psychology

SUCCESSFUL CHANGE STRATEGIES FOR A MAJOR RESEARCH AND

CONSULTING COMPANY

A dissertation submitted in partial satisfaction

of the requirements for the degree of

Doctor of Education in Organizational Leadership

by

Islam Ahmad Azzam

June, 2011

Kent Rhodes, Ed.D.–Dissertation Chairperson

This dissertation, written by

Islam Ahmad Azzam

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

Doctoral Committee:

Kent Rhodes, Ed.D., Chairperson

Jack McManus, Ph.D.

Elizabeth Reilly, Ed.D.

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DEDICATION

To my parents. Thank you for showing me the way.

I love you very much.

God Bless

ACKNOWLEDGMENTS

In the name of Allah, Most Gracious, Most Merciful.

Thanks be to God for my life through all tests in the past years. You have made my life more bountiful. May your name be exalted, honored, and glorified.

This dissertation would not have been possible without the guidance and the help of several individuals who, in one way or another, contributed and extended their valuable assistance in the preparation and completion of this study.

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VITA

ISLAM A. AZZAM

EDUCATION

Master of Business Administration   5/2002–8/2003
First Place Winner of Business Plan Competition and Strategy Simulation
California State University, Dominguez Hills, 8/2003

Bachelors Business Administration, *General Management*   1999–2003
National University, Los Angeles, 6/2001

ACADEMIC EXPERIENCE:
Colorado Technical University   2009-present
Adjunct Online Faculty/School of Business MBA
Rank: Assistant Professor
Courses taught: Graduate Research Methods, Managerial Decision Making; Strategic
Management, Emerging Markets

Westwood College
Undergraduate / Graduate MBA
Adjunct Faculty/School of Business   2009-present
Courses taught: Business, Principles of Management, Small Business Management,
Human Resource Management Project Management, International Management, Service
Marketing, Integrated Communication, Computer Information Systems, IT Project
Management, Ethics and Social Responsibility.

PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS

CEC Information Security   2009
CEC Code of Ethics and Business Conduct   2009

PROFESSIONAL EXPERIENCE:
WorldLink Diversified, Redondo Beach, CA   2002–present
General Manager/Research Analyst

INT Trading: Business Owner/ Independent Consultant   2002–present
Redondo Beach Ca. 90278

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:
Society of Educators and Scholars: Board of Directors (nominee)

Areas of Interest:
- Establishing Community in Business and Education

- Curriculum and Program Formation, Implementation and Evaluation
- Organizational Change in Global Communities
- Initiatives to Create High Performing Organizations
- Strategic Management Paradigms
- Intellectual Capital: Employee/Student Retention
- Entrepreneurship

ABSTRACT

This case study describes a major change initiative undertaken by a major consulting-contracting agency, 3 Tier Research and Development, Inc., engaged in market branding, research, and development in the United States. Focusing on one client account, Go-Green Auto Corp, the study scrutinizes relevant organizational theories as they apply to real-time organizational leadership and change-management strategy scenarios. Members of the studied organization from one office in Southern California, predisposed by their own mind-sets and training in the organization's mission statement and policies and procedures of operation, voluntarily participated in field research that included questionnaires and interviews by the researcher.

The goal of this study, which applies organizational change theory to practice, was defined and applied by specific trend analysis; process mapping in megabusiness processes known in the business world as Accounts Receivable (A/R) and Order Service Group with Customer Services/Customer Subscriptions; Service Level Agreements (SLA) between the 3 Tier contracting-consultant agency and its client account; the ISO 9000 series of standards and management strategies initially customized to the auto industry and commonly used by private companies; and finally, Sarbanes-Oxley compliance tools for change-agent, risk, and governance deliverables for publicly traded companies.

The key inquiry is this: What are the successful change strategies employed by a contracting-consulting company engaged in market branding, research, and development in response to a request from its key account?

With the recent collapse of GM and Chrysler and their subsequent bail out by the federal government, this topic is timely in its historic relevance and provides a useful real-time model extending from the auto industry to a more general economic recovery with concomitant reduction in the unemployment rate in the United States. Third-party outsourcing is pivotal in this global economy. This research also encompasses the Internet technology (IT) side of the change-management process, services measures, and user environment that necessarily include any of those services for infrastructure disaster recovery, backup, and network infrastructure change-agent provisions.

Chapter 1: Rationale for Study

This study describes a major change initiative undertaken by a major consulting-contracting agency, 3 Tier Research and Development, Inc., (3 Tier) engaged in market branding, research, and development in the United States, on behalf of its client, Go-Green Auto Corp. (Go-Green). The study explores and analyzes organizational leadership and change-management theory from the literature in order to set the stage for the case study, which incorporates open-ended questionnaires and interviews developed by subject matter experts engaged in academic research to prove their various working models or hypotheses.

All response and feedback, primary-source interviews, and secondary-source literature review were put to the test of flexible, yet rigorous, inductive reasoning to eliminate latent research bias that tries to fit theories to real-time practice. The subjects and stakeholders of the organization under study voluntarily participated in the field research; Participants were from one office in Southern California, predisposed to participate by their own mind-sets and training in the organization's mission statement, policies, and procedures of operation.

Different perspectives arise from different experiences due to workers' various positions in the organization. Placement in the hierarchy (or lateral placement in participatory-management organizations) facilitates different responses to any organizational change experienced. The key inquiry of this study is: What are the successful change strategies employed by a contracting-consulting company engaged in market branding, research, and development in response to a request for a change in procedure from its key account?

The extensive organizational-change literature and theory that are available provide a much-needed frame for this study's qualitative analysis of data obtained from management at 3 Tier. Conclusions in current research make the case that qualitative content analysis, obtained through interviews, questionnaires, and survey tools from random assignment of a universe of participant-subjects, does provide valuable results for ongoing research that can be extended from research and consulting to other sectors of the economy.

Outsourcing

This research should be applicable to similar third-party contracting-consulting organizations that perform work for corporate headquarters; these types of organizations and are doing most of the work in today's global marketplace. Because third-party outsourcing is pivotal in this offshore, Internet world, the findings here are crucial and can be generalized by a halo effect to most new organizations and start-ups in the United States, which are signing on as third-party organizations.

3 Tier: IT Processes and Challenges

The 3 Tier affiliation is external to the home base of Go-Green, yet it is connected through a document known as the Service Level Agreement (SLA). The vendor, 3 Tier, is experiencing change management in the update of its Oracle financials database, which handles the financial entries of the mega processes of accounts receivable (A/R), accounts payable (A/P), tax, order service group, and so forth.

Security issues appeared in the interface of Go-Green's corporate/regional satellite offices sending electronic data through the Internet to its affiliated third-party vendors. This case study also encompasses the IT side of the change-management

process, services measures, and user environment that necessarily include any of those

services for infrastructure disaster recovery and network infrastructure change-agent

provisions that spell out the inner workings of the Go-Green extranet.

Importance of the Study

This study documents organizational leadership and change-agent strategies

provided by 3 Tier's west coast offices, the center of the new surge in auto manufacturing

after the collapse of GM and Chrysler and their subsequent federal government bail out.

Hence, this topic is timely in its historic relevance and provides a new model pertinent for

economic recovery and reduction in the unemployment rate in the United States. This

case study's business strategy is, therefore, very compelling. Harrington and Mathers

(1997) note:

> Many organizations have found that in today's business environment,
> success comes with focusing on *doing things right the first time, on time,*
> *every time*, *and always to the customer's satisfaction* (both external and
> internal customers). Achieving this focus while building a lasting
> foundation for improving business operating systems is easier said than
> done. (p. 2)

Chapter Structure

The purpose of this study is to identify the successful change strategies that are

applicable to a third-party vendor, or contracting-consulting company, and ultimately to

any industry experiencing change. This chapter provides a background of the

organization, the industry, and the specific change situation studied. It also describes in

depth the changes taking place at a particular contracting-consulting organization as a

result of its interface with a client and an understanding of the changes in the industry or

key client account. The general perceptions of management and employees are reported.

This chapter then provides the reasons for and the significance of this study's being undertaken and its resulting deliverables.

Background of the Organization, Industry, and Specific Change Situation

In order to address the primary research questions, this study reflects on one organization's attempts to deal with change. The perceptions of management and employees in general are reported: Interviews with the organization members who were instrumental in the change provide data on the issues pertaining to organizational change.

To maintain confidentiality, the company was given the alias 3 Tier R & D, Inc. By referring to this company, some of the major elements of change are illustrated, typical causes of change are explored, and triggers that initiated change programs are described.

Description of 3 Tier: The nature of the organization. With annual revenue of more than $1 billion, 3 Tier, a market research consulting firm, is one of the top 500 privately held companies in the U.S. The company has been in existence for more than 100 years and employs more than 4,000 employees. According to May-Plumlee and Little (2006), market research provides a means for understanding the consumer-purchase decision and for anticipating consumer behavior.

According to a statistical study conducted by First Research (2007), more than 100,000 consulting firms in the U.S. generate a combined annual revenue of about $125 billion. Demand for consulting services is closely tied to the health of the U.S. economy. It is also noted that success for consulting firms hinges on the special expertise they provide to clients. Therefore, the quality of service is a fundamental issue for consulting companies.

3 Tier measures its quality-management services using the ISO 9000 series of standards, introduced in 1987 for the auto industry, and Sarbanes-Oxley auditing standards for publicly traded companies, introduced in 2002 to monitor financial business processes. IT software applications are an integral part of the firm's quality-management services.

Theories of organizational change: Sources of external change. Appelbaum, St-Pierre, and Glavas (1998) postulated that organizational changes can emanate from two different sources. The first is the external environment (Johns, as cited by Appelbaum et al., 1998; Vecchio & Appelbaum, 1995), such as changes in competitors' actions (which are relevant to the present study), the emergence of new competitors, government regulations (Sarbanes-Oxley standards), economic conditions (the recent U.S. recession), and technological advances (plug-in hybrid and all-electric cars). Regulation, risk, and governance are key concepts in enforcing quality assurance in all deliverables, including Go-Green's new product line and the business processes attached to it.

Sarbanes-Oxley. The Sarbanes-Oxley public law implemented in 2002 is one source of external organizational change, as it imposes governmental regulation on a company that has made the transition from a private start-up to a publicly traded entity on the New York Stock Exchange.

ISO standards. The ISO series of standards developed in 1987 apply to suppliers, organizations, companies, and contractors, i.e., suppliers and contractors acting as third-party vendors who have rights and duties defined in SLAs that are legally enforceable contracts (Harrington & Mathers, 1997).

Theories of organizational change: Sources of internal change. The internal environment of an organization is the setting in which external changes are implemented and internal changes are generated. These internal changes could be a new corporate vision and mission, the purchase of new technology (hybrid and electric), mergers and acquisitions, and the decline in the morale of the company stakeholders and line staff. Among the most common and influential forces of internal organizational change are new company leadership and evolving attitudes toward work (Vecchio & Appelbaum, 1995).

The need for change at 3 Tier. In the case of 3 Tier, change originated from the external environment. The company was providing marketing research services to a leading automobile company, Go-Green, one of its key client accounts.. However, there was no systematic protocol established between 3 Tier and its client to process a service request: There was no official order service group business process to professionally handle all the customer contacts in a professional Customer Relationship Management (CRM) database. In the words of Harrington and Mathers (1997), there was a "lack of a quality management documentation system" (p. 116).

Consequently, a considerable number of complexities arose every time 3 Tier received a service request from Go-Green prior to the advent of ISO standards in 1987. The service process in the order service group of 3 Tier's financial processes required substantial interactions between the two parties, and being a very dynamic organization, the client company recommended continuous modifications and enhancements in the job proceedings after a sizable amount of the project was already scoped and changes had been mapped. Harrington and Mathers (1997) discuss how change can impact the culture of an organization and detect the difficulties that are inherent to such a dynamic or

freewheeling type of organization working with one that is systematic and disciplined and

by definition, receptive to ISO 9000 standards:

> If your organization is already very systematic and disciplined in its
> operating approach, then the ISO 9000 series will be in line with your
> culture and will be fairly well accepted. If your organization is a
> freewheeling, creative organization that thinks procedures are (just)
> guidelines, or doesn't prepare written procedures, applying ISO 9000 can
> be a dramatic shock to the organization's culture. This is a very important
> consideration, since the degree of implementation and internalization
> effort required to support the new [Quality Management System] is greater
> (by a factor of 10) in the freewheeling type of organization, and
> implementation takes much longer. (p. 82)

Applying this definition to the particular culture at 3 Tier locates the firm in the

freewheeling, or dynamic mold, as it consumed significant resources just to process a

single client order for service. In Sarbanes-Oxley language applicable to publicly traded

companies such as Go-Green, the business process for this particular activity is defined as

order service group or some similar nomenclature customized to its approach in "the

transparency test" (Lahti & Peterson, 2005, p. 32). As noted above, 3 Tier had to engage

a good deal of its resources to process just one order from Go-Green. Hence, every time

the client requested a modification, project flow was interrupted, and 3 Tier literally had

to go back to the beginning of the order process and restart it, with a concomitant loss of

time and resources.

Do-overs such as this created much frustration among 3 Tier functional line staff

as well as managerial talent. Delays in deliverables' production ensued, which created

client-side confusion, raised questions about efficiency, and negatively impacted 3 Tier

profit margins.

The need for quality management systems: Customer relationship

management databases. In order to process SLAs more efficiently, 3 Tier needed to

adopt the standards commonplace in regional offices to enhance profit margins or return

on investment. The answer is central, according to Harrington and Mathers (1997):

> Executive audits (management reviews). . .should be conducted of the total quality management system, placing particular emphasis on *customer-related* quality data and processes. . . .[It is] extremely important for the executives to obtain firsthand, personal knowledge of the QMS. . .with emphasis. . .on the corrective actions proposed to eliminate discrepancies. (p. 51)

Since the publication of Harrington and Mather's (1997) advice, new CRM

databases have been marketed to organizations, both public and private, to get baseline

measurements. Efficient change in process improvements is built onto this foundational

business solution, which is integrated with Enterprise Resource Planning (ERP) and

supply chain databases.

Description of a CRM software system. IT solutions are crucial in

implementing a systematic protocol in a complex organization with multiple accounts.

SharePoint 2007 Solution for Customer-Related Metrics software was adopted by Go

Green for this purpose. The software uses templates to guide the contracting-consulting

organization. Proactive management of organizational change for Go-Green business-

process definitions is supported by implementation of SharePoint business solutions; this

aspect is the IT side of change management, which requires immersion in network design

to ensure dedicated documentation that reflects the mission, goals, objectives, and so

forth, of client-side deliverables.

According to Hillier (2006), Microsoft SharePoint Building Office 2003 Solutions

creates a management challenge in that the software address is based on an "explosion of

data [contained in] information systems" (p. 6). According to Hillier, there is a huge

organizational challenge requiring a change-agent resolution:

A typical organization might have as many as eight customer databases crossing several isolated systems such as Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), and multiple spreadsheets and documents. Each of these systems has a reporting mechanism to access the data, but there is generally no way to see all of the data together to create a single view of a customer, supplier, or partner. Consequently, organizations are forced to create manual systems [e.g., manual Job Information Forms or JIFs in the current case study] to collect and analyze information. (p. 6)

As noted above, 3 Tier and Go-Green were boxed into a reactive solution initially, as the account was new and had preexisting process deficiencies, including data dispersed in multiple databases without a single graphical user interface that could pull all data points together for problem identification in a process and/or on a dashboard (a collection of events or items facing client side on a Web site). A movement toward proactive decision making becomes available to the stakeholders and functional staff as they access one umbrella graphical user interface.

Hillier (2006) states that productivity is increased with commensurate return on investment as workers are able locate documents readily and are "not lost on file servers because no standards for file taxonomy, naming, or version control are in use" (p. 8). Additionally, "business users are often frustrated by technical barriers such as mapped network drives or server names" (p. 8), so an intuitive solution is to keep it simple. Organization is obviously the key to success in employee productivity, quicker process-document turnaround, and greater accuracy, as the data are in one place.

In a similar fashion, Sarbanes Oxley has a financial and IT break-out. The IT software applications have to be proactively linked to the correct business-process definition. For example, the PeopleSoft database is attached to the Human Resource (HR) business process/unit, and Oracle financials database is attached to financial business processes in respective business units (Lahti & Peterson, 2005):

If properly executed, the SOX [Sarbanes Oxley] compliance process gives CFOs, CIOs, and IT Directors an opportunity to address antiquated systems, personnel resource issues, and documentation/process issues. It will also provide them the opportunity to forge stronger alliances with the business units. IT will be critical to the success of SOX compliance, and the support of the business units will be critical to the success of IT. (p. 32)

Between the 300 generic objectives for Control Objectives for Information and Related Technology and ISO 9000 standards, there is absolutely no excuse for do-overs in process improvements (Harrington & Mathers, 1997). In addition to Control Objectives for Information and Related Technology, since 1996, there have been other types of risk and governance implementations for best-business practices. Mentioned in passing only, they are IT Infrastructure Library and Six Sigma (Lahti & Peterson, 2005).

Organization change as reactive or proactive. Appelbaum et al. (1998) suggested that organizational change could be undertaken in either a reactive or proactive manner: Management could anticipate the inevitability for change and adopt the necessary means to adjust its organization to meet the looming pressures of the environment, or resist change and be forced into an organizational transformation in order to survive. In collaboration with the client, 3 Tier pursued the change in a more proactive manner, even though the problem was preexisting, because the decision was made to immediately deal with it to enhance customer-related satisfaction metrics in the CRM.

SLA between 3 Tier and Go-Green. At any given time, several large programs are simultaneously in process with many different 3 Tier clients. Once a new project is secured, the organization is required to follow a protocol that includes a documented description of the scope of work requested from the client.

However, in the subject of this case study, there was a limited, extant systematic protocol for documenting changes in scope that occurred after or during the start-up phase between the company and its key-client account. In short, 3 Tier implemented quality assurance in accordance with the historical standard bearer (i.e., the ISO 9000 series of standards that applied to the manufacture of automobiles as well as to private company quality assurance).

With the advent of Sarbanes-Oxley for publicly traded companies in 2002, 3 Tier had to facilitate harmony among its ISO standards, Go Green's then-current ISO standards, and the roll out of new Sarbanes-Oxley standards for publicly traded companies such as Go-Green. Clearly, although Go-Green was already a publicly traded company, it required an extensive makeover in accordance with the new public law that was so comprehensive that, in effect, it was as if Go-Green was migrating from private to publicly traded status.

Consequently, there was considerable confusion every time 3 Tier received a service request from the client. The service process required substantial and repetitive interactions between the two parties, similar to aural-based marketing, but those redundancies were eventually self-defeating in terms of key performance indicators.

The 3 Tier CRM database is accessible by Go-Green's Finance Group for its A/R business process at the time the customer's request for service becomes a sale, because until that point, all the marketing and research of customer metrics, purchasing profiles, and key performance indicators are being handled by 3 Tier, as the third-party marketing and research vendor, contracting-consulting agency.

One solution would be a more formalized approach to scope change in an SLA that would work well with the best interests of the client's ISO 9000 series of standards and the client's publicly mandated Sarbanes-Oxley requirements for financial assertions regarding its various business processes in an Order Service Group.

The scope of the SLA that was developed was immediately responsive to Go-Green's request for consultation and proposal; it was comprehensive and inclusive of both business processes and IT technology associated with them. Titled "CRM and Finance Data Backup SLA," it proposes a pool of actors and stakeholders that will implement new processes to manage service request initiatives or change orders:

> The scope of this CRM SLA includes all full-time employees, contractors, subvendors, developers, or any unauthenticated anonymous guests, logged in to an FTP server through proxy service, who are responsible for the various third-party accounts (in addition to Go-Green) of 3 Tier and who require usernames and passwords to access any tier-1 client machine, tier-2 web server, or back end tier-3 database such as CRM in use by 3 Tier or Go-Green. Systems are defined as resident on any Go-Green campus, facility, building, 3 Tier extranet, or off-site storage that contains private and confidential customer data. (p. 5)

The text of the entire plan, an internal document, can be found in Appendix A.

Summary

The SLA is especially suitable for linking a third-party, consulting-contracting vendor to key management at its major account client. A work process requires the signing-off of the sales contract or work order when a standard operating procedure with approval is initiated. Approval and signing of such documents precludes the occurrence of the rubber-stamped Job Information Form (JIF) that had been interrupting the workflow of the project by generating a stream of constant do-overs.

The work order is matched to a corresponding purchase order. A copy of both are held in the 3 Tier SharePoint CRM repository and are accessible by Go-Green Finance Group at the time a customer's purchase order becomes a sales contract; meanwhile it is reviewed on the frequency of one business quarter and then held for three business quarters before being archived off site.

Appelbaum et al. (1998) noted that organizational change could be undertaken in either a reactive or proactive manner: Management could anticipate the inevitability for change and adopt the necessary means to adjust its organization to meet the looming pressures of the environment, or it could resist change and be forced into an organizational transformation in order to survive. In collaboration with the client, 3 Tier initially pursued change in a reactive manner, as it was more of a dynamic and free-wheeling organization similar to Go-Green, and it was imperative per the consultation and request for proposal that 3 Tier design and develop process improvements to deal effectively and efficiently with client service request initiatives or change orders that would no longer be rubber-stamped.

Problem Statement

Van de Ven and Poole (1995) noted, "Explaining how and why organizations change has been a central and enduring quest of scholars in management and many other disciplines" (p. 510). The problem is that there is a deficit in the research completed in the specific area identifying what recent successful change strategies exist for research and consulting companies. Findings of this study can be used to assist the research and consulting companies improve the level of uncertainty in dealing with change. Since change is a vast topic to study (Staniforth, 1996), this research reflects on one company's

attempts to respond to a particular context that led to a specific change. This descriptive study investigates a successful change strategy experienced by a leading research and consulting company.

Purpose Statement

The purpose of the case study is to identify the key influential success factors that were implemented by 3 Tier in its service requests change initiatives. To survive and prosper in the future, an organization has to make sound decisions today (Senge, 1994).

This study is different from others in its focus on specific modular components of both software and hardware that are associated with changes eliciting process improvements that are organized around an organic nexus of business and IT. Much research focuses on one aspect of organizational change and is not able to build up an inductive, overarching working model that necessarily results from consideration of all analysis modules.

The JIF packet reviewed by the 3 Tier contracts coordinator puts all Go-Green change orders into the queue. The JIF will be routed if it is qualified as the case cover sheet and if it is filled out with pertinent information such as the scope and rationale for the change order. The contracts coordinator signs off on the JIF and the packet is scanned into the appropriate 3 Tier repository database for processing, record retention, and archiving.

Research Questions

1. What was the nature of the successful change strategies employed by a contracting-consulting company engaged in market branding, research, and development for its key account?

This is the most important question of this case study, as it was the most comprehensive, having operationalized or specifically defined the variable known as nature of change in this study into a series of six more detailed inquiries, including (a) the reasons for the change, (b) who led the change, (c) who participated, (d) who would be affected, (e) the goal of the change, and (f) if the goal had been accomplished.

2. How do subject-participants at 3 Tier (a) describe their planned change experience and (b) explain what steps were the most effective?

3. What are the key learning factors reported by the 3 Tier subject-participants and stakeholders in the change process?

4. What applicable assumptions and change-management theories were utilized by this current case study's research and how did they relate to the results of the current study?

Key Definitions

Many of the terms of organizational change are common and popular, requiring minimal explanation; however, more proprietary language or terminology germane to IT, academic, and business-process deliverables are defined here to reduce misunderstanding. While not all-inclusive, the list provides a sampling of key definitions pertinent to this case study:

- 3 Tier Research and Consulting Inc.: (3 Tier): An alias (pseudonym) for a major consulting-contracting agency in the United States engaged in market branding as well as research and development located in Silicon Valley, California.

- Accounts Receivable (A/R) business process: An accounting procedure with accompanying databases for recording and collecting monies from customer's purchases.

- Consultant: An expert or a professional in a specific field who has a wide knowledge of the subject matter and advises clients on the best strategies to implement.

- Control Objectives for Information and Related Technology: A high-tech monitoring system linking IT applications to affiliated financial business processes.

- Customer Relationship Management (CRM): A database that collects customer metrics from Web site hits, return visits, as well as purchasing profiles, and key performance indicators.

- Emergent change: Change that unfolds in an apparently spontaneous and unplanned way.

- Enterprise Resource Planning (ERP): A business solutions software that incorporates several databases including the original, first version of Oracle Financials for business processes (A/R and Order Service Group) and PeopleSoft for the HR business process.

- Extranet: A network existing outside another's company's intranet, but that has access to it via a Virtual Private Network (VPN).

- Go-Green Auto Corp: A car manufacturing company.

- Graphical User Interface: An Internet computer term for the display that appears on a user's monitor after data entry into fields or text boxes to order products, to browse, and so forth.

- Intentional change: Desired, deliberate alteration of data resulting from the conscious effort to establish new behaviors or conditions that are different from what they presently are or appear to be (Ford & Ford, as cited by Nunez, 2007).

- Intranet: Internal connectivity of routers, switches, operating systems, Web sites, and business solutions that is accessible only by members or authenticated users of a company.

- ISO 9000: A series of International Standards Organization's 9000 series of standards originally set up for car manufacturing in 1987.

- Job Information Form (JIF): A document that controls other documents in accordance with ISO 9004-1 (Harrington & Mathers, 1997) that 3 Tier is using throughout the life cycle of the project, for example Software or System Development Life Cycle, submission of which provides document control for other documents known as test procedures, specifications, work instructions, quality assurance (QA) procedures, quality manuals, inspection instructions, and QA manuals for purchase orders and sales contracts, in defining the various phases of the successful, comprehensive change-strategies' project with Go-Green.

- Key Performance Indicators: A customer metric including, but not limited to, customers' hits and return visits to Web sites.

- Milestone or Benchmark: The completion of a significant event delimited by a start and stop point; namely, this case study depicts milestones as rectangles on the workflows, specifically, on the IT-JIF and Business-JIF submission packets, each box representing the beginning or ending of some task or process, with a more global deliverable being the output of one phase of the project that becomes the groundwork for the next phase or cluster of activity (Doucette, 2000); this case study examines the experiences reported by the IT Division subject-respondents to the interview protocol questionnaire.

- Order Service Group: A business subprocess that resides inside the Customer Services/Customer Subscription Group, which handles customers' orders for services or products; the modular design of this case study provides granularity of analysis, as the Customer Group resides inside the larger main process, A/R Group.

- Participative leadership: The practice of empowering employees to take part in the decision making (Senge et al., as cited in Nunez, 2007).

- Project manager: A team lead (or next-level manager) who creates and guides a team that implements the work, with key functions as follows: managing the group.

- Protocol: Steps to be taken. Procedure to be followed as in standard operating procedure or related documents controlled by the case cover sheet of the JIF organizing the supporting documentation of the packet, inclusive of test procedures, specifications, work instructions, QA procedures, quality manuals, inspection instructions, and QA manuals for purchase orders and sales contracts, which documentation defines the various phases (Harrington & Mathers, 2007).

- Planned change: Effort planned, organization-wide, and managed from the top, to increase organization effectiveness and health through planned interventions in the organization's processes (Beckhard, 1969).

- *Quantico* is the in-house name that 3 Tier uses in reference to its multiservice pipe that contains all implementations of massive technological machinery.

- Research: 3 Tier's market analysis that includes national and international consumer trends based on development-phase, then operations-phase strategy implementation and recommendations via the JIF submission process.

- Sarbanes Oxley auditing: Public law passed by U.S. Congress to regulate, monitor, and audit publicly traded companies that sell shares on the various stock exchanges by analyzing financial business processes.

- Service Level Agreement (SLA) contract: A document describing the functions of a third-party vendor, contracting-consulting agency in relation to its key client account.

- Software or System Development Life Cycle: An approach for organizing the various phases of the project into clusters.

- Uncertainty: The product of a changing environment, wherein there are frequent and dramatic shifts in social values that foster instability (Emery & Trist, as cited in Nunez, 2007).

- Upper Management or Next-Level Manager (above the four team leads): For purposes of this study, this term refers to any person employed within 3 Tier R & D, Inc., holding the title of director, manager, supervisor, or executive.

- Virtual Private Network (VPN): Technology for transferring data securely and confidentially over a free public Internet.

Yin (1984) presented the precedent of three conditions for the design of case studies. One is the type of research question posed. The abbreviated research questions framed as "who, what, where, how, and why" (p. 84) determine the relevant strategy to be used. In the current study, the nature of the questions led to an explanatory-exploratory case study in which there are several what questions. This type of research question justifies an exploratory study.

This case study explores the change strategies that have been deployed by the organization, and investigates stakeholders' responses-feedback in an interview protocol, e-survey, and questionnaire plus in-depth interviews. The novel frame of a theoretical perspective provided by this case-study relates how 10 major interdependent change migrations at Go-Green relate to conventional change literature as its foundation, but then

proceeds to a permutation of change, which posits future implications of a corporate culture subsequently responsible for quantum deliverables on a global scale.

As an interpretive, inductive form of research, case studies explore the details and meanings of experience and do not usually attempt to test a priori hypotheses (Yin, 1994). Instead, the researcher attempts to identify important patterns and themes in the data, such as the subject-participants' responses as primary resources that will or will not validate the hypothesis. To diminish personal bias, this author did not suggest specific hypotheses to the participants prior to the study and attempted to allow themes to emerge inductively from the data (Thankappan, 2005).

Study Design

A form of qualitative descriptive research, the case study looks intensely at a small participant pool, drawing conclusions about that group in that specific context. This is an exploratory, nonexperimental, intrinsic case study using a qualitative study research approach. Exploratory research is used for clarifying or prioritizing concepts rather than actually testing issues for generalized ability (Churchill, 1991). The study will attempt to explore the context and the process of change in the organization through descriptive research.

Through descriptive research, as evident in subject-participants' responses recorded in the transcripts and Appendixes B and C, both verbatim by rater 1 and summarized by rater 2 in order to minimize possible research bias, this case study investigates a successful, integrated change strategy referred to as the new-and-improved JIF documentation, initiated and experienced by a leading research and consulting company in virtual alliance with its key client account, retrofitting its manufacturing

facilities and associated business and IT processes. Qualitative research can provide both depth and detail in responses, rather than attempt to force individuals' experience into predetermined answers (Patton, 2002).

Specifically, interviews were conducted with team leads representing their respective team members, who operate in groups of functional work tasks with a high-level project manager, the director of Customer Services/Customer Subscriptions Group, Dr. Jack Goodfellow. Research focused on how these subject-respondents experienced change. Gathering data from multiple participants through oral interviews brings together multiple perspectives, methods, and sources of information. Interviews, observations, field notes, self-reports or think-aloud protocols, tests, transcripts, and other documents add multiple insights to an analysis and can enhance the validity or credibility of the results (Creswell, 1998). Enz (2002) noted, "Descriptive work often helps us to understand a particular situation better and can help us create a framework that can be used for assessing the elements of other, similar problems" (p. 6).

This case study investigates successful change strategies (as noted in the 9 Ways Table, Appendix D) experienced by both organizations as they fulfilled the terms and conditions of the SLA contract between them. Qualitative research provides both depth and detail of responses obtained from subject-participants in the assignment under study, in accordance with the methodologies of Patton (2002), who disdained attempts to fit the experiences of individuals into predetermined answers.

According to Enz (2002), descriptive research seeks to describe and create a useful frame for what exists at a given moment. The usefulness of the Enz frame is transferable to this current study, in which utility is augmented by creation of a frame, the

ultimately delivered SLA between 3 Tier and Go-Green regarding the deliverables 3 Tier would provide in combining the business-JIF and IT-JIF.

For ethical reasons, at the early planning stage, permission and consent was obtained in writing from all subject-participants regarding use of data gathered for anonymous reporting in the research. The detailed analysis of anonymous reporting not only minimizes study bias, but may also generate findings that are indicative of or that signify an under-explored area that the auto sector, and by extension, other sectors, will find informative.

The primary interview instrument included five questions, listed in Appendix E, which were answered by all four team leads, who incorporated and represented the responses of their 12 team members. The demographic questionnaire was completed by all team leads and team members (see Appendix F). The most significant question was: Did you take part in the JIF change process and what was your role?

The five questions on the interview protocol were:

1. Please describe the nature of the Service Request Change Initiatives.

   - What was it?

   - What were the reasons for it?

   - Who led it?

   - Who participated in it?

   - Who would be affected by it?

   - What was the goal of it?

   - Was it accomplished?

2. Could you list the steps that were undertaken in the planned change?

3. Which steps were most effective? Explain why you believe they were the most effective.

4. What did you learn from the experience?

5. Do you have anything to add?

These questions helped inform the case study regarding experiences and learning-curve adjustments made by the subject-participants following a particular change order initiated by Go-Green.

Appendix G includes a set of different questions asked of Goodfellow and relevant to his upper-management status, as shown:

1. Are you the decision maker for this Service Request Change Initiative, and what is your position and responsibilities?

2. What appears to be the issue (problem or opportunity) and its significance for your organization and your key client account?

3. Why has the issue arisen and why are you involved now?

4. When do you have to decide and resolve the issue? What is the urgency to the situation?

5. What exhibits and supporting documentation do you have?

6. Can you review the docs during this interview and tell us more about what areas are covered in more depth?

7. Is your area of interest, marketing, finance, operations, human resources, or integrated functions?

8. What specific problems or change strategies are to be made?

Using an interview guide to help structure the interview, semi-structured interviews were conducted in which subjects were asked open-ended questions germane to their area of work. Specifically, this group of line or functional staff in the 3 Tier IT division included the following break-out groups:

1. Developers in-house at 3 Tier, who write code that can query the new product;

2. Developers in-house at 3 Tier, who write and develop the email APIs (Spell out acronyms on first reference.) for MS SharePoint CRM database;

3. The network administrator and system administrator; and

4. Desktop migration technicians, who will roll out the new software (SW) and hardware (HW).

Interviews make it possible for the subjects to organize their own descriptions, emphasizing what they found important (Kvale, 1983). Since 3 Tier has an in-house IT division, it was the source for subjects for this study.

The respondent sample pool was the entire IT division at 3 Tier, plus Goodfellow from Customer Services/Customer Subscriptions Group, which is absorbing the Order Service Group and is part of A/R. He was responsible for designing and developing the SLA with input from the four team leads in the IT division. The responses regarding Go-Green's 10 organizational changes were gathered via an e-survey attached to an email. From the 16 returning completed surveys, five subjects were selected for in-depth interviews: the four team leads and the director of Customer Services. After consent was granted, the five subject-respondents' verbal responses were tape-recorded, transcribed, and cross-corroborated by two raters, with Rater 1 using verbatim quotes to capture the techno-slang from the transcripts and Rater 2 using summary content narrative for the lay reader who is not a technician or manager/executive.

Significance of the Study

In today's volatile corporate and organization environments, organizational change has become a way of life; this case study considers an alternative working model of punctuated equilibrium or steady states regularly interrupted by periods of rapid, often

radical change, caused by catastrophic events (Eigles, 2005). Change, whether moderate or radical, is a given, but how to facilitate effective change in organizations is perhaps the key question for managers (Matheny, 1998). Organizations globally are changing their traditional methods and beginning to understand that in order to gain competitive advantages, change is imperative.

This qualitative approach to understanding organizational change starts with an analysis of a successful strategy or a particular theory. This study incorporates discussions with upper management at 3 Tier to learn about improvements in quality and productivity.

This study's innovative frame provides context in which the ability of leaders and organizations to minimize resistance to change depends on an understanding of the desires and expectations of those directly impacted by change, as there can be several changes simultaneously—some overt and specifically requested on JIFs, and some latent, almost seamless and transparent, running in the background like a software application on the network. Insiders' accounts of change initiatives serve as concrete feedback that facilitates successful strategies in organizational change efforts; thus, mere participation in an in-depth, personal interview as part of a case study, such as this one, acts as a catalyst for change. In accordance with action research, the approach focuses on simultaneous action and research in a participative manner, thus freeing the researcher from the constraints of a traditional experimental model while placing strong emphasis on active observation.

This study also has significance, as it benefits not only organizations in research and consultancy, but people from multiple disciplines and industries. More clearly, the

ISO 9000 standards originally implemented in 1987 for the auto industry have since expanded to many private industries. The big car companies have all been audited by Sarbanes Oxley since 2002 as they are publicly traded companies on the New York Stock Exchange. Basically, the financial business processes such as A/R, A/P, revenue recognition, taxes, financial planning and analysis, and so forth, are audited by Sarbanes Oxley, but manufacturing plants use the original ISO 9000 standards for manufacturing, assembly, and work rules.

The ultimate significance of this particular study is the thoroughness with which it incorporates assumptions, patterns, frames, organizational theories, federal financial compliance, and manufacturing business strategy to accomplish the goals of Service Request Change Initiatives (or change orders) inside the unique frame of an SLA available from and derivative to an organic nexus of business-JIF with IT-JIF. This case study is complex and pragmatic, with its application to other sectors of the global grid highly recommended.

The case-example approach, which here considers 3 Tier to be in a virtual merger with its key account, Go-Green, animates the subjective theories of its predecessors. To analyze, predict, and influence the success of organizational change processes, it is necessary to explicate these subjective theories (Argyris & Schon, 1977; Senge, 1990; Weick & Quinn, 1999). Taking these factors into consideration, it becomes necessary to conduct a study and deliver the findings throughout the chain of command. Hence, this study examines an organization's experiences with change in an effort to illustrate successful change strategies.

By reflecting and implementing previous successful change strategies, the decision-making power is transferred into the departments or groups where the change is needed; in return, the organization can improve the level of uncertainty or "mixed feelings" (Harrington & Mathers, 1997, p. 24)—again, a quantum deliverables whereby all measurement is statistical probability and not an either-or type of discrete, fixed metric or algorithmic true-false.

Limitations of the Study

As in other qualitative case studies, this study was restricted by the methods chosen. Case studies involve a small number of individuals, and therefore, may not be entirely representative; however, such limitations can be identified.

The usual limitations of a case study start with its small or limited size, which, in this case, drew from a sample from the IT department that was randomly assigned. Some could argue that this case study does not provide the basis for generalization to other sectors. However, quite the opposite is evident from this case study. It acted as a template for sustainable car manufacturing resulting from successful change-agent strategies that can, by the halo effect, be applied successfully to other sectors in the global grid. Furthermore, despite data collection from a small, random sample, the qualitative analysis, which focuses on peoples' experiences, aims at providing a holistic view, through the participants' own words and perceptions, of how they understand, account for, and act within these situations (Miles & Huberman, as cited by Skinner, Tagg, & Hollaway, 2000). In so doing, they offer inquiring organizations a more accurate understanding and a complete detailed description of successful change strategies. Another possible limitation could be seen as the corporate culture, which predisposes

employees to the company's mind-set, unifies them by training, and gears them toward

the organization mission statement and policies and procedures of operation (Schein,

2009).

Assumptions of the Study

Making such assumptions explicit defines interesting goals for validation and

verification efforts. However, the responses the participants provided were assumed to be

accurate to the best of their recollection, and all participants were presumed to be willing

and motivated for inclusion in this study. It is also assumed that the findings of this study

would be used as a valid learning tool to assist organizations in dealing with the

uncertainty of change. This is derivative to the massive quantum global deliverables now

taking shape in order reduce concomitant pressure and therefore be used in the

assessment of elements with similar change initiatives and other SLA.

As stated above, in collaboration with participants, facilitated findings have

greater trustworthiness and therefore are more easily transferable to similar contexts. It

was also assumed that the findings of this study would be used as a valid learning tool to

assist similar organizations in dealing with the uncertainty of change.

It was assumed that workers experienced elevated levels of stress that are

common during change and that lack of training contributed to worker frustration in

achieving optimum on-the-job performance. Study data included complaints regarding

training and commensurate pay.

This qualitative study was designed to provide research and consulting companies

with recommendations for a successful change strategy. In order to diminish personal

bias, assumptions were not made regarding the what or the how, per Yin's (1994) model

of research question responses vis-à-vis the interview questions. However, there are other

assumptions that can be gleaned directly from the SLA between 3 Tier and Go-Green.

Chapter 2: Literature Review

The word change indicates a shift from an old state to a new one. Cooperrider and Dutton (1999) note, "Research on the human dimensions of change strives to understand and make sense of the interactions among and between human systems and environmental systems along with their relationship with and contribution to economic, political, cultural and institutional arrangements" (p. 14). There exists no standard procedure to approach organizational change, and so to acquire a deeper understanding of change and the factors that influence successful change, one needs to capture a wide array of practical observation and experience. Researchers have a growing responsibility to provide insights about how managers and change agents can better implement change in their workplaces (Peach, Jimmieson, & White, 2005). Hence, this study aims to examine an organization's experiences with change in an effort to illustrate a successful change strategy and identify patterns within the case study that align with organizational theory. Such inquiry can provide an important contribution to a field in which there is significant demand for change and little confidence among managers in their ability to manage it.

Demand for Change in the Modern Workplace

Change in its various forms is a continual process in organizations. The pace of change and its complexity are also greater than in times past (Burnes & James, 1994). IBM Corporation Business Services Consulting's (2004) global study of more than 450 CEOs from around the world indicated 43% would describe their efforts to manage change as unsuccessful. Other researchers (Beer & Nohria, 2000; Burke & Biggart, 1997; LaClair & Rao, 2002) stated that, at best, there has been a 30% to 50% success rate for

organizational change. This low rate of success is highly problematic in light of estimates that 75% of American organizations will reengineer with the goal of achieving substantial improvement in performance by starting from scratch in designing the core business process (Washington & Hacker, 2005). The IBM Corporation Business Services Consulting (2006) global study of 765 CEO's stated that two thirds of those interviewed were expecting "to be inundated with change over the next 2 years" (p. 7).

According to an American Management Association study, Peak (1996) noted that 84% of American organizations were in the process of at least one major change initiative and 46% of the companies were found to have had more than three or more change strategies in progress. A U.S. Bureau of National Affairs survey of 396 participating organizations revealed that more than a third of the organizations found organizational change to be a major concern (Vakola & Nikolaou, 2005).

Organizational change has no borders or boundaries. Change can happen anytime, anywhere, and to any organization, profit, not-for-profit, public, or private. The interconnectedness of the global economy and its political realities can magnify the ripple effect of any single change, making it a common feature of corporate life (Klann, 2003). Change affecting one organization can, among other things, cause layoffs and closings among that organization's suppliers, customers, and partners; bring about a loss of investor confidence that can cause a dip in the stock market; and even bring about environmental damage and psychological angst.

Cities all across the U.S. are losing investor confidence and consequently few people buy city bond notes to fund city services. KCBS News reported on January 14, 2009, that the city of San Ramon, California, would have a budget surplus because it is

not overspending and it is holding its elected officials accountable. This combination of two of the institutions of society, politics and economics, with the concept of risk and governance accountability is in accordance with ISO 9000 standards and Sarbanes-Oxley regulations. Before January 11, 2009, the U.S. President George W. Bush said that (a) he needed a plan for getting the deficit under control, (b) health care is a major challenge and we need to eliminate programs that do not work, and (c) the priority to get in place is a reinvestment-recovery package. He was asking for $350 billion, targeted very specifically at businesses.

With such strong and far-reaching national consequences, the need for effective management of change is requisite at 3 Tier. Because of their unpredictable nature and their accompanying ripple effect, change situations are unlikely to leave any organization untouched. Jacobs (1998) reported that *Fortune* 100 companies spent an average of $1 billion between 1980 and 1995 on change implementation. The prevalence and cost of organizational change means that the success of such initiatives is a predominant concern for business organizations (Peach et al., 2005). Given the numbers, business leaders cannot deny that change, to some degree, is inevitable. Business leaders can realistically count on facing some kind of organizational change during their careers. Without effective management, change has the potential to negatively affect people in an organization, which is often the most pernicious and difficult challenge leaders face in dealing with a change. However, with strong management, leaders can reduce the probability of negative change, reduce the duration of a change, and soften any negative impact by addressing the human element of a change process before, during, and after it occurs.

Klann (2003) argued that we need to reframe our perception of change, demonstrating an acceptance of its reality:

> Provoke a re-imagined world of change: A world where change is understood not as an exception to the norm of stability; not as an outcome that is known in advance and discussed in retrospect; not as something that can be made to unfold to the rhythm of clock-time; but as the defining character of organization; a fuzzy and deeply ambiguous process, which implicates both author and subject in the quest for new and different ways to understand one another. (p. 17)

From an overall business perspective, it is important to ask why organizations change. Some have argued that the proper, or only, aim of any change effort should be to increase shareholder value or return on investment, as noted above. The shareholders include the employees, the community, stockholders, customers, suppliers, and business regulatory agencies (Dessler, 1999). This outlook rests on the view that the continued survival of organizations in a competitive environment depends on their continued ability to satisfy their shareholders. This is where the role of effective change management takes hold.

The concept of change management is a structured approach to transitions that will affect individuals, teams, the organization, and leadership in order to move the target from a current state to a desired state. While the concept of organizational change and the importance of change management has drawn significant attention from a wide array of practitioners, theorists, and scholars, no single organizational change theory or model has been able to gain exclusive recognition (Bamford & Forrester, 2003).

According to Marshak (2002), there is no agreed-upon framework for pursuing organizational change. It is often argued that the determination of an appropriate change approach is subject to the type of change being undertaken and the circumstances under

which it is undertaken (Burnes, 2004a). Following this, the field of change has been

enriched by growing numbers of philosophical perspectives striving to explore and

apprehend change from the individual to organizational levels (Ackerman, 1996;

Bartunek & Moch, 1987; Greiner, 1972; Huy, 2001; Nadler, 1998; Weick & Quinn,

1999; J. Woodward, 1970). The following section provides a brief overview of key

foundational theories from which the practice of change management has evolved.

Conflicting Philosophical Perspectives of Change: Planned Versus Emergent

The contemporary literature on organizational management is replete with

theories and models related to change management. In examining the roots of these

contemporary theories, it is important to note that all theories link to one of the two

dominant philosophies of change management: Planned change management and

emergent change management.

Strategy formation in organizations involves deliberate, intended formulation and

emergent formulation (Mintzberg, 1983). Bamford and Forrester (2003) provided an

exquisite clarification of both approaches. The planned approach emanated from the

humanitarian perspectives that sought to make the industrial workplace more responsive

to the needs of workers (Ash, as cited in Ullman, 2000). This rejection of the scientific-

management theory sought to reduce social conflict during the change process by

enabling individuals to understand and restructure their perceptions of the world (Burnes,

2004c). The planned approach acceded change as a process that transits from one fixed

state to another through a series of preplanned steps. It also considers that changing an

old behavior requires such behavior to be scrapped before a new behavior can be

adopted. This can be compared to Eigles' (2005) report, which this case study used as an

alternative working mode—that of "punctuated equilibrium or steady states regularly interrupted by periods of rapid, often radical change" (p. 30) caused by catastrophic events. For example, this could be a metaphor for a radical change from combustion engines to plug-in hybrid and all-electric motors in automobiles, a lesser radical change from Oracles Financial to ERP, and so forth.

The emergent approach to change originated from criticisms of the planned approach and lacks a formal history. Garvin (1993) postulated that with the increasingly turbulent and highly dynamic business environment, it is virtually impossible to transit from one fixed state to other. Peters and Waterman (1982) ascertained that the planned approach is a rather bureaucratic and inflexible process to change, whereas Schein (1992) concluded that it is not conducive to making radical change. Even though the planned approach drew criticism, the advocates of the emergent approach did not offer any specific alternative (Bamford & Forrester, 2003). According to Burnes (2004a), the notion of the emergent approach acquired more attention from the culture-excellence school—the postmodernists, the processualists, and system theorists—in which everybody brings in an idiosyncratic approach to change, according to (Beeson & Davis, 2000).

The key features of the emergent approach (Bamford & Forrester, 2003; Burnes, 2004a) can be summarized in three points. First, it calls for organizations to adopt flexible cultures that promote innovation and entrepreneurship and that encourage bottom-up, continuous, and cooperative change. Second, it believes that change is continuous, unpredictable, and essentially political in nature. Third, it is based on the

notion of continuous transformation, less prescriptive and more analytical in nature, which helps in apprehending the problems of managing change in complex environments.

Many leading scholars and practitioners in the field of organizational change found the distinction between the planned approach and the emergent approach to be philosophical rather than methodical (Burnes, 2004a; Dawson, 2005). Several authors attempted to explain the distinction between the two philosophical perspectives. Oswick, Grant, Michelson, and Wailes (2005) labeled these two approaches as traditional and emerging discourse of organizational change, while Purser and Petranker (2005) used conditioned and unconditioned time approaches to change. Marshak (2002) and Weick and Quinn (1999) coined the terms episodic and continuous change, and yet despite the alternate nomenclature, the philosophical differences between planned and emergent approaches remain the hallmark of the dichotomy.

In the following section, the philosophy of planned change management is explored more fully and is followed by the theories that stem from this philosophy. Following this, a discussion of the philosophy of emergent change management and its relevant theories are provided.

Planned change management. Lewin is considered the founder of planned change and is credited by those who follow the model and those who dissent from it. According to Burnes (2004c), Lewin's planned approach to change comprised four components: Field theory, the three step model of change, action research, and group dynamics. Lewin postulated these four elements as one contigious unit in order to bring about planned change, even though some organizational development practitioners treat

them as separate elements of his work (Bargal & Bar, 1992; Kippenberger, 1998; Smith, 2001).

In recognizing the complex nature of human beings, Lewin's field theory proposed that human subjects are always subjected to two opposing force fields. The human subjects' motion is eventually governed by the field intensity and length of exposure. As Lewin came to recognize the limitations of attempting to attach scientific variables to social research and human systems, he proposed a new alternative to traditional research methodology called action research. At its core, action research is a research approach that focuses on simultaneous action and research in a participative manner, thus freeing the researcher from the constraints of a traditional experimental model while placing strong emphasis on active observation.

Through his workplace experiments at the Iowa Hardwood pajama factory, Lewin concluded a three-step working model to explain how people are motivated to change and was the first psychologist to discuss group dynamics. Group dynamics stress that group behavior, rather than that of the individual, should be the main focus of change. Consequently, the focus of change resides at the group level, with a concentration on factors such as group norms, roles, interactions, and socialization processes to create disequilibrium and change (Coghlan, 2000). Disruption and consequent change are reminiscent of Eigles' (2005) model of "punctuated equilibrium or steady states regularly interrupted by periods of rapid, often radical change" (p. 30).

According to Cummings and Worley (2001), there are four significant planned change models: Lewin's three-step change model, the planning model, the eight-phase action research model, and the contemporary adaptations of the action research model.

These planned change models had served as the backbone of the organization change movement. Lewin's three-step change model, discussed first, explains the system process of planned change. The three models that follow the discussion of the three-step change model explain the step-by-step workflow process of implementing a planned change by a consultant or a change agent. These are (a) the planning model, (b) eight-phase action research, and (c) contemporary adaptations of action research model.

Field theory three-step change model. Lewin's field theory describes transformation as a transient instability that causes a stable stationary organization at equilibrium to change through a three-step process: unfreezing, moving, and refreezing. Unfreezing is characterized by the motivation to change; moving is the process during which new values are adopted; and refreezing is the return to normative behaviors. This process is not rigid and inflexible, but rather it is dynamically informed and updated by the unfolding events. The field changes are subjected to smooth and continuous steps rather than discontinuous jumps. Lewin expresses such continuous steps through differential calculus equations (Rosch, 2002).

When a subject is under a field state, there are driving and restraining forces acting on the subject, thus resulting a net valence force. If the net valence force is zero, then the subject settles at quasi-stationary equilibrium. If the net valence force is not zero, then the net valence force will cause the subject to move. Therefore, the action of the subject is determined by a field state that is unknown in advance. In organizational change, the two forces are the force to maintain status quo and the force for change. A preferred way to induce positive change is to decrease the status quo force rather than increase the intensity of the force for change. This is the role of the unfreezing step, and

Lewin argues that this approach is a better organizational change strategy. The moving step implements intervening action to stimulate new organizational behaviors.

This model is significant in the area of organizational change. This is a pioneer model that describes effectively the field motion by applying physical and mathematical field models to social science. The sequence of the motion is further narrated in a three-step process that researchers and practitioners can easily understand. For the first time, the organizational change mechanism could be explained by using Lewin's field theory model, although it is also important to note that the model emphasizes the general steps of planned change and not on the specific organizational change activities conducted by the researcher. A causal process can be envisioned or added to Lewin's field theory change model. The resulting knowledge foreshadows Senge's approach to system thinking (Rosch, 2002; Senge, 1990), which is discussed later in the literature review.

Planning model. The planning model provides a macro-orientation of Lewin's three-step change model (Wooten & White, 1989), and was developed by Lippitt, Watson, and Westley (1958). The model expanded Lewin's model to a seven-step model that refines the specific organizational change activities. The steps are:

1. Scouting,

2. Entry,

3. Diagnosis (unfreezing),

4. Planning,

5. Action (change),

6. Stabilization and evaluation, and

7. Termination (freezing).

The model focuses on the workflow process that an organizational development consultant employs with the members of the organization under investigation (Bullock & Batten, 1985).

There are two conditional factors of success for this model. First, all information must be available and shared by the consultants and the organization members. Second, the gathered information must be translatable into action items. The goal is to find and mitigate or solve the organizational problems in order to increase the organizational performance.

Kolb and Frohman (1970) later revised and updated the planning model for an organizational development approach for consultants. Frohman, Shashkin, and Kavanagh (1976) made some more alterations to the model by inserting data collection and data feedback in between scouting and entry and eliminating the termination phase. Burke (1982) reorganized the seven phases and came up with the following seven steps: entry, contracting, diagnosis, feedback, planning, intervention, and evaluation.

Wooten and White (1989) stated that with the expansion of the field of organizational change, the planning model focused on client-consultant relational aspects. They mentioned three studies in that category, starting with Schein (1969), who suggested six stages of change. The steps were initial contact, definition of the relationship, selecting and setting a method of work, data gathering and diagnosis, intervention, and reducing involvement and termination. The second contribution to this category was made by Lippitt et al. (1958) who suggested yet another set of discrete stages (Lippitt & Lippitt, 1994) in the form of contact and entry, formulating a contract and establishing helping relationships, problem identification and diagnosis analysis, goal

setting, and planning. The third contribution came from Bell and Nadler (1979) who suggested five stages of change consisting of entry, diagnosis, response, disengagement, and closure. Though the terminology varies, what all of these adaptations have in common is a belief in a predictable, incremental process by which to implement change.

　　　　Eight-phase action research model. Cummings and Huse (1989) streamlined the eight-phase action research model, and this model is particularly significant because it is recognized as the most comprehensive approach in defining Lewin's planned change process. The model evolved from the approach of French (1969) that built on Lewin's classical action research principles. The stages for the eight-phase action research model are:

1. Problem identification;

2. Consultation with behavioral science expert;

3. Data gathering and preliminary diagnosis;

4. Feedback to key client;

5. Joint diagnosis of problem;

6. Joint action planning;

7. Action; and

8. Data gathering after action.

There is a feedback loop that connects the data gathering after the action stage to the key client feedback stage, thus providing an iterative process to guide the direction of initial research and the necessary action to correct the problem of the organization under investigation. This model clearly shows the needed collaboration between the organization members and organizational change consultants, and also demonstrates and

clarifies the path from beginning to the end in order to perform action research effectively and efficiently.

Data can be gathered through four tactics: observation, interviews, surveys, and institutional performance data. Results are evaluated carefully and jointly to help the institution to implement the planned change. After the organization implements the planned change, additional diagnosis may be needed to analyze the second round of iterative action to fine tune further planned change.

The goal is to implement a specific on-site intervention program that fits the diagnosis. Another benefit of this planned change exercise is the ability to acquire new knowledge or best practices for the organization and apply them at another site to improve the organization's performance. Thus, the model is constantly evolving based on the accumulated experiences of those who use it.

Contemporary adaptations of action research model. The contemporary adaptation of the action research model was proposed by Cummings and Worley (2001). This model was proposed to try to explain the encompassing essence of the new wave of action research methodologies such as participatory action research, action learning, action science, self-design, and appreciative inquiry. Rather than focusing on problem solving, all these new methodologies aim to change the way organizational members think. Most focus on the behavioral results of group norm change issues as Lewin did (as cited in Bushe & Kassam, 2005). These new action research methodologies are designed to help large groups change how they think about the change they experience through positive thinking and open participation in the process. The procedures for this model are:

1. Choose positive subjects;

2. Collect positive stories with board participation;

3. Examine data and develop possibility propositions;

4. Develop a vision with broad participation;

5. Develop action plans; and

6. Evaluate.

The goal of this sequence is to continue the positive effect of intervention so that people will change the way they think about their new organization.

Bushe and Kassam (2005) considered the theory of appreciative inquiry to be one of the most important innovations in the area of organizational development and organizational change, and appreciative inquiry is considered a contemporary form of action research. According to Zemke and Woods (1999), appreciative inquiry simply treats the organization as a thriving entity with ongoing evaluation of strengths, not problems, leading to refinements and enhancements for the organization. Furthermore, leading affected individuals to project positive images on themselves and their organization will guide the decisions and performance of the organization under intervention (Cooperrider & Whitney, 1999; Zemke & Woods, 1999).

Emergent change management. In contrast to the philosophy of planned change management, the emergent approach did not stem from a methical foundation. Instead, the approach united the critics of the planned approach. Emergent processes are involved; change emerges from the ongoing activity of organization actors as they respond to problems and opportunities (Orlikowski, 1996). This section reviews three notable change theories and models that stemmed from the philosophy of emergent change

management: (a) the big three model, (b) the organic change model, and (c) the Buke-Litwin model.

Big three model. The big three model (Kanter, Stein, & Jick, 1992) is considered one of the comprehensive attempts at understanding change (Bamford & Forrester, 2003). The model is based on the perception that change is a dynamic and continuous process. Hence, any change approach should focus on exploring change at multiple levels of analysis and embody a dynamic and integrative framework (Tracey, 1994).

Kanter et al. (1992) identified three levels, which start with the macro-evolutionary level where change is represented by the relationships between an organization and its environment. The second level is called the micro-evolutionary, where changes take place within the organization and affect the organizational components such as size or culture. The third level, termed revolutionary change, influences the power relationships that can impact the control of resources. Collectively, these three levels are commonly known as the big three models for change and are intended to describe and define the internal and external forces that cause change, the kinds of changes these forces produce, and the activities necessary to manage the change process.

Organic change model. According to Frantz (2004), another way to change organizations is by viewing them as a group of biological organisms that go through a life cycle of "decay, growth, and adaptation" (p. 39). Wheatley (2005) discusses this perspective with a special focus on the community and how employees relate and evolve within communities, noting that over time, individuals become so intermeshed in this process of coevolving that it becomes impossible to distinguish the boundary between

self and other, or self and environment. There is a continual exchange of information and energy among all neighbors, and a continuous process of change and adaptation everywhere in the system.

Wheatley (2005) extends this dialogue of the community by clarifying the role of the leader. She states that the leader's role in implementing change is to continually support conversations among the teams and groups, with the overall purpose of clarifying their goals. Communication, then, is the key element in organizing the change process within the organic model.

Burke-Litwin organizational change model. In the Burke-Litwin organizational change model, an attempt was made to draw a connection between the planned approach and the emergent approach by integrating two categories of change theories: implementation theory and change-process theory (Burke & Litwin, 1992). The former states that activities must be undertaken to affect planned change and the latter refers to specific changes that need to occur as a consequence of these implemented activities.

Based on criticisms of the congruence model (Nadler & Tushman, 1977) and 7S model (Peters & Waterman, 1982), this model integrates four variables (task, structure, technology, and people) of the organizational systems model (Litwin & Stringer, 1968) and nine organizational change levers (external interface, mission, strategy, mission, task, prescribed networks, organizational process, people, and emergent networks) from the sophisticated organizational framework (Rodsutti & Makayathorn, 2005; Tichy, 1983). Accepting the general systems theory, it offers an open systems model of input, throughput, and output (Burke & Litwin, 1992). The model has been recognized as a

comprehensive theory that covers significant organizational functions, and provides a foundation for researchers to understand and implement the process (Pofi, 2002).

Strategic Approaches to Change

Pettigrew and Whipp (1993) contemplated that there is no silver bullet in approaches to change. Instead, there is an array of factors that operates over time in high-performing firms, with the assistance of an array of supporting secondary mechanisms, to initiate, refine, and sustain change efforts over time (Jelinek, 1993). Pettigrew and Whipp (1993) proposed three dimensions of strategic change, namely content (what), process (how), and context (where), suggesting that successful change is subject to the interaction among the dimensions. They also considered change as a complex process founded on five interrelated factors: environmental assessment, the process of leading change, capability to link strategic and operational change, human resources that are both assets and liabilities, and the ability to maintain coherence in service of a given strategic direction across the firm.

Contemporary models of change management operate on the premise that individuals can and must participate in the change they are experiencing. Open-systems theory, contingency theory, and institutional theory have all provided a foundation for the more modern concepts of learning organizations.

Open systems theory. Open systems theory traces its origins to biological principles of organisms (Bertalanffy, 1968) and describes how an organization interacts with its environment (Miller, 1978). Examples of these interactions are summarized in detail by Emery (1969) and categorized as either task or general environments (Kast & Rosenzweig, 1979). Task environments are those aspects of the workplace that have a

direct impact on a business, and general environments are those items that have an

indirect impact on a business. The merging of the task environments into the general

environments defines the health and vitality of the system and can provide clues about

how the organization is managed. Where open systems theory is a workplace adaptation

of an ecological theory, contingency theory has its foundation in psychology.

      Contingency theory. Contingency theory is an outgrowth of the behaviorist

school of psychology. A reinforcer is anything that strengthens the desired response

(Skinner, as cited in Boeree, 2006). The basic principles of the theory as stated in

Schneier (1974) are:

1. Reinforced behavior tends to be repeated;

2. Reward is more effective than punishment;

3. Feedback is necessary for improvement;

4. Rewards should be given without delay; and

5. Rewards should be given for successive approximations of the desired behavior.

Contingency theory provides a framework for determining the effectiveness of the

structure of an organization and the demands of the environment in which it operates

(Burrell & Morgan, 1979). Contingency theory postulates that the effectiveness of the

organization in coping with the demands of its environment is contingent upon the

elements of the various subsystems that constitute the organization. The ability of an

organization to cope hinges upon the degree to which the organization was designed to

function in accordance with the demands of the environment with which it interacts.

      Institutional theory. Like contingency theory, institutional theory is a

contemporary theory of change management that has its roots in psychology and holds a

similar emphasis on the interaction between the organization and its environment. Rooted in the theory of human ecology (McKenzie & Hawley, 1968) and population ecology, institution theory suggests that organizational survival is based on competition, where the organization will experience the same cycles as an organism (Pfeffer & Salancik, 2003). The organization experiences the natural phases of birth, growth, development, and decline (Kimberly & Miles, 1980).

DiMaggio and Powell (1983) compared and contrasted institutional theory and contingency theory. Their primary focus is on the movement toward, and the maintenance of, institutional norms through coercive, mimetic, and normative processes. Results, in general, have been inconclusive as to which model presents an advantage over the other.

Ultimately, all of these theories place emphasis on the interaction between the organization and its environment. The more recent emphasis on individual learning and the establishment of learning organizations have spoken to the importance of the interaction between the individuals who make up the organization as well.

Single-loop and double-loop learning. Argyris and Schon (1977) explored the concept of learning within organizations through a model that distinguishes between what they called single-loop and double-loop learning. In single-loop learning, individuals, groups, or organizations organize their actions according to the difference between expected and obtained outcomes. Single-loop and double-loop learning involves the detection, correction, and review of an error. Double-loop learning differs in its addition of a feedback loop for review and modification of the governing variables.

In double-loop learning, the entities (individuals, groups, or organization) question the values, assumptions, and policies that led to the actions in the first place; if they are able to view and modify those, then second-order or double-loop learning has taken place. Double-loop learning is the reflective component of single-loop learning and occurs when errors are detected within the initial learning process and corrected in ways that involve the modification of an organization's underlying norms, policies, and objectives. Argyris and Schon (1977) argue that double-loop learning is necessary if practitioners and organizations are to make informed decisions in rapidly changing and often uncertain contexts. This emphasis on double-loop learning and reflection within the change process laid the foundation for the work of Senge (1990) and his explorations of what defines a learning organization.

Learning organizations. The learning organization can be defined as one in which everyone is engaged in identifying and solving problems, thereby enabling the organization to experiment continuously, change, and improve, and thus increasing its capacity to grow, learn, and achieve its purpose (Daft & Marcic, 1998). Senge (1990) coined this practical approach by developing the notion of a learning organization, which views organizations as dynamic systems in a state of continuous adaptation and improvement. Senge defined the learning organization as a group of people continually enhancing its capacity to create what it wants to create. Senge defined the learning organization in five dimensions, which he called disciplines:

1. The first of the five disciplines is systems thinking, a conceptual framework that makes the patterns clearer, and identifies how to change them effectively.

2. The second discipline, personal mastery, is the discipline of continually clarifying and deepening personal vision, of focusing our energies, developing patience, and seeing reality objectively.

3. The third discipline, mental model, represents deeply ingrained assumptions, generalizations, or even pictures or images that help enhance understanding about the world.

4. The fourth discipline is building a shared vision that has the capability of being uplifting, and can encourage experimentation and innovation. The practice of shared vision involves the skills of unearthing shared pictures of the future that foster genuine commitment and enrollment rather than compliance.

5. The fifth discipline, team learning, is viewed as the process of aligning and developing the capacities of a team to create the results its members desire. This discipline starts with dialogue, the capacity of members of a team to suspend assumptions and enter into a genuine *thinking together*. (p. 64)

Processual change. Dawson (2005), one of the proponents of processual change, stated that it is not necessarily a part of an emergent approach. The argument behind his belief lies in that the processual approach follows a linear approach and many emergent theorists and practitioners do not subscribe to the linear approach to change. However, Burnes (2004a) preferred to categorize this approach as an emergent study, with the notion that eventually all critics of planned change are somehow drawn to the emergent approach.

Leading advocates of processual change are Beckhard and Harris (1987), who characterized organizational transition as a movement from a present state of organization to some future state. They suggested that any major organizational change involves three distinct conditions: the future state, where the leadership wants the organization to get to; the present state, where the organization currently is; and the transition state, the set of conditions and activities the organization must go through to move from the present to the future. Influenced by this conception, Dawson (2005) came up with three stages of change: The initial conception of a need to change, the process of organizational change, and the operation of new work practices and procedures.

Urgency as a catalyst for change: The Rapid Results theory. The emphasis on establishing a learning organization is driven by the goal of establishing a workplace team that can manage change and benefit from it. The Rapid Results theory emphasizes the benefits of synchronizing the workplace team and states that urgency (a tight-time frame) and a tough goal (worthy challenge) can drive people to achieve new horizons. In fact, according to Schaffer and Siegel (2005), when faced with a crisis and need, people become bolder in testing new approaches and more creative in how they devise solutions. The authors state that groups break through all sorts of barriers to achieve dramatic goals when they feel that they must achieve a certain level of excellence.

Rapid Results starts with providing team members an achievable short-term goal, coupled with a sense of immediacy. Team members are provided the resources and support they need to become inventive and bold in devising solutions to organizational problems. Each team or subteam is led by a change or growth champion responsible for introducing the Rapid Results process and guiding it as questions or complexities arise. As the short-term goals are achieved, management introduces longer-range goals into the equation. These long-range goals and the gained experience in change implementation can serve as a basis for organizational growth (Schaffer & Siegal, 2005).

Rapid Results is an example of where a must-do attitude can fuel a change program. So long as management communicates a viable sense of urgency and immediacy while empowering its people to achieve worthwhile results (vision), then it is likely that change can occur successfully. However, an understanding of human behavior and change planning is appropriate at this juncture as a means for creating a more robust change program.

The Rapid Results theory demonstrates that change can be a catalyst for creating synergies, efficiencies, and transformations of a positive nature. In today's competitive world, they are not only important for maintaining an advantage, but also for survival. Organizational leaders are faced with a constant need to change and adapt to changing environments, needs, and other related forces. However, change and change planning are not easy. Change can simultaneously usher in both positives and negatives, each of which must be carefully balanced and managed to ease transition (Schaffer & Siegal, 2005).

The participatory component inherent in a Rapid Results model shows that successful change efforts can involve participation by those affected. By involving team members in the change implementation, change is more prone to be accepted because it is less obtrusive and its benefits better communicated. (Schaffer & Siegal, 2005).

Threading the discussion are the notions that change must be a planned and guided process led by someone able and willing to champion it. It does not require that management members lead it (although they should support it), but that the champion is someone who has invested himself or herself in the vision of what that change can bring. More important, change must be planned and executed with team member involvement.

As the role of the individual within the organization gains prominence, the issue of leadership in the workplace naturally emerges. Though the concept of participatory leadership is not a new one, it is a concept that demands renewed interest in light of today's rapidly changing workplaces (Kaufman, 2001).

Participative leadership. Organizations seeking to implement change utilize participative management as a change strategy. A predominant description of participative management is allowing employees to provide feedback and suggestions to

management, thus increasing involvement and control over one's own work (Kaufman, 2001).

Alfred J. Marrow is considered the father of participative management (Pojidaeff, 1995). In 1947, he explored reasons for low productivity, which dipped further when changes were introduced to a plant. Marrow realized that productivity could increase as much as 14% when employees were allowed to provide input regarding plant decisions that affected them (Kaufman, 2001; Lobenhofer, 2002). However, according to Kaufman (2001), participative management was founded through the work of Kurt Lewin, Chris Argyris, and Douglas McGregor during the post-World War II era.

The first studies on participative leadership were conducted by Lewin, Lippitt, and White in 1939 (Zimmerman, 1978). A series of studies at the University of Iowa's Welfare Research Station were conducted to examine the effects differing leader behaviors had on groups of fifth- and sixth-grade boys. Hundreds of studies have been conducted since that time with mixed results. Claims have been made that participative management results in improved decisions, facilitation of change, identification with leadership, and a high level of achievement (Williams & Huber, 1986).

The use of participative management has regained popularity as a result of global competition and the need to increase productivity (Holland, 1995; Kaufman, 2001; Pojidaeff, 1995). There remains resistance to participative management from those unwilling to give up control to the workers (Pojidaeff, 1995; White, 1985).

Participative management has drawbacks. Employees become discouraged when their suggestions are not implemented, and management experiences frustration when the ideas are impractical (Ward, 1997). Ward suggests that management identify a realistic

set of criteria to the workforce regarding the constraints that the organization faces. In order for participative management to be successful, the employees' suggestions must be taken into consideration when making the final decision. If the suggestions are not implemented, then the reasons should be explained to the workers. Ideally, a set of final choices are made available to the employee, thus increasing autonomy and empowerment. This method promotes the acceptance of the final decision.

Participative management can be a powerful change strategy and is highly successful in certain cases. However, White (1985) concurs regarding the drawbacks of participative management and cautions that when decisions are made through group consensus, solutions can sometimes lack innovation and end up being the safe alternative to true and lasting change.

The final approach, the whole-scale change process, also relates to the new era of change management, and was born in the early 1980s. Whole-scale change is an approach that reflects many of the characteristics described in the previous models and is discussed in the next section.

Whole-scale change process. Whole-Scale change process was founded while assisting the Ford Motor Company in its transition from a command-and-control management culture to a more participative style (Eggers, James, & Johnson, 2002). Also referred to as real-time strategic change, this highly participative approach seeks to engage a critical mass of stakeholders in the organization to achieve unified change within the organization. Whole-Scale change provides a robust, highly effective, and predictable set of processes to help organizations and communities identify and utilize

their own internal abilities to grow, to lead, and to create the organizations and communities of their own choosing.

In the Whole-Scale approach, Dannemiller and Fitzpatrick (2002) emphasize the importance of a collective vision that creates an organizational community with one brain and one heart. The one brain seeks to ensure that everyone sees and accepts the same data, and the one heart reflects everyone's connection around common yearnings. This system-wide approach incorporates a critical mass of stakeholders into an influential microcosm of individuals that builds and models the new organizational model and culture of the transformed organization. A common vision to align participants and inspire action among large groups is critical to the success of large-scale change (Kotter, 1996).

The Whole-Scale approach incorporates Beckhard's (1969) formula for desired change, D x V x F > R, Factors must be present for meaningful organizational change to take place. These factors are:

- D = Dissatisfaction with how things are;

- V = Vision of what is possible; and

- F = First, concrete steps that can be taken toward the vision.

If the product of these three factors is greater than R = Resistance, then change is possible. Because of the multiplication of D, V, and F, if any factor is absent or low, then the product will be low and, therefore, not capable of overcoming the resistance (Beckhard,1969).

The formula postulates that people will resist change if they do not experience Dissatisfaction, believe in a combined Vision for the future, and are in joint agreement on

the activities necessary to move forward (Holeman & Devane, 1999). The success of the formula drives the paradigm shift inherent in a successful Whole-Scale implementation. This shift involves the participants seeing the world in a new way. Once participants can see the world differently, they are able to take action toward the shared vision (Eggers et al., 2002). According to Dannemiller and Fitzpatrick (2002), there are few organizations that are able to create a "shared and compelling vision, which engages everyone in the organization in implementation" (p. 105).

A central founder to organizational development, Beckhard created a core framework for large-system change. His framework comprises four central themes: determining the need for change, articulating a desired future, assessing the present and what needs to be changed in order to move to the desired future, and getting to the desired future by managing the transition (as cited in Coghlan, 2000). Beckhard's framework recognizes the inter-level dynamics among individuals and groups in the organization.

Central to the Whole-Scale approach is the importance of a microcosm that includes individuals from all areas and levels of the organization planning a change process. The importance of the inter-level interactions aimed at identifying the central issues, collectively seeking solutions, and building commitment to a resolution are central to whole-systems change (Coghlan, 2000; Dannemiller & Fitzpatrick, 2002). Coalitions with the appropriate participants, shared trust, and a common vision are instrumental to leading a successful change effort (Kotter, 1996).

Whole-Scale change is a transformational approach that veers off the traditional approach, which requires individual employee participation to be focused on task-related

problem solving. In the transformed view, organizations are responsible to multiple

stakeholders and must incorporate their varied interests and needs (Kochan & Useem,

1992). Whole-Scale change encourages divergent and convergent thinking among

multiple stakeholders within the microcosm and seeks action involving the entire

organization to create successful change initiatives (Johnson & Tolchinsky, 1999).

In attempting to assess the effectiveness of the Whole-Scale change approach,

Arena (2002) was unable to find conclusive evidence of objective performance

improvements. However, Arena uncovered emerging aspects that demonstrated the

indirect benefits of the approach that created the greatest impact. These aspects include:

- Across-the-fence talk: The process shattered traditional organizational boundaries and enabled authentic sharing among individuals, workgroups, and divisions.

- Emotional change precedes performance: The process connected the whole system, instilling a sense of pride and ownership among stakeholders.

- Enhanced system awareness: The process created a greater level of understanding of the organization's strategy, other group needs, and the individual's role within the larger organization.

- Creating connections: The process brought together individuals on a more personal level to create ongoing relationships.

- Enhanced level of courage: The approach appeared to generate a greater level of empowerment and clarity around a common purpose.

- Multiple deployment approaches: The approach created frustration about how to deploy the key learning back in the workplace.

Overall, the Whole-Scale process appears to be an approach that continues to

evolve in practice. The approach continues to build upon core organizational

development methods in process consultation, action learning, systems theory, preferred

futuring, community building, sociotechnical systems, adult learning, strategic planning, and chaos theory (Eggers et al., 2002).

An important hallmark of these contemporary models of change management is the presence and role of effective change agents both within the organization or consulting for it. Change agents serve vital functions in the planning, implementation, and evaluation of change, and are discussed fully in the next section

Change Agent Roles

An individual functioning in the role of change agent has the task of developing a change-management plan, which may seem formidable to the individual. At times, it may be one person facing an organization. Fullan (1993) speaks to the importance of skilled change agents and the vital role they play in effective organizational change, noting, "One cannot wait for the other. And if they are not working in concert, in particular settings, it is necessary to work on them separately looking for opportunities to make them connect" (p. 12).

The definition of change agency encompasses expecting the semi-unpredictable accompanied by volatile processes. It also requires the change agent to be open to new ends as the plan progresses, thus necessitating the qualities of flexibility and openness to change. In *Managing at the Speed of Change,* Connor (1992) notes:

> Resilient people demonstrate an understanding of the key roles that operate during change and adapt to the varying configurations. People who lack resilience have difficulty keeping up with who is playing what role and, therefore, they usually fail at change. (p. 106)

Thus, implementing a change-management program not only focuses on planned change at the organizational level, but may also require a change in the agent.

Change agents act through the management of (a) values and beliefs, (b) cultural artifacts, (c) leadership practice, and (d) environment. The change agent identifies how he or she can act to positively influence the cultural factors. This may require exploring the roots of the organization and retracing the organization's steps from the present back to its creation. The question is this: On what values and beliefs was this organization founded? Are these underlying beliefs now hidden safely away? If so, the first step is to retrieve these founding beliefs and examine underlying assumptions for current relevancy and viability. Senge (1990) proposes that leaders need to continuously clarify what is important and be able to see the world from today's perspective.

In addition to an examination of the organization's values and beliefs, Higgins and McAllaster (2004) stress the need for leaders to recognize the significance and meaning of existing cultural artifacts. The organization's values and norms must be aligned with the desired strategic plan, and the cultural artifacts are selected to support the desired change. These authors also point out the need to manage the artifact of normative behavior. In other words, reward the desired behavior in order to reinforce the desired change.

The third action of change agents is to manage their leadership practice. Barrett (2003) states clearly, "If you want to change the culture of your organization, begin with the personal transformation of the leadership team" (p. 20), and in this case study, that person was Goodfellow, director of Customer Services/Customer Subscriptions for 3 Tier, who valued his four team leads in the IT division to the extent that they participated in writing the SLA. This simple yet profound statement has been heard and implemented by various organizations desiring a major cultural change. Barrett continues by

emphasizing that the organization's culture is directly correlated to the leader's value orientation.

A significant cultural factor to influence positively is the need to consider the effect of outcomes on the members of the organization. In other words, encourage the heart, which is one of the five leadership practices common to successful leaders (Kouzes & Posner, 1987).

Change agents positively influence others by demonstrating respect for people and encouraging growth. Regardless of the organization's mission, philosophy, and purpose, it is morally correct to preserve and uphold the needs and dignity of the human spirit. This can be done through empowering organizational members, another of Goodfellow's traits as he encouraged 24/7/365 brainstorming sessions among the team members and encouraged the hands-on team leads to achieve equitable or distributive decisions with the goal of upgrading. This means changing the quality management system at Go-Green with a new tool, the SLA, delivering the business-JIF and IT-JIF. His personal knowledge base and more than 20 years' experience as a network administrator at Intel helped him address the interpersonal dimension of change as well as the upgrade in quality management system at Go-Green.

In *ISO 9000 and Beyond*, Harrington and Mathers (1997) ask the questions "Change Agent and Advocacy Skills: How skilled are the change agents in developing transition management plans? Are they knowledgeable and experienced enough to address the human aspect of change management?" (p. 132)

An effective change agent is a role model for demonstrating consistency between the organization's espoused and observed values. Kouzes and Posner (1987) list the

fourth leadership practice common to successful leaders: modeling the way. Thus, change agents must act in ways congruent to the organization's belief system in order to have a positive impact on the outcome of the change management program. The change agent and leader must ante up first, according to Kouzes and Posner, if the members are expected to follow the outlined changes.

Honesty is an essential quality for the change agent so that members can recognize the behaviors of integrity. Hoerr (1999) identifies principle-centeredness as the most critical foundation for strategic planning. He writes:

> Commitment to core principles such as integrity, fairness, honor, and value will provide strength in times of incredible change. As the levels of change intensify, organizations need to be anchored to timeless principles that do not shift or shake—those proven to yield the fruit of success. (p. 28)

Change agents must exemplify honesty in order to implement a successful change management plan.

The last action of a change agent is to manage the environment. In systems thinking, change agents need to remain vigilant to the needs its members. A potential change agent must be constantly aware of the need to create products and services that exceed expectations. It requires an attitude that something's not being broken means that one has just not looked hard enough, with the imperative that he should fix it anyway (Robbins, 2005). Change agents, then, encourage the actions of analysis and evaluation with the goal of producing a better product more efficiently through encouraging the heart of team members, as was achieved in this case study.

As members work together, the change agent creates an environment where members find satisfaction in their roles. Clear direction is given regarding the proposed

change and its impact. Feedback is provided to members during the change management program that is constructive and helpful in a blameless manner. In addition, each member's efforts and contributions are acknowledged with sincere appreciation.

Change has been so thoroughly researched and discussed, because it is frequently controversial, often political, and sometimes painful. The many theories that have been the focus of this literature review demonstrate the varied approaches to change, and the sheer number of studies indicates that there is no magic formula for creating ideal change and perfect change processes. Perhaps most requisite to effective change is a strong rationale that drives the change and specific conditions under which change should and should not be pursued. The following section discusses the many challenges inherent to championing change.

Reasons for and Against Championing Change

The decision to undertake a change program presents organizational leaders with exciting but challenging dimensions that must be weighed carefully before pursuing a change strategy. On the positive side, change can identify new opportunities, reduce redundancies, and/or eliminate complexities. However, change can also create new complexities, often is a costly and expensive pursuit, and frequently increases dissatisfaction among organizational members. Also, consider that as human beings, we are naturally resistant to change because it disrupts our normal routines, thereby complicating its implementation even if the expected outcomes are positive. This does not mean that change cannot or should not occur. Kerber and Buono (2005) state that "building true organizational change capacity involves leading change in ways that are appropriate to the situation" (p. 24).

Managing Resistance

Uris (1986) posits that there are three major factors that make change threatening in organizations: The first is that sudden announcements and unexpected developments make people feel as if they have no control. Resistance is a way of coping with an unexpected situation. The second is that people often see change as threatening to their positions of authority. The third is that people fear that change will result in some kind of loss, such as status or privileges.

Management can counteract these fears by implementing a program that includes the people who will be affected by the change. This begins with an announcement that clearly justifies the need for change. Management seeks the cooperation and acceptance of the workers by minimizing the negative effects and maximizing the positive effects. Most important, management should seek the workers' participation in the planning process. Requesting workers' opinions and suggestions will provide valuable information to management, and they will also make workers feel a part of the process (Uris, 1986).

Bolman and Deal (2003) provide us with reasons for and against considering change implementation. For example, implementing change can be beneficial because it provides organizations the ability to adapt quickly to dynamic environments and changing consumer preferences. Hence, change creates a competitive advantage. Change also transitions in new leadership, enabling manager's leaders to implement new organizational goals and objectives quickly and effectively.

However, Bolman and Deal (2003) also warn that change is typically viewed as a disruption to the status quo. As a result, leaders are faced with a bevy of new challenges and dilemmas that impede its progress. Some of these new challenges can be foreseen,

but it is the unforeseen challenges can complicate change implementation because there are no ready solutions. S. Woodward and Hendry (2004) state, "In organizations that are undergoing change it is difficult, if not impossible, to define and resolve all eventualities. Hence, adaptive solutions are not amenable to leader-driven solutions. Leadership, in this perspective, involves a learning strategy" (p. 24). Bolman and Deal (2003) also state that change can be expensive and consist of high-risk programs that historically do not produce the significant gains initially sought. Often, the lackluster return may be attributed to poor planning and implementation. Additionally, Kotter (1995) found that 70% of change initiatives fail for one of the following reasons:

- Top management does not provide sufficient commitment and support

- Employees do not completely embrace the change or are not included in the change process

- Employees are forced into a change; they do not receive adequate feedback, coaching, or reinforcement to accept the change.

This discussion supports the idea that change is not easy and, therefore, must be carefully planned out before being undertaken. Change leadership must be a balance between team members and organizational leadership. Once the lines of communication are established, both leaders and affected members can begin preparing for a needed transformation.

Preparing to Undertake Change

Effective change is neither automatic nor quick, but instead planned and transitioned. Leaders must accept that despite their enthusiasm for any projected benefits, there must be a mechanism set in place to foster change acceptance within the organization and the individuals that compose it.

S. Woodward and Hendry (2004) state that in order for change leadership to work, we must first discard our preconceived notion of managerial leadership. Organizational members rely on management to solve specific or social routine problems to preserve the status quo. However, change ushers in an era of complexity in which there are no standardized or routine answers. Decision making must, therefore, be tackled as a team effort, whereby both management and member input are aligned toward creating solutions to emerging issues, thereby creating a participatory change strategy. Building a successful participatory framework will require that leadership create a high performing and effective communication process.

Those in leadership positions must listen actively to their people and encourage their input in order to identify areas of opportunity. Conversely, members of the organization should not rely solely on those in high-power positions to initiate change. This two-way communication bridge is essential in identifying the need as well as creating advocates for change thereby minimizing resistance (S. Woodward & Hendry, 2004).

Change creates chaos without readily available answers. Leaders and organization members must unite in solving new and complex issues brought about by change. This unification is strengthened by effective communications processes, which includes clarifying the need and the objective of the endeavor. Good communication facilitates learning and creates the knowledge required to solve change issues. As problems are solved and the complexities diminish, there is a greater understanding, acceptance, and appreciation for the change. Leaders must now consider how to plan for and incorporate

the needed change. We look to several change model strategies as a guide for creating a change plan.

Summary

There is a substantial body of literature related to change management, and each contributing researcher brings his or her own philosophies and approach to this challenging subject. Though theories and approaches may vary, the constants that can be identified throughout the literature are that change is transition, it is transformation, and, most often, it is difficult. Organizational change theories and models have a plethora of philosophical perspectives associated with them. By their very nature, there is no one specific framework for addressing the need for change within an organization. In keeping with the argument that the appropriate model for change is dependent on the circumstances the organization is facing, hallmark theories and models have been provided within this review and served as guideposts during the interviews that drive this study. Through these different philosophical perspectives of organizational change, an appreciation of the dynamics in this area of research and application are gleaned.

This study aims to supplement this area as it pertains to the research and consultation industry. This descriptive study investigates a successful change strategy experienced by a leading research and consulting company in the United States and solicits the identification and description of the essential steps in the planning phase of change and alternative approaches for achieving a desired result. Among them is the need to understand human behavior and learning as a foundation for accepting and ushering in change. Then, the visionary can proceed toward creating a more unified transition. Change is a process that can potentially yield many benefits, but requires careful

planning. In an incredibly fast-paced and highly competitive environment, change may even be a requirement for survival. The idea that organizations must be willing and able to change continually and as needed, and, therefore, foster their ability to adapt, only adds to the complexity in managing it.

It is the intent of this study to contribute to the existing body of literature and to provide change agents and managers with additional tools with which they can orchestrate their own change processes. The following chapter provides a detailed discussion of the methodology employed in this study and the research questions that drive it.

Chapter 3: Methodology

The purpose of this case study is to identify the key influential success factors that were implemented by 3 Tier in its Service Request Change Initiatives. In this chapter, the methodology is described and discussed in greater detail. A discussion of a qualitative study using a case-study approach is presented. This chapter also identifies the sources of data, including any information relevant to protecting the human subjects who participated in this study. The chapter also describes the data collection strategies, the method of analysis, and the manner in which the findings are presented.

Nature and Design of the Study

Case-study qualitative research is useful for understanding how participants make sense of events, contexts, and unexpected phenomena (Maxwell, 1996). In this case study, the researcher studied phenomena in their natural setting. The goal was to interpret phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 1998). The phenomena studied in this case are the successful strategies deployed by a research and consulting company to improve its Service Request Change Initiatives, generically known as change orders. To bring meaning and help in identifying successful change strategies that align with the study, a qualitative research design is properly qualified and appropriate, as it generates data that are in-depth, rich, and highly detailed (Norwood, 2000). As noted by Speziale and Carpenter (2007), the inclusion of commentaries and narratives adds richness and understanding to experiences. In qualitative study, reality is based on perceptions and is different for each person (Burnes & Grove, 2001).

This study seeks to understand and explain how an organization undertakes change. Patton (2002) notes that descriptive research can be employed to better

understanding and explain what happens during a change, The researcher takes into account a Gherardi and Turner (1999) warning that qualitative design can become very messy and complicated, and so intricately involved, that it is a time-intensive process. In consideration of Denzin and Lincoln (1998) and Gherardi and Turner (1999), the researcher understands that in order to learn the finer details and unique features of events such as how employees use voice to respond to organizational change are to be investigated and understood, sufficient time to collect and analyze data qualitatively is necessary.

Restatement of the Purpose of the Study

The purpose of the case study is to identify the key influential success factors that were implemented by 3 Tier in processing its client's Service Request Change Initiatives. To survive and prosper in the future, an organization has to make sound decisions today (Senge, 1994). This study is particularly important, as it can augment the knowledge base regarding organizational change. Research that builds on these insights is growing, but there remains much to be understood about what successful change strategies exist for research and consulting companies implementing changes in Service Request Change Initiatives. In today's volatile environment, organizational change has become a way of life. However, how to facilitate effective change in the functioning of organizations is perhaps the key question for managers (Matheny, 1998).

Restatement of Research Questions

The primary research questions are reiterated here:

1. What was the nature of the successful change strategies employed by a contracting-consulting company engaged in market branding, research, and development for its key account?

2. How do subject-participants at 3 Tier describe (a) their planned change experience and (b) what steps were the most effective?

3. What are the key learning factors reported by the 3 Tier subject-participants?

4. What applicable assumptions and change-management theories were utilized by this current case study's research and how did they relate to the results of the current study?

This case study explores the change strategies 3 Tier deployed and investigates from different theoretical perspectives how the strategies relate to conventional change literature. To avert personal bias, the author did not suggest specific hypotheses prior to the study and attempted to allow themes to emerge inductively from the data (Thankappan, 2005).

Selection of Research Site and Participants

Case studies can use one participant or a small group of participants. However, it is important that the participant pool remain relatively small. The participants can represent a diverse cross-section of society, but this is not necessary (Yin, 1994).

To recruit participants, the researcher contacted the director of Customer Services/Customer Subscriptions of West Coast Operations at 3 Tier. The researcher described the goals of the case study and explained that the identity of the organization and its participants would be kept confidential and would only be used for research purposes. Approval to be part of the study was granted by the director of Customer Services/Customer Subscriptions of West Coast Operations. The researcher was invited to visit the site and collect data.

The researcher selected five participants from among those who volunteered to participate in the in-depth interviews. These participants, four team leads and one project

manager, had insight into the perspectives of the employees under them as well as a broader understanding of the organization.

For convenience and assurance of a related viable sample, participants were recruited through a voluntary and confidential Preliminary Questionnaire E-Survey; see Appendix H for the complete text of the questionnaire. The preliminary questionnaire was sent out to identify participants who could represent the IT division as a whole, which has a total of 20 desktop technicians, developers, and a system administrator, plus the director of the Customer Services/Customer Subscriptions subprocess in 3 Tier's Accounts Receivables Group. The question, "Would you be open to a half-hour interview?" was included in the preliminary e-survey questionnaire to gain a viable sample size of at least 5 subject-respondents from the 20 in the IT division. With the help of the director of Customer Services/Customer Subscriptions, the questionnaire was distributed via email throughout 3 Tier's IT division to identify individuals who had participated in the Service Request Change Initiatives pursuant to the SLA between 3 Tier and Go-Green. Questions were addressed regarding approximate change strategies, proactive and reactive, in a coordinated partnership between the consulting vendor and its key client account.

The researcher also distributed the preliminary questionnaires in person during a brief visit to accompany the e-survey sent to the 20 employees and contractors in 3 Tier's IT division. This ensured that all 20 people in IT received the questionnaires, either by hand or by email. Full coverage was paramount in order to have a good base from which to select the 5 to 10 candidates for the in-depth interviews. A preliminary visit also gave the researcher an opportunity to meet management in other groups such as Finance,

Marketing, and Sales and explain in detail the purpose of the study, since all groups at 3

Tier are involved with servicing the key client account of Go-Green.

      After the questionnaires were returned, a content analysis was conducted to

determine whether the subject-participant met the criteria to be a subject for an in-depth,

follow-up interview using the primary instrument. Primary resources such as

questionnaires, surveys, and interviews, including the main management interview with

the director of Customer Service and the four hands-on team leads, provide the

cornerstone of this case study. Included is the question-and-answer format that defines

the Yin (1994) case-study approach, per the answers of the directors of Customer Service

and the four team leads.

      These are the research questions asked of the director of Customer Service

through a written questionnaire and an in-depth interview:

1. Are you the decision maker for the Service Request Change Initiatives, and what is your position and responsibilities?

2. What appears to be the issue (problem or opportunity) and its significance for your organization and your key client account?

3. Why has the issue arisen and why are you involved now?

4. When do you have to decide and resolve the issue? What is the urgency of the situation?

5. What exhibits and supporting documentation do you have?

6. Can you review the docs during this interview and tell us more about what areas are covered in more depth?

7. Can you lay out any additional background information that this researcher has not gathered yet from Internet postings, such as, pertaining to Go-Green auto industry, your third-party vendor organization, product launches, any history of Service Level Agreements with Go-Green, competition from Prius, financial information from Sarbanes Oxley, and just anything else of

significance that can complement this researcher's background check already done on the business model, financials online, marketing plan, and so forth?

8. Is your area of interest marketing, finance, operations, human resources, or integrated functions?

9. What specific problems or change strategies are to be made?

To gain a better understanding of the demographics of the participants, they were asked to fill out a demographic questionnaire during the interview. According to Business Research Lab (2007), the questions serve the following two main purposes:

1. To see how closely the sample replicates the known population. The more closely the demographic distribution of questionnaire respondents matches the population, the more confidence you can have in the data.

2. To allow analysis of subgroups of those responding to the questionnaire.

Protection of Human Subjects

To guarantee protection of the human participants involved in this qualitative study, the researcher followed the guidelines and procedures set forth by Pepperdine University's Institutional Review Board policy. A Human Participant Protection Education for Research Teams online course was completed by the researcher, and a certificate verifying completion of the course was granted and is included as Appendix I. As related to the ethics of studies that include human participants, this qualitative study followed the three basic ethical principles stated in the Belmont Report: respect of persons, beneficence, and justice (National Institutes of Health, 1979).

Respect. In accordance and alignment with the principles of respect of persons of the Belmont Report requirement (National Institutes of Health, 1979), participants in this study each signed an informed consent form explaining the purpose of the study and their individual role. Respect was addressed by offering each participant: (a) the right to

withdraw voluntarily from the study at any time, (b) an explanation as to how their views fit into the purpose of the research, and (c) the opportunity to review their transcript and make any corrections needed.

Beneficence. In accordance with the Belmont Report's principles of respect for persons (National Institutes of Health, 1979), beneficence was exercised by including in the informed consent form statements that (a) described any known risks to the participant, (b) described the benefits to both society and the individual, (c) provided a commitment that any collected information would be kept confidential and that their identities would be kept anonymous, and (d) offered the participants the opportunity to ask questions at any point during the research process. These elements were included as a means of reducing any potential for harm to each participant. The collection and analysis of data and the dissemination of findings throughout the change process should prompt new reflections, learning, and further positive change (see Appendix I).

Justice. In accordance and alignment with the Belmont Report's principles of respect for persons (National Institutes of Health, 1979), justice was used in the selection of the participants. No participant was chosen or rejected on the basis of race, gender, culture, or any other factor that was not appropriate for or related to the purposes of this study.

Interview Protocol

The collection and analysis of data and the dissemination of findings throughout the change process prompted new reflections, learning, and further positive change. Participation by a range of stakeholders would help ensure valuable outcomes in the

findings. To gather data, the investigator visited the research site, 3 Tier, on an arranged schedule set by the participant. The process was planned by the researcher.

The primary data collection took place through an online e-survey attached to an e-mail blast to 20 subject-participants. Its purpose was to collect demographic data along with some job-description data, for example, identifying the in-house developers, the desktop technicians, and system administrators for the functional line staff (four team leads) in the 3 Tier IT division. The survey was followed by one-on-one, semistructured interviews using the primary research instrument of the interview protocol. In short, the online e-survey blast is the Demographic Questionnaire (Appendix H) with four functional hands-on team leads and one upper-level project manager, the director of Customer Service. The five in-depth personal interviews employed the Interview Protocol (Appendix E) and the Survey to Participate (Appendix H), along with two tables, as the data-collection tools. A more robust set of questions was asked of the director of Customer Service, as noted above.

The interviews took place in a conference room prearranged by the participants to assure privacy, a comfort zone, and anonymity with alias names on the data-collection instrument. After greetings were exchanged, the researcher restated the purpose of the study. The researcher obtained from each participant a signed consent form (Appendix J).

The interviews lasted approximately 30 to 45 minutes. The interview settings chosen had minimal distractions (Burns & Groves, 2001). To encourage the participants to discuss the organizational change experience in more detail, per the Yin (1994) case-study's focus on testing experiences, the researcher used open-ended questions that included a semi-structured format. The qualitative research interview enabled participants

to report their stories of organizational change within the context of their personal values and experiences in a way that a more structured interview format may constrain (Bryant, 2006).

The interview is an excellent data collection format (Speziale & Carpenter, 2007). After permission was granted and the informed consent was signed, the interview proceeded, guided by the interview protocol. Although Norwood (2000) recommends that facts such as demographic data be collected at the beginning of the interview, participants were invited to fill out the demographic questionnaire after the interview ended. Completing the questionnaire was optional. The interview instrument and protocol are included in Appendix E. Demographic questionnaire is included in Appendix F.

Instrument Validity and Reliability

The goal of this qualitative case study is to examine insider accounts of successful change initiatives accomplished by a major research and consulting company using the guiding key question: What was the nature of the successful change strategies employed by a contracting-consulting company engaged in market branding, research, and development for its key account? Two research instruments were fundamental to this study.

The first instrument consisted of a preliminary questionnaire for the purpose of recruiting a viable sample of participants who could represent the population at 3 Tier. The preliminary questionnaire was distributed to members of the IT department, as IT was instrumental in developing and implementing the SLA. The second instrument consisted of five interview questions and served as the primary instrument for gathering descriptions and making sense of the phenomena under consideration:

1. Please describe the nature of the Service Request Change Initiatives.

    - What was it?
    - What were the reasons for it?
    - Who led it?
    - Who participated in it?
    - Who would be affected by it?
    - What was the goal of it?
    - Was it accomplished?

2. Could you list the steps that were undertaken in the planned change?

3. Which steps were most effective? Explain why you believe they were the most effective.

4. What did you learn from the experience?

5. Do you have anything to add?

Both instruments were validated by a panel consisting of three persons holding graduate or post-graduate degrees, with expertise in fields varying from education, qualitative research, and organizational change. After review of the correlation between the research questions and the interview questions, the panel of experts reached a consensus that the preliminary questionnaire would yield an adequate sample for research and the interview questions would yield data necessary to inform the study.

The purpose of reliability in a qualitative study is to assess the degree to which the findings of the study are in alignment with the data obtained (Clarke, 2005). To increase validity and reliability of the findings, the study attempted several measures to increase accuracy of the findings.

In order to facilitate the systematic analysis of the case study data, interviews were transcribed; the transcriptions were used jointly with audio tapes to improve reliability and validity (Merton, Fisk, & Kendale, 1990). To avoid subject bias, the researcher conducted the interviews separately. It was assumed that the presence of more

than one subject could lead to observational bias. Moreover, the interviewer stayed neutral during the interview process and did not lead the participants into a discussion. The study attempted to establish reliability through member checking. Member checks require the researcher to present the collected data and verify its accuracy with the participants (Norwood, 2000). According to Light, Singer, and Willett (1990), "When you examine the consistency of ratings of the same stimuli by different judges or raters, you estimate inter-rater agreement" (p. 166). Denzin and Lincoln (1998) described such efforts in avoiding bias as being indicative of investigator triangulation.

In categorizing the topics and developing the themes expressed during the interviews, the author worked to ensure that personal bias did not affect the outcome of the analysis. Moreover, to prevent personal bias, the author did not suggest specific hypotheses prior to the study and allowed themes to emerge inductively from the data (Thankappan, 2005).

Emphasizing the confidentiality of the discussions and anonymity of respondents was another means of improving the reliability of the responses (Martinsuo, 2001). The author kept a full record of the activities while carrying out the study and will store the data and findings inside a fireproof safe deposit box for 5 years after the study concludes. This includes raw data (transcripts) and details of coding and analysis. Such an approach aligns with Lincoln and Guba (1985), who refer to this approach as an audit trail and note that it minimizes the threat to internal validity in qualitative research.

Data Analysis and Data Reduction

The analysis of qualitative data is accomplished through the techniques of data reductions and data display. The collection and analysis of data and the dissemination of

findings throughout the change process should prompt new reflections, learning, and further positive change. The interview data was analyzed using qualitative content analysis, which involves using quotations in place of numbers. Answers were cross-corroborated by two raters, with Rater 1 using verbatim quotes to capture the techno-slang from the transcripts and Rater 2 using summary content narrative for a general audience. Henwood and Pidgeon (1992) argue that too much quantification in the social sciences can lead to inappropriate fixing of meaning, which is the neglect of the uniqueness of human experience with objective overlays. Qualitative content analysis attempts to identify themes and gain insight into how respondents understand the topic discussed (Neuendorf, 2002).

Once all five in-depth, personal interviews were completed, the two raters listened to the taped interviews and both transcribed them verbatim and summarized the content of the responses as an aid to the non-technical lay reader. The latter activity focused on interpretation of data from the transcripts, described by Miles and Huberman (as cited in Sato, 2007) as the "process of selecting, focusing, simplifying, abstracting, and transforming data" (p. 11). To assure reliability, the transcripts were read twice and sent to the participants for review to confirm their accuracy. The data were analyzed using content analysis to provide what Czarniawska (1997) refers to as a meaningful whole. To determine the presence of certain words or concepts within the texts, content analysis was deployed as a research tool.

The content analysis utilized Sato's (2007) following steps:

1. Listened to the taped interview while simultaneously reading the transcript as soon as possible to preserve currency of the experience and verify the accuracy (Burns & Groves, 2001; Norwood, 2000).

2. Identified themes by seeking recurrent responses while recognizing that variations are expected (Flick, 2002).

3. Correlated the highlighted areas and notes to the research questions (Norwood, 2000).

4. Tabulated the responses to determine frequency of occurrence (Burns & Groves, 2001).

5. Investigated the theme to determine the degree of integration to provide a description of the phenomena studied (Speziale & Carpenter, 2007).

6. Used a second rater to provide inter-rater reliability through independent interpretation and analysis of the responses (Norwood, 2000).

Researchers quantify and analyze the presence, meanings, and relationships of such words and concepts, then make inferences about the messages within the texts (Weber, 1990). The investigator determined what data to retain and what data to discard. Through this process, the data was organized into two bins: record retention and record disposal.

According to Sokolowski (2000), the purpose of phenomenology is to break down language into modes of presentation or pieces that describe what the respondent is truly saying, to translate syntax into meaning. Responses were tabulated and themes were identified per recurrent responses.

To help illustrate the findings and display the data, the researcher used figures and tables to display the key themes that emerged through the narratives. Moustakes (1994) stated that data display helps to compare the data and the experiences of the participants in a phenomenological study. To prevent personal bias, the author did not suggest specific hypotheses prior to the study and did allow themes to emerge inductively from the data (Thankappan, 2005)

Summary

This chapter describes and discussed in detail the methodology that was used in this study. It presents a discussion of a qualitative study using a phenomenological approach and identifies the four research questions. It also identifies the sources of data, including any information relevant to protecting the human subjects who participated in this study. The chapter also describes the data collection strategies, the method of analysis, and the manner in which the findings are presented.

Chapter 4: Results

The purpose of this case study was to identify the key influential success factors that were implemented by 3 Tier, a research and consulting company, in its Service Requests Change Initiatives. Chapter 4 presents the data obtained from the data collection phase of the study. Participants were recruited through a voluntary and anonymous preliminary e-survey questionnaire. Through qualitative content analysis and purpose sampling, five participants were selected for personal interviews with the researcher. Participation in this study was voluntary and limited to one facility. Data was gathered through semi-structured interview questions. The interviews were tape recorded, and participants received transcripts of the interview to review. The results are presented in order of the research questions and the related interview questions.

Overview

The human subjects involved in this study include employees of 3 Tier, a *Fortune* 500 research and consulting company that agreed to participate in the study. Twenty employees were emailed prelimanary questionnaires, which included an invitation to participate voluntarily in the proposed study. The prelimanary questionairre included an explanation of the purpose of the study as well as an attached letter of consent, which included a guarantee that participation was entirely voluntary and that all names and other possible identifying data would be stripped from the data prior to analysis. The email sent to the 20 employees of the IT division of Tier 3 included an invitation to complete the preliminary e-questionnaire. It also indicated that responding to the email meant that the individual was willing to participate and had read, understood, and agreed to the terms of the study and letter of consent. Sixteen of the 20 employees receiving

emails responded. The responding emails were printed out, with return email address deleted, and kept in a locked cabinet. The study proceeded as soon as the email responses had been received.

The question "Would you be open to a ½ hour interview?" was included in the preliminary e-survey questionnaire to ensure a viable sample size of at least five subject-respondents for interviews. Through qualitative content analysis, 5 of the 16 respondents were selected through purpose sampling for personal interviews with the researcher. Prior to the personal interviews, participants were provided with explanations of informed consent, the nature of the study, interview protocol, and the demographic questionnaire. To ensure confidentiality, the researcher, who had access to the code sheet, used coding to systematically change the names of the participants. The data will be stored in a locked safe deposit box in the researcher's office in a secure location. Data from this research will be safeguarded for a period of not less than 5 years. After 5 years, the data will be destroyed.

Participant Profile

The final study consisted of five participants employed by a leading business organization with more than 100 employees. From a sample of 16 preliminary participants, five subject-participants who met the criteria were selected for an in-depth, follow-up interview using the primary instrument. These five participants were identified as individuals who had worked on the Service Request Change Initiatives derivative to the SLA between 3 Tier and Go-Green.

The participants included team leads consisting of four (80%) white males and one (20%) black female who ranged in age from 46 to 58. All participants had been

employed by the company for more than 7 years, held the title of team lead-project

manager, and had participated in the Service Request Change Initiatives, also know as

JIFs. Four of the five (80%) held a Master's degree, and 20% had a Bachelor's degree

(See Appendix C) Table 1 below shows the demographics of Team Lead participants.

Table 1

Demographics of Team Lead Participants (n = 4)

	P 1	P 2	P 3	P 4
Age	58	46	48	58
Gender	M	M	M	F
Race	W	W	W	B
Education	Master's	Master's	Bachelor's	Master's
Tenure/yrs	8	8	7	8

Table 2 identifies the occupation of the participants.

Table 2

3 Tier Team Lead Participants (n = 4)

	Occupation of Participant
P1	In-house developer who writes code to connect to Go-Green product catalog
P2	In-house developer who writes 3 Tier e-mail aps for MS SharePoint CRM database
P3	Desktop technician who migrates-rolls out new SW-HW
P4	System administrator who scripts DNS(Spell out acronyms on first reference.), proxy, firewall, etc., all e-blade servers

Change Process

The phenomena to be studied in this case study were the successful strategies

deployed by a research and consulting company to design and develop process

improvements related to Client Service Request Initiatives, or change orders. Previous to

this study, change orders generated by Go-Green were processed by JIF cover sheets

attached to packets of supporting documentation that were manually processed and

routinely rubber-stamped, with little scrutiny, by the 3 Tier Project Management Office. This resulted in jobs not being done properly, with a subsequent and continuous stream of do-over change orders that were over budget and late. As a result, Go-Green requested an upgrade or change in a quality management system that would respond to its large organizational change.

The design of the study incorporated process improvements via the JIFs that would be reviewed for rigorous ISO 9004-1 compliance, as discussed by Harrington and Mathers (1997). The JIFs are documents that control the life cycle of a project that occurs in phases, which is known either as the Software or System Development Life Cycle. The JIFs, now upgraded by rigorous conformance to ISO 9004-1 and interdependence with Sarbanes-Oxley received the name of upgraded ISO-SOX-implemented change orders to accomplish the request for an upgraded quality management system. The JIF cover sheet served as a table of contents to a packet of supporting documentation that could include test procedures, specifications, work instructions, QA procedures, quality manuals, inspection instructions and QA manuals for purchase orders and sales contracts, and define the various phases of a project, as described earlier.

Data Collection

After consultation with the dissertation committee and approval from the institutional review board (see Appendix E) the researcher selected five participants from among those who volunteered to participate in the in-depth interviews. These participants, four team leads and one project manager, had insight into the perspectives of the employees under them as well as a broader understanding of the organization. The design of the case study included recruitment of participants through a voluntary and

anonymous Preliminary Questionnaire E-Survey, Survey to Participate (Appendix H) and in-depth face-to-face personal interviews (Appendix E). Both instruments were validated by a panel consisting of three persons holding graduate degrees or higher, with expertise in fields varying from education, qualitative research, and organizational change. After review of the correlation between the research questions and the interview questions, the panel of experts reached a consensus that the preliminary questionnaire would yield an adequate sample for research and the interview questions would yield data necessary to inform the study.

Data Analysis

The interview data was analyzed using qualitative content analysis, which involves using quotations in place of numbers. Answers were cross-corroborated by two raters, with Rater 1 using verbatim quotes to capture the techno-slang from the transcripts and Rater 2 using summary content narrative for an audience of lay readers who are not technicians or managers/executives. Qualitative content analysis aims to identify themes and gain insight into how respondents understand the topic discussed (Neuendorf, 2002).

Once all five in-depth, personal interviews were completed, the two raters listened to the taped interviews and transcribed them verbatim, as well as by summary content to assist the nontechnical lay reader. This activity focuses on the interpretation of data from the transcripts and is the "process of selecting, focusing, simplifying, abstracting, and transforming data" (Miles & Huberman, as cited in Sato, 2007, p. 11). To assure reliability, the transcripts were read twice and sent to the participant for checking to confirm the accuracy of the findings. The data were analyzed using content analysis to provide, what Czarniawska (1997) refers to as, a meaningful whole. To determine the

presence of certain words or concepts within the texts, content analysis was deployed as a research tool.

The content analysis utilized the following steps:

- Listened to the taped interview while simultaneously reading the transcript as soon as possible to preserve currency of the experience and verify the accuracy (Burns & Groves, 2001; Norwood, 2000).

- Identified themes by seeking recurrent responses while recognizing that variations are expected (Flick, 2002).

- Correlated the highlighted areas and notes to the research questions (Norwood, 2000).

- Tabulated the responses to determine frequency of occurrence (Burns & Groves, 2001).

- Investigated the theme to determine the degree of integration to provide a description of the phenomena studied (Speziale & Carpenter, 2007).

- Used a second rater to provide inter-rater reliability through independent interpretation and analysis of the responses (Norwood, 2000).

The investigator determined what data to retain and what data to discard. Through this process, the data was organized into two bins: record retention and record disposal. Responses were tabulated and themes were identified per recurrent responses. To help illustrate the findings and display the data, the researcher used figures and tables to display the key themes that emerged through the narratives.

Change-Process Mapping

3 Tier accomplished process mapping by combining the development phase of the IT-JIF (inclusive of tech setup and pilot phases that together are coterminous with the development IT-JIF phase) and the operations phase of the business-JIF into which the IT development processes feed.

The phases of the tech setup phase and pilot phase, when combined, are actually the same as the entire IT-JIF development phase, with a small distinction resulting from the type of graphics software used to illustrate the phases. Specifically, the tech setup and pilot phases are depicted in MS Project tracking software, while the IT-JIF development phase is depicted in Visio workflow software.

Moreover, the flow of change processes is from the development phase of the IT-JIF submission that feeds into the larger-picture deliverables of a subsequent yet ongoing operations phase; for example, the operations phase for a particular baseline specification in the business environment of 3 Tier's key client account, Go-Green Auto Corp, would be mapped out on a Visio workflow and appear side-by-side and after the development phase map of the IT-JIF.

Figures 1 and 2 provide a visual mapping of the side-by-side or one-after-the-other Visio workflows for the development phase of the new-and-improved IT-JIF, with different phases of approval related to a continuous stream of requests from Go-Green project managers. (These requests occurred several times a week, with the 3 Tier team leads receiving three to five changes per team, before approval of application of the JIF submission packet for each change process as a deliverable of ISO 9001-4). Sometimes requests, as reported by the four team lead interviewees (one from each of the IT groups), would be for new reports or new market surveys, as per verbatim remarks by team leads, which is what 3 Tier does best in its third-party-vendor-marketing capacity. Studies such as this current case study are included under the research function of 3 Tier.

Content-Analysis Results from Transcriptions of In-depth Interviews with 3 Tier IT Team
Leads regarding **IT JIF** Process for Code Rollout Initiative per 3 Tier SLA with Go-Green
Auto Corp, with Corresponding HR Training Procedures, Appliances Installation
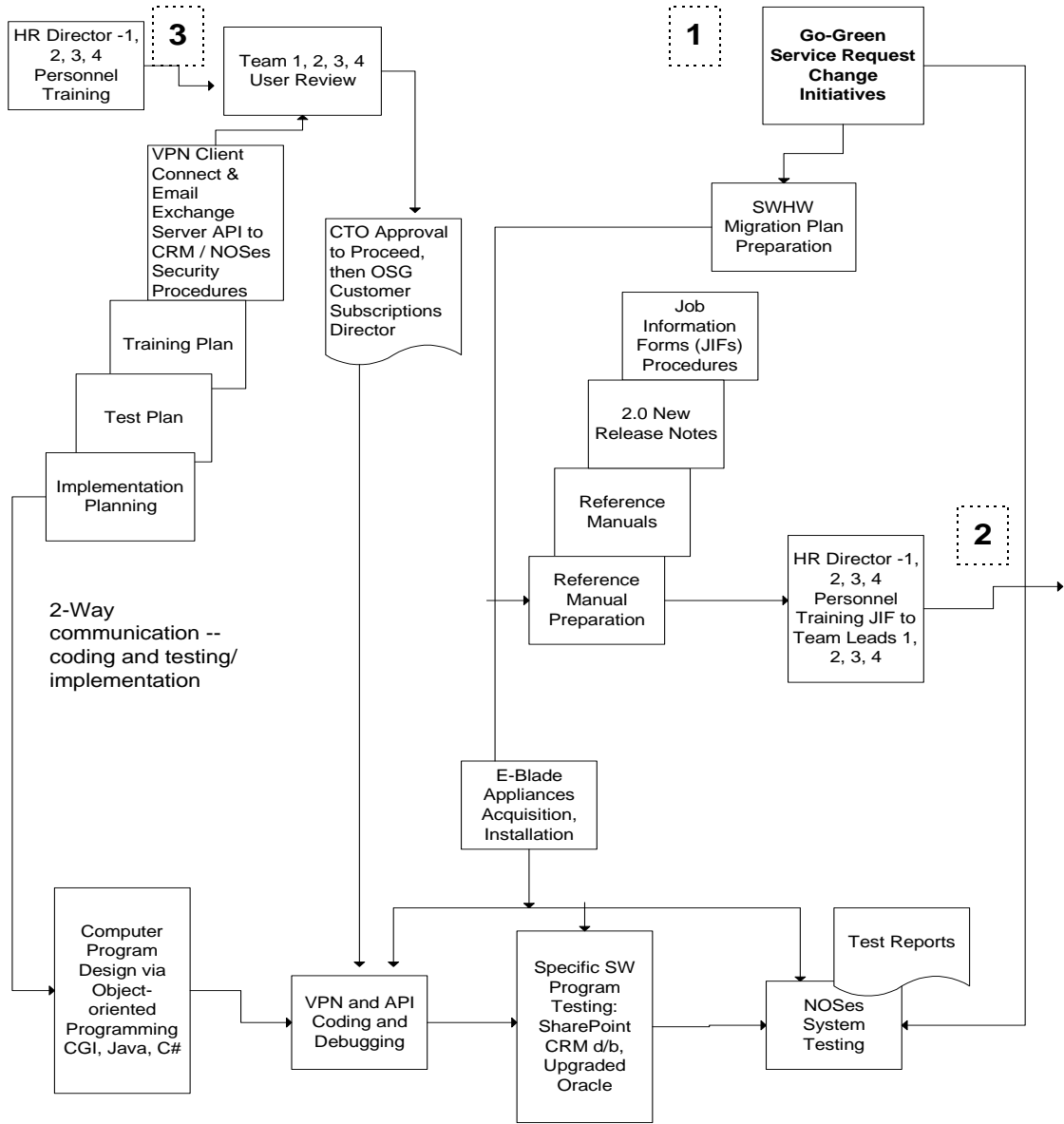
1--3 Tier In-house Developers-Write Code for VPN Connect to Go-Green Product Catolog Srever
2--3 Tier In-house Developers-Write Code for Email Exchange Server API interfaces fo MS
    SharePoint CRM d/b
3--Desktop Technicians-Perform Rollout Migration of SW / HW changes
4--System Admin--Writes scripts for DNS, FTP, Proxy, Firewall Quantum E-blade Servers

Figure 1. Content analysis results for IT JIF process.

Content-Analysis Results from Transcriptions of In-depth Interviews with 3 Tier**IT Team Leads** regarding **Business JIF** Process for Service Request Change Initiatives, e..g., Specification, Work Instruction, QA Manual for Purchase Orders / Sales Contract for Vehicle Purchase - Usually After Development Phase of IT JIF (described in SLA that supports Business JIF) but sometimes a Standalone Business Change Request Occurs
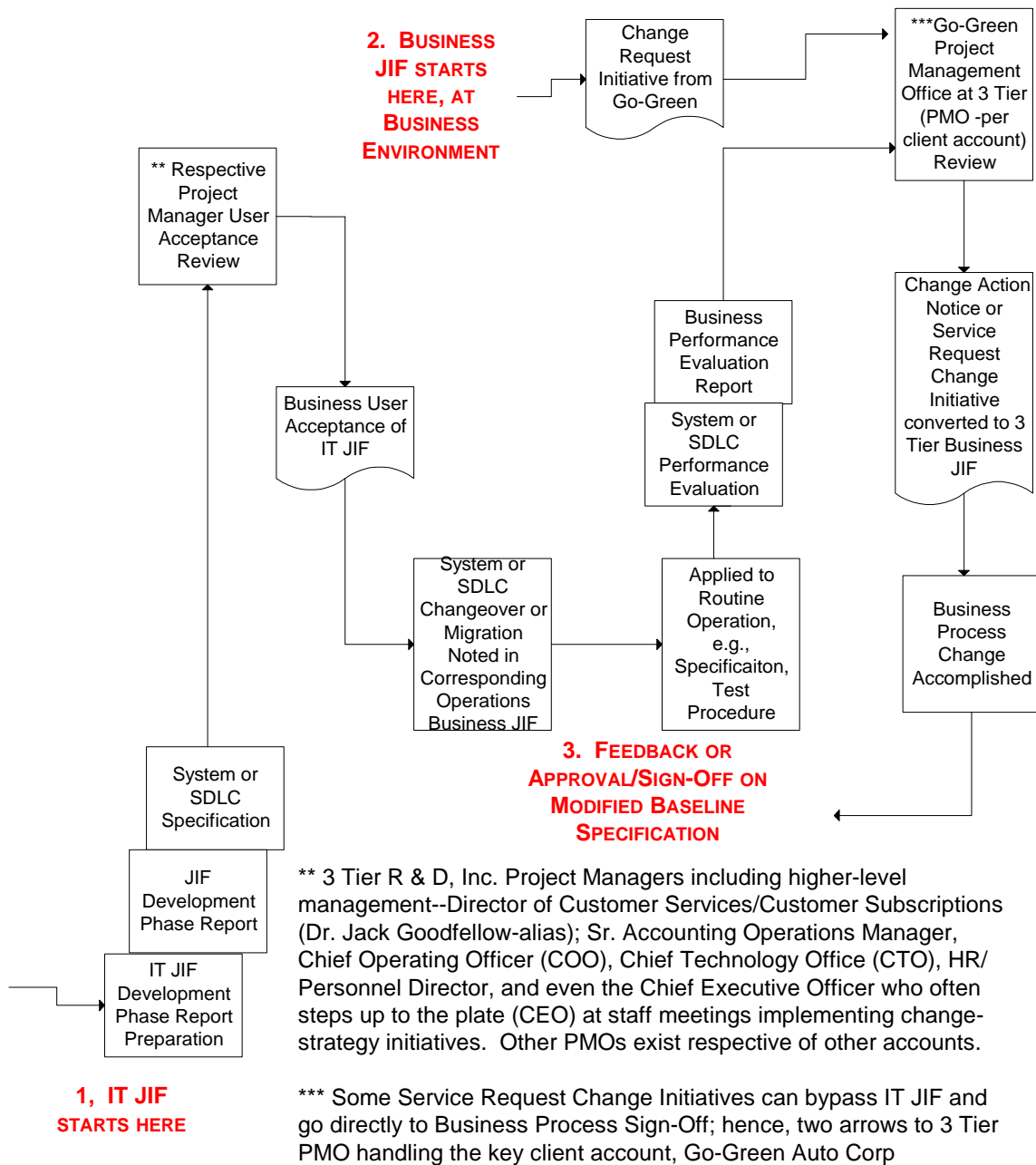
Figure 2. Content-analysis results for business JIF process.

New reports could include an HR-driven performance or quarterly and yearly

review for employees, delivered as an employee newsletter with the latest updates on pay

compensation (a big issue at 3 Tier) in accordance with the going global market. Only

one pay result from 3 Tier was determined: the Group 4 executive team lead's or the

system administrator's pay was more than six figures, according to the director of

Customer Service, who did not reveal his own pay, but referenced the other project

manager's pay as what he called a high-end goal in HR talent-asset management. The

operations phase of JIF (business), termed the business-JIF in this study, appears in the

second Visio workflow. It clearly complements the development phase of IT.

Both workflows are included in the body of the Results section of this study.

Visio workflow process mapping per the JIF's case cover sheet attached to the packet of

supporting documentation is equivalent in importance to Excel charts typically located in

the Results section of case studies, and thus both are discussed. Content analysis—after

transcriptions of in-depth, personal interviews with the four hands-on 3 Tier IT team

leads and the executive team lead, the system administrator running the IT division—is

thus charted after being process mapped for ease of visual reference. The two workflows

visually capture feedback loops between the IT-JIF and the business-JIF, with

benchmarks indicated by arrows at the points of entry and egress into the workflows.

Summary

The universe of responses was a random assignment of four employee groups in

the 3 Tier IT division composed of a sample of $n = 16$ respondents. Two layers of case-

study interviewing were conducted: The first was data collection per the demographic or

e-survey sent in an e-mail blast to the 20 participants to establish a reference point

regarding employee participation in the combined JIF submission packet for change

process; the second was a prequalified subset sample of the team leads/project managers

one from each of the four groups, and thus representative of respective groups, for in-depth personal interviews regarding the details of the upgrade. Though the two organizations are not officially merged, in effect, they work so closely on their intranets that responses to change have to be extracted and defined in more detail at the operational level. This is all done per the JIF framework. For example, this researcher determined that there were response trends regarding employees who had a role in the JIF submission for change process and those who did not. Figures 1 and 2 below show the overview content analysis at the process level; and several figures with the statistical Excel-chart analysis are included following the process analysis.

The MS Project benchmarks (milestones) and Visio workflows (feedback loops) provide a shortcut version of the overview of the research design implemented by the three team leads, one executive team lead, and the Customer Services-Customer Subscriptions director.

The two Visios are the two phases: This project focuses on the development phase of the JIF for Service Request Change Initiatives. Go-Green had been in the habit of sending more than seven or eight change orders a week, with no pattern or planned change. The 3 Tier Project Management Office just rubber-stamped the job orders and passed them down the hierarchy for functional staff's processing.

A detailed review of the research design reveals that control of the change orders is accomplished by the JIF, in accordance with ISO 9004-1. Note the three numbers on the IT-JIF. Start at 1, which is the start of the Go-Green change request or initiative, for example, for a high-speed bandwidth connection procedure right into 3 Tier.

There was no VPN before because of its being a fairly new technology, but mostly because Go-Green is a separate intranet and is afraid of getting viruses by connecting to an outsider such as 3 Tier. Trust issues arose as feedback during the in-depth interviews. Since this is the IT division, the staff prepared an HW and SW migration plan to address whatever the change request covered—in the example diagram, it was that secure link connection. In effect, the two organizations virtually merge. Though the companies are separate, secure linking is the change initiative that appears on Visio and in Excel.

Number 1 pointer feeds shortly into 2, Job Information Forms procedures documents, which are documents that control other documents, such as new release notes and reference manuals, with output going to HR personnel training regarding training in new procedures requested by Go-Green. Content analysis showed that training was a big factor that produced positive change, by subject-respondents learning and then applying the new technology deployments.

Number 2 wraps around to the left side of the Visio workflow sheet, to 3, where the three team leads and one executive team lead-project manager have their teams do user reviews of User Acceptance Testing, and two-way communication occurs per the VPN Client Connect Procedure (which Go-Green requested as its change), An email API coded change for customer access to the 3 Tier web that is higher quality and faster, with training (again), testing and implementation plans working off that task. After No. 3, all the milestones (rectangular boxes) have arrows down to the bottom of the workflow; these get into the details of coding, testing, and debugging.

The business-JIF starts in the bottom left-hand corner with No. 1 coming from the development phase of the IT-JIF, with the milestones ascending, from the point of entry of the development phase that is integrated into the business processes. Since IT attaches itself to the business processes, all need different software, like PeopleSoft (referred to as Psoft by the interviewees), upgraded Oracle (referred to as Orca), and SharePoint CRM at 3 Tier (known as Sharebox).

First the project managers do a user acceptance review before going to the actual business user, whether the A/R manager, HR director, or other personnel. The arrow flow down to the System Development Life Cycle Changeover or Migration was finalized or incorporated into the business JIF at 3 Tier. Each Change Service Request gets a JIF attached to it; the JIF is a document to control all the forthcoming documents attached to that particular Service Request.

The content analysis showed that in the past, 3 Tier simply rubber-stamped the JIFs and told the workers what to do with minimal participatory leadership, so there was resistance to the very change they were supposed to process. This process is displayed in the Excel charts, along with the new-and-improved JIFs change process.

Workflow arrows from the development phase IT-JIF reach their final destiny at No. 2 on the business-JIF for the operations phase of this project. Business and System Development Life Cycle (SDLC) evaluation reports are combined with the final deliverable or output looping back to Go-Green, which started the change request initiative. Note that some of the Go-Green change requests are so minor that they travel straight through the multiservice pipeline (all IT services going through one infrastructure

pipe referred to as Quantico for the Quantum e-blade servers working the background)

without having or needing any development phase work or input from the IT-JIF.

The change is accomplished by nature of its being converted immediately at

intake into a 3 Tier business-JIF, and 3 Tier keeps copies of spec binders on all the

standard operating procedures and processes. Some standard operating procedures pass

right through and receive an almost-immediate sign-off of acknowledgement with that

particular job being considered done.

The Go-Green Changes

In that there was no prestudy breakdown or breakout of tasks on an MS project

software timeline connecting the IT side to the finance side, Go-Green's change requests

were initially tumbling into the 3 Tier branch office at the rate of seven to eight per week,

being rubber-stamped without employee input, and passed down the line. The problem

was the constant do-overs in accomplishing change orders as a result of a free-wheeling

management style. There was no systematic protocol or business model in place to handle

changes.

The IT side and the finance side, together, make up this complex yet practical

inquiry into change, which is a given in the global market place. A key question is how to

facilitate effective change for managers (Matheny, 1998). Moreover, the complexity and

pragmatism emerging from historical organizational development and how-to

implementations ultimately resulted in this case study's new organizational model,

coined the Prototype Change Model.

The comprehensiveness of this last, combined set of regulations pertaining to

Service Request Change Initiatives (or change orders) are delivered through an SLA

given the acronym SIS, representative of **S**LA, **I**SO, and **S**arbanes-Oxley. The aim of the

Prototype Change Model was the achievement of an upgraded or changed quality

management system for a key client account. With the advent of major organizational

changes at Go-Green, the time had arrived to set up a Project Management Office at 3

Tier specific to its key client account's changing needs and deliverables.

3 Tier, Four Research Questions, and the Best-Case Answers

3 Tier's responsiveness to Go-Green's changes was accomplished in hands-on

project planning, divided into two development subphases of tech setup phase and pilot

phase (with a subsequent operations phase) consultation to answer the first research

question. Detailed information on this is provided in Appendix B, Part A, Columns 1–8;

this appendix should acquaint the reader with an easy-to-read, table-outlined version of

the same content of subject-respondents that appears below in narrative format. To verify

and clarify the identified key influential success factors that were implemented by 3 Tier

in its Service Requests Change Initiatives, excerpts from participants are provided:

1. Research Question 1: What was the nature of the successful change strategies
   employed by a contracting-consulting company engaged in market branding,
   research and development for its key account? *This was the most important
   question of this case study* as it was the most comprehensive, having
   operationalized or specifically defined the variable known as (2) "nature of
   change" in this study into a series of six more detailed inquiries, including: (3)
   the reasons for the change, (4) who led the change, (5) who participated, (6)
   who would be affected, (7) what was the goal of the change, and (8) was the
   goal accomplished. The exegesis below focuses on the last two variables,
   What was the goal? and Was it accomplished?

The successful change strategies were the change in the JIF from rubber-stamped

status to that of collaboration with participants and a change in its content from free-

wheeling and dynamic to systematic protocol orientation via division into two JIFs:

business-JIF and the IT-JIF deliverables, per the SLA. This research question was

answered by the team leads in response to the third question of the interview protocol cross-referenced in Appendix B, Data Collection Instrument or Table, Interview Protocol for In-Depth, Personal Interview on Change (listed on JIF).

Answers are cross-corroborated by two raters, with Rater 1 using verbatim quotes to capture the techno-slang from the transcripts and Rater 2 using summary content narrative for the lay reader. A representative sampling of the most pertinent responses are listed below. It is emphasized that discrepancies between readers-raters are more a matter of technical language used by various respondents per the high IT content and acronym abbreviations. These discrepancies are resolved by leaving as-is some of the responses, to address even the appearance of reader-rater bias that manifests in cognitive-dissonance facilitated behavior of trying to fit results to theories, patterns, or assumptions. All attempts were made to follow the guidelines of professional case-study approaches that are inductive and experiential in approach, such as Yin's (1994).

Appendix B, Part A, Column 2, provides detailed technical aspects. One change was statistically significant, as it was common to and applied to all four groups (i.e., training in Red Hat Enterprise Certified Engineer or Certified Technician training) and is thus graphically illustrated in an Excel chart. This aspect of the nature of the change is discussed below, as some groups received the Red Hat training and others did not, which is illustrated in the Excel chart:

> Group 1 Participant: Team Lead Alex Boness: (7)—The goal was to reduce "red tape" (bureaucracy) by documenting change requests or new Jobs…Access free, public Internet access on high-speed, reliable bandwidth…Reduce costs…Ensure "Q&A (quality & efficiency)"; and (8)—The goal was accomplished…"Yes, enhanced communication between 3 Tier & GG."…The goal was accomplished…"Yes, very thorough documentation" ensured success of doing Job requests on time, "under budget"…-"Wore (received) the Red Hat" (Training).

Group 2 Participant: Team Lead Sly Forever: (7) Perform quick close of sales by management of first-time subscriptions and renewal quotations to "flip POs into Sales Contracts" with Bill of Sale…Sold add-on warranties, processed rebates;…(8)—The goal was accomplished, "Yes and No, very complete docs and follow-up calls to flip PO to Bill of Sale",…"No, 3 Tier Windows Outlook not synced to Go-Green Lotus"…"No Red Hat yet"—"No, too much pressure to close sales deal."

Group 3 Participant: Team Lead Rhett Orick: (7)—Improve quality and efficiency of deliverables…Improve worker team building in-house…Reduce stress; and (8)—Yes and No, Had "extra tight paper trail"—But "UAT (User Acceptance Testing) stress for bug errors showed holes (vulnerabilities)"…"Techs didn't get the (understand) the ShareBox rollout," so stress "zombies."…Part-timers (workers) need more hours to do roll-outs…No Red Hat training received yet.

Group 4 Participant: Executive Team Lead Sally Hemming: (7)—Pass ISO Quality Management System audits/approval; and (8)—Yes…Accomplished "compatibility" between "mixed platforms by TCP/IP"…Had "thorough JIF process…biggest factor in success."

3 Tier's responsiveness to Go-Green's changes was accomplished in hands-on project planning, divided into two development subphases of tech setup phase and pilot phase (with subsequent operations phase) consultation to answer the second research question, which is listed in columns 1–3, in Appendix B, Part B. This appendix should acquaint the reader with an easy-to-read, table-outlined version of the same content of subject-respondents appearing below in a more narrative format.

2. Research Question 2: How do subject-participants at 3 Tier (a) describe their planned change experience and (b) what steps were the most effective?

The team leads of the four sample groups described their planned change experience in response to the second question of the interview protocol cross-referenced in Appendix B, Part B, Columns 1 and 2 (i.e., having taking ownership of interactions that were so second nature to them, they easily conveyed a well-informed, yet casual camaraderie with some techno-slang in listing the steps that were undertaken in the planned change [successful change strategies]) listed in Appendix B. Answers are cross-

corroborated by two raters, with Rater 1 using verbatim quotes to capture the techno-

slang from the transcripts and Rater 2 using summary content narrative for the lay reader

who is not a technician or manager-executive.

> Group 1 Participant: Team Lead Alex Boness: (2) "Dr. Jack gave all the TLs (Team Leads) a Service Level Agreement" containing the planned changes from Go-Green. "Then, the TLs sketched out some diagrams" about how the JIF Change could be done in accordance with that doc. "An ISO (9004-1 JIF) was stapled to the VPN Connect" Procedure Request that came in from Go. "I used to write a work instruction for my team. So the JIF cut the downtime…by reducing the pressure cooker" in the developer group for the CC (Connect Code)." (3) "the JIF step was the most effective" because it was a "talking points sheet" of the changes, to which "the Go packet (of supporting docs) were stapled"…"it increased trust" with our key client…"opened up the (communication) lines" …and the "IT general controls install with the NOSes (Network Operating Systems) network and back-ends listed in Jack's Service doc."
>
> Group 2 Participant: Team Lead Sly Forever: (2) The steps that were undertaken in the planned change were reported as "setting up new e-mail X (Exchange) Servers" to process the increase in prospective customer activity and meet Go-Green's "3-day turnaround pushing ShareBox metrics," (purchasing profiles, and key performance indicators). (3)—"New server set up on the new Q blades (line of Quantum E-blade servers) was the most effective"…That "hiked" (increased) customer Web site hits (inquiries) where the customer (opens and) downloads apps to prequalify for a car"…Why? "Well, GG, because it's getting access to deliverables on time and correctly (with efficiency)"…"IT application controls on the CRM, with the consult to GG on the ERP and Psoft."
>
> Group 3 Participant: Team Lead Rhett Orick: The steps that were undertaken in the planned change were reported as (2) "rolling over and migrating the Indians (Apache web servers)" to the latest upgrades "to work with all the NOSes"…"rolling out developer Java, C and NET (for anticipated customer demand)"…"rolling out ShareBox is a code guy's nightmare but Desktop installs and jacks the code back to CC (Connect Code) and Indians." Finally, there's collection of A/R templates on ShareBox repository component for access by Go-Green. (3)—"The whole migration" process is happening "in phases, so rolling out the upgrade Indians (Apaches) before rolling out the CRM on all desktops was happening" (worked well)…—The output of one leads to input of the next phase…—"Get" (procure) the HW (hardware)"…—"Setup the Test HW at the Dataman" (Torrance Data Center)…—"School" (Red Hat Technician Training).
>
> Group 4 Participant: Executive Team Lead Sally Hemming: The steps that were undertaken in the planned change were (2) implementation of "systematic document control" by the "new-and-improved JIF" process coming from the client. There was "no more rubber-stamping" of the "case cover sheet" because the "TLs felt they didn't have a voice in the changes, that they were just dictated to."—Then, the "sniffers (performance and network analyzers) are now on

steroids and the big Red Pill" with increasing frequency of audit log runs on the 3 Tier web, mail, ShareBox, Red Hat Linux mounts and other server components— "all in full swing." Finally, "A big step was security on the fractional T1"…"saves money with the Internet VPN link" and "makes for robust security protocols." (3)—"Most effective were specs, test procedures, work instructions, from QA JIFs" (procedures, QA manual for POs and Bills of Sale on the JIF)…— Complete compliance document collection)…—Why? "I think all of us, the TLs (Team Leads), and myself think that authentic logon with ISO-JIFs (implementation in accordance with the ISO 9004-1 on the JIFs) ensure effectiveness, everyone has a say, and there's no more red tape."

3 Tier's responsiveness to Go-Green's changes was accomplished in hands-on project planning, divided into two development subphases of tech setup-phase and pilot-phase (with subsequent operations-phase) consultation to answer the third research question, which is covered in columns 1 and 4, Appendix B, Part B; this appendix should acquaint the reader with an easy-to-read, table-outlined version of the same content of subject-respondents appearing below in a more narrative format.

3. Research Question 3: What are the key learning factors reported by the 3 Tier subject-participants and stakeholders in the change process? This research question was answered by the team leads of the four sample groups in response to the third question of the interview protocol cross-referenced in Appendix B, Part B, Columns 1, 4, and 5.

Group 1 Participant: Team Lead Alex Boness: "My group learned how to really pull together as a team with different people writing different (code library) objects that they were already skilled at"…"that was a time and money saver."

Group 2 Participant: Team Lead Sly Forever: "Emergent changes in the technology is key"; (Exchange) X Servers for Miss (MS) Outlook are not totally synchronized to Go's (Go Green's) Lotus Notes e-mail servers, so new technology has to be tweaked to run (interoperate) with other boxes (computers/servers), and that means we have better communication."

Group 3 Participant: Team Lead Rhett Orick: Proactive changes that "take the initiative" in anticipating problems before they happen required "so fewer downtimes for housekeeping department" (and server maintenance updating, running at night)…—"Divvying up" (dividing functions by teams) has to be "by the book (systematic and deliberate), on the ISO-JIFs" (JIF change orders)…— the "Job goes from Desk Techs for ShareBox (SharePoint) install to TL 2 and the Sly farms out (delegates) his group…knows what he's doing…a good walker-talker on code fix (repair), so has respect."

Group 4 Participant: Executive Team Lead Sally Hemming:—Downsizing of the economy compels a second VPN set-up and actually motivates creative

thinking in increasing the bottom line, and reducing costs…—"ISO-JIFs (9000, new and improved), work great for the three teams, myself as PM, and we hear from across the aisle, that Dr. Jack likes the new roll-outs."…—Repetition with functional staff or the team leads and "performance of the walk-throughs ensured that JIFs were done right" by all teams.

The 3 Tier company's responsiveness to Go-Green's changes was accomplished in hands-on project planning, divided into two development subphases of tech setup phase and pilot phase (with subsequent operations phase) consultation to answer research questions 1, 2, and 3, together comprising the tables of Appendix B, Part A and Part B, all columns. These appendixes help answer the fourth research question, which provides the whole framework of a new business model for organizational change that is derived from this case study's results, provided by narrative and table. It is coined the SIS Prototype Change Model.

4. What applicable assumptions and change-management theories were utilized by this current case study's research and how did they relate to the results of the current study?

Workflows show interdependence of the extant theories and their applicability to this case study's design and development of a new change-management theory or business model coined simply as SIS Prototype Change Model. Finally, the comprehensiveness of this last, combined set of ISO-SOX regulations pertaining to Service Request Change Initiatives (or change orders) are delivered through an SLA, the novel frame given the acronym SIS, as it is representative of SLA, ISO, and Sarbanes-Oxley. After design and development of the prototype change model that incorporates assumptions and prominent organizational theories, the organic nexus for the SIS frame is established in the combination of business-JIF and IT-JIF, referenced as ISO-JIFs by some of the team leads.

Successful Change Strategies Employed

The following content analysis complements the taped and transcribed interviews discussed above, and the 2-rater organization of results provides the answer to Research Question 1 organized by both the group team lead respondents and the project phase (i.e., Tech setup phase or pilot phase, with inclusion of group team members inside that combined breakout).

Each change is listed in relation to its associated group The order of changes are not listed sequentially by group number but rather by the chronological timeline of rollout of change deliverables, starting, of course, with set up of the technology, per Appendix B, Part A:

1. Tech Setup Phase

   3 Tier has been engaged by Go-Green to handle its Project Planning. The 3 Tier IT Division started with a Tech Setup in its office.

   - Procure hardware (HW)

   - Set up Test HW in data center

   - Accomplish HR-responsive training in Red Hat Certified Technician. Certification for two teams of developers and one team of desktop technicians (to install and configure Red Hat Enterprise Linux to work with Go-Green ERP, including "basic networking and file systems, X Windows system, essential Red Hat Enterprise Linux system administration, host security, setup of client-side networking services and diagnostics and troubleshooting" (Global Knowledge, 2004, p. 63);

   - Perform HR-responsive training in Red Hat Certified Engineer Certification for three team leads and one executive team lead (system administrator) built on prior skills learned in technician deliverables;

   - Deliver HR-responsive Advanced Project Management coursework in assessments of project teams, auditing of project deliverables/timeline/budget to enhance skills beyond the basics of how things were when JIFs were just rubber-stamped by upper

management and created resistance in functional line staff team members ($n = 16$) participant-respondents, who were secondarily included in JIF change processes (via representation by team leads who incorporated feedback and then delegated assignments). This advanced training, by providing content knowledge in the application of change orders from key-client account, Go-Green, established, in fact, a successful track record in efficiency deliverables by HR responsiveness to the in-depth interviews' data-collection results, in accordance with this case-study's application of project-planning theory to practice, namely:

- Diagnose the complexity of organizational systems through evidence-based application of evaluation, research, and psychometrics. . .[that prepare] to improve the design, execution, and evaluation of programs and projects (Global Knowledge, 2004, p. 35).

2. Pilot Phase

Roll out of the standards—ANSI (API), Sarbanes Oxley, ISO 9000 series of standards, and more—that make new client Web site searchable with superior performance on connection to back-end MS SharePoint d/b server at 3 Tier— a green-eyeshade site initially for downloading customer applications (before eventual upgrade to bells-and-whistle site hosted internally by 3 Tier developers also on the multi-talented SharePoint servers) with a breakout as follows:

- Complete compliance document collection by collecting pilot documentation in JIF in development phase IT-JIFs working before and seamlessly in the background after the operations phase business-JIFs, commences with business-JIFs covering the 10 major organizational changes at Go-Green that 3 Tier is implementing on its IT end.

- 3 Tier IT general controls, which are its multiple NOSes, VPN network infrastructure, and back-end databases listed in the SLA.

- 3 Tier IT application controls, which are the SW applications (i.e., 3 Tier-resident SharePoint CRM d/b, upgraded Oracles, and subvendored consult on Go-Green ERP and PeopleSoft).

- Consult on the collection of A/R documentation in templates on the ERP platform that is built around Go-Green's Sarbanes-Oxley requirements vis-à-vis going from private to publicly traded.

- Consult on providing security management, preparation of script development in two developer group teams, loading of compliance

documentation into respective MS SharePoint CRM d/b repository for both 3 Tier and Go-Green access, as well as into separate Go-Green ERP platform containing its Oracle, People Soft, A/R, etc.

- Consult by 3 Tier subvendor resident at Go-Green regarding loading of users and groups into Sarbanes-Oxley access through scripts uploaded over the VPN onto the 3 Tier MS SharePoint repository component that has a link holding Red Hat Linux scripts for groups-users' access (Go-Green uses its ERP platform for its several Sarbanes-Oxley business processes with the security scripts for user access being parked at 3 Tier in the repository part of its CRM d/b with automatic version control for JIF updates and attached change orders).

- HR performs follow-up training (team members this time as team leads trained in first phase of HR training deliverables) to incorporate feedback from functional staff and managers per JIF Process Visios, review results of pilot phase, and change requirements based on results of demographic and in-depth interviews (refer to IT-JIF that "wraps" in a feedback loop of HR training that feeds into the team user review process, which happens after a content analysis of the transcription of the in-depth interviews from the four team leads (inclusive of executive team lead) requesting training in the new technologies to enable completion of Go-Green JIF-driven change requests.

Content Analysis

Cross-corroboration of content from lengthy transcription recordings that was provided by two raters, with Rater 1 focused on gleaning verbatim quotes to capture the techno-slang from the transcripts and Rater 2 using summary content narrative for the lay reader audience who is not a technician or manager. The two reader/rater system was designed to minimize bias that arises between performance measures and expected occurrences of results to ensure a case-study deliverable that truly builds from the ground up in testing respondents' experiences (Yin, 1994). The new-and-improved JIF change processes described by the respondents throughout the first two phases of the SDLC, along with the tech setup and pilot phases that are coterminous with the development

phase of IT-JIF, led into the operations phase of the business-JIF, which is process-mapped together with IT-JIF.

The case study implemented data-collection functions in accordance with the interview protocols per IRB approval, demographic, and in-depth personal interview instructions. Results were sampled and documented by merging both rater results into easy-to-read table formats, with trend or theme results being extrapolated into Excel charts for visual comprehension. The charts drop any busy, distracting language regarding those trends and themes (Yin, 1994) and that may not be as readily discernible in language as they are in charted, qualitative informational comparisons.

Responses inform the content analysis of those transcriptions per the corresponding Excel charts appearing here and in the following pages. This first Excel chart reflects the data collected in the last column of Appendix C (i.e., team leads' responses that they had participated in the changes processes and team members responses that they had not participated in the change processes).
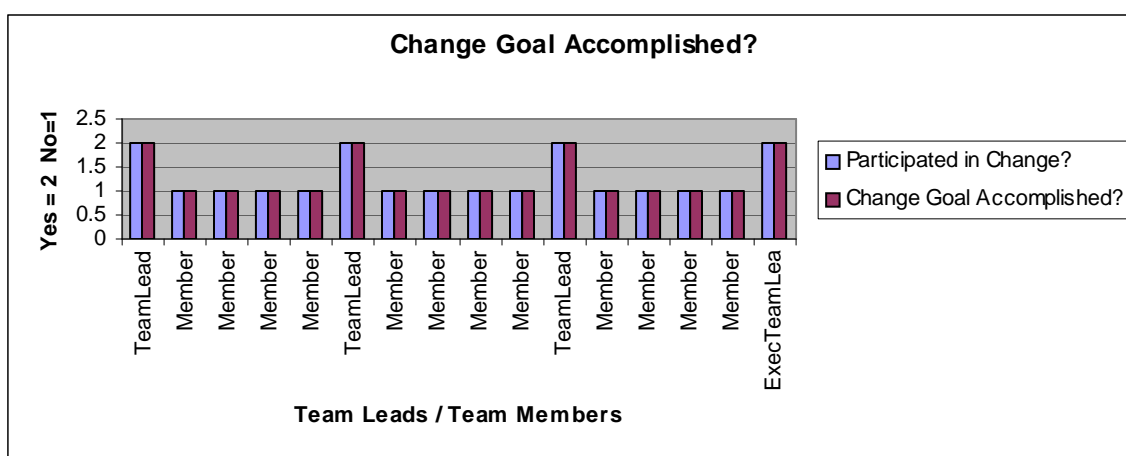

Figure 3. Participant views on success of process changes.

Significantly, team members were able to answer only Yes or No to the demographic survey question, "Did you take part in the JIF change process?," as there

was no follow-up. During the in-depth interview, participants were asked, "What role?," and the team leads, who had been selected for the interviews responded regarding accomplishment of a goal.

The Limitations section of this case study provides rebuttal to this seeming inconsistency, listing it as a soft limitation. The 12 team members reported that they had not specifically participated as individual responders in the JIF change process, but the supplemental in-depth, personal interview instrument that gathered data from the team leads implies a derivative Yes answer regarding participation by team members, based on their representation by the hands-on team leads doing double duty as de facto project managers who attended the same 24/7/365 team brainstorming meetings. The results were bundled into delegation of tasks and milestones/benchmarks, with continuous cybernetic feedback from team members built into workflow looping and mapping.

This soft limitation could be addressed in a future follow-up study. It could be expanded in the other, subsequent phases of this project to gather more data specific to verbatim and summary comments, from team members, not filtered by their team leads, regarding their own individual participation in the change processes. That is separate from their representation by their team leads. However, most teams, because of budget and time constraints, follow a team lead in order to expedite deliverables. In an efficient way that "cuts to the chase" after all the pow-wows and brainstorming sessions; this is the reality of IT and thus a successful workaround is accomplished via the team leads. Hands-on workers and not just delegation-oriented. Thus, it is not deemed plausible to perform this inclusion at this time, or in future case studies based on this third-party vendor and key-client account. That this study conducted in-depth interviews with hands-

on team leads led to a decision not to pursue in-depth interviews with their direct reports, at least initially.

Moreover, the evidence from this case study suggests that there is a correlation between the SIS Prototype Change Model's design and development of process improvements that effectively and efficiently achieved the goals listed in Appendix B, Part A. The details are these: Groups 1 and 4 reported affirmative positive results and groups 2 and 3 reported mixed Yes and No results regarding goals beings accomplished by change. If the results from groups 2 and 3 were tallied not as Boolean sums, wherein a true and a false equal a final false, but were rather extracted as individual responses, then there would be a total count of four Yes and two No responses replacing the Boolean results of two Yes and two No responses.

Figure 4, illustrating responses to research question 1, depicts two facts: two team leads who had not received Red Hat Certified Engineer Training (Group 2 API-CRM developers) and had not received Red Hat Technician Training (group 3 desktop technicians) reported mixed results of Yes-and-No answers in response to the question: Was goal accomplished by JIF change? The mixed answers were related solely to the Red Hat training. A combined Yes and No earned the final ranking of No per the concept of Boolean logic in which two Yes results equal a Yes, two No results equal a No, and a mixed-results variable of a Yes-No or No-Yes both equal a final No.
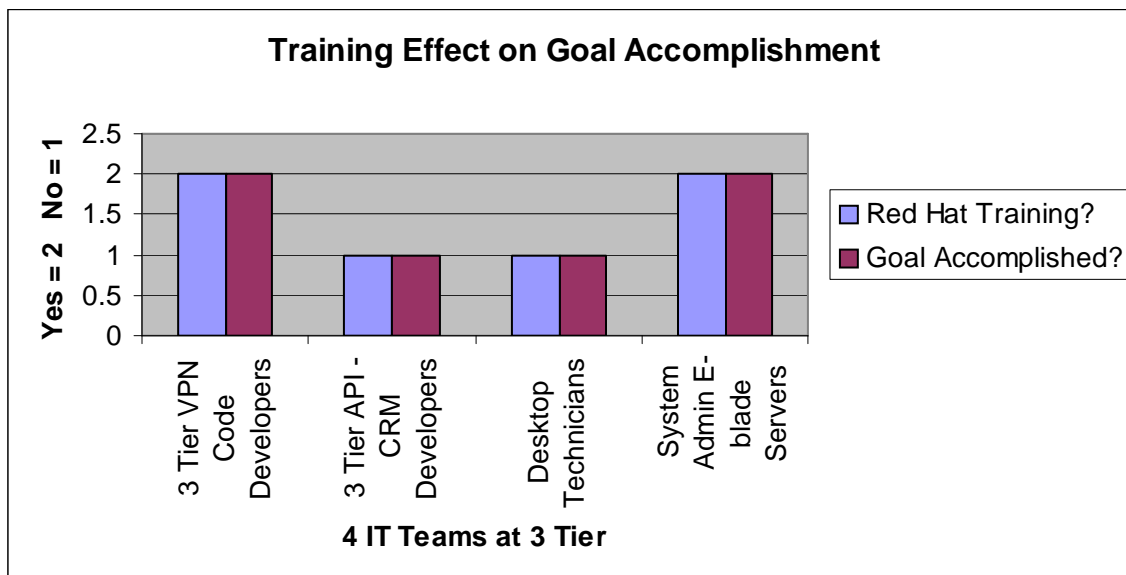
Figure 4. Effect of training on views of project success.

The simple Yes answers regarding the accomplishment of change goals were given by team leads who had received Red Hat Certified Engineer Training (group 1 VPN Connect Procedure Developers) and the executive team lead (group 4). In brief, if there were any adverse factor detracting from a Yes ranking, then the readers-raters agreed on a final ranking of No; a partial No is thus ranked as a full No, in accordance with the rules of algorithmic, Boolean logic that code developers use. Figure 4 illustrates how training affected the goal.

The raters agreed that the content analysis on the transcriptions from groups 2 and 3 revealed a medium-to-high level of stress on the job for these workers, the team members. Group 2 was the team of code developers in charge of the SharePoint CRM code and the upgraded Oracles resident in-house at 3 Tier. Group 3 was the team of part-time desktop technicians in charge of all the SW and HW roll-outs and migrations. Before the advent of the new-and-improved JIF change process, a pressure-cooker

environment had been present and identified in group 1, the team of multiple NOSes, large-scale AT&T communications, and so forth.

The breakout on the tables pointed to the shift of stress down to a more customer-oriented level (not large-scale communications per se) to the common theme that was generating stress, in other words, the install on the MS SharePoint CRM database that was responsible for crunching the numbers on customer metrics. If the customer numbers were not high, then "the whole project will go down the toilet," as one respondent so descriptively noted. Figure 5 below illustrates how stress affected the goal.
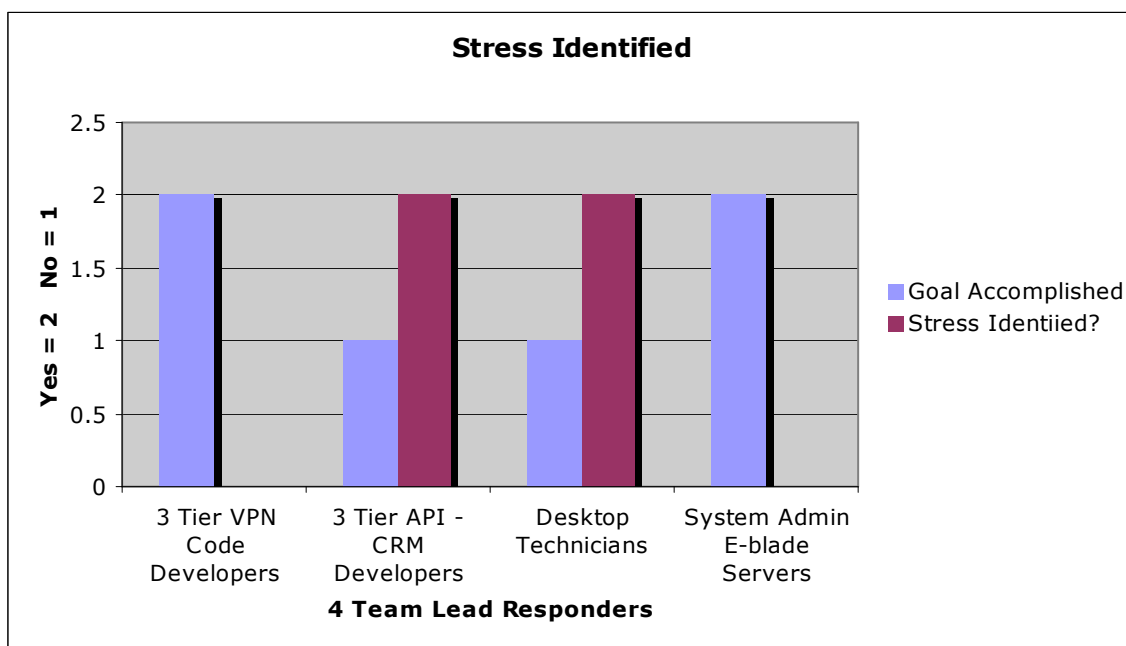
Figure 5. Effect of stress on views of project success.

Groups (2 and 3) had not yet received the benefit of the Red Hat Certifications Training that was being rolled out in stages by HR. The next roll-out would cover groups 2 and 3; meanwhile team members were reporting stress because they did not fully understand the new Enterprise Edition of Red Hat Linux.

Another complaint was low compensation, the same pay that group 2 developers and group 3 desktop technicians were receiving in the business-as-usual, rubber-stamped JIF days before the request for proposal from Go-Green for an upgraded quality management system. Groups 1 and 4 were aware of the stress. They had heard about the grumbling, although they had not expressed any concerns about their own pay. It was concluded that those groups that had benefited by the first HR rollout of Red Hat Enterprise Edition training were initiated in the new technology and expectations, and thus were less fearful and stressed. Figure 6 below illustrates the secondary concept of fairness-in-pay stress.
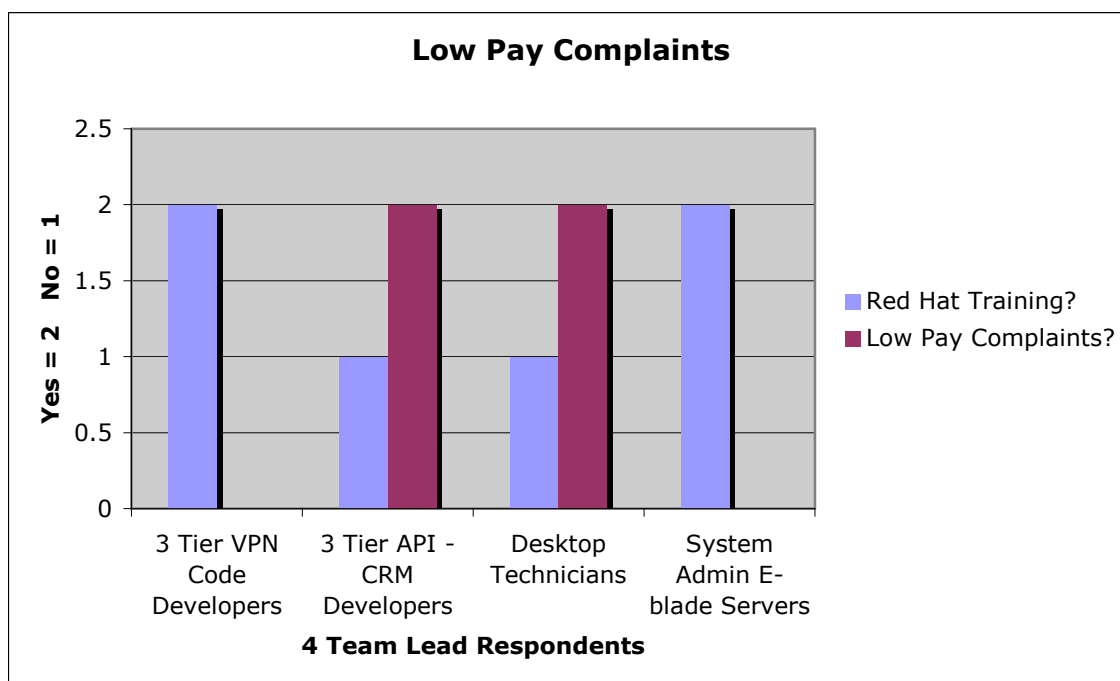
Figure 6. Effect of training on low pay complaints.

Participation in change and in Red Hat training are illustrated in Figures 3 and 4, while stress and low-pay complaints are graphed in Figures 5 and 6.

All planned change is in process, and in this particular case study, conclusions feature the myriad positive enhancements in quality, efficiency, cost reduction, red-tape

reduction, and reduction of stress that are the takeaways and aspirations identified by all group team leads in Figure 7. All the aspirations are related to or operationalized by the new-and-improved JIF process, further operationalized by the standard-bearer variable being that the JIF step was the most effective step. Groups 1 and 4 embraced aspiration measurement in terms of the most effective tool for change. Again, groups 2 and 3 did not explicitly mention the JIF as being the most effective tool; this study suggests that failure of groups 2 and 3 to receive Red Hat training in a timely fashion contributed to their not explicitly reporting JIF as the most effective step. It is suggested that they were naturally upset at not getting the training they needed to perform high-level rolls outs, which would have predisposed them to a more explicit, strong response about the most effective step. Also, the use of other language by groups 2 and 3 could be not only related to their lack of immediate Red Hat training, but also to the type of work being done. For example, group 2 reported similar language such as getting access to deliverables on time and correctly with efficiency, which could be cross-indexed in a future study to a definition of the most effective tool. Group 3 also uses similar, perhaps, substitution-type language, such as, rolling out, worked well. Figure 7 illustrates group goal aspirations related to JIF.
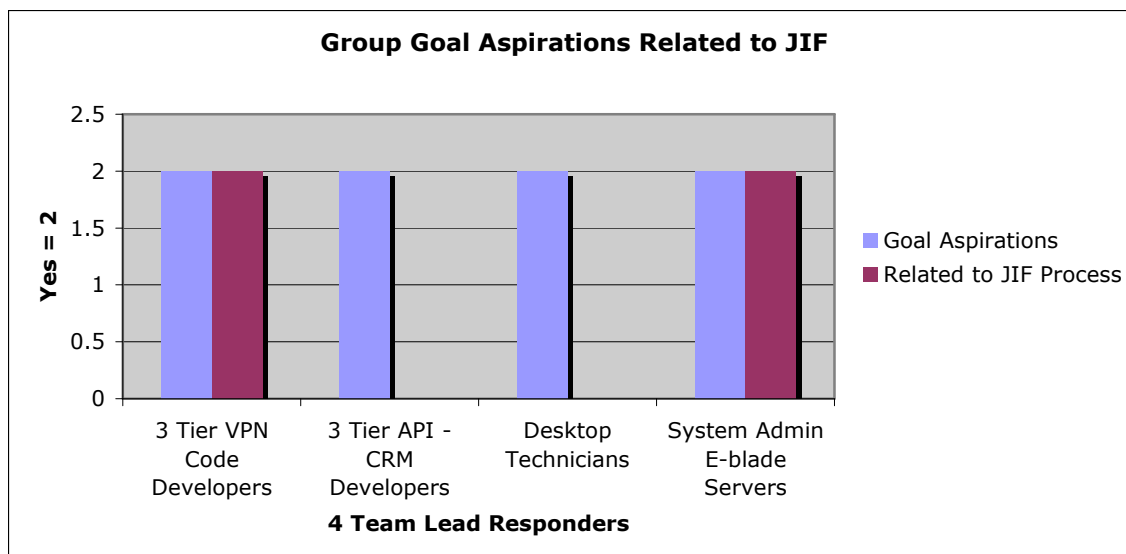
Figure 7. Relationship of aspirations and JIF process.

Primary Contact Information Gathering of Case Study: Director of Customer

Service, Dr. Jack Goodfellow Interview (Participant 5)

A fifth in-depth interview was conducted with the director of Customer

Services/Customer Subscriptions. He is held in high regard by the team leads in 3 Tier's

IT Division, because he was the change agent tapped by Go-Green through its request for

proposal for an upgraded quality management system. The in-depth interview is provided

verbatim, with redactions that protect confidential information, proprietary information,

and individual's names.

This researcher presented the SLA that was mailed earlier during the information-

gathering stage of this case study, as a visual aid for the real-time discussion of the theory

of planned changed. In addition to redactions to protect privacy, answers have been

edited or condensed only to achieve conciseness without in any way altering or

sacrificing the contents of the responses, which were sometimes lengthy. Goodfellow,

when shown the transcription of his responses, affirmed the validity of all remarks. The

model for analysis is in accordance with Yin's (1994) case-study research, design, and

methods:

1. Are you the decision maker in the Service Request Change Initiatives, and what is your position and responsibilities?

   My job and title in a nutshell is director of Customer Services/Customer Subscriptions in Order Service Group. . .part of the A/R department.

2. What appears to be the issue (problem or opportunity) and its significance for your organization and your key client account?

   The underlying macroeconomic issue of nationwide financial downturn, so our big client, Go-Green Auto Corp, is going in reverse to go forward (nice pun, he says and laughs here) with its implementation of an innovative change-agent strategy to increase market share, eh, you might say respond to customers' needs better, and increase profitability, in this new product launch of the hybrids and some people want the all-electric cars.

3. Why has the issue arisen and why are you involved now?

   The first thing is the retrofitting at…one] plant and so we need to retool the client for manufacturing this new fleet of vehicles. Change is like pulling teeth, it seems. There's so much resistance…a tug of war with management. The only reason I'm here is to straighten up the teeth as painlessly as possible by a program of participatory leadership from Dave Fish. My group was pulled in to handle the website orders for these cars. They aren't sold at the auto dealership anymore…a waste of space people say.…They just browse Web sites right here on the computer. Fish asked me one night to dinner with the intention in mind to write up a Service Level Agreement to put together the Job Information Forms we were already using. He wanted to streamline and said go with an IT-JIF and a business-JIF that Go-Green sends us anyway, but seem to be just dictation orders on paper without brainstorming over it, and put them together so they do the changes the right way, the first time. I started with the IT group since I came over from Intel and then went to accounting, because my group is the one that actually crunches the numbers on the customer marketing and research end of it for Go-Green. Accounting was fine with that. The IT brainstorming drew up one draft and then another and another until we got in everyone's face and put all ideas down,…then I laid out that Service Level document into a couple of Job Information Forms to start Dave's project for the IT and business sides. So, basically we started by connecting the dots of IT to various business departments and went around with that.

4. When do you have to decide and resolve the issue? What is the urgency to the situation?

Well, the changes and retrofitting in the manufacturing process depend on all the planning, which is pretty much on schedule by the phases the project is going through. All the employees in IT were polled for their suggestions on how to implement the huge IT server changes in the hardware and software. The team leads there pretty much drive it, but there has been some flak from some of the code writers who want pay increases for developing long hours on campus here to get all the object modules in the library. If they don't compile and execute the code to do what Fish wants, the desktop people can't migrate the new software and hardware. A bunch of Quantum E-Servers have to be adapted to this new web channel.…The Java and C programmers have to have a go to get all the customer coding right so that the customers get back the right info from the backend at Go-Green. If they can't find the car they're looking for, that's it, we lose that guy and maybe he goes to Prius.

Sometimes, I just want to say I don't know, but the changes are exciting and who wouldn't want to be part of this great venture. Making the new ShareBox from Microsoft work over a VPN to Go-Green takes the work of some of the best developers we have here. Everyone tries to pitch in. That's our job, doing all the development and research for the client. Basically, all companies are going global like this, in these emergent changes, so jump on board, with all these intranets all connected, so we have to really pull out all the stops on security protocols, confidentiality and privacy of information. If we don't do that, we lose the customer.

Manufacturing is on a hiring and training binge too, right now. . .just like we pick the brains of our developers and technicians, we're trying to pick up some workers laid off by some other empty GM, maybe Chrysler plant since they already know retrofit. All these ISO changes work with the JIFs, so that helps speed things up and get good quality assurance.

5. What exhibits and supporting documentation do you have (he looks at the Service Level Agreement)?

I have that and our brainstorming sessions on the Visios [now part of this case study.] The web site stuff is all behind the scenes but you can see the marketing stuff I wrote…also on the client-side web browsers. The biggest deal is the purchase order that we have to flip to a sales contract and then we get that extended warranty money, which makes up a bit for the economy reducing the MSRP on the new fleet.

6. Can you review the docs during this interview and tell us more about what areas are covered in more depth?

The business processes are VERY detailed because of the public law requirements of Sarbanes, so we have to meet that since Go-Green is changing from private to public with shares on the NASDAQ. My side is the IT-JIF starting point, but we are operating a business here, two businesses, and never lose sight of that. The customer side that I'm running is big on the rebate program right now, which we process through accounting and the server side run out of the server farm downstairs drives the car to the front door, so to speak.

7. Is your area of interest, marketing, finance, operations, human resources, or integrated functions?

The ultimate is marketing, as the vendor….you know…is a marketing, research do-it-all workhorse; however, in a comprehensive approach, 3 Tier integrates all of it in the ISO, even Go-Green's product upgrade. We do the emergency plan for new employee handbook on hiring and training the laid-off workers from Prius and even consulted on the hiring of internal auditors to do Go-Green's Sarbanes requirements. Wearing many different hats, just like the guys on the IT teams, is a challenge, but one that I see like Fish, you know, increasing employee loyalty, I think, to 3 Tier. Everyone gets to do what they can do well.

8. What specific problems or change strategies are to be made?

All decisions made consider that whole area of customer satisfaction throughout all phases of deliverables including the online e-mail application for quotes and estimates of product to the front door of customer.

Phase I tech setup includes procure and set up client hardware [at the plant], then install the NOS on test hardware…so on and so on…and a pilot phase sets up the compliance document repository also in the ShareBox here.….We provide security management, scripts, and, like I said, a regular workhorse.

Chapter 5: Discussion, Conclusions, and Implications for Future Research

The success factors of organizational change vary from one organization to another, just as every organization differs in organizational structure and culture. This study investigated what influences success in organizational change in a research and consulting company. The purpose of this study was to determine influential factors that enable an organization to successfully handle a change phenomenon.

In order to understand a phenomenon in its natural setting, the researcher utilized a case study qualitative research design, which is a descriptive study of an organization that experienced a major change.

Four research questions were developed:

- Research Question 1: What was the nature of the successful change strategies employed by a contracting-consulting company engaged in market branding, research, and development for its key account?

- Research Question 2: How do subject-participants at 3 Tier describe (a) their planned change experience and (b) what steps were the most effective?

- Research Question 3: What are the key learning factors reported by the 3 Tier subject-participants and stakeholders in the change process?

- Research Question 4: What applicable assumptions and change-management theories were utilized by this current case study's research and how did they relate to the results of the current study?

A preliminary questionnaire was distributed across the IT department of 3 Tier, a research and consulting company. The IT department was instrumental in the

development and implementation of the SLA resulting from the changes studied here.

The second instrument consisted of five interview questions and served as the primary

instrument with which to gather descriptions and bring meaning to the phenomenon being

investigated.

1. Please describe the nature of the Service Request Change Initiatives.

   - What was it?
   - What were the reasons for it?
   - Who led it?
   - Who participated in it?
   - Who would be affected by it?
   - What was the goal of it?
   - Was it accomplished?

2. Could you list the steps that were undertaken in the planned change?

3. Which steps were most effective? Explain why you believe they were the most effective.

4. What did you learn from the experience?

5. Do you have anything to add?

To avoid subject bias, the researcher conducted the interviews separately. It was

assumed that the presence of more than one subject could lead to observational bias.

Moreover, the interviewer stayed neutral during the interview process and did not lead

the participants into a discussion. Data were analyzed using qualitative content analysis,

which involves using quotations in place of numbers. Answers were cross-corroborated

by two raters.

Problem, Reaction, and Solution

Change comes in many forms. Change is a constant. In order to deal with change,

organizations must constantly analyze their internal and external environments. Kaizen, a

Japanese term meaning "improvement" or "change for the better," refers to a philosophy

or practices that focus on continuous improvement of processes in manufacturing, engineering, supporting business processes, and management (Masaaki, 1986). This approach, starting with a look at anticipation of problems such as rubber-stamped JIFs, rests its case on the backbone of a planned IT-business infrastructure. The customer-centric focus is the prime driver or initiator of planned IT change. There was a business problem with an IT solution

Variables and Constants

In this case study, there was a saturation factor and it was similar to a globalization factor of the quantum, global grid (e.g., another term appearing verbatim was thorough knowledge that every group team lead responded with in terms of particular change goals being accomplished). This study concludes that immersion in thorough knowledge was communicated via business-JIFs and IT-JIFs generated by Service Change Request Initiatives from Go-Green to 3 Tier. The new-and-improved documentation facilitated other documentation that accomplished the overriding change goal of upgrading the quality management system at a key client account, as proved in the Results section of this case narrative.

Comparison of the Five Theories

This case study's prototype working model was set up first in the five stages and in accordance with an empirical, inductive paradigm advanced by the case-study method of who, what, where, and how, proposed by Yin (1984, 1994).

This case study's working model is more complex, as with Eight-Phase Action Research, which also includes the feedback loop mid-cycle. Both the SIS Prototype Change Model and the Eight-Phase Action are cybernetic, that is, changing continuously

(Beckhard, 1969) on a stream of subject-respondents' output deliverables, which then serve as input deliverables to the first process of change or problem identification. In the case of Schein (as cited in Nellen, 1997), as input of correction/repair to the mission statement, rather than a problem per se.

A best-mix model in theory and practical application takes the detail and feedback looping of Eight-Phase Action, streamlined economically into a more manageable, concise model, which is just as complex in its inclusion of the feedback looping, but is simpler in terms of planned project planning now occurring through the new-and-improved JIF Change Service Request Initiatives.

The change milestones are visually and initially mapped as two: per the tech setup phase and the pilot phase at 3 Tier. Change implementation tasks are very detailed in the transcription tables depicted in Appendixes B and C, Parts A and B.

Changes are measured as being accomplished per the feedback loop provided in the theory, which is extracted empirically from the transcription tables in the Goal Accomplished column and also in Goodfellow's open-ended responses. Some of these were also captured secondhand by his team leads. Goodfellow introduced organization change as planned change, and managed from the top, to increase 3 Tier's organizational effectiveness and health through planned interventions in the organization's processes (Beckhard, 1969) through the business-JIF and IT-JIF generated by Go-Green's Service Request Change Initiatives.

Details are provided in the comprehensive appendixes, and thus the SIS Prototype Change Model is competitive with the Eight-Phase Action Research Theory in its application to the unique position of a third-party vendor in a virtual merger with its key

client account. The vendor provides the change-order deployments for the client's retrofitting of a manufacturing plant with concomitant major change from one quality management system to another that is an upgraded combination of two systems.

In its inclusion of phases, the Prototype Change Model provided the opportunity to include detail tasks. The major ones are called the milestones and benchmarks with the process mapping of the Visio workflow feedback loop. This provides for constant auditing and monitoring so do-overs do not occur in the future.

Schein's theory is excellent, but focuses on an organization's culture, such as group norms, rights, climate of group in interaction, stated values, formal philosophy of mission statement, habits of thinking such as the paradigm of third-party involvement, and how it grows, which may not include change for problem solving. For Schein, change may be for growth and not to solve a problem; this case study's Prototype Change Model, while borrowing Schein's assumptions regarding people's emotional reactions and the value of the third-party vendor (Schein, as cited in Nellen, 1997), specifically treats change as it relates to problem solving, as opposed to broader culture change.

This case study produced a Prototype Change Model that has five basic steps, Figure 8 illustrates the prototype change model. Milestone overlaps, stacking orders of the process shapes, and feedback loops describe visually how the theory of SLA, ISO 9000, and Sarbanes Oxley or SIS, for short, occurs in practice via five steps.
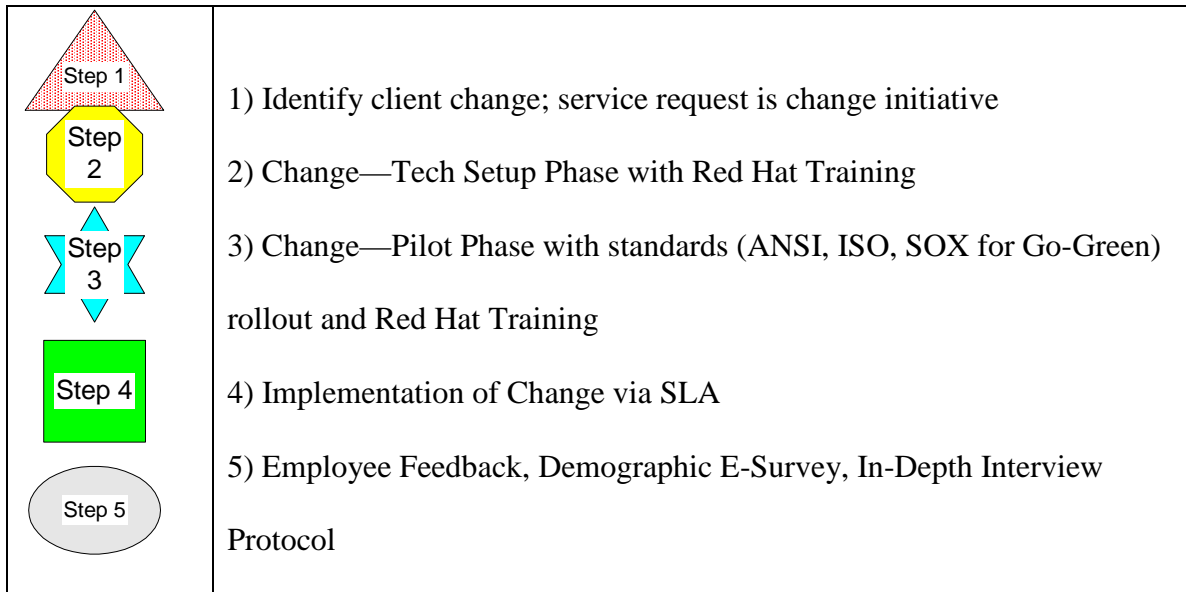
Figure 8. SIS prototype change model.

Correlation of Model No. 1 SIS Prototype Change Model and the 4 Relevant Models
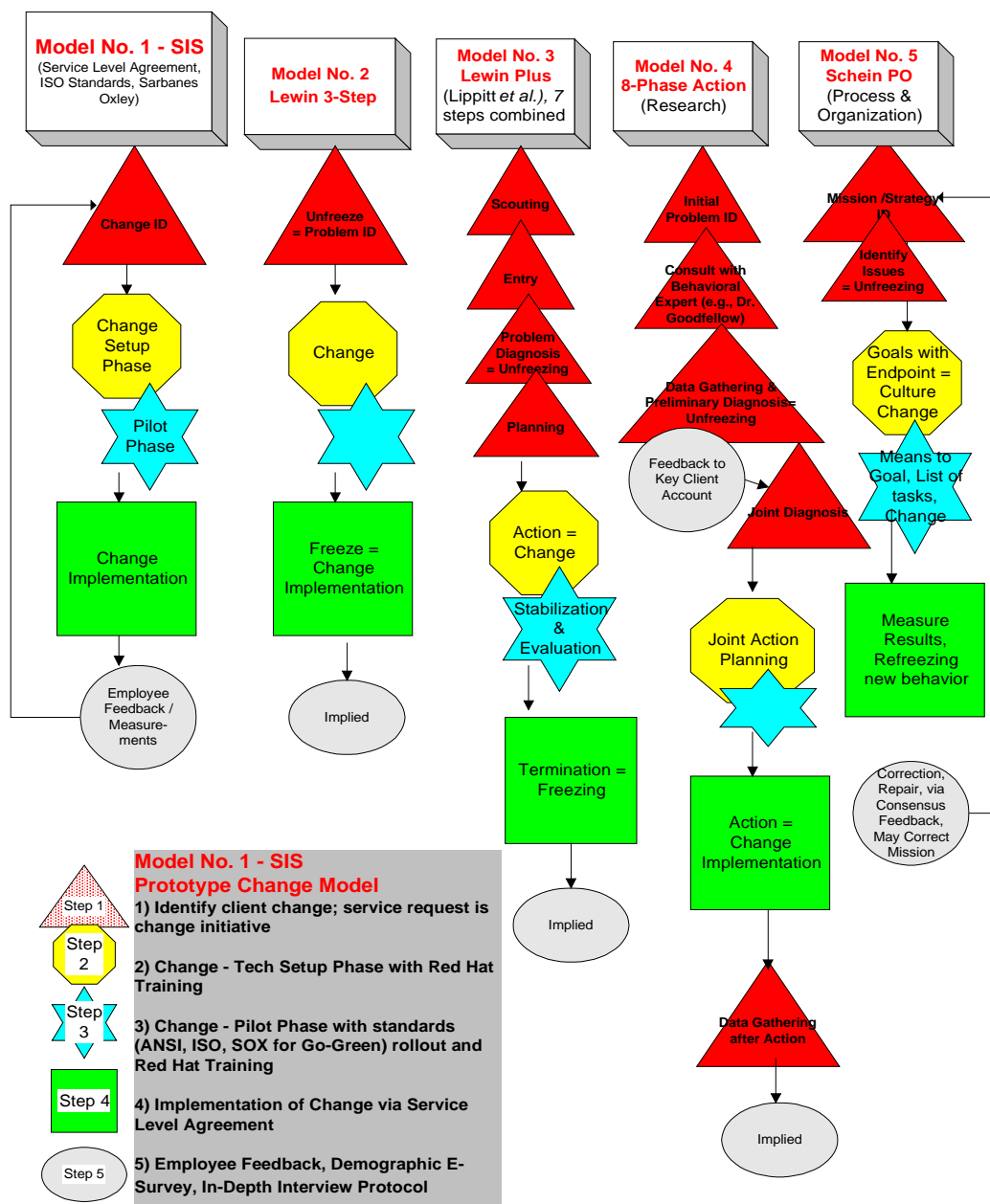
Figure 9. Correlation of prototype change model and 4 relevant models.

Conclusions

Specific conclusions of this case study include the following detailed account with references to the literature review, which should acquaint the reader with professional exegesis motivating future research. Team leads responded that they had participated in the changes processes, and team members responded that they had not participated in the change processes. This case study concludes that both are right: While the 12 team members reported that they had not specifically participated, as individual responders, in the JIF change process, the supplemental interviews with team leads implied a derivative Yes answer regarding participation by team members. They were represented by the hands-on team leads doing double duty as de facto project managers who attended the same team brainstorming meetings, from which results were bundled into delegation of tasks and milestones-benchmarks, with continuous cybernetic feedback from team members built into workflow looping and mapping. The focus on the team leads as representative of their respective groups has sustainability, according to Lewin's three-step theory, in which group dynamics stress that group behavior, rather than that of the individual, should be the main focus of change. Consequently, the focus of change resides at the group level, with a concentration on factors such as group norms, roles, interactions, and socialization processes to create disequilibrium and change (Coghlan, 2000). Concentration on group norms and socialization is also the focus of Schein (as cited in Nellen, 1997).

A second conclusion ensues from the design and development of process improvements that effectively and efficiently achieved the goals. Groups 1 and 4 reported affirmative or positive results, with groups 2 and 3 reporting mixed Yes and No results

regarding goals beings accomplished by change orders. In addition, if the results from groups 2 and 3 were tallied not as Boolean sums, wherein a true and a false equal a final false, but were rather extracted as individual responses, then there would be a total count of four Yes and two No responses, replacing the Boolean results of two Yes and two No responses.

A third conclusion is that team leads who received training reported that the JIF change goals were definitively accomplished. Team leads who had not received training reported mixed feelings of Yes-and-No answers, similar to recognizing the complex nature of human beings, in which Lewin's field theory proposed that human subjects are always subjected to two opposing force fields (Coghlan & Brannick, 2003). The role of training in this process cannot be overemphasized, since training is how the skills and knowledge necessary for effective empowerment are acquired. Moreover, training is recognized as important to the success of most organizational change efforts (Kappelman & Richards, 1996).

A fourth conclusion is that stress on the job was reported most by groups 2 and 3, the same groups that had not received training in the new product launch roll-outs. It is concluded that fear about poor performance because of a lack of knowledge (Klein, as cited in Alford, 1989). Groups 2 and 3 team leads revealed a medium-to-high level of stress on the job for these workers.

A fifth conclusion is that virtualization on a high-speed quantum backbone provided a transparent, seamless knowledge base available as deliverables or outputs of 3 Tier and inputs to its key client account, Go-Green, and vice versa. Access to backend

catalog, product, and database servers over a VPN facilitates a virtual merger running on quantum computing.

A sixth conclusion is that group team leads 1, 2, 3, and 4 all responded positively that they had been included in the new-and-improved JIF change process, which was a promising representative response in that only two project phases had been accomplished: Tech setup and pilot phase that were coterminous with the IT development phase at 3 Tier, which fed into the operations phase handling Go-Green's business processes.

It is also concluded that any movement from the primary resources, the interviewees, toward embracing the new upgraded quality management system for processing change is salutary for continued success on a gradual basis. In fact, it provides a foundation for 3 Tier's continuing in the same direction based on the results of this initial case study.

An eighth conclusion is that the participatory style of management was actively engaged in at 3 Tier, as the hands-on team leads met with their team members to brainstorm and troubleshoot issues and ultimately delegate tasks to the line staff; it is anticipated that this process of direct inclusion of team members by team leads (themselves once team members and promoted out of the ranks) will continue post-tech setup and pilot phases.

There is an urgency to rebuild trust in business among management and staff through leadership initiatives and strategic action (Marques, 2010). This type of participatory interaction engendered a sense of trustworthiness as seen in the comfort level that team leads had in giving mixed feeling (Harrington & Mathers, 1997)

responses, particularly to the open-ended question, "Do you have anything to add?" This opened up a unified response from all team leads regarding lack of pay commensurate with the increased workload of a product launch requiring much overtime, with team lead 3 stating, "HR needs to get on the stick and do some adjustments."

A tenth conclusion was that all team leads shared a corporate-culture view of the organization (Schein, as cited in Nellen, 1997) in terms of the scope of the project's being all persons affected by the change, beyond their own respective groups (i.e., the scope was unanimously reported as all employees, contractors, a subvendor lent out to Go-Green, developers, and the Project Management Office (PMO) of Order Service Group [absorbed by Customer Services-Customer Subscriptions] inside A/R).

The business psychology or workplace behavior of expressed complaints or disgruntlement was measured vis-à-vis a lack of Red Hat training and commensurate pay with increased duties and hours of work. At the same time, expressions of team building and stress reduction were reported during the in-depth personal interviews.

A further conclusion was that planned change (Beckhard, 1969) or successful change strategies overlap change goals. Since these were case-study, interview-protocol questions, the tech setup and pilot phases' tasks acted as variables that were measured to inform the achievement of the change goals or claim that the change goals were achieved.

Another conclusion was that the director of Customer Service pulled together all the team leads and had them participate in and contribute to a new SLA. Organizations are adopting more participatory management styles, which are causing communication to focus more on listening, ownership, teamwork, and involvement (Marques, 2010). The team leads felt included in the process, per their reports captured in Appendix B, Part B.

A fourteenth conclusion was that insiders' accounts of change initiatives served as concrete instruments/tools, or feedback, that facilitated practitioner exercise of successful strategies in organizational change efforts; thus, mere participation in an in-depth personal interview acted as a catalyst for change. The process of interviewing subjects catalyzed change. In accordance with quantum mechanics, observation and/or study of an object alter it. In accordance with action research, the approach focuses on simultaneous action and research in a participative manner (Coghlan, 2000), thus freeing the researcher from the constraints of a traditional experimental model while placing strong emphasis on active observation.

A fifteenth conclusion is the macroview of the Cooperrider and Dutton (1999) bigger picture in which, "Research on the human dimensions of change strives to understand and make sense of the interactions among and between human systems and environmental systems along with their relationship with and contribution to economic, political, cultural and institutional arrangements" (p. 14). The translation for this case study is that the appendixes that provide a content analysis of the transcriptions make sense of participant-respondents' feedback, not inside a vacuum, but as large interdependent internal and external systems. These include the recent economic collapse, cultural anomie as workers lose jobs, and a big institutional arrangement in this case study, in which the key client is launching a new sustainable product that has a global market.

The Cooperrider and Dutton (1999) big-picture window or institutional view encompasses recent historic events descriptive of both internal and external systems. The President's Live Town Hall Meeting on Economics, on C-SPAN, (Mayer, 2009), was

high tech, including a type of e-mail e-survey that was done in response to the 1,000 online questions submitted to the President. He could not answer all of them, so a core sample was selected to get results that would address the business psychology of constituents and stakeholders in the American economy. This type of e-mail, with an e-survey, was used in the current case study very successfully, which might signify its future use.

The last conclusion is that the most effective steps in the process were occasions when Go-Green and 3 Tier sat down together, with both sides of the SLA evaluating the JIF submission packet for change process in the walk through via the ISO 9004-1 with actual sign-off; the brainstorming about the tech setup and pilot phases charting; and the big step of Go-Green's opening the JIF inside an upgraded quality management system, and not just passing off to 3 Tier a request that would turn into a rubber-stamped JIF doing business as usual. Team leads said that the new-and-improved system eliminated guesswork so they were not compelled to make false assumptions about specific tasks. The business strategy was truly that of no do-overs, do things right the first time, every time (Harrington & Mathers, 1997).

Limitations of the Study

The usual limitations of a case study start with its small or limited size, which in this case, occurred from a sample that was randomly assigned from the IT division that was randomly assigned from the auto sector. Some could argue, therefore, that this case study does not provide the basis for generalization to other sectors. However, quite the opposite is evident. The process studied acted as a type of template for sustainable car manufacturing as a result of successful change-agent strategies that can, by the halo

effect, be applied successfully to other sectors in the quantum, global grid.

This case study's inclusion of assumptions, patterns or themes, a frame, organizational theories, a manufacturing business strategy, and even a new working model with variations filtered and substantiated in exception reports or errata sheets—appear extendible to various industries. Furthermore, despite data collection from a small random sample size, the qualitative analysis focusing on peoples' experiences aims at providing a holistic view through the participants' own words and perceptions. How they understand, account for, and act within these situations (Miles & Huberman, as cited in Skinner et al., 2000), offer organizations in similar settings in the auto sector a more accurate understanding and a complete detailed description of successful change strategies.

Another possible limitation could be the corporate culture that predisposed employee-participants in the company's mind-set unified by training and geared toward survival of the organizational mission statement and policies and procedures of operation (Schein, as cited in Nellen, 1997)

In addition to limitations specified in the SLA under Design Considerations of Assumptions and Dependencies and Constraints, related limitations can be described as risks and contingencies that can be prepared for and responded to, not after the fact in a reactive way, but rather through leadership that anticipates problems before they happen and takes the initiative to prevent them or put alternative workarounds in place, per the Appelbaum et al. (1998) theory discussed earlier.

The ISO 9000 series of standards and Sarbanes-Oxley public law identify just such risks and liabilities on the workroom floor, in quality-management systems, and on

financial spreadsheets. Each risk is quantified in this case study in order to be readdressed in the new-and-improved JIF and the packet of supporting documentation attached to it.

One major limitation, a risk reported by the subject-respondents and possibly jeopardizing project completion, was a lack of in-house Red Hat Enterprise Training on an equally distributed basis. Instead, HR rolled out training on a type of first-come, first served basis. The employees' sense of fairness seemed to have been violated. According to some respondents, HR had arbitrarily decided to phase in training with the rationale that all workers could not be removed from the project at the same time to participate in training. This attitude replaced a possibly closer scrutiny that would have justified standardization of training offered to all employees at the same time, in order to head off complaints and increase process performance.

The HR rationale of schedule constraints, in turn, expanded to become an active limitation to fully functional capability for the project. It appears that lack of training contributed to failure to achieve optimum on-the-job performance; as a result, workers reported job dissatisfaction that was expressed as complaints about lack of training. It is concluded that such limitations, beginning as passive and then expanding to active, should be identified at the outset before they even become passive, as these limitations are associated with before and after events on the workflows that have to be completed for the success of a product launch. Scheduling training based solely on time constraints was counterproductive in achieving full employee job satisfaction.

A soft limitation is this: The 12 team members reported that they had not specifically participated, as individual responders, in the JIF change process. However, the supplemental personal interview that gathered data from the team leads implies a

derivative Yes answer regarding participation by team members, based on their representation by the hands-on team leads doing double duty as de facto project managers who attended the same 24/7/365 team brainstorming meetings from which results were bundled into delegation of tasks and milestones/benchmarks, with continuous cybernetic feedback from team members built into workflow looping and mapping.

This limitation could be addressed in a future, follow-up study. It could also be expanded in subsequent phases of this project to gather more data in the form of verbatim and summary comments from team members, not filtered by their team leads, regarding team members' own participation in the change processes. However, it is true that most teams, because of budget and time constraints, follow a team lead in order to expedite deliverables. This is the reality of IT, so that a successful workaround is accomplished with team leads who are hands-on workers and not just delegation-oriented. Thus, while possible, it is not deemed plausible to perform this inclusion at this time or in future case studies of this particular third-party vendor and key-client account. Nevertheless, other sectors could possibly benefit from use of the in-depth, personal interview of functional line staff, in addition to their representative, delegating team leads/project managers. That this study conducted in-depth interviews with hands-on team leads led to a decision not to pursue in-depth interviews with their direct reports, at least initially.

Another hard limitation was the lack of a lead IT business analyst liaison at 3 Tier. Such a person's expertise would be specific to analysis of business processes, risk, and governance issues as they relate to key client accounts that are an implementation of Sarbanes-Oxley compliance, in contradistinction to or even in addition to ISO standards, the latter scenario applying to Go-Green Auto Corp. The vendor, 3 Tier, had to rely on

Go-Green's internal and external teams of Sarbanes-Oxley financial auditors because it did not have an in-house expert to interface with those teams and provide input on the interdependence of Sarbanes-Oxley and ISO, the latter of which 3 Tier has used for years.

Future Implications and Recommendations

In summary, the assumption of a quantum world-view implies the following premises, also available to the reader as an implication of this study: Quantum consciousness to compete on a global scale requires ongoing implementations of the Quantico technological machinery, the huge-consciousness computer running on an IT backbone of E-Quantum blade servers and the Internet cloud, to carry the business of the world, the business processes of Go-Green, in particular, on its back and onto the world stage.

Recommendations are made for future interview protocols with other senior management officials at 3 Tier's west coast offices in Torrance, California, including the HR director, CFO, CEO, Sr. Accounting Operations manager, and so forth to complement the results obtained from director of Customer Services-Customer Subscriptions.

Goodfellow's decision to write an RFP for future psychological testing that would identify more workplace behavior, as well as the support that groups 1 and 4 gave to groups 2 and 3 regarding pay that is commensurate with increased workload of a new product launch is a useful initiative. A study in business psychology is not the focus per se of the current case study, but aspects were recorded on the in-depth, personal interviews instrument, Appendix B, Part A, Column 7, regarding the goal of the change

(including team building, stress reduction, and red tape reduction) and Part B, Columns 3 and 4, regarding key learning factors and additional comments.

It is recommended that 3 Tier perform a data-migration strategy from the current green-eyeshade type of website to state-of-the-art Microsoft SharePoint Web site as soon as the customer traffic and metrics support this change. Another forthcoming recommendation that needs to be completed in subsequent phases is the migration of Microsoft Sequel server database with an Access front end to a more robust MS SharePoint CRM database.

Another recommendation is that 3 Tier develop detailed business requirements for an A/R system containing Order Service Group with add-on Customer Services/Customer Subscriptions Group and associated with the implementation of software associated with Go-Green's Sarbanes-Oxley risk and governance compliance for business-process definitions. Therefore, recommendations include design and development of a future case study with a focus on human resources methods, namely, in job design and analysis of an anticipated new hire. This person would be a lead IT business analyst liaison at 3 Tier whose function would be to analyze business processes, risk, and governance issues as they relate to key client accounts involving compliance with Sarbanes-Oxley and/or ISO standards, similar to the Go-Green account.

Future case studies need to build on the type of e-survey with an added video link like the one that was used in the Microsoft Live conferencing hook-ups as the President's Live Town Hall meeting on March 26, 2009. That system is real-time-based, whereas popular You Tube and Google streaming videos are archived for later viewing and not

interactive. An exception is the Moderator software that Google placed on the Web site for the Town Hall Meeting (Mayer, 2009).

Business Consultancy and Quantico Join Forces

Business consultant and computer programmer George Ure envisions sensing changes in a unique way via independent mini-programs or spiders to comb the Internet for hints of future financial news (Web Bot and 2012, 2009). Ure's track record is impressive: 20 straight readings correct, beginning in late 1990s to predict financial forecasting trends.

A new software program called web-bots, which senses the universal Quantico consciousness described by this case study and predicts trends not only in economic crashes but also in weather systems, has a direct bearing on future case studies that measure business psychology such as resistance, team building, mixed feelings, and so forth. Prediction of future trends in this way with measurements being evaluated by globally crawling computer algorithms instead of error-prone human beings can seamlessly transition the U.S. to a high-production environment of new product launches based on the new physics and obviate any chance of redundancy in change orders, for example. If this type of precision is available through algorithmic crawlers that see into the future, as presented by Mayer (2009), then mistakes will be minimized as anticipatory actions occur more and more seamlessly.

The predictive or anticipatory powers of any organization are grounded in an economic recovery that increases productivity of the labor force and capital investment in depressed neighborhoods. By increasing the productive powers of the infrastructure grid, new product launches would include 3 Tier and Go-Green, in other words, biomedical

research, production of orbiting satellites, and the nano-physics that go into the manufacture of plug-in hybrid and all-electric cars, for example. Smokestacks and windmills are no longer sustainable as by-products of production manufacturing. This case study anticipates that strong production stateside would get the global world out of a depression, because when people produce hard, tangible things, they make real money that they save and use to buy other things. This new thinking is an alternative to the derivatives financing, fractional banking, and fiat money that is collapsing one country after another.

Justification of the visionary discussion of web-bots programs above is the macro view of both Goodfellow and Cooperrider and Dutton's (1999) bigger picture in which, "Research on the human dimensions of change strives to understand and make sense of the interactions among and between human systems and environmental systems along with their relationship with and contribution to economic, political, cultural and institutional arrangements" (p. 14).

Change processing includes a lot of compromise; it is a large part of planned change. On March 27, 2009, C-SPAN reported that the State of California would receive $10 billion in federal stimulus funds. But measurements of state budgets show that it is not enough money, so California plans to increase the state income tax and, at the same time, cut spending for, among other things, the university system, which is not considered a necessity on par with other state services.

Sometimes, change is proactive, and in this current economic collapse, there is a fair amount of reactive change. A look at the mix has direct implications for 3 Tier.

If California had taken advantage of the new state-of-the-art software programming implemented by Web-Bot technology (since the late 1990s), which senses universal consciousness, what a majority of people are thinking, and even the economic collapse starting on October 6, 2008, the collapse could have been avoided and with it, the reactive change to that collapse. In its place would have been the proactive-change visionaries who had the initial foresight to take the lead and stop the problem before it started.

Proactive change has always been better in the sense that it is based on participation of all constituents and stakeholders. When the constituents take ownership of the changes that they are involved in, the business psychology of organizational change is socially inclusive of the team members' being valued in change deliverables or outputs and incentivizes them and their team leads. Team members delay the gratification of immediate training or commensurate pay, knowing that they are self-actualizing in accordance with Maslow's hierarchy and that reward is higher than the lower-level rewards of pay. Of course, everyone needs the pay to survive, but there is something else going on: delay of gratification and taking the initiative to anticipate problems before they start, to be truly proactive is to deal with organizational change.

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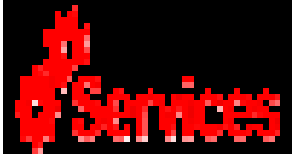
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APPENDIX A

Customer Relationship Management and Finance Data Backup SLA

	Service Level Agreement between 3 Tier R & D, Inc. and Go-Green Auto Corp

CRM and Finance Data Backup SLA
Implementing/Deploying IT-JIF and Business-JIF Change Processes
Tech Setup and Pilot Phases

	3 Tier R & D, Inc. Pepperdine, California 98754

Customer Services / Customer Subscriptions Director Jack Goodfellow

Revision History

Date	Author	Doc Version	Description of Change
Dec 21, 2008	Jack Goodfellow	1.0	Initial draft: based on meetings between Dec 9 – Dec 14

CRM and Finance Data Backup SLA—INTRODUCTION

The privately run, third-party vendor, 3 Tier R & D, Inc. (now known as 3 Tier in this document) will provide Subscription Services / Customer Services to its client, Go-Green Auto Corp (now known as Go-Green in this document) per this Service Level Agreement or SLA. Subscription Services / Customer Services Director Jack Goodfellow will manage every facet of the administration of Go-Green's technical-support, subscription-contracts and renewals. Go-Green having expanded from a start-up to a publicly traded company on the New York Stock Exchange, retained the services of 3 Tier, and now trades on the Big Board as GGAC.

Duties in implementation of this CRM and finance-data backup SLA (Lahti, p. 209) that will be performed include management of first-time monthly subscription and renewal quotations with follow up per various media, including, but not limited to, phone calls, emails, email blasts, postal mail, online three-tier responses from the 3 Tier web, etc., in order to close customer contracts in a timely manner, that is, not more than a five-day turnaround schedule.

Implementation and maintenance of 3 Tier's Suite of CRM (or Customer Relationship Management) protocols will create a large number of quotations and reports for Go-Green on a quarterly basis, monitored by 3 Tier's privately implemented ISO 9000 standards working in conformance with standards of publicly traded Go-Green's Sarbanes-Oxley (SOX) IT Compliance using COBIT (Control Objectives for Information and Other Related Technologies) and open source tools. Quality assurance will monitor performance deliverables through quarterly customer service phone calls and continual contact of all customers whose tech-support subscription has lapsed in order to renew their subscription.

Purpose or Objective

The purpose of this SLA is to establish a best-practices' standard for reducing the risks of threats to the CRM implementation on the extranet of 3 Tier networked to the intranet of Go-Green, as well as for the internal 3 Tier Corporate Headquarters and regional satellite offices. The ability to manage multiple projects concurrently on the CRM extranet, while maintaining a high level of quality and commitment to Go-Green's project time frames will be accomplished by ISO 9000 standards by 3 Tier and SOX IT by Go-Green. A dynamic and entrepreneurial environment will be provided by 3 Tier vis-a-vis the initial small-company flexibility required by Go-Green with expected expansion per Go-Green's newly acquired GGAC status on the New York Stock Exchange.

Deployment of a security infrastructure on multiple platforms including Red Hat Enterprise Linux-based application servers and Web servers that support business-to-business (B2B) and as well as business-to-customer (B2C) business models used for connecting corresponding tiers commonly known as 1, 2, and 3 in Internet e-commerce channels of 3 Tier and Go-Green will be utilized. Performance of authentication, auditing and accounting of servers and applications that support the financial and business processes of Go-Green will be achieved by 3 Tier Network Administration. (Go-Green performs its own in-house authentication, auditing and accounting.) The Network Administrator of 3 Tier will use three tests, HTML, CGI, and API (Schneider, p. 61), to measure performance transmitted from the 3 Tier extranet to the Go-Green intranet will be kept private of its extranet in its role as client to the Go-Green tiers 1, 2, and 3. Information transmitted from the 3 Tier extranet to the Go-Green intranet will be kept private via implementation of Secure Socket Layers or SSL with File Transfer Protocol or FTP being used to transfer files from 3 Tier users in the CRM Project Office over the Internet to the web servers at Go-Green.

Scope

The scope of this CRM SLA includes all full-time employees, contractors, sub-vendors, developers, or any un-authenticated anonymous guests, logged in to an FTP server through

proxy service, who are responsible for the various third-party accounts (in addition to Go-Green) of 3 Tier and who require usernames and passwords to access any tier 1 client machine, tier 2 web server, or backend tier 3 database such as CRM in use by 3 Tier or Go-Green. Systems are defined as resident on any Go-Green campus, facility, building, 3 Tier extranet, or off-site storage that contains private and confidential customer data.

Intended Audience

This CRM SLA applies to the Project Management Office (PMO) responsible for the Go-Green account, including but not limited to the following stakeholders: Director of Subscription Services / Customer Services, CFO, the ISO 9000 auditors, and relevant functional staff in the PMO such as contractors, temporary workers, and full-time employees working in Corporate Headquarters or Regional Satellite Offices of 3 Tier.

System/Service Identification Using Applicable Names

The 3 Tier CRM database and system implementation at tiers 1, 2, and 3 are defined briefly as the following, in accordance with best business practices performed through online channels provided by the Internet, in this case, the 3 Tier extranet securing accessing the Go-Green intranet's web servers and back-end databases: The name of this third-party vendor, 3 Tier, provides CRM service deliverables that are an investment in its name itself, that is, the online business models of an advertising-supported web presence, order catalog and sales of Go-Green autos and warranties occurring inside a secure 3 Tier extranet connection to a secure Go-Green intranet. Both operate at three levels used by the Internet: in this case, the tier one client is 3 Tier itself as staff interact from their workstations with the tier two Internet web server of Go-Green that is connected to its own tier three backend catalog / product databases. In reverse, when Go-Green is a client to 3 Tier, it connects to the web server of 3 Tier which then is able to connect to 3 Tier's back-end databases, such as, the SharePoint repository holding the CRM database

System Overview

To ensure network data integrity in the CRM database, all access from the 3 Tier extranet to the Go-Green intranet must conform the guidelines of ISO 9000 standards to those of SOX COBIT that support the Go-Green domain of IT general controls, including network, database and Operating System (OS), and the IT applications controls, including software (SW) applications, such as PeopleSoft for HR functions and Oracles Financials, connected to specific financial / business process definitions, including, but not limited to, transferring funds, placing orders, and sending invoices also known as revenue recognition, order service group and accounts payable in SOX (Schneider, p. 7).

DESIGN CONSIDERATIONS

Design considerations are based on the COBIT control objectives regarding security for firewall / gateway requirements for virus prevention, access and remote connectivity to Go-Green provided by Linux Heartbeat which includes, but is not limited to, monitoring of 3 Tier web servers, mail servers, database servers, file servers, DNS and DHCP servers, and proxy servers. Change management will be delivered via applications, databases, OS and hardware (HW), network design, and firewall. Monitoring will occur on server performance, network availability, network nodes backups, and network security. Logical access will be implemented for applications, OS password control, application password, and to servers / files.

ASSUMPTIONS AND DEPENDENCIES

Assumptions or dependencies regarding the SW and its use include SW programs' stress testing in system development life cycle of SDLC for bugs via pop-up error messages in new release notes for 3 Tier CRM database in the SharePoint business platform also serving as a document repository for ongoing performance reviews and Crystal Reports of customer metrics, as well as IT reports, such as, web-certified performance reports,

including, but not limited to, directory servers, proxy servers, price performance, dashboards, benchmarks, and all web servers at 3 Tier—as deliverables to Go-Green, per this CRM and Finance Data Backup SLA contract.

Related Software or Hardware

Related SW or mixed platforms for CRM PMO team users with Red Hat Enterprise Linux workstations includes a Windows box for email and Microsoft Office applications for documentation (Lahti, p. 95) uploaded to the Microsoft SharePoint repository (mounted on LINUX) containing all document versions. Related HW includes, but is not limited to the following: Windows XP notebooks and Apple ibooks (laptops) connecting remotely through the Internet, Oracle Financials server, PeopleSoft server, Cisco firewall/Virtual Private Network or VPN, and LINUX marketing, research, and development file and print servers.

Operating Systems

OS is LINUX with TCP/IP compatibility providing compatibility between mixed platforms, such as Red Hat Enterprise Linux and Windows..

End-User Characteristics

Go-Green's business model is represented by third-party vendor, 3 Tier, as primarily an online advertising-supported, mail order catalog, and CRM database with finance data backup, recording sales of Go-Green autos. The bricks-and-mortar physical dealerships populated with pre-owned and new hybrid and electric vehicles provide aural advertising and service deliverables of the product purchased and recorded in the 3 Tier CRM via VPN from the Go-Green intranet to the 3 Tier extranet (remote connectivity) via the security objective of COBIT for SOX IT implemented at Go-Green, and to which 3 Tier is in conformance to, by its own in-house ISO 9000 standards specifically designed for the auto industry.

Functionality Changes

Organizational change-agent strategies will be implemented per the SOX COBIT used by Go-Green as a now-publicly traded company per the toolkit used by IT professionals who interface with financial auditors regarding business-process definitions and best-business practices that ensure effective quality assurance (Lahti front cover).

GENERAL CONSTRAINTS

General constraints in delivery of the 3 Tier SLA include the following breakout categories that clearly address a wide range of possible vulnerabilities to the 3 Tier CRM.

Hardware or Software Environment

Internet access will be limited to specific computers, including but not limited to, the web servers, mail servers, database servers, file servers, DNS and DHCP servers, and proxy servers located between internal and external firewalls. Firewalls will be configured to allow only designated computers to access the Internet connection to Go-Green. Monitoring will occur by logging of computers' IP addresses and user accounts and comparing them to the Access Control Lists. Dial-up modem connections will be disabled.

End-user Environment

Employees or contractors in the 3 Tier CRM PMO who refuse to sign an acceptable online use policy as noted in the employee handbook will have their user accounts restricted from

any Internet use by placing their IP addresses in the cache on a proxy server, thereby effectively blocking all work activities performed over the Internet from the 3 Tier extranet to the Go-Green intranets, for those workers.

Availability of Resources

Human Resources in the 3 Tier PMO for the Go-Green CRM database include Team Lead, Director Jack Goodfellow, and his PMO team members with various levels of access to the Go-Green CRM database and Go-Green intranet and remote connectivity to 3 Tier. As Go-Green gains market share on the Big Board, 3 Tier will hire employees and contractors to handle increases in customer requests for marketing media kits on the Go-Green line of pre-owned and new vehicles, including hybrids and electrics. Web servers with increased RAMs will be added, along with in-house workstations and remote laptops for outside sales reps calling on Go-Green.

Standards Compliance

ISO 9000 standards will be implemented by the private organization, 3 Tier, that are also in compliance with the publicly traded company, Go-Green, using required mandates from the Sarbanes-Oxley public law passed in 2002 by the US Congress.

Interoperability Requirements

LINUX-based OS, SW, and HW are interoperable with Microsoft Windows workstations, laptops, and related peripherals.

Interface/Protocol Requirements

The 3 Tier extranet will use Internet-based protocols, including but not limited to, TCP/IP, FTP, Telnet, HTML, HTTP, and web browsers, such as Leopard and Safari on Apple Macs and Vista and XP on Microsoft Windows machines. (Schneider, p. 63).

Data Repository/Distribution Requirements

The SharePoint data repository used by 3 Tier will be installed on a 3 Tier MS Windows Server 2006 which rides on top of a Mac Red Hat Enterprise Linux-based server. SharePoint clients will be installed on MS Windows XP Professional workstations that are compatible with Apple workstations via the TCP/IP protocol that allows mixed platforms to communicate. (SharePoint, p. 30).

Security Requirements

Security will be accomplished by the Linux Heartbeat component that can monitor web servers, mail servers, database servers, file servers, DNS and DHCP servers, and proxy servers (Lahti, p. 67).

Memory Limitations

Any memory limitations are addressed by periodic review of audit logs regarding central processing unit speeds. Add-on RAM cards will be installed in current servers, as needed, to keep the bandwidth and throughput at optimal levels, or these web servers will be rolled over and migrated to new servers with increased built-in memory.

Performance Requirements

Performance and network analyzer components will automatically audit 3 Tier web servers,

mail servers, database servers, file servers, DNS and DHCP servers, and proxy servers, and reports sent to the email box of the Network Administrator.

Network Communications

Network communications will be provided by AT&T as the primary provider of a private-line network between Corporate Headquarters of 3 Tier to its regional satellite offices via fractional T1 lines that save money at 256 kbps. In this current option, security occurs by PPTP and IPSec protocols.

Due to downsizing of the economy, 3 Tier is considering the use of a Virtual Private Network or VPN tunnel encrypted over the free, public Internet to carry traffic from all its regional offices' users to its Corporate Headquarters and then another VPN to carry traffic from the 3 Tier extranet to the Go-Green Home Office.

If all connections occur through VPNs, security occurs through the use of various protocols, such as, PPTP and IPSec, but, in addition, SSL/TLS. Long-distance charges are reduced by using the free public Internet to connect corporate sites and protocol encryption guarantees security of the 3 Tier CRM, reports from which are accessible by certain Go-Green groups.

Application Data, Backups and Restore

Since there are no SOX compliance requirements for this area, 3 Tier will rely solely on ISO 9000 standards regarding industry standards for retention of CRM database reports from SharePoint for the financial / business processes, such as A/R (Order to Cash), A/P (Procure to Pay/Disbursement), and Record to Report (GL, FP&A, Tax, Inventory, Fixed Assets). (Lahti, p. 207).

CRM database with critical financial data and system data on Red Hat Enterprise Linux / Linux servers will be exported and mounted (Lahti CD-ROM) by 3 Tier and the mounts backed up in conformance with schedules that meet Go-Green's three-day turnaround time per this contract

SLA DOCUMENT ACCEPTANCE AND SIGN-OFF

By signing below, I acknowledge that I have read the entire contents of this SLA document for CRM database and finance data backup deliverables and accept the SLA in this form as reasonably representing all issues intended per the scope. I accept this document as the full specification, subject, of course, to ongoing review, revisions, and adjustments per organizational change-management strategies. These include, for example, roll out and migration to new HW, SW, and databases, for completion of the Tech Setup and Pilot phases of the project defined by Go-Green's transition from a private organization to a publicly traded company, known as GGAC on the New York Stock Exchange.

PRINTED NAME	SIGNATURE	DATE

APPENDIX B

Interview Data

Interview Protocol for In-Depth, Personal Interview on Change (listed on Job Information Form, JIF) 4 Groups of One Team Lead Each in the 3 Tier IT Division – Part A Answers Research Question 1 (successful change strategies)							
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Interviewee No.	What is JIF Change and nature of it?	Reasons for JIF Change	Who Led JIF Change	Who Participated Change JIF	Who Would Be Affected – Scope	What Was the Goal of JIF Change	Was Goal Accomplished by JIF Change
(1) 3 Tier In-house Developers Who Write Code to Connect to Go-Green Product Catalog **Tech Setup Phase**	-IT general controls - Go-Green VPN Connect Procedure Change Request - Design and execute solid test plan, training plan, implementation plan -provide security, script dev., loading compliance docs. -Take Red Hat Certified Engineer Training	- Link Go-Green extranet to 3 Tier intranet and vice versa - Ensure documented to process and carried out effectively on JIF	Alex Boness	George Yousef Carl Raymond	All of IT employees, contractors, sub-vendor at client site, Development Phase PMO of OSG (with Customer Subscriptions) in A/R Group	-The goal was to reduce "red tape" (bureaucracy) by documenting change requests or new Jobs … --Access free, public Internet access on high-speed, reliable bandwidth -Reduce costs ,,, -Ensure "Q&A (quality & efficiency)"	The goal was accomplished … "**Yes**, enhanced communication between 3 Tier & GG.". -"Yes, very thorough documentation**"** ensured success of doing Job requests on time, "under budget" -"Wore (rec'd) the Red Hat (Training)."
(2) 3 Tier In-house Developers Who Write 3 Tier E-mail APIs for MS SharePoint CRM database	-IT application controls -Provide security, scripting, loading compliance docs. -Consult on collection of A/R docs in templates -Satisfy Go-Green Job Request for Email GUI on Web Servers -Provide first web	- Decrease turnaround time from PO to Car Sale -Crunch Customer metrics to determine if web is effective -Sub-vendor consult on Go-Green ERP, PSoft ShareBox web, hosted internally on	Sly Forever	Jeremiah Zeke Solomon Ruben Sub-vendor contracted to Chattanooga	All of IT employees, contractors, sub-vendor at client site, Development Phase PMO of OSG (with Customer Subscriptions) in A/R Group	-Perform quick close of sales by mgmt. of 1st time subscriptions and renewal quotations to "flip POs (Purchase Orders) into Sales Contracts" with Bill of Sale -Sold warranties,	-**Yes and No**, "very complete docs" and follow-up calls to flip PO to Bill of Sale" -No, 3 Tier Outlook not synced to GG's Lotus Notes -No Red Hat -No, too much pressure to close

| Pilot Phase | -Take Red Hat | JIF | | | | | processed rebates … | sales deal |

APPENDIX B – DATA COLLECTION INSTRUMENT OR TABLE –

Interview Protocol for In-Depth, Personal Interview on Change (listed on Job Information Form, JIF)
4 Groups of One Team Lead Each in the 3 Tier IT Division – Part A (continued) for **Research Question 1** (successful change strategies)

1	2	3	4	5	6	7	8
Interviewee No.	What is JIF Change and nature of it?	Reasons for JIF Change	Who Led JIF Change	Who Participated Change JIF	Who Would Be Affected – Scope	What Was the Goal of JIF Change	Was Goal Accomplished by JIF Change
(3) 3 Tier Desktop Technicians Who Migrate / Roll out new SW/HW **Pilot Phase**	-Procure HW -Setup Test HW -Install SW on servers for "ShareBox;" -Upgrade "Orca;" Applied patches and hot fixes -Red Hat Certified Technician Training	-Promote B2C (business-to-customer) business model in selling cars virtually on JIF	Rhett Orick	Manny Jose Veronica Tomas	All of IT employees, contractors, sub-vendor at client, Development Phase PMO of OSG (with Customer Subscriptions) in A/R Group	-Improve quality and efficiency of deliverables -Improve worker team building in-house -Reduce stress	**Yes and No**, -Had "extra tight paper trail," but "UAT (User Acceptance Testing) stress for bug errors showed holes (vulnerabilities)" -"Techs didn't get the (understand) the ShareBox rollout," so stress "zombies." -Part-timers need more hours to do roll-outs … -No Red Hat training received yet
(4) 3 Tier System Admin Scripting E-blade Servers	-Provide IT controls -Take Red Hat Engineer Training -Load users and groups -Advanced Project Mgt coursework	-Provide server build for new IT backbone on Quantum E-blade servers to match client changes -Perform server	Sally Hemming	Alex Sly Rhett\ Sub-vendor contracted to Chattanooga	CEO, CTO, COO, HR Director, Director Fish, Customer Subscription Director	-Pass ISO Quality Management System audits/approval	**-Yes-** - Accomplished compatibility between mixed platforms by TCP/IP

Pilot Phase	Complete compliance doc. Collection	checklist routed through for new servers on the JIF			Goodfellow, and ISO 9000 internal auditors		-Had "thorough JIF process … biggest factor in success"

Interview Protocol for In-Depth, Personal Interview on Change (listed on Job Information Form, JIF)
4 Groups of One Team Lead Each in the 3 Tier IT Division – Part B Answers **Research Questions 2, 3** (planned change and learning)

	1	2	3	4
	Could you list the steps that were undertaken in the planned change?	Which steps were most effective? Explain your views.	What did you learn from the experience?	Do you have anything to add?
(1) 3 Tier In-house Developers Who Write Code to Connect to Go-Green Product Catalog **Pilot Phase**	-"Dr. Jack gave all the TLs (Team Leads) a Service Level Agreement" containing planned changes -Then the "TLs sketched out some diagrams" about how the JIF Change could be done in accordance with that doc -"An ISO (9004-1 JIF) was stapled to the VPN Connect" Procedure Request from Go. -as Team Lead, "I used it to write a Work Instruction for my team…So the JIF cut the downtime by … reducing the pressure-cooker" atmosphere "in the developer group for the CC (Connect Code)."	-"the JIF step was the most effective" because it was a "talking points sheet" of the changes, to which "the Go packet (of supporting docs) were stapled "it increased trust" with our key client … "opened up the (communication) lines" -"IT general controls install with the NOSes, network and back-ends listed in Jack's Service doc."	-"My group learned how to really pull together as a team with different people writing different (code library) objects that they were already skilled at" … -"that was a time and money saver."	-Yes, there is still friction from Groups 2 and 3 with HR which hasn't compensated the Team Leads for the increase workload, due to so many changes coming in from Go-Green as it changes to the new product launch -Group 1 is okay with everything so far though
(2) 3 Tier In-house Developers Who Write 3 Tier E-mail APIs for MS SharePoint CRM database	-"setting up new email Exchange Servers" to process the increase in prospective customer activity and meet Go-Green's "3–day turnaround pushing ShareBox metrics," purchasing profiles, and key performance indicators.	-"New server set up on the new Q blades (line of Quantum E-blade servers) was the most effective" -That "hiked" (increased) customer web-site hits (inquiries) where the customer (opens and) downloads apps (applications) to pre-qualify for a car" …	-"Emergent changes in the technology is (are) key"; (Exchange) X Servers for Miss (MS) Outlook are not totally synchronized to Go's (Go Green's) Lotus Notes Email boxes (servers), so new tech (nology) has to be tweaked to run (interoperate) with other boxes, and that means we have	Communication of our "good-faith intentions carries the day, so to speak, when the system goes down—the client understands and that makes working for the solution easier." -pay is not up for all the extra work we're

Pilot Phase		-Why? "Well, GG, because it's getting access to deliverables on time and correctly (with efficiency)" … -"IT application controls on the CRM, with the consult to GG on the ERP and Psoft."	better communication"	doing

APPENDIX B – DATA COLLECTION INSTRUMENT OR TABLE – **Interview Protocol for In-Depth, Personal Interview on Change (listed on Job Information Form, JIF)** 4 Groups of One Team Lead Each in the 3 Tier IT Division – Part B (cont.) for **Research Questions 2, 3** (planned change and learning)				
	1	**2**	**3**	**4**
	Could you list the steps that were undertaken in the planned change?	Which steps were most effective? Explain why you believe they were the most effective.	What did you learn from the experience?	Do you have anything to add?
(3) 3 Tier Desktop Technicians Who Migrate / Roll out new SW/HW **Tech Setup Phase**	-"rolling over and migrating the Indians (Apache) web servers" to the latest upgrades "to work with all the NOSes (Network Operating Systems)" … -"rolling out developer Java, C and NET (for anticipated customer demand)" -"rolling out ShareBox is a code guy's nightmare but desktop installs and jacks the code back to CC and Indians." - Finally, there's collection of A/R templates on ShareBox repository component for access by Go-Green.	–"The whole migration" process is happening "in phases, so rolling out the upgrade Indians (Apaches) before rolling out the CRM on all desktops was happening" (worked well) … –The output of one leads to input of the next phase … -"Get" (procure) the HW (hardware)" … -"Setup the Test HW at the Dataman" (Torrance Data Center) -"School" (Red Hat Technician Training).	-Proactive changes that "take the initiative" in anticipating problems before they happen required "so fewer downtimes for housekeeping department" (and server maintenance updating, running at night) …-- "Divvying up" (dividing functions by teams) has to be "by the book (systematic and deliberate), on the ISO-JIFs" (JIF change orders) … -the "Job goes from Desk Techs for ShareBox (SharePoint) install to TL 2 and the Sly farms out (delegates) his group… knows what he's doing … a good walker-talker on code fix (repair), so has respect.	**-**The biggest complaint here is all the OT and no pay raises for the added work -"HR needs to "get on the stick" and do some adjustments" --Red Hat for everyone "at the same time."

APPENDIX B – DATA COLLECTION INSTRUMENT OR TABLE – **Interview Protocol for In-Depth, Personal Interview on Change (listed on Job Information Form, JIF)** 4 Groups of One Team Lead Each in the 3 Tier IT Division – Part B (continued)				
	1	**2**	**3**	**4**
	Could you list the steps that were undertaken in the planned change?	Which steps were most effective? Explain why you believe they were the most effective.	What did you learn from the experience?	Do you have anything to add?
(4) 3 Tier System Admin Scripting all Quantum E-blade Servers **Pilot Phase**	- implementation of "systematic document control" by the "new-and-improved JIF" process coming from the client. - There was "no more rubber stamping" of the "case cover sheet" because the "TLs felt they didn't have a voice in the changes, that they were just dictated to." - Then, the "sniffers (performance and network analyzers) are now on steroids and the big Red Pill" with increasing frequency of audit log runs on the 3 Tier web, mail, ShareBox, Red Hat Linux mounts and other server components—"all in full swing." - Finally, "A big step was security on the fractional T1" …"saves money with the internet VPN link" and "makes for robust security protocols."	–"Most effective were specs, test procedures, work instructions, from QA JIFs" (procedures, QA manual for POs and Bills of Sale on the JIF -Complete compliance document collection) … -Why? "I think all of us, the TLs (Team Leads), and myself think that authentic logon with ISO-JIFs (implementation in accordance with the ISO 9004-1 on the JIFs) ensure effectiveness, everyone has a say, and there's no more red tape."	-Downsizing of the economy compels a second VPN set-up and actually motivates creative thinking in increasing the bottom line, and reducing costs -"ISO-JIFs (9000, new and improved), work great for the 3 Teams, myself as PM, and we hear from across the aisle, that Dr. Jack likes the new roll-outs." … -Repetition with functional staff or the Team Leads and "performance of the walk-throughs ensured that JIFs were done right" by all Teams	-The Team Leads are great but Groups 2 and 3 are angry about the lack of increased pay for all their increased responsibilities during the unending wave of change orders from Go-Green in its new product launch, even though more systematic.

APPENDIX C

Demographic Data

<table>
<tr><td colspan="14" align="center">Combined - Demographic Questionnaire / Online E-survey
Attached to E-mail Blast to 20 Subject-Participants, with 16 Returned (on 4 teams) in 3 Tier IT Division</td></tr>
<tr><td colspan="7">Occupation 1 = 3 Tier In-house Developers Who Write Code to Connect to Go-Green Product Catalog</td><td colspan="7">Occupation 2 = 3 Tier In-house Developers Who Write 3 Tier E-mail APIs for MS SharePoint CRM database</td></tr>
<tr><td colspan="7">Occupation 3 = 3 Tier Desktop Technicians Who Migrate / Roll out new SW/HW</td><td colspan="7">Occupation 4 = 3 Tier System Administrator who Scripts DNS, Proxy, Firewall, etc., all E-blade Servers</td></tr>
</table>

Name (aliases) Sample Note: 30 employees in 2 locations,, sample of 16 taken from 1 location at Torrance Campus	Age	Gender	Race White Black Hispanic	High School Grad	BA Grad	Master's Higher	IT Occ. / Job Title	How many do you manage?	Time with Org	Time on Job	No. of changes per Tech Setup & Pilot Phases	Hr /Wk (26), (27), (28)	Did you take part in the Job Information Form (JIF) change process? What role?
1. Alex Boness	58	M	W			X	**Team Lead/De facto PM, 1**	4	8	8	5	28	**Yes, as De Facto PM**
2. George Loory	35	M	W		X		**1**	**0**	8	8	4	28	**No**
3. Yousef Tube	35	M	B		X		**1**	**0**	5	5	4	28	**No**
4. Carl Sagan	39	M	W		X		**1**	**0**	5	5	4	28	**No**
5. Raymond Bilder	40	M	W		X		**1**	**0**	7	7	4	28	**No**
6. Sly Forever	46	M	W			XX	**Team Lead/De facto PM, 2**	4	8	8	5	28	**Yes, as De Facto PM**
7. Jeremiah Red	25	M	W		X		**2**	**0**	5	5	4	28	**No**
8. Zeke Pillsbury	23	M	W		X		**2**	**0**	5	5	4	28	**No**
9. Solomon Coors	26	M	W		X		**2**	**0**	4	4	4	28	**No**
10.Ruben Cube	29	M	W		X		**3**	**0**	3	3	4	28	**No**
11. Rhett Orick	48	M	W		X		**Team Lead/De facto PM,**	4	7	7	5	28	**Yes, as De Facto PM**

Name	Age	Gender	Race	High School Grad	BA Grad	Master's Higher	IT Occ. / Job Title	How many do you manage?	Time with Org	Time on Job	How many planned changes	Hr/Wk (26),(27),(28)	Did you take part in the Job Information Form (JIF) change process? What role?
12. Manny Balsacks	28	M	H	X			3	0	6	6	3	26	No
13. Jose Voltaire	29	M	H	X			3	0	6	6	3	26	No
14. Veronica Lakers	26	F	W	X			3	0	4	4	4	27	No

APPENDIX C (continued) – DATA COLLECTION TABLE - for Combined - Demographic Questionnaire / Online E-survey Attached to E-mail Blast to 20 Subject-Participants with 16 Returned (on 4 teams) in 3 Tier IT Division													
Occupation 1 = 3 Tier In-house Developers Who Write Code to Connect to Go-Green Product Catalog							Occupation 2 = 3 Tier In-house Developers Who Write 3 Tier E-mail APIs for MS SharePoint CRM database						
Occupation 3 = 3 Tier Desktop Technicians Who Migrate / Roll out new SW/HW							Occupation 4 = 3 Tier System Administrator who Scripts DNS, Proxy, Firewall, etc., all E-blade Servers						
Name (aliases) Sample Note: 30 employees in 2 locations,, sample of 16 taken from 1 location at Torrance Campus	Age	Gender	Race White Black Hispanic	High School Grad	BA Grad	Master's Higher	IT Occ. / Job Title	How many do you manage?	Time with Org	Time on Job	How many planned changes	Hr /Wk (26), (27), (28)	Did you take part in the Job Information Form (JIF) change process? What role?
15. Tonas Jeffers	22	M	H		X		3	0	1	1	4	26	No
16. Sally Hemming	58	F	B			X	Executive Team Lead /Full PM, 4	15	8	8	4	28	**Yes, as Upper-level PM**

APPENDIX D

Changes Between 3Tier and Go-Green

Note. Refer to this table often throughout the discussion to determine efficacy, efficiency, economies of scale in terms of change-management strategies occurring inside renowned theories referenced in Chapter 2: Literature Review.

9 Ways to Improve Your Organization Processes and Change-Management Strategies—Who's Counting?

Organization Name

3 Tier R & D, Inc.	Go-Green Auto Corp

Roadmap to Implementation of Change Management Strategies

3 Tier	Go-Green
Write, review, revise Service Level Agreement (SLA) contract between 3rd-party vendor, 3 Tier, and client account, Go-Green, per Request for Proposal from client for design and development of process improvements that would effectively and efficiently deal with change orders..	Hire team of internal auditors in the Finance Group of Go-Green to handle business processes, updated from private start-up to publicly traded organization..
Implement new SharePoint Customer Relationship Management (CRM) database to measure customer metrics, key performance indicators (KPIs), purchasing profiles, etc., of prospective contacts and first-time buyers of plug-in hybrids and all-electrics.	Update the Accounts Receivable business process to meet tighter auditing standards provided by publicly traded companies since 2002, known as Sarbanes Oxley public law. Accounts Receivable is selected for analysis in this Service Level Agreement as it is the key indicator of profitability of Go-Green. It measures expected increase in monies received corresponding to increase in sales of new product line recorded by 3 Tier in CRM database..
3 Tier ensures that its customer database reporting on business process, Order Service Group, used for	Go-Green checks for any discrepancies in 3 Tier's customer metrics by comparing them to monies

recording new prospects and sales, do the handshaking protocol with the Go-Green change to Enterprise Resource Planning business solutions that accesses Order Service Group metrics in the Customer database at 3 Tier.

received by its Finance Group and deposited to its own banks; any discrepancies between prospect hits on the 3 Tier web and actual sales via bank deposits at Go-Green are listed in an exception report for later review; ongoing ad campaign and pitches convert hits to sales.

Upgrade network design infrastructure to make Customer database available from extranet of 3 Tier to intranet of Go-Green on a VPN connection with usual TCP/IP protocol.

Connect to the 3 Tier VPN over free, public Internet to save money and have access to the 3 Tier SharePoint CRM parked on the extranet servers of 3 Tier, its consulting-contracting agency.

Upgrade ISO 9000 standards originated for the auto industry in 1987 by customizing standards specifically to hybrids and all-electrics and by having them correspond to and support the 2002 Sarbanes-Oxley standards of the continuing publicly traded Go-Green client.

Go-Green Finance Group reviews the International Standard Organizations (ISO) quality-assurance voluntary guidelines that still apply to the manufacturing processes to ensure that they support business-processes' regulation by law, that is, Sarbanes-Oxley financial auditors.

3 Tier provides business model of an advertising-supported web site, customer facing, and mail-order catalog that increases bottom line for 3 Tier as it advertises the new product line of its client, Go-Green.

Go-Green accesses the customer-facing web site of 3 Tier by a redirector function from its intranet to review and revise 3 Tier's business model, as needed, on the 3 Tier extranet.

Launch market-branding campaign geared to the new product line of Go-Green.

Go-Green reviews and revises email blasts advertising for hybrids and all-electrics (see the attached savings notice in the Appendix section of this research study).

Engage in teleconferences and other meetings to ensure ongoing change-management progresses on time, under budget

Engage in teleconferences and other meetings to ensure ongoing change-management progresses on time, under budget

APPENDIX E

Protocol for In-Depth Interview

Date:
Time:
Place:
Respondent: (no.)

I.   INTRODUCTION
     a) Thank the participant for partaking in the study
     b) Review the Informed Consent Form
     c) Remind participant of confidentiality agreement
     d) Explain use of recording device: obtain approval for use of recording device
     e) Ask respondent if he/she has any questions
     f) Remind the participant he/she will have the opportunity to review their transcript

II.   Review with the respondent the reason for the interview (study subject/topic).

     The purpose of this study is to identify successful change strategies in your organization and your experience with the current change program.

III.   Initiate Interview Protocol

1. Please describe the nature of the Service Request Change Initiatives.
     g) What was it?
     h) What were the reasons for it?
     i) Who led it?
     j) Who participated in it?
     k) Who would be affected by it?
     l) What was the goal of it?
     m) Was it accomplished?

2. Could you list the steps that were undertaken in the planned change?
3. Which steps were most effective? Explain why you believe they were the most effective.
4. What did you learn from the experience?
5. Do you have anything to add?

Review with respondent procedure for reviewing transcripts. Thank you. End.

APPENDIX F

Demographic Questionnaire

Age:

(01) 18-25;   (02) 26-35;   (03) 36-45;   (04) 46-55;   (05) 56-65;
(06) 66 and over;

Gender:

(07) Male;   (08) Female

Race:

(09) African American/Black;   (10) Asian American/Pacific Islander;
(11) Hispanic/Latino/Mexican/Mexican-American/Chicano;
(12) White/Caucasian;   (13) Other;   (14) Undeclared;

Primary Language:

(15) English;   (16) Other

Education level:

(17) High School;   (18) Some college;   (19) Bachelor degree;
(20) Master degree;   (21) Post Graduate;

Occupation:

Title of position:

Number of employees:

(22) 100-1,000;   (23) 1,001-5,000;   (24) 5,001–10,000;
(25) over 10,000;

How long has the organization been in existence?

What is your department?

How long have you been in this position?

How long have you been with the organization?

How many people do you have in your team?

How many people do you manage?

How many hours do you work in a week?

(26) 20 hours or less   (27) 20-40 hours   (28) over 40 hours

How many planned changes have you been through at this organization?

City/state of organization:

APPENDIX G

Protocol for Primary Resource Interview

Case-Study, In-depth, In-person Interview—Dr. Jack Goodfellow
Director of 3 Tier Customer Services/Customer Subscriptions

The Q & A format for this case study includes the following primary-resource Questions for one Dr. Jack Goodfellow, (an alias for a real-life manager at a real marketing and research company; he is a direct report to the West Coast Operations for Automotive Research at 3 Tier R & D, Inc. (another alias). This researcher will present the Service Level Agreement as a talking point to the Director of Customer Services/Customer Subscriptions; it was mailed earlier during the information-gathering stage of this case study.

1) Are you the decision maker in the Service Request Change Initiatives, and what is your position and responsibilities?
2) What appears to be the issue (problem or opportunity) and its significance for your organization and your key client account?
3) Why has the issue arisen and why are you involved now?
4) When do you have to decide and resolve the issue? What is the urgency to the situation?
5) What Exhibits and supporting documentation do you have, Dr. Jack?
6) Can you review the docs during this interview and tell us more about what areas are covered in more depth?
7) Is your area of interest, marketing, finance, operations, human resources, or integrated functions?
8) What specific problems or change strategies are to be made?

APPENDIX H

Consent to Participate Via Online Preliminary E-Survey/E-Mail

Date:

Employee
3 Tier R & D
Research and consulting company
Address

Dear_____,

I want to thank you for your consideration in participating in this study. With this letter I am providing you information regarding your participation in this study which is in partial fulfillment for the requirement for dissertation. In the course of my doctoral program at Pepperdine University, I am performing research on the *Successful Change Strategies for a Major Research and Consulting Company.*

You are asked to participate in a research study conducted by Islam A. Azzam, Pepperdine University, under the direction of Dr. Kent Rhodes, Pepperdine University Faculty Advisor, from the Graduate School of Education and Psychology at Pepperdine University. Through a purposeful sampling method, you were selected as a participant in the study because you meet the criteria for this study. Your participation in this research is voluntary.

You are being asked to fill out this E-survey/questionnaire. The purpose of this voluntary and confidential preliminary E-Survey/Questionnaire is to serve as a tool to acquire volunteers (a sample) to become participants of a research study designed to examine what successful change strategy works in planned change. The purpose of this study is to identify the key influential success factors that were implemented by 3 Tier research and consulting company in its Service Requests Change Initiative. Your participation in the research may afford you the opportunity to: (a) contribute to the understanding of planned change, as well as contribute to the field as a whole; (b) to gain additional understanding of your lived experience by means of personal reflection during the interview; and (c) the results of the research may include the opportunity to build on the knowledge related to change in organizations.

Procedures:
If you volunteer to participate in this study, you can expect the following:
- You will be e-mailed a survey/questionnaire
- You will be asked to participate in a survey in which you will be asked questions in order to describe your experience with planned change.
- Your responses will be kept confidential. To ensure confidentiality, the researcher will utilize coding to systamatically change the names of the participants. All information will be kept confidential and will be kept in a locked file-cabinet in the researcher's office for no less than 5 years at which the data will be destroyed.
- At your request, you will be informed of any significant findings developed as a result of this study.

The risks, if any, that might be associated with participation in the study are considered

minimal and by definition are no greater than those experienced in daily life. It also should be noted that you may decline to answer any questions that cause discomfort.

The identities will remain confidential as the names are replaced through coding. Any information that is obtained in connection with this study and that can be identified with you will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of keeping all collected data in a locked file-cabinet in the researchers office in a secured location for no less than five years at which the data will be destroyed.

Participation is voluntary and you are not compensated for your time. There is no payment for participation in this study. You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind.

If you would like sign a consent form or if you have any questions, concerns about this research or if you have questions regarding your rights as a research subject, please feel free to contact Islam Azzam, Investigator: ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮, or Dr. Kent Rhodes, Faculty Advisor: ▮▮▮▮▮▮▮▮▮▮▮▮▮▮, You may also contact the Chair of the Graduate and Professional Institutional Review Board Pepperdine University: Dr. Doug Leigh at ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ or ▮▮▮▮▮▮▮▮

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal rights because of your participation in this research study.
By responding via email means that you, the participant is willing to participate and has read, understands and agree to the terms of the study and letter of conscent. If you would like to sign a consent form or have documentation linking you to the study please call the researcher at ▮▮▮▮▮▮▮▮▮▮.
Expected time to complete this survey is 10-15. Thank You

Preliminary E- Survey/Questionnaire

1. Name (optional)_____

2. Occupation:
_____
3. Title of position:
_____

4. What is your department?
_____

5. How long have you been in this position?
_____

6. How long have you been with the organization?

_____

7. How many people do you have in your team?

_____

8. How many people do you manage?

_____

9. How many hours do you work in a week?
    __ 20 hours or less __ 20-40 hours __ over 40 hours

10. How many planned changes have you been through at this organization?

_____

11. Did you take part in the Service Request change process?

_____

12. If so, what was your role in the Service Re quest change process?

_____

13. Would you be open to a ½ hour interview? (if yes, please provide name & contact information).

Thank You

APPENDIX I

Human Participant Protections Completion Certificate

Human Participant Protections Education for Research Teams - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Back   Search   Favorites   Media

Address   http://cme.cancer.gov/cgi-bin/cms/cts-cert5.pl   Go   Links »

Search Web ▾   My Web ▾   Mail ▾   My Yahoo! ▾   Games ▾   Movies ▾   Music ▾   Answers ▾   »

Human Participant Protections Education for Research Teams

Completion Certificate

This is to certify that

Islam Azzam

has completed the **Human Participants Protection Education for Research Teams** online course, sponsored by the National Institutes of Health (NIH), on 03/01/2006.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.

National Institutes of Health

Internet

start   Yahoo! Messenger wi...   Pepperdine Universit...   Human Participant Pr...   8:18 PM

APPENDIX J

Consent to Participate in Research

Date:

Employee
3 Tier R & D
Research and consulting company
Address

Dear_____,

I want to thank you for your consideration in participating in this study. With this letter I am providing you information regarding your participation in this study which is in partial fulfillment for the requirement for dissertation. In the course of my doctoral program at Pepperdine University, I am performing research on the *Successful Change Strategies for a Major Research and Consulting Company.*

You are asked to participate in a research study conducted by Islam A. Azzam, Pepperdine University, under the direction of Dr. Kent Rhodes, Pepperdine University Faculty Advisor, from the Graduate School of Education and Psychology at Pepperdine University. Through a purposeful sampling method, you were selected as a participant in the study because you meet the criteria for this study. Your participation in this research is voluntary.

The purpose of this study is to identify the key influential success factors that were implemented by 3 Tier research and consulting company in its Service Requests Change Initiative. This study is designed to examine what works in planned change. Your participation in the research may afford you the opportunity to: (a) contribute to the understanding of planned change, as well as contribute to the field as a whole; (b) to gain additional understanding of your lived experience by means of personal reflection during the interview; and (c) the results of the research may include the opportunity to build on the knowledge related to change in organizations.

Procedures:
If you volunteer to participate in this study, you can expect the following:
- You will be interviewed by the researcher for a period lasting approximately 30-45 minutes.
- You will be asked to participate in an interview in which you will be asked questions in order to describe your experience with planned change.
- You will be asked to complete a written demographic questionnaire. This questionnaire will be used to assist the researcher in describing the sample composition.
- With your permission, the interview will be tape recorded. The tape recordings will be transcribed and kept in a locked file and will be destroyed after five years. During the interview you can request to stop or resume recording. You can also selectively answer the interview questions.
- You will be given the opportunity to examine the interview transcript.
- At your request, you will be informed of any significant findings developed as a

result of this study.

The risks, if any, that might be associated with participation in the study are considered minimal and by definition are no greater than those experienced in daily life. It also should be noted that you may decline to answer any questions that cause discomfort.

The identities will remain confidential as the names are replaced through coding. Any information that is obtained in connection with this study and that can be identified with you will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of keeping all collected data in a locked file-cabinet in the researchers office in a secured location for no less than five years at which the data will be destroyed.

Participation is voluntary and you are not compensated for your time. There is no payment for participation in this study. You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind.

If you have any questions, concerns about this research or if you have questions regarding your rights as a research subject, please feel free to contact Islam Azzam, Investigator: ███████████████████, or Dr. Kent Rhodes, Faculty Advisor: ██████████████, You may also contact the Chair of the Graduate and Professional Institutional Review Board Pepperdine University: Dr. Doug Leigh at ████████████████ or ██████████.

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal rights because of your participation in this research study.

SIGNATURE OF RESEARCH SUBJECT

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to voluntarily participate. I have been given a copy of this form.

_____
Name of Subject

_____   _____
Signature of Subject   Date

SIGNATURE OF INVESTIGATOR OR DESIGNEE

The subject is voluntarily giving informed consent and possesses the legal capacity to give informed consent to participate in this research study. I have explained and defined in detail the research procedure in which the subject has consented to participate.

_____Islam A. Azzam_____
Name of Investigator or Designee

_____   _____
Signature of investigator or Designee   Date

APPENDIX K

Accounts Receivable Business Process/Flowchart and Change-Management Strategy

Purpose

The marketing and research purpose of third-party vendor, 3 Tier R & D, Inc., is served by its integrated CRM business solutions platform to its client account, Go-Green Auto Corp. Under the leadership of Subscription / Customer Services Director Jack Goodfellow, development of customer metrics, purchasing profiles, and key performance indicators (KPIs) will promote sales of autos for Go-Green, as shown below:

- Increase customer web site inquiries to increase sales of Go-Green autos, now a publicly traded company on the New York Stock Exchange (GGAC);
- Use the advertising-supported Internet and mail-order business models to increase 3 Tier cash flow and profitability on its own web site pointed to by the redirector program on the customer-facing Go-Green web site;
- Build a relationship with the customer, online and off-line; and
- Participate in a modular, web-centric, thin-client technology architecture on the 3 Tier intranet and scale that modularity to extranet connectivity to the Go-Green intranet, thus, ensuring high performance and seamless integration from third-party vendor to Go-Green main-campus systems and regional dealerships.

A/R Module Business Process Definition: Information-oriented A/R Flowchart

Incorporating Change-Management Strategy for Service Request Change Initiatives

Online customers submit inquiries regarding quotes for autos to the Go-Green customer-facing web site which points outside the web server to the 3 Tier contracting-consulting, third-party extranet which actually holds the SharePoint (see Appendix for SharePoint) CRM database and Finance Data Backup functionalities. Go-Green gets the data via a VPN to the third-party, 3 Tier extranet, and its sales group follows up with quotes, online account applications, credit approvals, sales closing, contracts with coupon payment books, and down payment by checks and other media that are processed by the A/R (a business process) Corporate Group at Go-Green Corporate Headquarters. In summary, 3 Tier collects all the customer data and KPIs with the actual receipts for auto purchases being deposited by Go-Green Auto Corp Finance Group.

If an application is accepted, it is stored in a 3 Tier SharePoint CRM database (d/b) server. The online application resides on this tier-three d/b server in the SharePoint repository for documents/contracts.

1. Customer payment for purchase of an auto from Go-Green or A/R money is collected first. For example, when down-payment checks are received in the A/R Finance Group at Go-Green after customer metrics and KPIs are recorded in the 3 Tier SharePoint CRM, they are accompanied by a web-centric print-out from Go-Green which the customer attaches to the check.

2. The receivables are matched to customer sales orders for all autos sold.

Sale orders are copied to online order processing, or an Order Service Group at Go-Green in which amounts due and ongoing balances owed are automatically calculated regarding any combination of discounts off manufacturer's suggested retail price, trade-ins, gift certificates and rebates. Ancillary items such as extended warranties are automatically purchased when the customer buys the auto in order to qualify for discount, trade-in, gift certificate or rebates programs. Also, since the Go-Green A/R module is web-centric, online web-site credit-card authorization ensures payments are approved before sales are closed and finalized in locked-in bills of sale / contracts, followed by customer receipt of Title to ownership after all installment payments have been made.

Method of payment can be: credit cards, cash, checks, gift certificates, debit cards and payments from account for those customers who have money on account with Go-Green Auto Corp. After A/Rs are received at Go-Green Finance Group, they are then matched against customer orders for auditing, quality assurance and reconciliation.

The 3 Tier CRM collects customer metrics, purchasing profiles, and KPIs while actual receipts are deposited and processed in accordance with Go-Green's back-end databases, such as, legacy Oracle Financials and SQL servers, currently being migrated into Enterprise Resource Planning (ERP) business-solutions' databases as the change-management strategy from privately operated Go-Green is transitioned to a publicly traded company on the New York Stock Exchange.

The A/R module at Go-Green also issues invoices and creates credit memos to customer accounts. Credit memos are generated and the customer data entered online and the customer accounts are updated accordingly. Refund controls are provided automatically; every refund is automatically routed to the appropriate person for review and approval before it is processed. (See Business Process Identification Sign-off Sheet attached).

Specifically, the seamless Go-Green ERP A/R database servers for customer receipts send over-credit notices to the credit report database whenever a new customer order for an auto would exceed the customer's credit limit and the additional credit is not approved. The order and notice are returned to the customer. If the additional credit is approved and authorized per respective customer limits of credit, the order for the auto with extended warranty is processed, recorded and stored in the Go-Green ERP A/R module.

Customer account data is displayed on demand to the customer with the proper online authentication via username and password, after successful A/R processing, acceptance and storage on the 3 Tier CRM d/b which sets up customer profiles and does the number crunching of customer metrics, purchasing profiles, key performance indicators (KPIs).

Customer notifications are emailed monthly to customers who can then sign in with a

username and password on the Go-Green web and make an electronic statement from a designated checking account or the customer can just pay via a paper check attached to a hard-copy statement returned through the postal mail.

Online credit card payments are securely encrypted online at https: port 443 web site of Go-Green and logged into the system; the snail mail payments by paper check are manually sent to the A/R lock box, ready for deposit, and entered into the Go-Green A/R module.

The A/R module automatically and immediately prints, emails or faxes official receipts based on each customer's method of communication.

Immediate reversals, corrections, voids, adjustments and NSF processing are performed.

Furthermore, online web-site credit-card authorization ensures approved payments before a bill of sale is locked in.

3. The next step after matching payments with sales orders of autos is the following: All receipts are registered and batched in a spreadsheet on a daily/weekly basis by the module system in the current Go-Green Oracle Financials d/b.

Receivables are sent to the appropriate bank accounts.

Daily reconciliation of the spreadsheet with the bank and mid-month review by the Corporate A/R Group in the current Go-Green Oracle Financials d/b are performed.

4. At the same time that the customer monies received have been matched to the customer orders in batches, the 3 Tier CRM d/b is updated. The current Go-Green Oracle Financials d/b outputs a receipt for each batch and zeroes out each updated batch in an updated aging report if the ERP has not been fully rolled out and implemented in the change-management strategy yet. .

(Other modules in the Go-Green Sarbanes-Oxley financial / business processes are: AP, Order Services Group, Inventory, Fixed Assets, Manufacturing, Inventory, Revenue Recognition, Manufacturing, Legal, Tax, and so forth, in addition to the A/R module which often includes Order Service Group).

5. An aged A/R report is forwarded on a monthly basis to the Go-Green Finance Group from the legacy, tier-3 backend Oracle Financials d/b server holding customer billing data. Migration of the legacy system must be performed as Go-Green was initially a private organization; now that is it publicly traded on the New York Stock Exchange, Oracle Financials is being integrated to an integrated Go-Green ERP business solutions platform.

A daily 3 Tier CRM transaction register is accessible by the Go-Green Finance Group

via VPN connectivity. This data, too, is also available upon request by authenticated users and staff engaged in market branding research and development.

The A/R summary data is available as a display to both the Go-Green Finance Group and its third-party vendor, 3 Tier R & D, via a CRM and Finance Data Backup SLA that incorporates a change-management strategy for Go-Green's migration from legacy Oracle Financials to integrated ERP business solutions.

3 Tier R & D Customer Metrics Printout Accessed by Go-Green VPN

Checks Received by Go-Green Corporate HQ

Checks Received by A/R Corporate Group in Go-Green Oracle Financials d/b

ChecksMatched to Orders by Go-Green Finance Group

Super User Authenication Performed by Username and Passcode

All Receipts Recorded in a Spreadsheet (SS)

3-Tier rolls out SharePoint CRM database (d/b) and Order Service Group (OSG) inside its Accounts Receivables

Decision Break - Change Management Strategy Enhances Profitability

Checks Sent to Respective Quantico-related Banks

CRM d/b and OSG customer metrics, purchasing profiles and KPIs accessible by Go-Green Finance Group

Go-Green Legacy Oracle Financials d/b migrated into new ERP business platform as co. now publicly traded

Daily Reconciliation of SS with Bank and Mid-month Review by AR Module Manager

Bank Statement

Bank Reconciliations

APPENDIX L

IRB Approval

PEPPERDINE UNIVERSITY

Graduate & Professional Schools Institutional Review Board

March 17, 2009

Protocol #: E0309D11
Project Title: *Success Change Strategies for a Major Research and Consulting Company*

Dear Mr. Azzam:

Thank you for submitting your application, *Success Change Strategies for a Major Research and Consulting Company,* for exempt review to Pepperdine University's Graduate and Professional Schools Institutional Review Board (GPS IRB). The IRB appreciates the work you and your faculty advisor, Dr. Kent Rhodes, have done on the proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations (45 CFR 46 - http://www.nihtraining.com/ohsrsite/guidelines/45cfr46.html) that govern the protections of human subjects. Specifically, section 45 CFR 46.101(b) (2) states:

> (b) Unless otherwise required by Department or Agency heads, research activities in which the only involvement of human subjects will be in one or more of the following categories are exempt from this policy:

> Category (2) of 45 CFR 46.101, research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: a) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and b) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

In addition, your application to waive documentation of consent, as indicated in your **Application for Waiver or Alteration of Informed Consent Procedures** form has been **approved**.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit a **Request for Modification Form** to the GPS IRB. Because your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the GPS IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the GPS IRB as soon as possible. We will ask for a complete explanation of the event and your response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the GPS IRB and the appropriate form to be used to report this information can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* (see link to "policy material" at http://www.pepperdine.edu/irb/graduate/).

Please refer to the protocol number denoted above in all further communication or correspondence related to this approval. Should you have additional questions, please contact me. On behalf of the GPS IRB, I wish you success in this scholarly pursuit.

Sincerely,

Doug Leigh, Ph.D.
Associate Professor of Education
Pepperdine University
Graduate School of Education and Psychology
6100 Center Dr. 5th Floor
Los Angeles, CA 90045
dleigh@pepperdine.edu
(310) 568-2389

cc: Dr. Lee Kats, Associate Provost for Research & Assistant Dean of Research, Seaver College
       Ms. Ann Kratz, Human Protections Administrator
       Dr. Doug Leigh, Chair, Graduate and Professional Schools IRB
       Ms. Jean Lee, Manager, Graduate and Professional Schools IRB
       Dr. Kent Rhodes
       Ms. Christie Dailo

APPENDIX M

PowerPoint

Executive Summary of Changes

❑ Go-Green Auto Corp – Announces new product launch of hybrid and all-electric cars and converts manufacturing plant

❑ Go-Green – Migrates and upgrades from Oracle Financials to Enterprise Resource Planning (ERP) business platform to handle expected increase in new business

❑ Major organization change due to product line change triggers massive employee recruitment, and hiring of 3 rd-party vendor, 3 Tier R & D, Inc., finalized in Service Level Agreement contract

❑ 3 Tier – Project Management Office (PMO), Director of Subscription Services / Customer Services, Dr. Jack Goodfellow, implements new SharePoint CRM database for all Go-Green levels of documentation -- system policies, IT and business- process procedures, task work instructions as well as customer metrics on hits to 3 Tier web, return visits and closed sales call

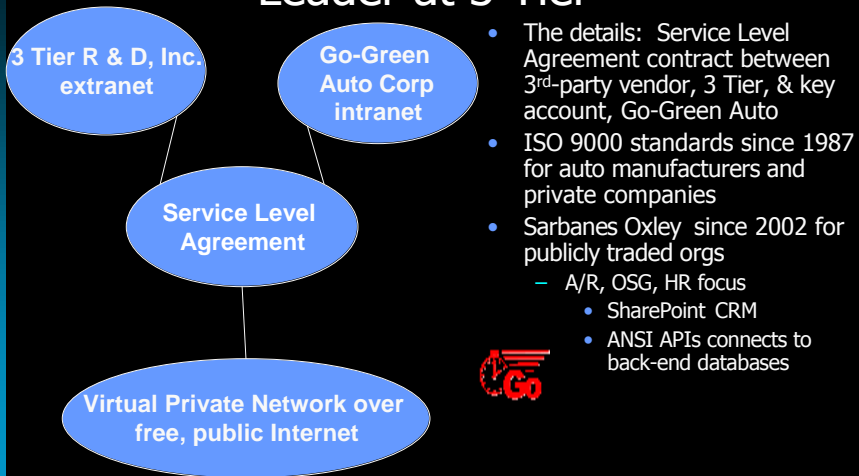3/2/09   2

5-Fold Framework within Theories

❑ parent frame of many organization / change-agent **theories;**
❑ nested within it, another child frame of **SIS—representing SLA, ISO and SOX** (Service Level Agreement, International Standards Organization 9000 series of standards, and Sarbanes-Oxley IT and financial business-process compliance;
❑ nested within this child frame of SIS is another baby frame of **Accounts Receivable (A/R) , Order Service Group (OSG) & Human Resources (HR);**
❑ new 3 Tier Customer Relationship Management database (**SharePoint CRM) implements customer metrics, purchasing profiles, and key performance indicators to correspond to Go Green's migration to ERP;** and
❑ the American National Standards Institute (ANSI) standards for an "alias" and Unicode versions of an **email API or other Application Programming Interfaces** connects web sites at both organizations to back-end product / catalog databases

3/2/09   3

Dr. Jack Goodfellow – Change Agent Leader at 3 Tier

3 Tier R & D, Inc. extranet

Go-Green Auto Corp intranet

Service Level Agreement

Virtual Private Network over free, public Internet

- The details: Service Level Agreement contract between 3rd-party vendor, 3 Tier, & key account, Go-Green Auto
- ISO 9000 standards since 1987 for auto manufacturers and private companies
- Sarbanes Oxley since 2002 for publicly traded orgs
  - A/R, OSG, HR focus
    - SharePoint CRM
    - ANSI APIs connects to back-end databases

Go

3/2/09

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No More Do-Overs

❑ Pulling a page right out of the ISO 9000 series of standards handbook, Dr. Harrington shares the secret in going from compliance to performance improvement:

❑ "Many organizations have found that in today's business environment, success comes with **focusing on doing things right the first time, on time, every time, and always to the customer's satisfaction** (both external and internal customers" (emphasis added, p.2).

❑

  This is implicit in the Service Level Agreement!

4/2/2009

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