NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

CENTER FOR NAVY BUSINESS EXCELLENCE: A CATALYST FOR BUSINESS TRANSFORMATION

by

Gordon E. Meek III

December 2005

Thesis Advisor:	Nancy Roberts
Associate Advisor:	Richard L. Dawe

Approved for public release; distribution unlimited.

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.			
1. AGENCY USE ONLY *(Leave blank)*	**2. REPORT DATE** December 2005	**3. REPORT TYPE AND DATES COVERED** Master's Thesis	
4. TITLE AND SUBTITLE: Center for Navy Business Excellence: A Catalyst for Business Transformation			**5. FUNDING NUMBERS**
6. AUTHOR(S) Gordon Eugene Meek III			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			**8. PERFORMING ORGANIZATION REPORT NUMBER**
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			**10. SPONSORING/MONITORING AGENCY REPORT NUMBER**
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.			
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			**12b. DISTRIBUTION CODE**

13. ABSTRACT (maximum 200 words)

In order to remain relevant in the face of both national and global challenges, the U.S. Navy must recognize that its once useful organizational constructs and business operations that fought the Cold War must be supplanted by significantly more nimble and effective organizations and business models. To realize the Force Transformation vision as outlined by Sea Power 21, the Navy must be vigilant in transforming its business operations.

The Navy has devised several business improvement strategies, most notably Sea Enterprise, but has not institutionalized a process to refine and translate these strategies into actionable, measurable business goals. The missing piece, a center of business excellence, would integrate the strategic management of business transformation, unite future business improvement opportunities, provide an operational-level business excellence resource, and aid business initiative implementation throughout the Navy enterprise.

The Center for Navy Business Excellence (CNBE) leverages six business transformation enablers throughout the Navy: Business Management Integration, Business Intelligence, Communities of Practice, Corporate Universities, Embedded Human Capital Programs, and Consultants. By incorporating these six enablers, CNBE gives the Navy the operational capability to convert business transformation strategy into a tangible, measurable, business improvement roadmap. CNBE increases the likelihood that the Navy achieves the remarkable Sea Enterprise vision and arms the CNO with an expert, internal, business intelligence, implementation, and outreach capability.

14. SUBJECT TERMS Sea Enterprise, Business Intelligence, Internal Consulting, Innovation, Center for Naval Business Excellence, Malcolm Baldrige National Quality Award, Business Transformation, Business Excellence	**15. NUMBER OF PAGES** 235
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	**18. SECURITY CLASSIFICATION OF THIS PAGE**	**19. SECURITY CLASSIFICATION OF ABSTRACT**	**20. LIMITATION OF ABSTRACT**
Unclassified	Unclassified	Unclassified	UL

NSN 7540-01-280-5500 Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. 239-18

THIS PAGE INTENTIONALLY LEFT BLANK

Approved for public release; distribution is unlimited.

CENTER FOR NAVY BUSINESS EXCELLENCE: A CATALYST FOR BUSINESS TRANSFORMATION

Gordon E. Meek III
Lieutenant, United States Navy
B.S. Civil Engineering, Georgia Institute of Technology, 1996

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

NAVAL POSTGRADUATE SCHOOL
December 2005

Author: LT Gordon E. Meek III

Approved by: Dr. Nancy Roberts
Thesis Advisor

Dr. Richard L. Dawe
Associate Advisor

Robert N. Beck, Dean
Graduate School of Business and Public Policy

THIS PAGE INTENTIONALLY LEFT BLANK

ABSTRACT

To remain relevant in the face of both national and global challenges, the U.S. Navy must recognize that its once useful organizational constructs and business operations that fought the Cold War must be supplanted by significantly more nimble and effective organizations and business models. To realize the Force Transformation vision as outlined by Sea Power 21, the Navy must be aggressive in transforming its business operations.

The Navy has devised several business improvement strategies, most notably Sea Enterprise, but has not institutionalized a process to refine and translate these strategies into actionable, measurable business goals. The missing piece, a center of business excellence, would integrate the strategic management of business transformation, unite future business improvement opportunities, provide an operational-level business excellence resource, and aid business initiative implementation throughout the Navy enterprise.

The Center for Navy Business Excellence (CNBE) leverages six business transformation enablers throughout the Navy: Business Management Integration, Business Intelligence, Communities of Practice, Corporate Universities, Embedded Human Capital Programs, and Consultants. By incorporating these six enablers, CNBE gives the Navy the operational capability to convert business transformation strategy into a tangible, measurable, business improvement roadmap. CNBE increases the likelihood that the Navy achieves the Sea Enterprise vision and arms the CNO with an expert, internal, business intelligence, implementation, and outreach capability.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

LIST OF FIGURES

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF TABLES

THIS PAGE INTENTIONALLY LEFT BLANK

ACRONYMS AND ABBREVIATIONS

ACNO-IT	Assistant Chief of Naval Operations-Information Technology
AEIOO	Army Enterprise Integration Oversight Office
ASCE	American Society of Civil Engineers
ASD NII	Assistant Secretary of Defense Network Integration and
ASD	Assistant Secretary of Defense
ASMC	American Society of Military Comptrollers
ASN(FMC)	Assistant Secretary of the Navy (Financial Management, Comptroller)
BEA	Business Enterprise Architecture
BI	Business Intelligence
BMSI	Business Modernization and Systems Integration
CA	Certification Authorities
CBM	Core Business Mission
CDFM	Certified Defense Financial Manager
CEO	Chief Executive Officer
CFO Act	Chief Financial Officers Act of 1990
CGISS	Commercial, Government, and Industrial Solutions Sector
CIO	Chief Information Officer
CMO	Chief Management Official
CNBE	Center for Navy Business Excellence
CNBI	Center for Navy Business Intelligence

CNO SSG	Chief of Naval Operations Strategic Studies Group
CNO	Chief of Naval Operations
CoE	Center of Expertise
CSS	Contactor Support Services
DBSMC	Defense Business Systems Management Committee
DoD BMMP	Department of Defense Business Management Modernization Program
DoD BTA	Department of Defense Business Transformation Agency
DoD	Department of Defense
DoN BIT	Department of the Navy Business Innovation Team
DoN CBC	Department of the Navy Corporate Business Council
DoN	Department of the Navy
DRMI	Defense Resources Management Institute
ELO	Executive Learning Officer
ETP	Enterprise Transition Plan
FAM	Functional Area Manager
FYDP	Future Years Defense Plan
GAO	Government Accountability Office
GPRA	Government Performance and Results Act of 1993
GSBPP	Graduate School of Business and Public Policy
GTCS	Georgia Tech Consulting Services

IM	Information Management
IRB	Investment Review Board
IT	Information Technology
LCS	Littoral Combat Ship
MOVES	Modeling Virtual Environments and Simulation
NDAA	National Defense Authorization Act
NII	National Innovation Initiative
NIST	National Institute of Standards and Technology
NKO	Navy Knowledge Online
NMCI	Navy-Marine Corps Intranet
NPS	Naval Postgraduate School
NWC	Naval War College
NWDC	Navy Warfare Development Command
OFT	Office of Force Transformation
OSF	Organizational Systems Framework
PMA	Presidential Management Agenda
RFID	Radio Frequency Identification

SEBOD	Sea Enterprise Board of Directors
SECNAV	Secretary of the Navy
SES	Senior Executive Service
SPAWAR	Space and Naval Warfare System Command
TPG	Transformation Planning Guidance
TPO	Transformation Program Office
UNSECNAV	Under Secretary of the Navy
USD ATL	Under Secretary of Defense Acquisition, Technology, and Logistics
USD P&R	Under Secretary of Defense Personnel and Readiness
USD	Under Secretary of Defense

ACKNOWLEDGMENTS

I would like to express my gratitude to my incredible wife, Eve, who encouraged me throughout my pursuit of a Master's of Business Administration. As my thesis idea sounding board, Eve endured countless tales of Navy business stories, corporate business initiatives, and thousands of CNBE concept iterations. And to Gordie, my fifteen month old son, I thank you for reminding Daddy that the best business practice is to love and raise a family.

I would like to thank LT Jason Miller who originally stoked my interest in improving Sea Enterprise and selflessly provided me with the nascent CNBE design. To him I owe this rewarding, educational journey.

Dr. Bernard Ulozas coached, encouraged, inspired, and challenged me throughout the writing of this thesis and helped me achieve a new level of intellectual maturity and awareness. Having never met Dr. Ulozas, I envision our relationship being the kind that CNBE facilitates: networked, collaborative, mutually beneficial, and thought provoking. Dr. Ulozas never tired of rereading thesis drafts – in their entirety!

CDR Dave Nystrom was another instrumental mentor during this thesis. CDR Nystrom provided valuable insight, guidance, and timely encouragement numerous times as I attempted to craft CNBE to be the Navy's business transformation agent.

VADM Thomas Hughes (Ret) created two significant opportunities for me during my thesis research for which I am extremely thankful: a site visit to the CNO's Strategic Studies Group in Newport, RI and a 35 minute meeting with VADM Dan McCarthy at NPS. Both experiences rejuvenated my passion for the pursuit of Navy business excellence while reemphasizing the complexities of Navy business management.

To my thesis advisors, Professors Nancy Roberts and Richard Dawe, thank you for assisting me transfer my thoughts to paper, the constructive critique, the guidance, and the support.

The research conducted during this thesis helped me create my own business network and to those many people who listened to my ideas, provided feedback, and offered alternative perspectives, thank you!

I. INTRODUCTION

> Leaps in technology, greater economic interdependence, and major shifts in demographics along with greater connectedness will create what we call hyper-globalization. In the future, competitors on the global stage will include not only nations but stateless corporations, powerful cartels, and individuals, controlling perhaps their own security forces, constituencies, territories and promoting their own ideologies. 2035 will be a very different world from today.
>
> *CNO Strategic Studies Group XXIV Report: briefed to Admirals Vern Clark and Michael Mullen on July 15, 2005.*

A. NAVY BUSINESS TRANSFORMATION HISTORY

Navy business transformation aims to alter fundamentally Navy business operations, business strategy, business education, business process, and business management to improve the readiness, adaptability, and lethality of the maritime force. The business transformation process is a difficult endeavor for any organization, private or public. The Navy's business transformation effort must also contend with complicated budget appropriations, traditions, and powerful cultural norms. The Navy business transformation is not about transforming the core mission of the Navy – the business of the Navy will remain to ensure freedom of the seas, to demonstrate power projection, to deter, and to protect the Homeland.

It is important to distinguish between the varied uses of the word *business*. At the strategic level, the word *business* refers to an industry type. For example, people often say the *computer business* or the *shipbuilding business*. Organizationally, the word *business* is used as a noun and refers to a group of people and assets that have been organized to create a product or service. The word *business* also refers to the reason an organization exists. For example, the Navy's *business* is to ensure freedom of the seas, project power, deter aggression, and protect the Homeland. The word *business* is also used as an adjective to specify types of systems or operations within an organization that support the *business* of that organization. A sample of these support, or enabling, mechanisms are *business strategy, business processes, business models, business*

education, *business networks*, and *business transformation*. *Business management* is the disciplined effort by individuals to integrate these supporting initiatives to achieve the greatest efficiency and effectiveness for delivering the product or service.

The word transformation must also be defined. In the April 2003 Transformation Planning Guidance (TPG), Secretary of Defense Donald Rumsfeld identified transformation as:

> A process that shapes the changing nature of military competitions and cooperation through new combinations of concepts, capabilities, people, and organizations that exploit our nation's advantages and protect against our asymmetric vulnerabilities to sustain our strategic position, which helps underpin peace and stability in the world.[1]

The Department of Defense (DoD) Office of Force Transformation augments Secretary Rumsfeld's definition by adding:

> 1. Transformation is a continuing process – there is no end point.
>
> 2. Military transformation is about changing the culture of the U.S. Armed Forces. Therefore, transformational activity must facilitate a culture of change and innovation in order to maintain competitive advantage in the information age. That culture must foster leadership, education, processes, organizations, values, and attitudes that encourage and reward meaningful change.
>
> 3. Transformation is a combination of continuous small steps, a series of exploratory medium steps, and a few big jumps.
>
> 4. Forces employing transformational warfighting concepts require transformed processes that produce the timely results demanded by 21st century security challenges. Senior leadership must take the lead in fostering innovation and adaptation of information age technologies and concepts within their organizations and ensure that processes and practices that are antithetical to these goals are eliminated.[2]

To address *business transformation*, the Department of the Navy (DoN) created the Sea Enterprise Board of Directors (SEBOD) in March 2003 to execute existing business transformation initiatives and identify future savings opportunities to generate additional resources toward recapitalizing the Fleet. Figure 1.1 shows the 21st century DoN

[1] Rumsfeld, Secretary of Defense Donald. *Transformation Planning Guidance*, April 2003

[2] *Military Transformation; A Strategic Approach.* Office of Force Transformation, Fall 2003; pp 8-9.

Business Transformation Timeline beginning with Secretary Rumsfeld's original transformation speech on September 10, 2001. SEBOD was co-chaired by the Vice Chief of Naval Operations and the Assistant Secretary of the Navy (Research, Development, and Acquisition). In October 2004, SEBOD was disbanded and the role of Sea Enterprise implementation was handed over to the DoN Corporate Business Council.

Figure 1.1 DoN Business Transformation Timeline Since 2001

The DoN has implemented numerous business initiatives and processes that have increased the efficiency and effectiveness of Navy delivered services and products to the warfighters. The Navy/Marine Corps Tactical Aviation Integration Plan and Naval Air Systems Command's implementation of LEAN/Six Sigma are two recent examples. However, transformation within the DoD and DoN has taken on a new urgency as technology has enabled anybody and everybody to enjoy rapid communication and information access. Deputy Secretary of Defense, Gordon England, recently spoke of the continuing imperative to transform U.S. military forces:

> For 229 years, a strength of the U.S. military has been its ability to adapt and change. As the rate of change of technology continues to accelerate, it will be even more important that the U.S. military keep pace…The greater institutional risk for DoD is over reliance on traditional platforms and delaying the advent of new technologies and systems.[3]

B. THE CONTINUED IMPETUS FOR NAVY BUSINESS TRANSFORMATION

In October 2002, Admiral Vern Clark, then Chief of Naval Operations (CNO), introduced Sea Power 21 as the Navy's vision to confront the numerous 21st century challenges. The goal of Sea Power 21 is to transform the present day Fleet from a victorious Cold War relic into a modern, 21st century organization capable of executing missions that deter and defeat the country's enemies around the world, expeditiously, cost effectively, and without a "permission slip." Admiral Clark stated, "It will align our efforts, accelerate our progress, and realize the potential of our people."

Sea Strike, Sea Shield, Sea Basing and ForceNet are concepts that enable Force Transformation, fielding new weapon platforms like the Littoral Combat Ship (LCS), researching innovative solutions to theater air missile defense and evolving sea bases to project power and swiftly defeat the enemy. Sea Warrior, Sea Trial and Sea Enterprise form the triad of organizational business processes that support Force Transformation.[4] Sea Enterprise is the strategy that critically assesses current business operations and where possible, harnesses efficiencies and improves business performance to fund the requisite warfare transformations.

The Government Accountability Office (GAO) recently published a report highlighting eight major forces at work within the U.S. domestic environment that augment Admiral Clark's 21st century forecasts. Figure 1.2 below presents the GAO's eight key demographic, security, and quality of life forces shaping the Unites States in the early 21st century. The GAO argues that the U.S. federal government must confront these forces with new, enlightened policies, priorities, and management solutions commensurate with today's dynamic environment.

---

[3] *Force Transformation Trends*, Office of Force Transformation, 25 April 2005.

[4] Clark, Admiral Vern. *Projecting Decisive Joint Capabilities*, Proceedings, October 2002.

Large and Growing Long-term Fiscal Imbalance—The U.S. government's long-term financial condition and fiscal outlook present enormous challenges to the nation's ability to respond to forces that shape American society, the United States' place in the world, and the role of the federal government. The short-term deficits are but a prelude to a projected worsening long-term fiscal outlook driven largely by known demographic trends and rising health care costs.

Evolving National and Homeland Security Policies—The dissolution of the Soviet Union in 1991 and the emergence of the more diffuse threats posed by terrorism to the nation's national and homeland security have led to major shifts in strategic threats. While these new security concerns are already prompting changes in defense postures and international relationships, preparedness and responses to these new threats also carry wide ranging and unprecedented implications for domestic policies, programs, and infrastructures.

Increasing Global Interdependence—The rapid increase in the movement of economic and financial goods, people, and information has prompted more widespread realization that the nation is no longer self-contained, either in its problems or their solutions. The growing interdependence of nations, while carrying clear economic and social benefits, also places new challenges on the national agenda and tasks policymakers to recognize the need to work in partnerships across boundaries to achieve vital national goals.

The Changing Economy—The shift to a knowledge-based economy and the adoption of new technology has created the potential for higher productivity but posed new challenges associated with sustaining the investment in human capital and research and development that is so vital to continued growth. While the sustainability of U.S. economic growth has been aided by trade liberalization and increased market competition in key sectors, the sustainability of growth over the longer term will require a reversal of the declining national savings rate that is so vital to fueling capital investment and productivity growth.

Demographic Shifts—An aging and more diverse population will prompt higher spending on federal retirement and health programs. Unless there is strength in the underlying sources of productivity—education, technology and research and development—low labor force growth will lead to slower economic growth and federal revenue growth over the longer term. As labor becomes ever more scarce, a greater share of the work force will be comprised of foreign-born workers, women, and minorities with broad-scale implications for education, training, child care, and immigration policies.

Science and Technology Advances—Rapid changes in science and technology present great opportunities to improve the quality of life and the economy, whether it be finding new sources of energy, curing diseases, or enhancing the nation's information and communications capacities. However, technologies raise their own unique vulnerabilities, risks, and privacy and equity concerns that must be addressed by policymakers.

Quality of Life Trends—Large segments of the population enjoy greater economic prosperity than ever before, and the well being of many Americans has improved dramatically thanks to breakthroughs in health care and improvements in environmental protection. However, these improvements have not been evenly distributed across the nation, as more than 40 million Americans lacking health insurance demonstrate. Prosperity has prompted its own stresses, as population growth and sprawl create demand for new transportation and communication infrastructure.

Diverse Governance Structures and Tools—To deliver on the public's needs and wants, the nation's system will be pressed to adapt its existing policy-making processes and management systems. The governance structures and management processes that emerge will be shaped by the above forces (e.g., increasing interdependency, scientific and technological changes, and security threats), and will depend on having sufficient foresight, a continuous reexamination and updating of priorities, ongoing oversight, and reliable and results-oriented national performance indicators.

Source: GAO.

Figure 1.2 Eight Forces Shaping the United States and Its Place in the World. [Ref: 21st Century Challenges: Reexamining the Base of the Federal Government, GAO 05-325SP]

In the same report, GAO highlights increasing public expectations for balanced government resource management despite today's dynamic environment and current national focus on global terrorism and Iraq:

> As the pace of change accelerates in every aspect of American life, these forces work to present the government with new and more complex challenges and demands. As the federal role has grown in addressing a wide range of needs, the public has come to expect higher levels of performance and greater responsiveness by public officials and programs.[5]

The Department of the Navy (DoN) is inextricably linked to each of these eight domestic shaping forces either as a participant or a recipient of the outcomes. For instance, the DoN budget may be impacted by decisions to correct the federal budget imbalance and the DoN's future weapon platforms will certainly depend upon continued, unparalleled science and technology innovations. Further, the global uncertainties and challenges likely to face the United States Navy in the future will increasingly become more ambiguous and more intricate as global interdependence matures, technology further enables world-wide communication and information access, and emerging states compete for political and economic power. Despite formidable challenges, the American public demands accountability, fiscal responsibility, and improving performance outcomes.

In order to remain relevant in the face of both national and global challenges, the Navy must recognize that its once useful organizational constructs and business operations that fought the Cold War must be supplanted by significantly more nimble and effective organizations and business models. The Navy must admit that its conventional force construct and 20th century business operations are outdated and need significant overhaul to balance nation-state warfighting capabilities with new, emergent ways of war, namely terrorism. To realize the Force Transformation vision as outlined by Sea Power 21, the Navy must be vigilant in transforming its business operations. Mr. Thomas Hone, Office of Force Transformation's assistant director of risk management,

[5] 21st Century Challenges; Reexamining the Base of the Federal Government (2005); GAO-05-325SP. p. 12.

recently acknowledged this point in his comment, "The administration would like to pay for modernization and transformation, wherever possible, with savings from business transformation."[6]

Figure 1.3 demonstrates the rising average operating cost per unit from FY88 to FY06. For example, the Active Duty Personnel quad in Figure 2.1 shows a 51% real increase in the average annual cost per person (in thousands) from FY88 to FY06. In the 21st Century Challenges Report, GAO aptly summarizes the opportunity cost of outdated weapon platforms and/or business models: "Outmoded commitments and operations constitute an encumbrance on the future that can erode the capacity of the nation to better align its government with the needs and demands of a changing world and society."[7] Using this opportunity cost concept and the rising operating costs depicted in Figure 1.3, the Navy is currently eroding its future capacity to build and operate the 21st century force by holding on to outdated missions, weapons, and business systems.

6 *With 2005 Transformation Roadmaps Scrapped, OFT Focuses on QDR*. Inside the Pentagon; August 4, 2005. http://web.lexisnexis.com/universe/document?_m=e7975bdf244c6aa11b270cbd40d8c3e0&_docnum=11&wchp=dGLbVlz-zSkVA&_md5=07ee9cb6950e162781e8eb791783e628 Last accessed August 9, 2005.

7 21st Century Challenges; Reexamining the Base of the Federal Government (2005); GAO-05-325SP. p. 12.

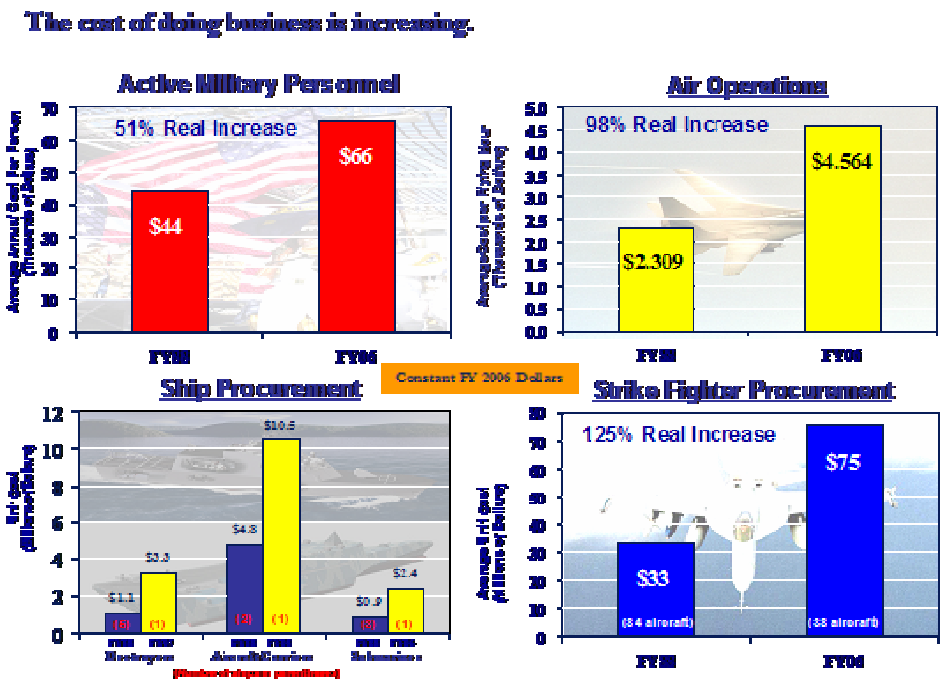

Figure 1.3 The Cost of Doing Business
[Ref: RADM Stanley D. Bozin; Director, Office of Budget, brief to Naval Postgraduate School Conrad Seminar, Aug 2005]

Having established that business transformation is required to dominate in the 21st century, the DoN must take the next step, asking hard, strategic questions and conducting rigorous research to find the answers. Examples of potential Navy research include:

- What is the role of business consultants in shaping the strategic business vision and goals of the Navy?
- Should the Navy adopt new organizational models to speed decision-making, agility, and responsiveness?
- How can the Navy recapitalize platforms for current missions and simultaneously invest in long term research and development of future fighting platforms at a reasonable cost?
- Does the benefit of operating a Carrier Strike Group outweigh the cost or can some other deterrent or force projection platform accomplish the same goal using considerably fewer resources?

GOVEXEC.com recently highlighted one Navy example of a core strategic issue dealing with rising operational costs and future procurement trends. The article expressed the overall concern of Congressional members and industry leaders over whether or not the Navy's shipbuilding plans are sufficient to meet the military's future missions and simultaneously sustain the U.S. shipbuilding industrial base. Various issues surfaced such as shipyard costs, efficiencies, international competition, and inconsistent Navy budgets.[8] [9]

This debate is interlaced with very complicated political, industrial, and national defense strategies (in addition to individual agendas) that demand answers to very difficult questions. This is the new Navy reality – complicated scenarios that combine national defense, financial management, global interconnectedness, and survivability.

These questions and the pursuit of their answers will shape the business environment, relationships, and innovations required to operate cost effectively in the future. Who in the Navy is going to ask these questions, conduct the required investigation, truthfully report out the findings and implement improved and/or corrective action? That is the focus of this thesis.

C. PURPOSE OF THIS THESIS

The Navy has devised several business improvement strategies, most notably Sea Enterprise, but has not institutionalized a process to refine and translate these strategies into actionable, measurable business goals. The missing piece, a center of business excellence, is needed to integrate strategic management of business transformation, unite future business improvement opportunities, provide an operational-level business excellence resource, and aid business initiative implementation throughout the Navy enterprise. An institutionalized, robust business core competency is required to understand the complexities of both short and long term business decisions, research and analyze business data, and recommend solutions that acknowledge the nuances and

[8] Scully, Megan. House Pushes Navy to buy more ships in 2006, GOVEXEC.com, June 22, 2005. www.govexec.com/story_page.cfm?articleid=31563 Last accessed August 17, 2005.

[9] Klamper, Amy. Navy seeks to issue a new order: Abandon shipyards, GOVEXEC.com, March 9, 2005. www.govexec.com/story_page.cfm?articleid=30732 Last accessed August 17, 2005.

intricacies of military business operations in the 21st century. The goal of this thesis is to recommend how an organization would fill this void, thereby leading, integrating, and streamlining the Navy business transformation.

Three years into its strategic execution, the outcome of Sea Enterprise remains ambiguous. LT Jason Miller, in his thesis, *An Analysis of the Sea Enterprise Program*, finds that the Sea Enterprise message has not been equally understood at all levels of the Navy. Claims of realized savings resulting from Sea Enterprise initiatives swing from a low of $40 million to a high of $44.4 billion depending on the entity defining "realized savings." Regardless of the true savings, numerous shortfalls with Sea Enterprise execution are highlighted in the thesis.

LT Miller details these shortfalls within his thesis after extensive interviews with Sea Enterprise stakeholders. He lists the following Sea Enterprise strategy omissions that currently contribute to an ineffective Navy business transformation: Clarity of Purpose; Uniformity of Effort; the Process and Measure of Harvested Savings; Culture; Communication and Awareness; Savings Targets; and Educated Driving Force.

LT Miller recommends establishing the Center for Navy Business Intelligence[10] (CNBI) to be used by the Navy as a change agent to realize business transformation and then sustain continuous business improvement. CNBI would facilitate continuous education, investment in research, provide intelligent change recommendations to the Navy, and assist in execution. "The center ought to be the CNO's change agent resource."[11]

The purpose of this research is to suggest one adaptation – the creation of a Center for Navy Business Excellence (CNBE)[12] to assist DoN leaders and workforce members in achieving the goals of Sea Enterprise more quickly and effectively than currently possible. The intent is to make CNBE the Navy's business excellence voice.

---

[10] Business Intelligence is a broad category of business processes, application software and other technologies for gathering, storing, analyzing, and providing access to data to help users make better business decisions. Business intelligence enhances data into knowledge.

[11] Miller, LT Jason R. *An Analysis of the Sea Enterprise Program*. NPS Thesis, Jun 2005; p. 101.

[12] During the research, the author chose to substitute Excellence for Intelligence to communicate the comprehensiveness of business management, operations, and results. Intelligence remains a critical component of business excellence as will be demonstrated throughout this thesis.

As it is conceived in this thesis, CNBE would be a vibrant, 21st century organization, existing in both physical and virtual space that equips the DoN enterprise with relevant, actionable business intelligence in pursuit of Sea Enterprise goals. This adaptation, explored in its entirety in Chapter IV, would provide the Navy with a set of expert opinions exploring answers to the questions posed by the GAO in its 21st Century Challenges Report, DoN shipbuilding stakeholders as reported by GOVEXEC.com, and others. By asking why, what, and how, CNBE would create the future business-space, uncover and map Navy business processes, and seek revolutionary military business operations concepts.

The expectation is that CNBE would accelerate the Business Transformation outlined in the Sea Enterprise strategy, and in so doing, free fiscal resources for a robust Force Transformation. This thesis research draws on several aspects of business transformation and innovation within the private sector and uses them as possible benchmarks for outlining the CNBE concept of operations, its internal organizational design, and outputs.

D. RESEARCH QUESTION

The author decided to look at the varied components of established business excellence programs to determine if the Navy would benefit from the creation of CNBI as outlined by LT Jason Miller. Therefore, the primary research question for this thesis was:

> How can CNBE institutionalize sustained, effective business practices within the Navy?

To answer this question, it was necessary to identify what constitutes business excellence, how the Navy compares to this business excellence model, and in the event the Navy's model is not producing business excellence, what can be done to move the Navy toward business excellence. Supplemental information was gathered and researched that included: business intelligence, internal and external consulting advantages and disadvantages, transformation, change management, learning

organizations, think tanks, incubators, the future of work, networking, consortia, DoD and DoN governing strategies, and current DoD and DoN organizations already involved in this endeavor.

Armed with proven processes and techniques that contribute toward more successful business transformations, it is posited that CNBE could become the transformational vehicle required to leverages business transformation enablers throughout the Navy.

E. BENEFIT OF STUDY

This study explores the design and operation of CNBE, one solution to the identified strategic business research and innovation gap within the Navy. Research indicates that a coordinated, integrated approach to transformation has the highest rates of success.

This thesis provides an initial CNBE concept of operations that can be modified and improved upon as additional DoN business transformation stakeholders read this thesis and contribute toward CNBE's start-up. As a DoN business transformation enabler, CNBE could be dedicated to researching and solving the most challenging business issues - those currently identified and those of the future. It could be further validated with additional research or compared to other solutions targeting the strategic management of the DoN business transformation process.

Ultimately this study is intended to raise business transformation awareness throughout the DoN and reaffirm the importance of cultivating business expertise within the DoN to cope with financial and business risk.

F. SCOPE

This thesis focuses on the creation of CNBE. The thesis maintains that a gap exists in the strategic management of the DoN business transformation process and that the DoN lacks an enterprise-wide business transformation resource expert.

This thesis does not evaluate the current Sea Enterprise initiative. This thesis strongly recommends that by introducing an entity like CNBE into the operational level of the DoN, the vision and goals of Sea Enterprise can be achieved in an accelerated and more effective manner. This thesis concerns itself with the strategic and operational levels of business operations within the Navy. No attempt is made to identify potential business initiatives, specific commands in need of business improvement, or savings evaluation criteria.

G. METHODOLOGY

To design CNBE to fill the strategic business management gap and act as an enterprise resource for business transformation, successful corporate business transformations were studied. For example, the Malcolm Baldrige National Quality Award was used to identify those companies that possess recognized business excellence programs. The two selected Malcolm Baldrige Award recipients, Motorola's Commercial, Government, and Industrial Solutions Sector (CGISS) and Graniterock, were studied to discern common approaches and frameworks for implementing and realizing continued business excellence. Graniterock was selected because their headquarters is located 30 miles from Monterey, CA, facilitating easy site visits. A Motorola business unit was selected because Motorola invented the statistical business tool Six Sigma, a current business initiative within DoN. This review included the use and effectiveness of business models, organizational constructs, incentives for motivation and performance, idea generation, sustaining innovation, consulting, business plan development, and business intelligence.

Concepts distilled from analyzing Graniterock and Motorola CGISS were further investigated to ensure the author understood their significance and to ensure that their transfer into Navy business operations would be beneficial. Corporate research included corporate business structure, processes, and techniques used to transform business operations. Knowledge about industry best practices, communities of practice, innovation processes, and organizational behavior was gained through books, magazine articles, interviews, and web research. Specifically, site visits were conducted with: Mr. Mike Cook, Director, Quality Services and Mr. Keith Severson of Graniterock Company

in Watsonville, CA; and Dr. William Moore, Vice President of Infrastructure Management and Mr. Chris Mays, Program Director of Logistics Management Institute in McLean, VA. Phone interviews were conducted with Ms. Julie Ann Williamson, Georgia Institute of Technology, Consulting Services; Mr. Robert McPherson, Accenture Consulting; and Mr. Timothy Derrick, GE Energy and Commercial Six Sigma Black Belt. Article reviews included submissions by McKinsey & Company, Accenture Consulting, Bain and Company, Intel Corporation, IBM Consulting Services, and numerous academic publications. Notable book reviews included *Unleashing Change* by Steven Kelman; *Management Gurus and Management Fashions* by Brad Jackson; *The Fifth Discipline* by Peter Senge; *Communities of Practice* by Etienne Wenger, and *Corporate Universities* by Jeanne Meister.

To ascertain the level of established business excellence within the Navy, current business transformation strategies within the DoD and DoN were investigated. Knowledge about current business organizations and initiatives within the DoD and DoN was gained through site visits, web-based research, and phone interviews. Specifically, a site visit was conducted to the CNO's Strategic Studies Group in Newport, RI. Office visits were held at Naval Postgraduate School (NPS) with Dr. Douglas Brook, Director, Center for Defense Management Reform; Mr. Carson Eoyang, Associate Provost for Executive Education, NPS; Professor Susan Higgins, Deputy Chair, Cebrowski Institute, DoD Office of Force Transformation; Dr. David Richards, former DoN Business Innovation Team employee; and Professor Natalie Webb, Defense Management Resources Institute. Interviews with people familiar with Sea Enterprise and the DoN business transformation provided insight into the progress and products of Sea Enterprise thus far and potential areas for improvement.

Military business research focused on the GAO to ascertain outside viewpoints on the progress of DoD business transformation. The author assumed Navy business transformation is not ahead of, and likely behind DoD. Therefore, what the GAO says about DoD can be said about DoN in general.

Research also focused on the Defense Resource Management Institute, DoN Corporate Business Council, DoN Business Innovation Team, DoD Business

Management Modernization Program, American Society of Military Comptrollers (ASMC) and the MOVES Institute to demonstrate the breadth of business initiatives and programs currently underway within the DoD and DoN at the strategic level. Research into ASMC reveals that there exists a professional business community of practice within the DoD. The MOVES Institute highlights one model that embeds a postgraduate degree within an active, vibrant, networked consortium. CNBE could adopt a similar scholar program within the Graduate School of Business and Public Policy at Naval Postgraduate School.

The design of CNBE flows directly from the lessons learned from proven corporate business excellence models, an analysis of current Navy business transformation, and the study of various features that compliment and enhance business transformation. The CNBE concept of operations was equally influenced by Dr. Bernard Ulozas, Human Capital Researcher, Space and Naval Weapons Warfare Command (SPAWAR) in San Diego, CA. Dr. Ulozas' memoirs on the need for a strategic business center within the Navy contributed to the CNBE vision, work activities, and products.

H. ORGANIZATION OF STUDY

The research presented in this thesis is organized as follows:

This chapter, Chapter I, establishes the business transformation imperative and provides a brief DoN business transformation chronology. Thesis purpose, scope, and methodology are discussed.

Chapter II, Corporate Business Excellence Models, uses the Malcolm Baldrige National Quality Award to narrow the list of potential industry candidates with exceptional business excellence programs. The study of two specific companies reveals key business transformation enablers that contribute to sustained, effective business practices. These enablers provide a basis from which to evaluate the current Navy business transformation effort.

Chapter III, DoN Business Transformation Assessment, uses the findings of Chapter II to propose ways to strengthen the Navy business transformation process. This

chapter investigates several DoD and DoN business strategies and organizational constructs and compares them to the corporate business excellence components.

Chapter IV, Center for Navy Business Excellence, provides an outline of the people, work, and products of CNBE that are required to integrate and synchronize the Navy's business transformation effort. This chapter explains the vision and the strategic value of CNBE.

Chapter V, Conclusions and Recommendations, presents a series of conclusions and recommendations based on the assessment. The recommendations outline the next steps required in order to realize the transformational advantage of CNBE throughout the Navy.

Appendix A, Exploration of Business Transformation Enablers, provides amplifying research on select business transformation enablers.

Appendix B, Organizational Ideas and Models that Offer Potential Improvements to DoN Business Transformation, highlights organizations that influenced the CNBE construct.

Appendix C, CNO SSG Interview, contains a summary of the interview between Mr. Bill Glenney, Deputy Director CNO Strategic Studies Group, and the author conducted in Newport, RI.

Appendix D, CNBE Scholar Curriculum, provides a CNBE Scholar Program curriculum outline.

II. CORPORATE BUSINESS EXCELLENCE MODELS

A. INTRODUCTION

This chapter illustrates two corporate business performance excellence models. The first segment outlines the Malcolm Baldrige National Quality Award[13] business excellence philosophy and award criteria.

Using the Malcolm Baldrige National Quality Award to narrow the list of recognized, exceptional business excellence models, the second segment presents two examples of comprehensive business excellence programs. Within their Award submission packages, both Graniterock and Motorola CGISS articulate the detail and integration of business components that is required to achieve and maintain business excellence.

The segment following the presentation of the two models highlights six key business transformation enablers distilled from the corporate business excellence models: 1) Business Management Integration, 2) Business Intelligence, 3) Communities of Practice, 4) Corporate Universities, 5) Embedded Human Capital Programs and 6) Consultants. The word enabler is used purposefully to denote that an organization that possesses these identified features increases the likelihood of achieving sustained, business practices.

The following chapter, DoN Business Transformation Assessment, uses the derived business transformation enablers to determine the strengths and weaknesses of the current Navy business transformation effort.

B. MALCOLM BALDRIGE NATIONAL QUALITY AWARD

Founded in 1987, the Malcolm Baldrige National Quality Award (Baldrige Award) seeks to encourage and recognize U.S. quality and performance excellence. The Baldrige Award is managed by the National Institute of Standards and Technology

[13] Malcolm Baldrige was Secretary of Commerce from 1981 until his death in a rodeo accident in July 1987. Baldrige was a proponent of quality management as a key to this country's prosperity and long-term strength. He took a personal interest in the quality improvement act that was eventually named after him and helped draft one of the early versions. In recognition of his contributions, Congress named the award in his honor.

(NIST), a component of the U.S. Department of Commerce. The goal of NIST is to promote U.S. economic growth by working with industry to develop and deliver the high-quality measurement tools, data, and service necessary for the nation's technology infrastructure.[14]

The Baldrige Award is not given for specific products or services, but recognizes best practices and processes that enable superior product or service quality and performance. Three awards may be given annually in each of these categories: manufacturing, service, small business, education, and health care.

In October 2004, President Bush signed into law legislation that authorizes NIST to expand the Malcolm Baldrige National Quality Award Program to include non-profit and government organizations. Non-profit and government organizations may submit Baldrige Award applications beginning in 2006.

The Baldrige Award outlines strict criteria that define high performance, successful organizations. Award recipients are required to share information on their successful performance and quality strategies with other U.S. organizations. This best practice exchange is facilitated through the Baldrige National Program's annual Quest for Excellence Conference. The outcome of the Baldrige Award is summarized below:

> While the Baldrige Award and the Baldrige recipients are the very visible centerpiece of the U.S. quality movement, a broader national quality program has evolved around the award and its criteria. A report, *Building on Baldrige: American Quality for the 21st Century*, by the private Council on Competitiveness, said, "More than any other program, the Baldrige Quality Award is responsible for making quality a national priority and disseminating best practices across the United States."[15]

Since the inception of the Baldrige Award in 1987, there have been 999 applicants. Through 2003, there have been 58 Baldrige Award recipients (an applicant to

[14] 2005 Criteria for Performance Excellence, Baldrige National Quality Program, p. i.

[15] Fact Sheets from NIST, Frequently Asked Questions about the Malcolm Baldrige National Quality Award. http://www.nist.gov/public_affairs/factsheet/baldfaqs.htm Last accessed November 7, 2005.

award ratio of 12:1) across five categories: 24 manufacturing companies, 13 service companies, 14 small business companies, 4 education organizations, and 3 health care organizations.[16]

Criteria for the Baldrige Award is updated annually to reflect changing business environments, challenges, and opportunities. The 2005 Criteria were created to define roles in strengthening U.S. competitiveness and are outlined below:

- To help improve organizational performance practices, capabilities and results;
- To facilitate communication and sharing of best practices information among U.S. organizations of all types;
- To serve as a working tool for understanding and managing performance and for guiding organizational planning for opportunities for learning.

The Baldrige Award combines Criteria for Performance Excellence Goals with Criteria Core Values and Concepts to arrive at the Seven Baldrige Award Competitive Categories. The 2005 Criteria can be seen in Figure 2.1.

[16] 2005 Criteria for Performance Excellence, Baldrige National Quality Program, p. 69.

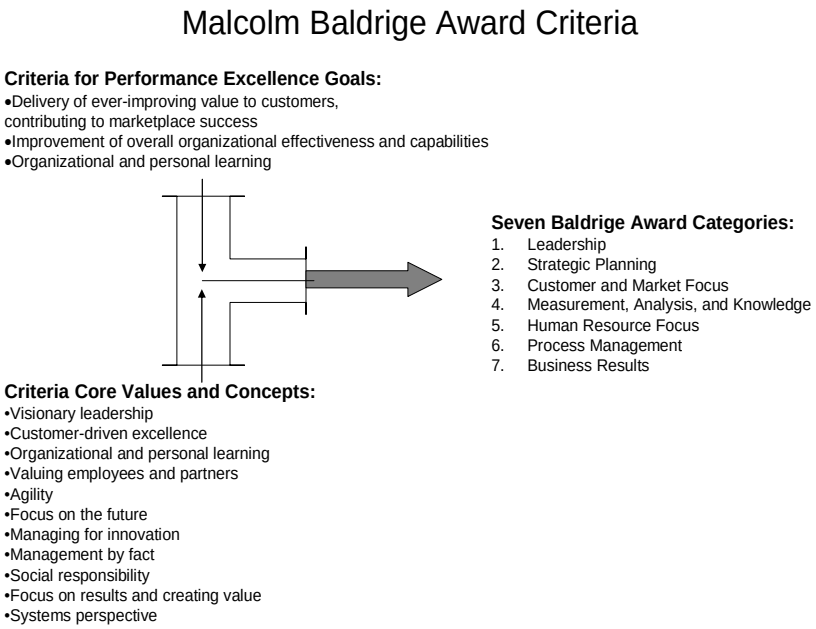

Figure 2.1 Seven Baldrige Award Categories [Ref: 2005 Criteria for Performance Excellence, Baldrige National Quality Program]

These seven categories create the Baldrige Criteria for Performance Excellence Framework. Figure 2.2 depicts the interconnectedness of each of the categories towards achieving successful business results. The emphasis on the interconnectedness of key categories is commonly referred to as the Systems Perspective.

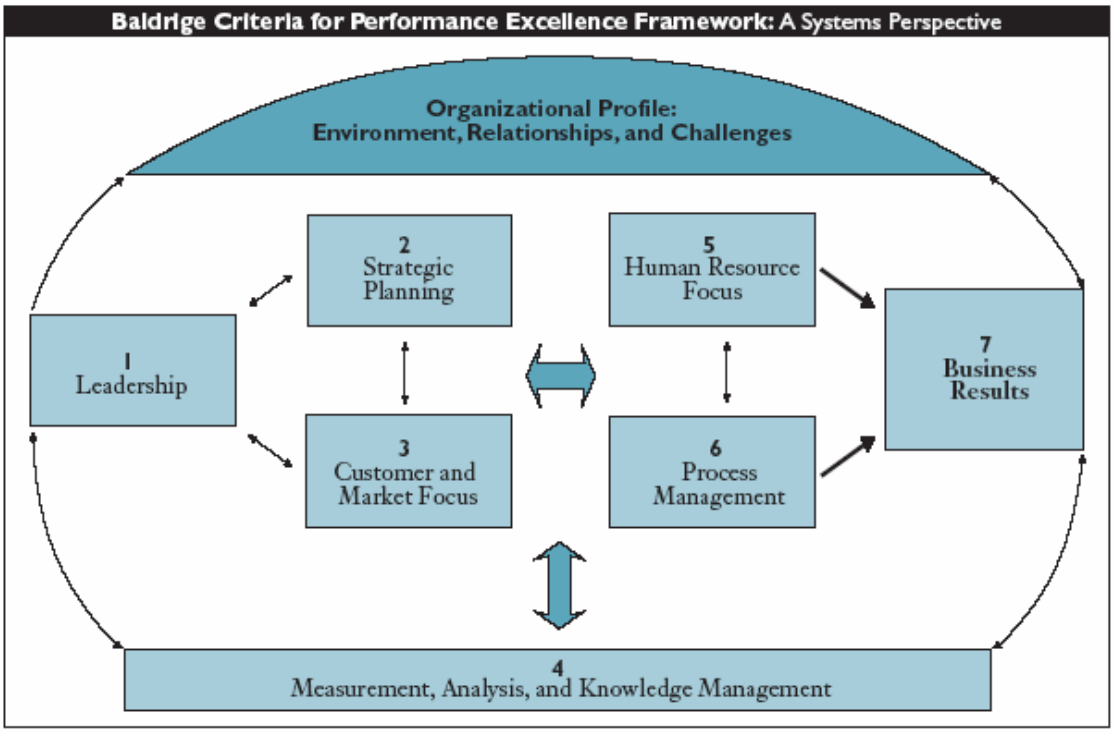

Figure 2.2 Performance Excellence Framework [Ref: The P2005 Criteria for Performance Excellence, Baldrige National Quality Program]

The Performance Excellence Framework is further translated into a structured category item listing to assist both the Baldrige Award submitting organizations and the competition judges. The items and point totals are shown in Fig 2.3. The organization with the most points wins the Baldrige Award.

2005 CRITERIA FOR PERFORMANCE EXCELLENCE—ITEM LISTING

P	**Preface: Organizational Profile**		
	P.1	Organizational Description	
	P.2	Organizational Challenges	
2005 Categories and Items			**Point Values**
1	**Leadership**		**120**
	1.1	Senior Leadership	70
	1.2	Governance and Social Responsibilities	50
2	**Strategic Planning**		**85**
	2.1	Strategy Development	40
	2.2	Strategy Deployment	45
3	**Customer and Market Focus**		**85**
	3.1	Customer and Market Knowledge	40
	3.2	Customer Relationships and Satisfaction	45
4	**Measurement, Analysis, and Knowledge Management**		**90**
	4.1	Measurement, Analysis, and Review of Organizational Performance	45
	4.2	Information and Knowledge Management	45
5	**Human Resource Focus**		**85**
	5.1	Work Systems	35
	5.2	Employee Learning and Motivation	25
	5.3	Employee Well-Being and Satisfaction	25
6	**Process Management**		**85**
	6.1	Value Creation Processes	45
	6.2	Support Processes and Operational Planning	40
7	**Business Results**		**450**
	7.1	Product and Service Outcomes	100
	7.2	Customer-Focused Results	70
	7.3	Financial and Market Results	70
	7.4	Human Resource Results	70
	7.5	Organizational Effectiveness Results	70
	7.6	Leadership and Social Responsibility Results	70
	TOTAL POINTS		**1000**

Figure 2.3 Point Calculation for the Baldrige Award [Ref: 2005 Criteria for Performance Excellence, Baldrige National Quality Program]

Figure 2.4 is used to assist assigning scores during the application review. The figure clearly depicts the desired integrated approach to achieve strategic and operational goals.

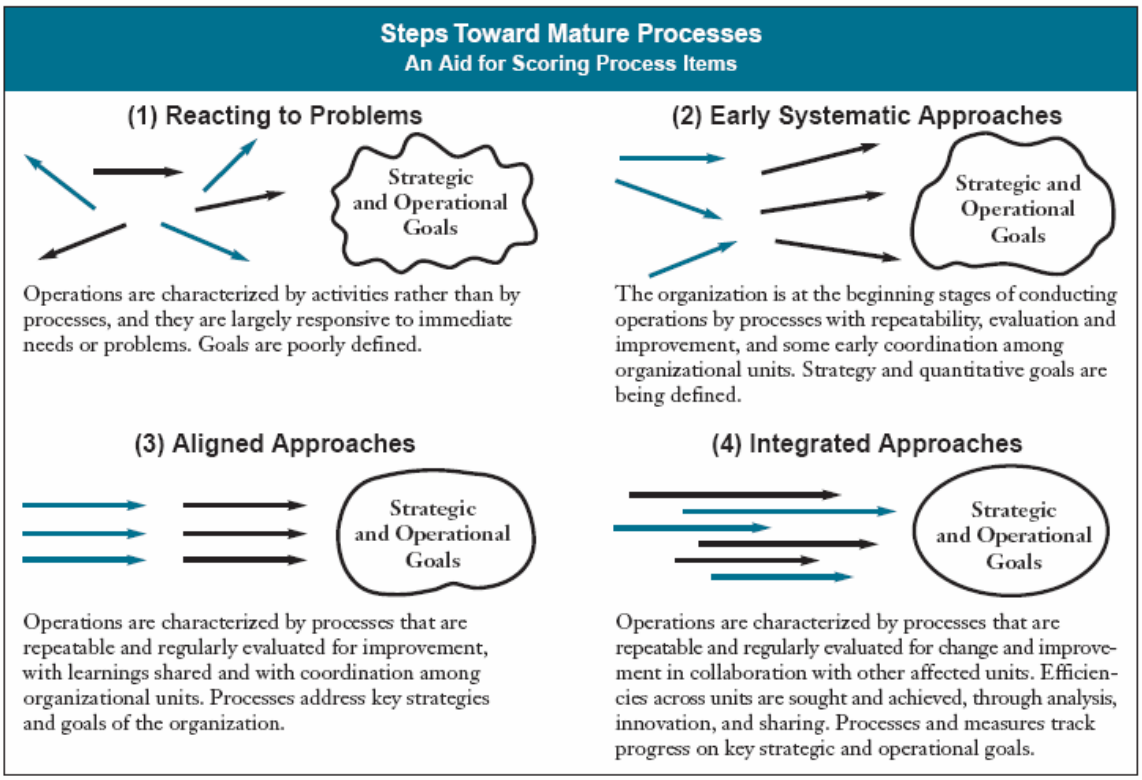

Figure 2.4 The Four Evolutionary Steps of a Systematic Approach to Achieving Strategic and Operational Goals [Ref: 2005 Criteria for Performance Excellence, Baldrige National Quality Program]

In Figure 2.4, Step (4) Integrated Approaches depicts the full, mature state of business excellence. In this mature state, business operations constitute clearly defined processes and possess built in feedback loops, improvement opportunities, stakeholder collaboration, and outcome measurement. Processes are linked and tracked to business and operational goals. The business system is aligned, synchronized, integrated and adaptive to the business environment and goals of the organization.

The following two companies exemplify Step 4: the mature state of business excellence. The models presented here can be used to measure the maturity of business excellence within the Navy.

C. GRANITEROCK'S BUSINESS EXCELLENCE MODEL

Located in Watsonville, CA, Graniterock is a manufacturer of high quality building materials for road and highway construction and maintenance, and for residential and commercial building construction. Major product lines include: rock and other aggregates; ready-mix concrete; asphalt and paving services; and other contracting services. Graniterock employs 750 workers as of June 2005.

In 1992 Graniterock won both the state of California's highest quality award, the Governor's Golden State Quality Award, and the Malcolm Baldrige National Quality Award (Small Business). Since then Graniterock has maintained its dedication to performance and quality excellence, recognized routinely by the National Asphalt Pavement Association for construction quality (most recently in 2004); voted 100 Best Companies to Work for in America (8 years in a row including 2005); and achieving the ranking of #16 out of 100 top companies to work for by Fortune Magazine in 2002.

The author discussed Graniterock's sustained business excellence with Mr. Mike Cook and Mr. Keith Severson in June 2005 at Graniterock's corporate headquarters in Watsonville, CA.

Graniterock's corporate philosophy is depicted in Figure 2.5. The circular diagram demonstrates that each of the objectives has an equal weighting. The corporate objectives provide a success roadmap to bound the behaviors of employees during their pursuit of business goals. Graniterock employs a "Yes We Will" attitude with its customers as long as the requests is legal, ethical, and falls within the corporate objectives.

Figure 2.5 Graniterock's Corporate Objectives [Ref: Graniterock Website: http://www.graniterock.com/corepurpose.html]

Graniterock remains dedicated to the growth of its employees. Individuals work with their managers to develop an Individual Professional Development Plan (IPDP) that reflects both the needs of the company in achieving strategic objectives and the need of the employee to achieve job enrichment and satisfaction. This IPDP is incorporated into company Baseline Goals.

Baseline Goals originate from the CEO and cascade throughout the organization, becoming more detailed and specific to the individual along the way. The CEO establishes the overarching business objectives for Graniterock and then subsequent division managers add their division strategic goals. In the end, each employee's Baseline Goals align with corporate objectives while fulfilling personal goals. Typically, employee Baseline Goals include 57-64 separate annual performance measures. Though each employee has his or her own goals, performance measurement is largely group or team focused.

Graniterock has optimized its business management and operations system over the past two decades. Long-term planning (2-4 years), conducted by senior leadership and collaborated with each corporate manager, encompasses business research, economic and technological trends, and Graniterock operational objectives. Through various committees, a roadmap is created that charts the direction Graniterock intends to take within the forecasted business environment. Using Quality by Design Timelines and

Baseline Goals, the entire organization, from the newest worker to the CEO, is linked through specific goals tied to strategic direction. Frequent employee reviews allow managers and their direct reports to modify goals, discuss progress, and take any corrective action.

Baseline Goals link the entire company from the newest worker to the CEO. Managers exist to give their employees the resources to succeed. Managers encourage their employees to work themselves out of their current jobs by implementing technological solutions, streamlining operations, or creating new, innovative approaches to the work that must be performed. This corporate philosophy maintains that the evolution of individual work is important and by finding a better solution to current processes, individuals make themselves available for more responsibility and more challenging assignments.

Graniterock prizes self-leadership. Each employee is a knowledge worker; generating, sharing and using information to improve decisions that impact customer satisfaction and product quality. Graniterock believes that empowered, educated individuals make the company more effective. The company demonstrates this commitment by delegating decision authority to the lowest level.

Graniterock allocates $100,000 per employee annually for training and professional development. This commitment to employee job satisfaction and enrichment is reflected in very high company retention statistics.

Graniterock increases compensation for cross-trained, multi-skilled workers. Working seamlessly with its union, Graniterock has shaped its workforce to be flexible and agile. Cross-trained workers allow immediate responsiveness in the dynamic construction materials business environment.

Graniterock University exists as an education provider. Selected resident subject matter experts and outside guest speakers lead discussions on current technical and organizational trends and innovations. Though no physical presence exists, Graniterock University provides a network to generate and communicate ideas and increase business awareness.

Graniterock identifies and shares its best practices is several ways. First, the CEO reviews every employee's annual Baseline Goal attainment. The CEO selects success stories that he believes can improve operations company-wide. Second, each corporate facility sponsors its own Recognition Day, an opportunity to show-off the facility's business improvements and innovations compared to the previous year. All Graniterock Executive Committee members must attend four Recognition Days per year as outlined in their Baseline Goals. Third, Graniterock has three communication mediums to reach its employees; Rock Talk, a weekly company newsletter; Tuesday Facts, a fax memorandum; and Construction Update.

"Whatever else Graniterock may be, it is also a huge mechanism for gathering, analyzing, and acting on information."[17] Though this quote is from an article in 1992, the primary information gathering mechanisms remain vital to the company's competitive advantage. Customers are surveyed yearly through a comprehensive report card format that rates Graniterock's performance against its competitors. Periodic customer focus groups are utilized to hear customer needs and concerns. Company operations are also stringently measured through rigorous statistical procedures. The resulting charts and ratios are posted on all employee bulletin boards to communicate company success. Taken together, the customer feedback and company operations performance form the strategic objectives and Baseline Goals for the upcoming year.

Graniterock employees have the opportunity to belong to one of more than 100 company teams that focus on safety, capital expenditure, or new product lines. These teams are not ad hoc, but part of the institutionalized systems approach to addressing business threats and opportunities efficiently and effectively.

Graniterock does not have a defined internal consulting group, but standing working groups or ad hoc working groups can be called to address emergent issues. If the issue cannot be solved in-house, Graniterock will go anywhere to get the answer; tapping into the expertise of consultants and other companies.

More than 700 members of the Graniterock team have volunteered their personal talents and shared their financial support with more than 400 organizations in Monterey,

[17] Case, John. *The Change Masters*. Inc. Magazine, March 1992.

San Benito, Santa Cruz, and Santa Clara Counties. Graniterock employees share the Total Quality Management approaches learned in business with government, educators, and non-profit organizations.

The following passage comes from Graniterock's website, a philosophical perspective that is earnestly practiced:

> We see continuous improvement as a way of lifebecause Graniterock people are achievement-oriented, they are unsatisfied with the way things are, when they believe they can make improvements. So Graniterock encourages and supports Graniterock people in making both incremental and sweeping changes. The company also recognizes that risk-taking and honest mistakes are unavoidable parts of constantly improving our business.
>
> We Produce and Deliver Products More EfficientlyTo offset some of the rising costs of materials, equipment and labor, we are constantly improving the productivity of every business process and job function. Every business area and department is expected to demonstrate higher productivity and safety performance each year. We increase productivity by changing and improving work practices, investigating and implementing new technologies, and eliminating errors and waste.
>
> At Graniterock, individuals are responsible for championing new ideas to improve their job efficiency, implementing improvement processes, which compare current performance with goals. The company also expects people to work with teams to improve company-wide practices. As Graniterock implements improved productivity practices in each of its business entities, we expect cost performance ratios to decline, making the company one of the leaders in cost efficiency and market competitiveness.

The following excerpts are taken from an article appearing on Graniterock's website as of August 2, 2005. This article reinforces Graniterock's commitment to its continued pursuit of quality and performance excellence through the effective use of business intelligence:

> using business intelligence (BI) solutions to help manage the data pouring in from an RFID (radio frequency identification) tagging system, Graniterock has been able to leverage its RFID information to improve operational performance and boost customer satisfaction.
>
> Users throughout the organization use [business intelligence] to gain insight into the transport cycle and ensure timely delivery of materials to customers.

> [business intelligence] gives Graniterock this ability to share information that is relevant and useful to its customers, while providing operational information to the customer in real time.
>
> With [business intelligence] we have turned our RFID tracking system into a strategic differentiator that has improved operational efficiency and customer satisfaction as Graniterock extends its information systems out to its customers.
>
> Graniterock recognized that the true value of RFID will be in using business intelligence to take strategic advantage of the wealth of information delivered by this new technology. They are truly at the forefront of using business intelligence to manage RFID data.[18]

In summary, Graniterock provides an excellent example of a small company that successfully implemented Total Quality Management. Mr. Cook stated frankly that the quality evolution took between five and seven years to anchor into the company culture. Senior management must remain dedicated to the outcomes of any chosen quality or business improvement technique. Mr. Cook closed with, "Always question everything."

D. MOTOROLA'S CGISS BUSINESS EXCELLENCE MODEL

Motorola's Commercial, Government and Industrial Solutions Sector (CGISS) won the 2002 Baldrige Award (Manufacturing). The main products and services of CGISS include: mission critical radio networks, systems, products, and services; integrated communications technology and information technology solutions; and commercial and industrial radio products. CGISS is a worldwide organization that employs 15,260 workers.

CGISS' 60 page 2002 Baldrige Award application packet presents numerous examples of best practice concepts, processes, and organizational structures that contribute to the development of a high performing workforce that manufactures quality products. Highlights of the CGISS application follow:

The key factors that determine CGISS success are built on technological supremacy, customer intimacy, and operational excellence. CGISS achieves this success

[18] Lowe, Sherry. Business Objects Corporate Press Release. Business Objects Helps Graniterock Manage Mountains of Data: http://www.graniterock.com/pr080205.html Last accessed October 20, 2005.

because of: customer focused employees; strong relationships with suppliers and customers; trust and brand reputation; global distribution networks; and Motorola labs and research.

CGISS' improvement process has been standardized to ensure consistent Sector-wide deployment of systematic evaluation and improvement of CGISS' processes. Figure 2.6 depicts the generic improvement process model. The "What We Do" line is the same for every improvement process. The "How We Do It" area of the model describes responsibility for the improvement process, frequency of evaluation, stakeholders involved, inputs considered, evaluation approaches and key measures, the process to monitor improvements, and how the improvements are implemented and institutionalized.

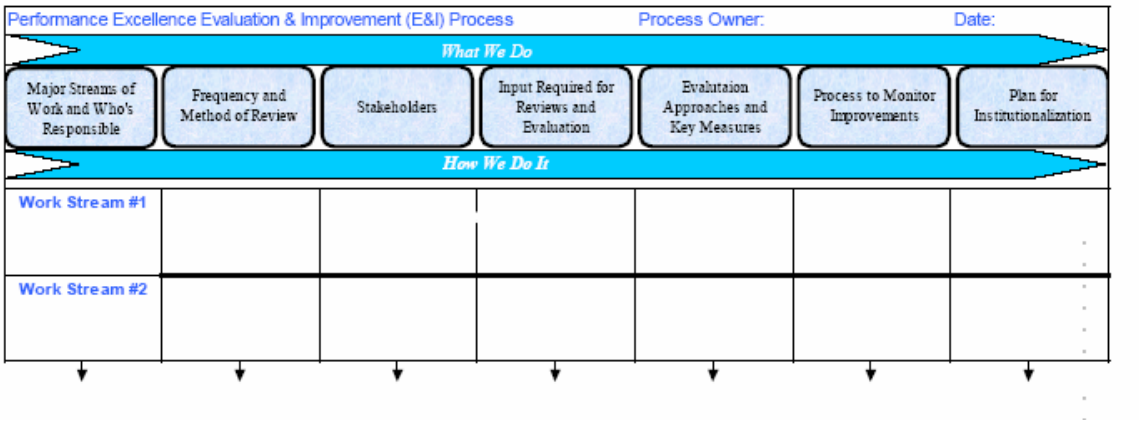

Figure 2.6 CGISS Performance Excellence Evaluation & Improvement Process [Ref: 2002 CGISS Baldrige Award Application]

Motorola uses a Performance Excellence Scorecard to align strategies and results throughout the company. There are four levels of performance, evaluation and improvement processes, linked to the scorecard initiatives cascaded down to individual levels. They are:

1. Stractics™ – sector level strategy implementation, monitoring and management framework. Stractics™ (Strategic tactical initiatives) is a process to drill down into the necessary ingredients to identify, analyze, prioritize, and assign ownership to specified critical action plans.

2. Organizational Performance Reviews – regular formal performance review of key organizational measurements as compared to the organization's scorecard.
3. Operations Reviews – Regular formal review of key operational measurements that are linked to the organizational scorecard.
4. Personal Commitment Process – regular formal performance review of individual measurements that are liked to the sector and corporate scorecards.

Performance Excellence is an on-going, consistent business system framework that helps CGISS to set key strategic initiatives, establish clear priorities and align efforts as one company in order to execute flawlessly and deliver on-time customer solutions. All of the business processes are linked to key strategies, focused on results and designed to create value for all key stakeholders.

Performance Excellence Scorecards include development of a Personal Commitment goal-setting document for each manager and employee. Each manager and employee develops personal goals that support the Sector's performance expectations. Rewards are provided based on performance results. The performance expectations are communicated through a communication cascade: one-way, two-way, upward, downward, electronic, and feedback channels. Managers of all levels are expected to participate and communicate their performance goals to their respective employees. Scorecards, standardized practices, and Personal Commitment practices reinforce and set clear performance expectations while minimizing supervision.

Senior Management (Motorola Board of Directors, Motorola Management Board and Sector senior management) creates an environment for empowerment and innovation through support of "learn through mistakes." This environment is reinforced through after action reviews, recognition programs, and several unique Motorola programs: Town Hall Meetings, Personal Commitment, Leadership Supply, and BRAVO!

Organizational learning is achieved through organizational training specialists, topical/functional sponsored symposia, skill development guides, the training tracking system, Performance Excellence, Personal Commitment, project management, after action reviews, the Chairman's Leadership Institute, and the Business Development

Institute. Employee organizational learning tools include a standardized change acceleration model, communities of practice, e-learning, internal and external certifications, employee involvement in professional societies, and information repositories. Organizational learning is functionally supported by company programs and organizations like Leadership Learning and Performance, the Office of Business Excellence, and World Wide Learning Services.

Organizationally, innovation opportunities are identified through the *One Motorola Business Transformation Initiative* and Advanced Technology Group meetings. Innovation is also discussed during quarterly Personal Commitment reviews where individuals specifically review progress towards goal completion and discuss how individual and team performance can be improved. Once identified, innovation opportunities are assigned to a team for further research and possible implementation.

Education and training support the CGISS short and long term organizational objectives by aligning training solutions and individual training plans to the overall organization's business goals. The CGISS Learning Community includes Motorola University, Worldwide Learning Services, and training managers. Together, this community researches the projected educational backgrounds of CGISS employees and devises plans to remedy the perceived capability gaps. The CGISS Learning Community maintains curriculums that address technological change, management/leadership development, performance/measurement, and diversity. Web-based learning, CD-ROMs, self-paced e-learning, and small group seminars provide continuous educational opportunities for employees.

CGISS' support of local and professional communities is highly encouraged at the organizational, senior leader and employee level. Employee membership in professional communities fulfills employee enrichment and networking desires while promoting Motorola's community involvement strategy. Annually, Motorola's CEO chooses an employee to receive the Award for Volunteerism. Figure 2.7 demonstrates CGISS' commitment to the community.

	Local Communities	Professional Community
Organizational Support and Leadership in Key Communities	• United Way • Alignment with Motorola Foundation Contribution Strategies • Matching gifts for higher education employee contributions • Community Relations Strategy and Plan • Community Relations Councils/Coalitions • Response to Major Disasters • Education Outreach • World Wildlife Fund • Call to Protect "Donate a Phone' Program	• Support of participation of employees in professional organizations including the payment of dues, time off and expenses paid to attend meetings • Institute of Electrical and Electronic Engineers (IEEE) • National and Illinois Association of Manufacturers (NAM/IMA) • American Electronics Association (AEA) • Society of Women Engineers (SWE) • National Society for Black Engineers (NSBE) • Society of Hispanic Professional Engineers (SHPE) • Association of Public-Safety Communications Officials, International (APCO) • International Association of Chiefs of Police (IACP)
Senior Leadership Support and Leadership in Key Communities	• United Way Silver leadership Giving • CEO Award for Volunteerism • Senior Management Champions for key Outreach Programs (e.g. FIRST, JA, United Way, Science Bowl)	Senior Leaders actively participate in leadership and technical forums.
Employee Support and Leadership in Key Communities	• United Way • Junior Achievement • Community Liaison Council • CEO Award for Volunteerism	Participation in technical organizations

Figure 2.7 CGISS Community Support [Ref: 2005 CGISS Baldrige Award Application]

CGISS encourages employees to belong to professional organizations and for senior management to participate on community boards and committees. To support this effort, the Community Relations staff identifies and places management-level employees on boards and committees of organizations that target priority community needs and/or represent opportunities to meet key business objectives.

CGISS's strategic planning process is the ongoing responsibility of the management team. The short and long term planning horizon is one and three years respectively. It includes a well-defined, multiphase process that includes quarterly reviews and off cycle reviews to assess performance. This ongoing opportunity assessment and strategy investment is revisited when assessing the external environment, developing the internal strategic fact base, developing strategies and setting performance targets, and selecting priority strategic initiatives and milestones.

Key participants in the strategic planning process are Global Marketing and Sales Group, Global Technology and Development Group, Supply Chain Organization, and functional groups like legal, human resources, and information technology. See Figure 2.8 for a detailed process flow.

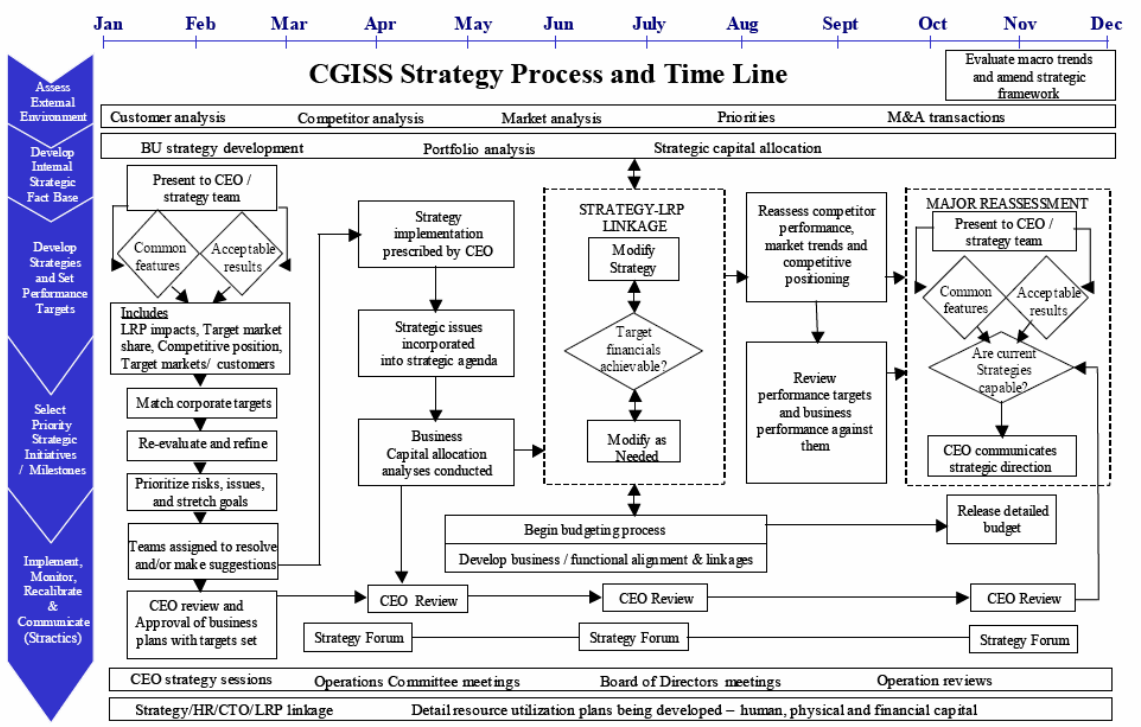

Figure 2.8 CGISS Strategy Process and Time Line [Ref: 2002 CGISS Baldrige Award Application]

In preparing the strategic direction, numerous contributing factors are gathered and studied: strategic marketing, input from field sales and service teams; surveys and focus groups; inputs from outside consulting firms; industry studies by third parties on products and markets; analysis of the external environment, market, competitor, customer, and portfolio; macro trends; strategic capital allocations; professional conferences and trade shows; benchmarking; and other Motorola labs and sectors. Each of these sources contributes to CGISS' business intelligence. These potentially impacting sources are plotted on a "radar screen" and continually updated to inform employees of the developing business environment.

The Human Resources Function is responsible for the Human Asset Planning and aligns the capabilities of the work force with the strategic plan. Gaps are assessed to provide information to senior management for use in the planning process.

CGISS' key performance measures/indicators for tracking progress relative to action plans are managed and monitored through the scorecard. Deployment is achieved through the alignment of the individual's Personal Commitment goals to the scorecard.

The Global Customer and Marketing Team and the Global Portfolio Management Team share a centralized research entity, the Global Marketing Operations Group. This Group works to ensure current, best research practices are tested and utilized; establishing research protocols, a research repository; and for coordinating research projects to eliminate duplication of effort and ensure optimal use of research budgets.

Measurement of organizational performance is critical to determining success. Data and information is gathered using a networked, IT architecture, then integrated and categorized as either performance or operational information. The resultant metrics are shared throughout the organization using Motorola's internal portal, the Motorola Compass Knowledge Sharing System. Figure 2.9 depicts a Performance Measurement Chart, clearly demonstrating the linkage of each measurement with the business goal.

Measurement Name	Benefactor(s)	Scorecard Goal Linkage	Data Collector	Review Forum	Frequency of Update
Accounts Receivable Weeks	❸	Meet accounts receivable plan	Finance	All Ops Reviews	Monthly
Annual Revenue Growth	❶❸❼	Achieve annual revenue growth plan	Finance	Group Ops Reviews	Monthly
Annual Sales Growth	❸	Achieve target sales of new products/solutions	Finance	All Ops Reviews	Monthly
Budgeted Costs	❸	Manage controllable budgets to plan	Finance	All Ops Reviews	Monthly
Cost of Sales	❸	Achieve Sector cost of sales plan	Finance	Ops Review	Monthly
Project Cycle Time	❷❸❼	Meet all Program commitments	Program Mgmt.	Meet Commitments	Monthly
Project M-gate status	❹	Meet all Program commitments	Program Mgmt.	Meet Commitments	Monthly
Project Risk Assessment	❹	Meet all Program commitments	Program Mgmt.	Meet Commitments	Monthly
Manufacturing Costs	❷❸❻❽	Achieve manufacturing cost plan	Finance	All Ops Reviews	Monthly
On-time Delivery	❷❸	Meet performance goals on major projects/products	Quality	Group Ops Reviews	Monthly
Free Cash Flow	❸	Meet accounts receivable plan	Finance	All Ops Reviews	Monthly
Profit Before Taxes	❸❼	Achieve PBT plan	Finance	All Ops Reviews	Monthly
Program Cost Performance	❸	Meet performance goals on major projects/products	Finance	Group Ops Reviews	Monthly
Releases	❸	Achieve releases plan	Finance	All Ops Reviews	Monthly
Return on Net Assets	❸	Achieve RONA goal annually	Finance	Group Ops Reviews	Monthly
SEI/CMM/ CMMI Levels	❹	Software Engineering SEI Level	Quality	Group Ops Reviews	Quarterly
Top Box Customer Satisfaction	❷	Improve Top Box customer satisfaction	Quality	All Ops Reviews	Bi-Annual
Share of Market	❸	Maintain share in N.A.- Increase share in rest of world	GMSG Brand	All Ops Reviews	Monthly

Fig 4.1-1 Performance Measurements (Overall Organization Performance)

Legend:
❶ = Employee
❷ = Customer
❸ = Financial Performance
❹ = Operational
❺ = Human Resources
❻ = Suppliers
❼ = Share Holders
❽ = Manufacturing

Figure 2.9 CGISS Performance Measurement Chart [Ref: 2002 CGISS Baldrige Award Application]

CGISS uses several tactics to ensure partners and employees have access to information. Transactional data is all real-time and available to employees, suppliers/partners, and customers. Historical data is stored in data warehouses and is accessed by various, tailored software applications to locate and summarize pertinent information for the requestor. Secure portals have been created to exchange specific customer information.

All business applications must adhere to company development guidelines to ensure compliance with authorized access, backup, virus protection, and firewalls. To keep the hardware and software applications current with business needs and directions, several teams exist to review potential impacts; new technology, legal requirements or

budget planning for example. Formal mechanisms exist so that any user can submit a request for new or modified hardware and/or software.

CGISS' work and jobs at all levels are designed, organized and managed through collaboration with employees and management. Managers and employees take ownership of the process and job designs. All jobs are organized and managed to promote teamwork, knowledge sharing, collaboration, and professional development. Approaches to work and job management are organized using team approaches that support cooperation, collaboration, individual initiative, innovation and flexibility among employees. Figure 2.10 demonstrates these tactics.

J (Job), W (Work Unit), L (Location), S (Sector), C(Corporate)

Cooperation/Collaboration	Innovation/Individual Initiative	Organizational Culture
• Business Councils (C) • Cross-functional teams (JWLS) • Sharing of Best Practices through Communities of Practice (JWLS) • Information-sharing Events (JWLS) • Community Involvement (S) • Establish "work partners / collaboration with colleagues via Personal Commitment (JWS)	• Open-door policy (C) • Patent Awards (C) • Service Club dinners (C) • Personal Commitment process (C) • FAST Teams (JWL) • Patent Awards (J) • Business Councils (C) • SKIP Dialogues (W) • Promotion from within (JW) • Career Plans in PC (C)	• New Hire Orientation (JWLS) • Uncompromising Integrity (JWLSC) • Constant Respect for People (JWLSC) • Performance Excellence Business Systems Framework (JWLS) • Six Sigma Black Belt, Green Belt (JW) • Diversity (C) • 'One Motorola' face to the Customer(C) • Performance Management (J)
Flexibility	**Communications**	**Knowledge / Skill Sharing**
• Cross training (JW) • Flex-time as appropriate (JW) • Job rotation (JW) • Employees "float" to address changes in workload (JWS) • Job descriptions (JW) • Open one- and two-way communication environment with employees so they are comfortable raising suggestions via Town Halls, team meetings, open-door policy, intranet, email, Net Meetings, Personal Commitment quarterly checkpoints. (WS)	• Town Halls (JWLS) • Executive Conferences (JWLS) • CGISS Newsbriefs electronics publications (JWLS) • Closed-circuit TV (JWL) • Quarterly Personal Commitment Dialogues (JWL) • Employee Recognition (JWL:) • Bulletin Boards for facilities w/o web access (JWL)	• Teams (JWL) • Communities of Practice (JWLS) • Cross-Functional Teams (JWLS) • Managers and direct reports (JWLS) • Operations reviews (JWLS) • NetMeetings (JWLS) • Cyber Casts (JWLS) • Learning Skill Guides (JW)

Figure 2.10 CGISS Opportunities for Individual Initiative and Responsibility [Ref: 2002 CGISS Baldrige Award Application]

The Rewards organization has developed clear metrics to target and evaluate the differentiation of rewards for both executives and non-executives. Benchmark data

supports the position that organizations that differentiate their reward programs, demonstrate better business performance that those who do not.

The CGISS Learning Community is a cross functional team made up of Motorola University and Leadership Learning and Performance. Together with CGISS senior management and training mangers, CGISS Learning Community aligns training solutions and individual training plans to overall organizational business goals. Gaps identified between workforce education and business objectives are worked into training plans and reinforced through the Personal Commitment process. Employees can specify training that they need to be effective in their jobs.

CGISS' business processes are evaluated and improved by the business owners in scheduled staff and operations meetings. The business process owners are responsible for implementing functional area improvements to maintain alignment with CGISS strategic goals.

E. ANALYSIS OF BUSINESS EXCELLENCE MODELS REVEALS SIX KEY BUSINESS TRANSFORMATION ENABLERS

As discussed, the Baldrige Award is awarded to organizations demonstrating competency in seven structured business categories: Leadership; Strategic Planning; Customer and Market Focus; Measurement, Analysis, and Knowledge Management; Human Resource Focus; Process Management; and Business Results.

But before an organization can compete using the criteria outlined within the seven Baldrige Award categories, fundamental business capabilities must exist within an organization. The organization must possess the resources to be aware of and then answer questions such as: How does an organization acquire and use organizational agility to its advantage or how does an organization develop an employee performance scorecard that is linked to corporate business goals?

Within the award write-ups, several themes emerge that provide insight into how Graniterock and Motorola develop the capability to achieve their integrated, systems approach to business management. The author contends that these themes, or business

transformation enablers, must be understood and employed by an organization in order to build and sustain effective business practices.

The six identified key business transformation enablers include: 1) Business Management Integration, 2) Business Intelligence, 3) Communities of Practice, 4) Corporate Universities, 5) Embedded Human Capital Programs and 6) Consultants. Figure 2.11 shows where in the business system each of these business transformation enablers exists. The enabler enhances a strategic business capability and increases the likelihood that business excellence will be attained.

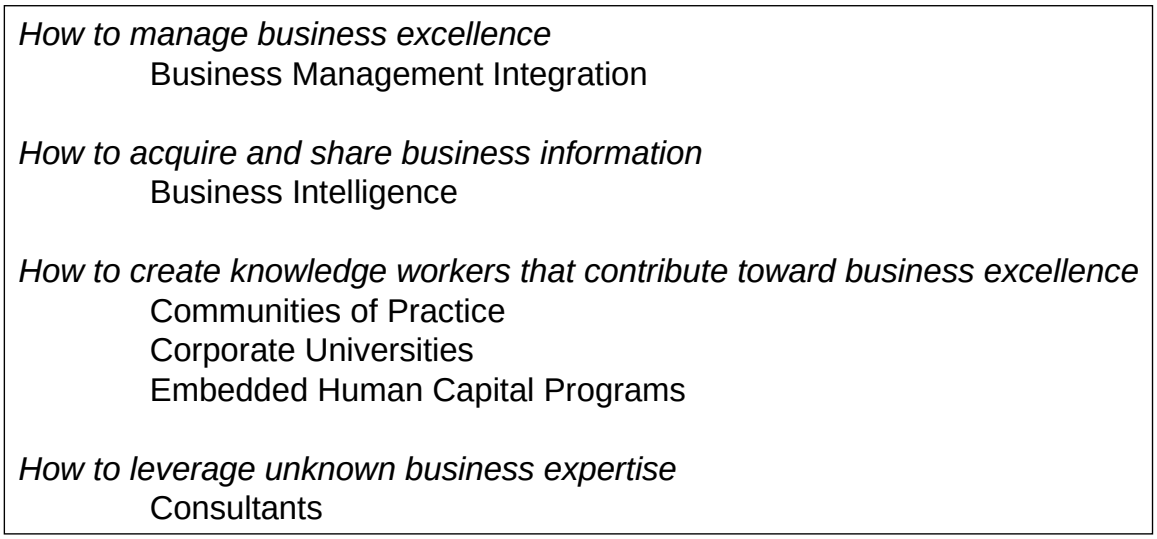

Figure 2.11 The Six Key Business Transformation Enablers and Where in the Business Process They Act.

The six business transformation enablers are described below with examples of insights taken from the Graniterock and Motorola CGISS Baldrige Award write-ups. Appendix A provides additional research into select enablers.

1. Business Management Integration

Effective business management requires the integration of all enterprise business processes, business support functions, and human capital programs. Each component of the business system must add value to the other components. By complimenting each

other, business processes and programs mass effectiveness and result in a synchronized business process that minimizes waste and duplication of resources while optimizing time and decision-making.

Synchronized business operations integrate strategic business planning, operational planning, business innovations and business measurements. Business process are depicted in flow charts, business results are mapped to strategic planning documents, and roles and responsibilities for business outcomes are clearly defined. Opportunity to modify or improve any part of the business system is open to every employee throughout the organization through feedback loops, peer reviews, and surveys. Every business process, operation, output and outcome is measured and people are held accountable for the results. By relying on measurements of performance rather than supervision, self-directed workers are more productive and effective.[19] Human capital programs encourage and support employees achieve their goals by providing fair reward programs, continuous education, and an environment appreciative of innovation and risk.

Graniterock and Business Management Integration: Graniterock has remained small enough that the CEO, Bruce Woolpert who has led Graniterock since 1987, personally establishes yearly corporate objectives, participates in routine Executive Committee meetings, and reviews every employee professional development plan. Through this review process, the CEO centrally integrates Graniterock's business processes and operations. This methodical, analytical approach to business management early in the process sets the boundaries and direction for employees to use their initiative to experiment and innovate during execution.

Motorola CGISS and Business Management Integration: Through CGISS, the breadth and comprehensiveness of business excellence begins to emerge. CGISS employs numerous business processes, standards, and review events to coordinate and synchronize its business operations. The Performance Scorecard links corporate business objectives with employee goals. CGISS depends exclusively on measurement to determine operational results, customer satisfaction, market share, the value of employees, and quality of leadership. Using several guiding and integrating

[19] Bryan, Lowell L. and Joyce, Claudia. *The 21st Century Organization*. The McKinsey Quarterly, 2005 Number 3.

organizations such as the Office of Business Excellence and Global Technology and Development Group, CGISS develops and manages business investment, development, deployment, and operations.

CGISS institutionalizes its changes in processes and practices through sharing and communication.

2. Business Intelligence

The term *business intelligence* describes the strategies and processes used by an organization to obtain, share and then enhance business information through rigorous analysis. Business intelligence includes the same activities commonly associated with military intelligence: gathering, storing, analyzing, and disseminating information. Well constructed business intelligence processes produce information augmented with insight and original analysis that equip leaders and employees throughout an organization with intelligence, rather than just information, so that better business decisions can be made.

Business intelligence empowers an organization to shape its future competitive environment. Business intelligence enhances a user's ability to understand business results, increases a user's business acumen, and communicates the findings and insights so decisions can be made quickly. Today, the competitive advantage afforded to an organization employing business intelligence can be the difference between an innovative, growing company and a stagnating, irrelevant company.

Graniterock and Business Intelligence: Graniterock has a reputation for gathering, analyzing, and acting on information. The company uses surveys extensively to solicit feedback on its products and services, from both customers and employees. Graniterock's new RFID tagging system provides business intelligence to its customers and its own organization so that operations can be improved. Possessing business intelligence is a competitive advantage for Graniterock.

Motorola CGISS and Business Intelligence: CGISS continuously pulses the external business environment and its own internal business results to ascertain its real-time status. Business intelligence enters CGISS through various channels: marketing,

conferences, customers, surveys, complaints, and competitors. By analyzing this business intelligence, CGISS draws business insights that contribute to its competitive advantage.

3. Communities of Practice

Communities of practice enable organizational learning. These communities of related people practice similar activities and engage with each other to acquire and create knowledge that continuously refines and improves their practice. This improvement benefits both the community's objective and the entire organization of which the community is a part. Dr. Wegner explains the importance of communities of practice in the following manner:

> Communities of practice are organizational assets because they are the social fabric of the learning of organizations. It is their ability to cross institutional lines that makes them so critical. An organization's ability to deepen and renew its learning thus depends on fostering – or at the very least not impeding – the formation, development, and transformation of communities of practice, old and new.[20]

Not only is education transformative for an individual, but educating individuals plays a critical role in transforming the organization. New perspectives, coupled with emerging technologies and business management techniques equip workforce participants with the tools and confidence to invite and cope with change.

Graniterock and Communities of Practice: Graniterock employees have the opportunity to belong to more than 100 formal teams that focus on business processes and programs throughout the corporation: safety and capital expenditure for instance. These teams collaborate across traditional functional lines, increasing the knowledge of each other, but also expanding and elevating the level of knowledge within Graniterock.

Motorola CGISS and Communities of Practice: CGISS fosters numerous communities of practice within its organization and even extends the community to customers, suppliers, and community members. By establishing communities of practice,

[20] Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998. p. 253.

CGISS accesses individuals who would otherwise remain isolated from one another, encouraging innovation, sharing ideas, and developing social networks.

4. Corporate Universities

Today, most companies have used technology advancements to move the university away from a physical entity and toward an innovative educational process that allows employees to participate in life-long education while improving job performance. Companies that retain physical university locations, use these assets as an opportunity to bring-in employees from around the world to identify and discuss business threats and challenges, share best practices and network. Corporate universities have become the nexus of business innovation.[21] Often the opportunity to go to a company's corporate university is an honor and employees are expected to return with new business education, tools and insights that can be shared with coworkers.[22]

An effective Corporate University achieves the following for its organization:

1. Helps the organization exceed organizational performance objectives by equipping employees and future leaders with appropriate development opportunities
2. Drives higher quality programs at lower costs by managing enterprise-wide learning resources for consistency, and using deliberate processes for vendor review, selection, and management
3. Defines value generated for the organization through learning by implementing a relevant measurement system that monitors investments in learning in relation to business results
4. Focuses learning programs on business needs through a model of enterprise-wide education with central oversight to address needs of business units with unique learning and development requirements.[23]

---

[21] Meister, Jeanne C. Corporate Universities: Lessons in Building a World-Class Work Force. McGraw-Hill, 1998, pg x.

[22] Interview with Mr. Tim Derrick, General Electric Energy. September 2005.

[23] http://www.corpu.com/services/cu_design.asp Last accessed October 9, 2005.

Graniterock and Corporate Universities: Graniterock maintains a virtual corporate university consisting of subject matter experts and guest lecturers. Employees regularly attend "classes" to further their understanding of new technologies, share and communicate ideas and technical issues, or attend change management seminars. This education contributes to organizational learning and builds a capability for responsiveness and business intuition.

Motorola CGISS and Corporate Universities: CGISS uses its Learning Community to access the educational expertise of Motorola University and Worldwide Learning Services. CGISS educates and cultivates its employees in the latest business trends, management science, and technical solutions to further its competitive advantage.

5. Embedded Human Capital Programs

High performance, 21st century organizations have adopted new paradigms concerning human capital development. Figure 2.12 demonstrates the shifts from yesterday's practices to more update, representative models of the 21st century worker.

Transforming the Way We Do Business

Yesterday	Today
Transaction-oriented	Strategic, enterprise approach
Isolated Workers	Knowledge-bases, collaborative workers
Local information	Shared business intelligence
"Silos" of data	Integration with Logistics, Finance & other Communities
No common architecture	Enterprise Architecture
Stand alone applications that lack interoperability	Net-centric, interoperable applications
Redundant systems; capability gaps	Rationalized systems
Tactical utility to individual programs	Strategic Value to the Department
Long cycle times and transaction costs	Decreased cycle times and transaction costs

Figure 2.12 Transforming the Way We Do Business [Ref: Department of Defense Enterprise Capabilities Brief delivered by Ms. J. Lisa Romney at the 2005 ASMC PDI]

Figure 2.12 highlights the overall trend from isolation toward collaboration. Additionally, organizations realize the importance of effectively managing work and individuals. Leaders must cultivate good mid-level managers, giving them the tools,

responsibility and accountability to cultivate, educate, and inspire workforces to achieve their goals. Research demonstrates that highly effective organizations possess organizational trust, allowing leaders to delegate, eliminate redundancy, and foster a collaborative environment. Rewards and incentives play instrumental roles in recruiting, retaining, and shaping the desired behavior.

The key is to embed these human capital programs within business processes and practices. Human capital strategies must compliment business strategies and employ similar and linked systems of measures to accurately report the value of human capital in attaining business objectives.

Graniterock and Embedded Human Capital Programs: Graniterock employs Individual Professional Development Plans (IPDPs) to link corporate goals with employee business and professional development goals. The employee goals shape behavior by encouraging innovation, efficiencies, and growth. Leadership's high expectations create an atmosphere of innovation, sharing, and continuous improvement. Individual and team recognition programs, communication vehicles, trust, and loyalty all factor into cultivating a workforce that strives to achieve business goals.

Motorola CGISS and Embedded Human Capital Programs: Like Graniterock, Motorola CGISS links individual performance metrics with corporate business objectives through Performance Excellence Scorecards. Every employee begins an evaluation cycle understanding and agreeing to their performance goals. Motorola CGISS provides comprehensive recognition programs, educational opportunities, community involvement activities, and professional development programs to enhance and shape its high performance organization. Attention is given to every detail of human and business integration.

6. Consultants

No single organization has all the answers to the various business challenges that arise throughout any given year. Collaboration and cooperation with other business experts often yields alternatives that would have otherwise been ignored, rejected, or

unknown. Today, many corporations turn to business management consultants outside their own organizations for assistance.

Management consulting firms may provide the following services:

> The identification and cross-fertilization of best practices, analytical techniques, change management and coaching skills, technology implementations, strategy development or even the simple advantage of an outsider's perspective. Management consultants generally bring formal frameworks or methodologies to identify problems or suggest more effective or efficient ways of performing business tasks.[24]

Figure 2.13 summarizes research into the advantages and disadvantages of hiring external consultants:

Cited advantages of hiring external consultants:

- Independent, objective, business management professionals
- Established credibility with demonstrated experience in business management or process improvement
- Experienced in the art of facilitation and use of proprietary methodologies to find the most effective solution
- Ability to leverage the knowledge capital of the entire consulting firm to find the right solution
- Expertise in developing alternatives
- Rapid dissemination of new frameworks, tools and techniques throughout large companies
- Innovation in areas such as strategy is presently dominated by management consultants, not by managers or academics.
- Business management competence not available internally
- Commitment of time and resources to find solutions
- Hiring external consultants is a mechanism to shape the workforce quickly and effectively

Cited disadvantages of hiring external consultants:

- Potential to focus on the wrong problem, thereby solving a tactical but not a strategic issue
- Perception that by hiring external consultants management has failed
- Expensive
- Not immediately available for tasking; must have a contracting mechanism in place
- Unfamiliar with culture, organizational politics, and informal networks
- Usually absent during implementation of their recommendation
- Ambiguous Client doesn't have a metric on effectiveness of advice/recommendation
- Surrendering internal intellectual capital and potential competitive advantages
- Deterioration of in-house analytical/diagnostic capability

Figure 2.13 Advantages and Disadvantages of Hiring External Consultants

In the end, the decision to adopt a business technique proposed by an external consultant rests solely with an organization's leadership. That leadership decision should be based on a fundamental understanding of the problem, the culture, and the desired outcomes upon implementing the chosen technique. No doubt some companies have documented results that prove the effectiveness of an adopted business improvement

[24] Definition of Management Consulting. Wikipedia. http://en.sikipedia.org/wiki/management_consulting Last accessed: September 30, 2005.

initiative – GE and Six Sigma for example. However, the following passage from Ingersoll-Rand's CEO, Herbert L. Henkel, clearly advises organizations to build the foundation before grasping at the most recently hyped business initiative:

> Businesses must prepare carefully for the adoption of tools such as Six Sigma. Six Sigma is a powerful methodology, but companies need to implement it on top of a strong foundation of teamwork, commonly shared goals, and a commitment to change to make it worthwhile. Lots of companies make the mistake of launching into Six Sigma without this foundation, and their efforts miss their mark.[25]

Some organizations use internal consulting groups, believing that their personnel possess the knowledge and creativity to identify and improve business efficiencies, customer satisfaction rates, product quality, and process improvements in a manner equal to or better than external management consultants.

Internal consultants provide the following key benefits:

- Respond easily to new problems as they arise or spot them before they become significant,
- Possess valuable corporate knowledge,
- Understand the culture and organizational politics surrounding change and/or innovation,
- Personally accountable for their work; their job does not end with a final presentation but continues through implementation and measurement,
- Professional development; challenging environment for the company's most talented personnel,
- Once established, more economical than using outside consulting firms,
- Creating and retaining business intelligence and intellectual capital through their work that benefits the entire corporation.[26]

---

[25] Ingersoll-Rand website. The Insider's Advantage. www.irco.com/pressroom/businessperspectives/generaloperations/insideradvantage_print.html Last accessed October 12, 2005.

[26] Levey, Jonah. Outside In: The Benefits of Internal Consulting. Raines International website: www.rainesinternational.com/knolwedgedetail.cfm?articleID=2 Last accessed August 2, 2005.

Graniterock and Consultants: Graniterock uses both ad hoc internal teams and external consultants to address emerging business opportunities and threats. Graniterock recognizes that the business world changes rapidly and in order to keep pace they must cultivate a business savvy workforce augmented by external management consultants.

Motorola CGISS and Consultants: Motorola CGISS hires external consultants as a source of independent analysis, a reviewer or evaluator of strategic management, or a component of business intelligence. However, Motorola CGISS is more inclined to tap its own network of research laboratories, internal business community of experts, or front line employees to develop the next communications innovation. In fact, employees are encouraged to submit innovations during their semiannual performance reviews. Motorola CGISS' business processes encourage and incorporate internally developed and implemented business practices and innovations.

F. CHAPTER SUMMARY

This chapter summarized the research conducted into the Malcolm Baldrige National Quality Award criteria and highlighted two Baldrige Award recipients: Graniterock and Motorola CGISS. The Award analysis reveals six key business transformation enablers: Business Management Integration, Business Intelligence, Communities of Practice, Corporate Universities, Embedded Human Capital Programs, and Consultants. The author contends that possession of these features enables an organization to transform its business operations and in time, sustain business excellence.

Chapter III, DoN Business Transformation Assessment, evaluates the DoN Transformation effort according to the significance of its inclusion of the six identified business transformation enablers.

THIS PAGE INTENTIONALLY LEFT BLANK

III. DON BUSINESS TRANSFORMATION ASSESSMENT

A. INTRODUCTION

This chapter presents a cursory assessment of the current Navy business transformation effort using the previously identified six business transformation enablers: Business Management Integration, Business Intelligence, Communities of Practice, Corporate Universities, Embedded Human Capital Programs, and Consultants.

This analysis reveals a strategic weakness in the Navy's approach to business transformation: the absence of a business transformation coordinating entity that possesses the resources to effectively move the Navy toward business excellence. The key enabler, Business Management Integration, is conspicuously absent. Further, evidence remains ambiguous on the effective employment of the other key business transformation enablers within the Navy's business transformation strategies and execution.

The next chapter, Center of Navy Business Excellence, examines one organizational solution to filling the recognized gap in Navy strategic business transformation.

B. BUSINESS MANAGEMENT INTEGRATION

DoN business transformation is not a new effort. Several major laws have been passed that were designed to stimulate business management reform within the DoN. Specific legislation includes, but is not limited to:

The President's Management Agenda (PMA), announced in the summer of 2001, is an aggressive strategy for improving the management of the Federal government. The PMA clearly articulates the reform goal:

> The President has called for a government that is active but limited, that focuses on priorities and does them well. The same spirit should be brought to the work of reform. Rather than pursue an array of

> management initiatives, we have elected to identify the government's most glaring problems – and solve them. The President's Management Agenda is a starting point for management reform.[27]

Eight years prior to President Bush's PMA, the Government Performance and Results Act (GPRA) of 1993 sought to shift the focus of government decision-making and accountability away from an activities-focus to a results-focus, such as real gains in employability, safety, responsiveness, and program quality. Under the Act, agencies are to develop multiyear strategic plans, annual performance plans, and annual performance reports.

Eleven years prior to President Bush's PMA, the Chief Financial Officer's Act (CFO Act) of 1990 was intended to accomplish the following:

1. Bring more effective general and financial management practices to the Federal Government through statutory provisions which would designate a Chief Financial Officer in each executive department and in each major executive agency in the Federal Government.
2. Provide for improvement, in each agency of the Federal Government, of systems of accounting, financial management, and internal controls to assure the issuance of reliable financial information and to deter fraud, waste, and abuse of Government resources.
3. Provide for the production of complete, reliable, timely, and consistent financial information for use by the executive branch of the Government and the Congress in the financing, management, and evaluation of Federal programs.

Federal management reform legislation is voluminous. The following selected DoN strategy documents translate the Presidential and Congressional business transformation mandates into DoN business visions, strategies and goals.

---

[27] The President's Management Agenda. Office of Management and Budget. August 2002. p. 4. For more information: http://www.leadership.opm.gov/content.cfm?CAT=TPMA-GTG Last accessed October 12, 2005.

1. Sea Power 21

Then Chief of Navy Operations, Admiral Vern Clark, promulgated the Navy's 21st century vision in a *Proceedings* article in October 2002:

> To realize the opportunities and navigate the challenges ahead, we must have a clear vision of how our Navy will organize, integrate, and transform. 'Sea Power 21' is that vision. It will align our efforts, accelerate our progress, and realize the potential of our people. 'Sea Power 21' will guide our Navy as we defend our nation and defeat our enemies in the uncertain century before us.[28]

Three years later, Sea Power 21 continues to guide the Navy's 21st century warfighting vision and transformation initiatives. Sea Power 21 is comprised of seven integrated and complimentary components as depicted in Figure 3.1.

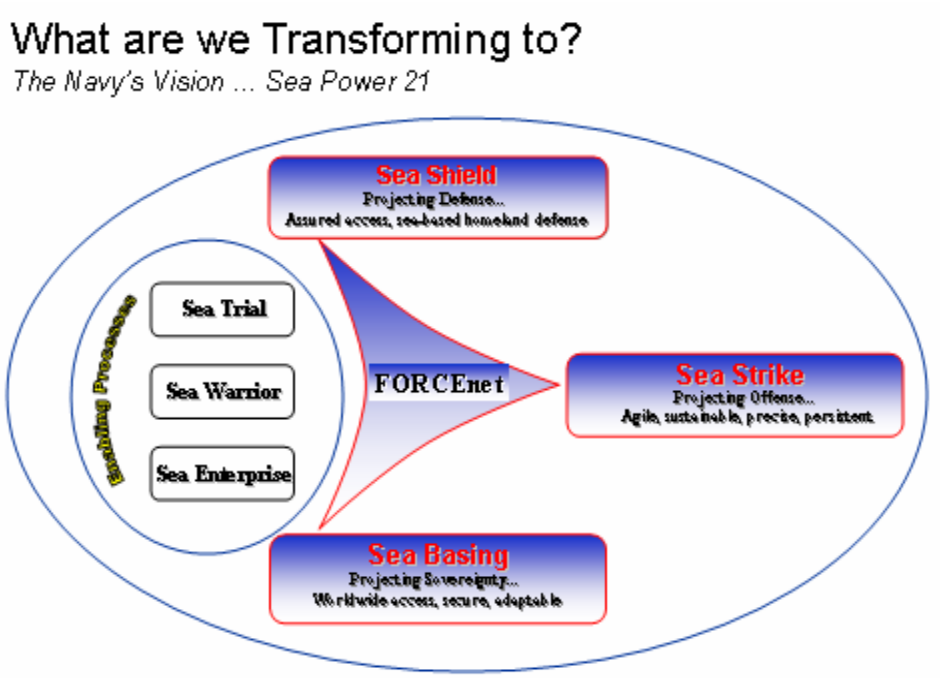

Figure 3.1 The Seven Components of Sea Power 21 [Ref: VADM McCarthy brief, *The Case for Transformation*, delivered to the Executive Business Course, 08 Jun 05, slide 14]

[28] Clark, Admiral Vern. Projecting Decisive Joint Capabilities. Proceedings, October 2002.

Sea Power 21 has three organizational areas: 1) three warfighting concepts, 2) one integrating concept, and 3) three supporting concepts. The warfighting concepts include:

1. *Sea Strike* – this concept ensures the Navy remains focused on projecting precise and persistent offensive power. Through information dominance enabled by networked battlespace sensors and robust intelligence analysis, the Navy will deliver accurate, timely, and devastating fire power within a joint environment.

2. *Sea Shield* – this concept expands the defensive role of naval power to include not only the Navy's ships and units, but the U.S. homeland and its national interests. Technologies and concepts underlying Sea Shield include Theater Missile Defense, direct-energy weapons, greater emphasis on joint and combined coalitions, networked intelligence, and advancements in unmanned aerial and subsurface platforms.

3. *Sea Basing* – this concept presumes that future shore based operations and permissible country over-flights will be unresponsive to asymmetric threats and in fact may be unattainable. Therefore, Sea Basing, the ability to project power and operations from the sea becomes more important to achieve U.S. objectives. Sea Basing involves forward pre-positioning of war materiel and troops in potentially hostile areas, global command and control, and the ability to sustain the fight without a shore foothold.

The integrating concept is *FORCEnet*. FORCEnet outlines the architectural framework that must exist for the effective communication and information exchange during 21st century warfare. The warfighting concepts outlined above, Sea Strike, Sea Shield, and Sea Basing, rely exclusively on sharing real-time data to give the Navy a decisive strategic advantage and improve effects-based operations. FORCEnet is the backbone, the glue, that harnesses the disparate battlespace data into structured networks, allowing the Navy and associated partners to be achieve significant information dominance.

Sea Power 21's three supporting concepts, or enabling processes, include:

1. *Sea Trial* – led by Naval Warfare Development Command, Sea Trial is a process of accelerating promising new naval warfighting technologies and concepts from

ideas into reality. Sea Trial takes advantage of experimentation, exercises, and an innovative workforce to equip the Fleet with improved capabilities.

2. *Sea Warrior* – this organizational process targets the professional and personal development of Navy personnel. Sea Warrior encompasses an array of strategies aimed to improve workforce recruiting, retention, training, and performance with the goal of creating a high performing organization for the 21st century.

3. *Sea Enterprise* – this organizational process targets business management and operations throughout the Navy. ADM Michael G. Mullen wrote the following about the Sea Enterprise effort, "This is not about turning the Navy into a corporation. The Navy's business remains war fighting. Nevertheless, we have a unique opportunity to fundamentally alter the business of putting combat power to sea."[29] This vision punctuates the Sea Enterprise magnitude and breadth: fundamental changes to the business of manning, training, and equipping the naval force.

The following section provides a more in-depth review of Sea Enterprise as currently envisioned and structured.

2. Sea Enterprise

VADM Justin "Dan" McCarthy assumed duties and responsibilities as Director, Material Readiness and Logistics (OPNAV N4) in August 2004. As such, VADM McCarthy is also the sponsor of Sea Enterprise.

VADM McCarthy stresses three Sea Enterprise Strategic Imperatives:

#1: Change Behaviors: Promote enterprise perspective, focus on productivity, leverage ideas/innovation, divest non-core capabilities.

#2: Improve Structures and Processes: Build on existing initiatives, identify better ways of doing business, focus on metrics…to drive performance.

#3: Harvest Savings: execution accountability, financial flexibility.[30]

---

[29] Mullen, ADM Michael G. Sea Enterprise: Resourcing Tomorrow's Fleet. Proceedings, 2004: p. 3.

[30] VADM McCarthy brief, *The Case for Transformation*, to the Executive Business Course, 08 June 05; slide 20.

Figure 3.2 is a familiar depiction of the Sea Enterprise strategic imperatives.

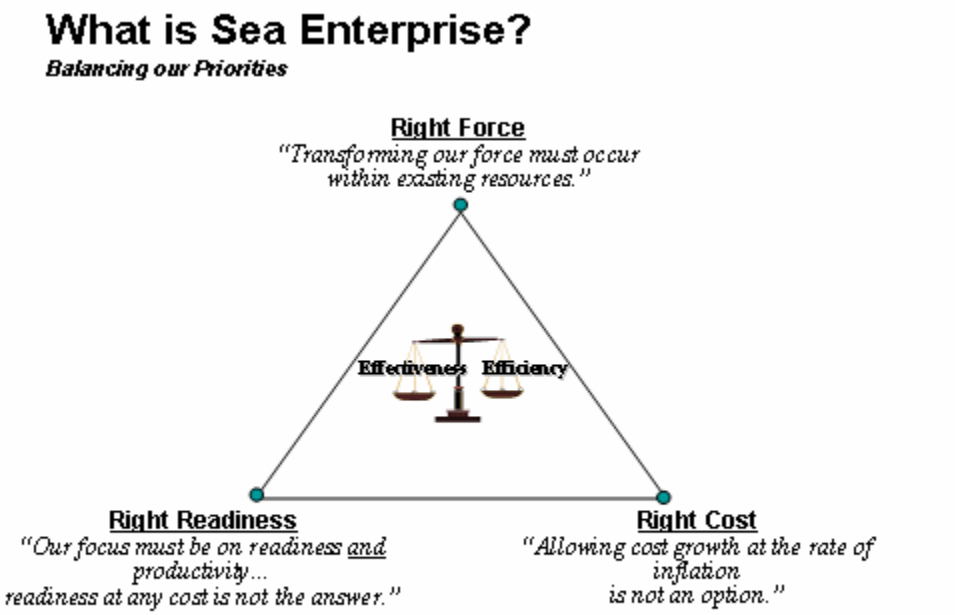

Figure 3.2 Sea Enterprise Strategic Imperatives [Ref: VADM McCarthy brief, *The Case for Transformation*, to the Executive Business Course, 08 Jun 05; slide 19.]

Congruent with Naval Power 21 and Sea Power 21, N4's vision of Sea Enterprise seeks to improve organizational alignment, refine requirements, and reinvest the savings to help the Navy recapitalize and transform today's force. Fundamental to the attainment of these goals is a culture of continuous business improvement, creating better processes to deliver the right products to the Fleet.

By focusing leaders on leadership, outputs and execution, Sea Enterprise stimulates innovations that improve business effectiveness. Key objectives of Sea Enterprise include:

- Leverage technology to improve performance and minimize manpower costs
- Promote competition and reward innovation and efficiency
- Aggressively divest non-core, under-performing or unnecessary products, services and production capacity

- Foster creativity and boldness in innovation
- Maximize in-service capital equipment utilization
- Merge redundant efforts and minimize life-cycle costs
- Challenge every assumption, cost and requirement.[31]

Figure 3.3 summarizes the actual and anticipated savings resulting from Sea Enterprise business initiatives from the perspective of N4. A total of $44.8 billion has been reallocated throughout Presidential Budgets FY03-06.[32]

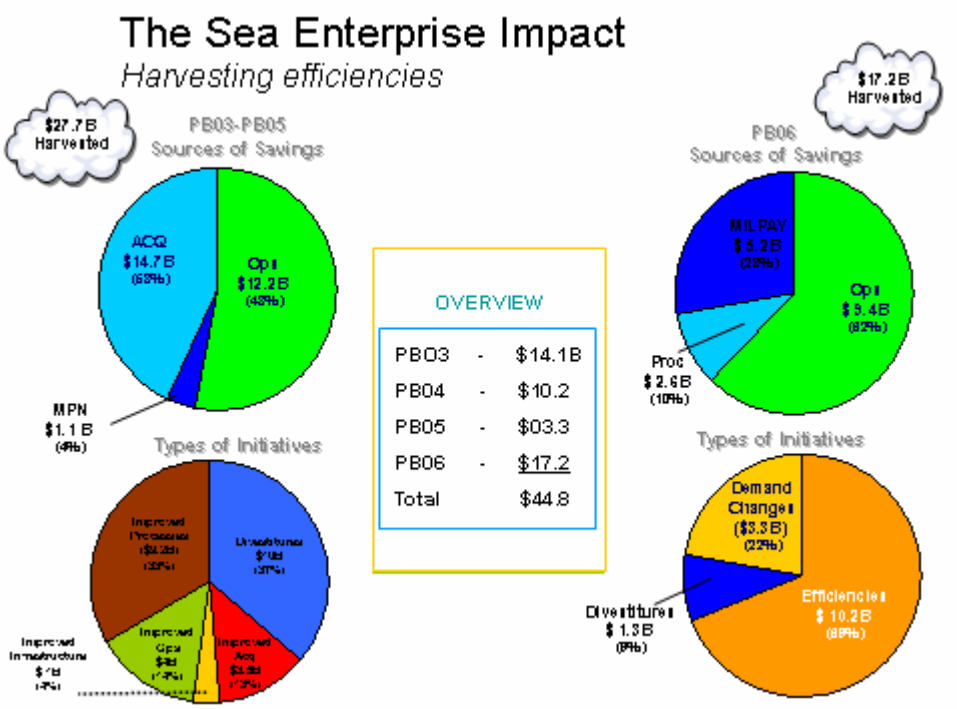

Figure 3.3 Budgetary Impacts of Currently Identified Sea Enterprise Initiatives [Ref: VADM McCarthy brief, *The Case for Transformation*, to the Executive Business Course, 08 Jun 05; slide 31]

[31] VADM McCarthy brief, *The Case for Transformation*, to the Executive Business Course, 08 June 05. slide 18.

[32] LT Jason Miller's thesis, *An Analysis of the Sea Enterprise Program*, explores the terminology and accounting behind the "realized savings" of $44 billion.

3. DoN Corporate Business Council

The DoN Corporate Business Council (DoN CBC), a transformation of its predecessor the Sea Enterprise Board of Directors (SEBOD), leads the Sea Enterprise business revolution within the Navy.

As outlined in the DoN CBC Charter, the purpose of the DoN Corporate Business Council is to provide Navy corporate leadership and governance over enterprise business process improvement efforts. The Council is a forum empowered to act, by identifying and executing Sea Enterprise objectives. The primary responsibilities of the CBC include:

1. Further Sea Enterprise goals through routine engagement with Echelon II commands to foster a culture of productivity and continuous improvement.
2. Develop, articulate, advocate and ensure the execution of high potential, cross-functional enterprise initiatives. Assign champions as necessary to implement initiatives.
3. Ensure savings are harvested and returned to the corporation for reallocation against other Navy priorities. Redistribution of harvested savings is not under the purview of the CBC.
4. Track and integrate Echelon II business initiatives.
5. Manage across functional and organizational seams to ensure opportunities for enhanced performance and organizational efficiencies are not lost in the "white space."
6. Sponsor investments in cross-enterprise efficiency initiatives.
7. Facilitate barrier removal and organizational impediments to change.
8. Address policy changes necessitated by the transformation effort.
9. Ensure Sea Enterprise and CNO Echelon II Execution Review lessons-learned are leveraged across the enterprise, where appropriate.

10. Ensure consistency of enterprise operational and financial objectives with the Sea Enterprise vision and objectives.

11. Provide progress reports to VCNO/UNSECNAV on a quarterly basis.

12. Ensure senior leadership awareness of significant issues impacting the efficient and effective delivery of products and services to the warfighter.

13. Leverage the 3-star BOD when needed to remove barriers and support transformational, enterprise level, business process initiatives.[33]

The CBC is accountable to the Vice Chief of Naval Operations (VCNO) and the Under Secretary of the Navy (UNSECNAV). The Director, Material Readiness and Logistics (OPNAV N4) is the CBC sponsor and serves as the interface between the CBC and the 3-star Board of Directors. The Director, Logistics Planning and Innovation Division (N40) serves as the Executive Secretary of the CBC. N40 staff members provide all Sea Enterprise coordination, communication, and documentation. Figure 3.4 outlines the CBC membership.

[33] DoN Corporate Business Council Charter, 22 October 2004, p. 2.

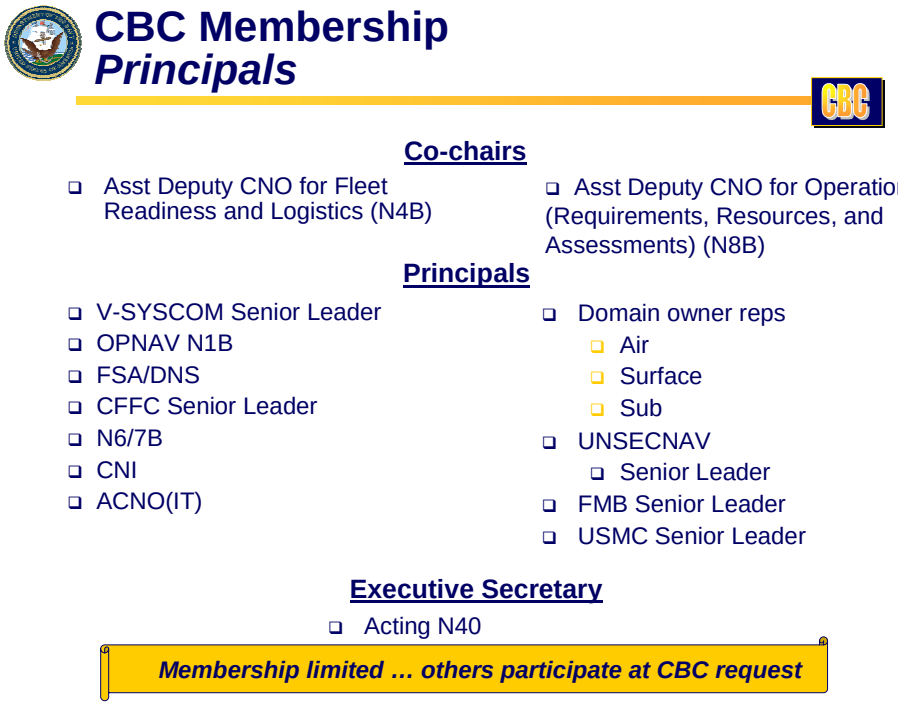

Figure 3.4 CBC Membership [Ref: CBC Membership Principals_18 Aug 05 slide]

The CBC members meet semi-monthly to discuss current business improvement initiatives and render decisions on the required next steps toward realizing changed business management and/or process efficiencies. A review of the current tasking list on the Sea Enterprise homepage reveals nearly 100 open action items, some of which include:

- Contractor Support Services (CSS) Analysis: Depending on the source and calculation, the Navy spent between $6 billion and $10 billion in FY2004 on contractor support services;
- USMC Strategic Purchasing Initiative: This initiative includes Strategic Sourcing and Commodity Council work (external strategy) and process analysis and improvement (internal strategy);
- Information technology issues to include; ACNO-IT stand-up, NMCI, cell phones, PDAs;
- Supply Chain Procurement Initiative.

Figure 3.5 below depicts the current CBC organizational structure. As mentioned above, the CBC is sponsored by N4 but reports to the VCNO and UNSECNAV on issues related to Sea Enterprise and business transformation. Under the Sea Enterprise construct, the N40 office has been assigned the title Transformation Program Office (TPO), providing Sea Enterprise program management. N4 and N40 are also involved in the cultural change initiatives instigated by ADM Vern Clark's Echelon II visits.

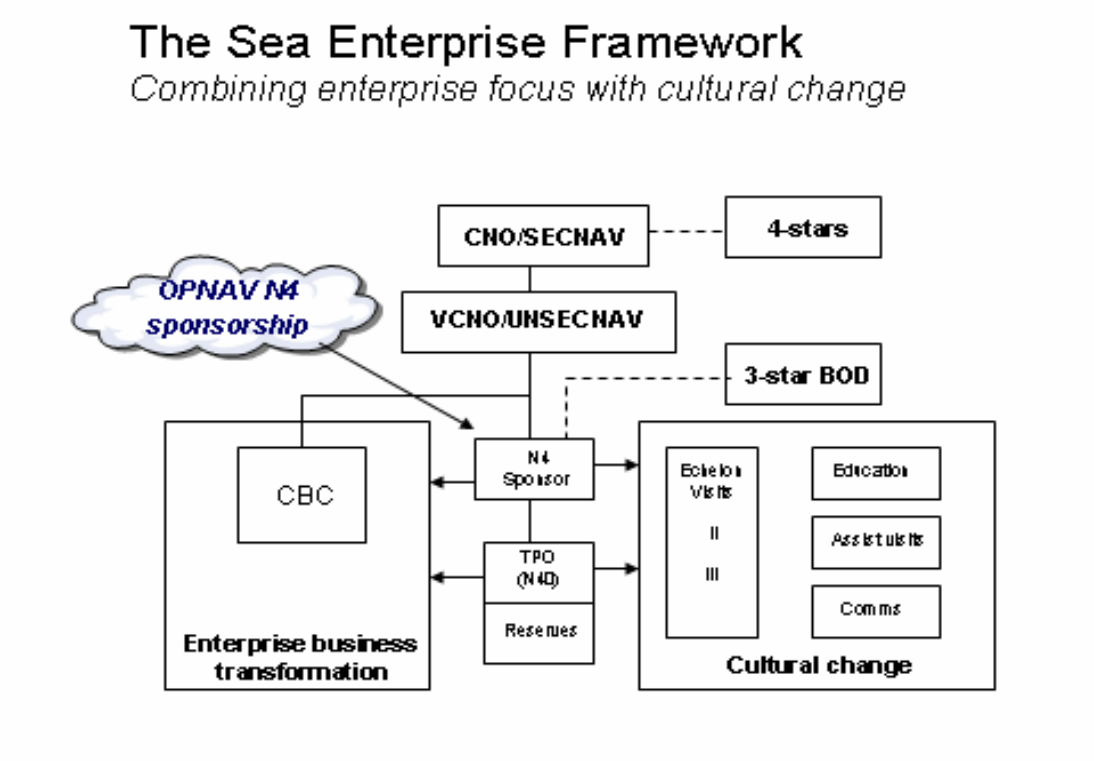

Figure 3.5 The Sea Enterprise Framework [Ref: VADM McCarthy briefing, slide 21]

4. DoN Financial Management Strategic Plan

The DoN Financial Management Strategic Plan outlines the Assistant Secretary of the Navy's (Financial Management and Comptroller) [ASN(FMC)] vision for financial management in the DoN and includes a business plan to facilitate the achievement of real financial results.[34] The Honorable Richard Greco, appointed by President Bush in

[34] Greco, The Honorable Richard, Assistant Secretary of the Navy, Financial Management and Comptroller. Transforming Today to Win Tomorrow, Financial Management Strategic Plan, DoN. April 2005; p. 1.

September 2004, currently serves as ASN (FMC). As ASN (FMC), Mr. Greco heads the DoN Office of Financial Management. Mr. Greco outlines the mission of the Office of Financial Management in his strategic plan as follows:

> We direct and manage the financial activities of the Department of the Navy. This means, on the one hand, overseeing the management of the annual budget and supporting processes, and, on the other hand, providing independent analysis to our constituent clients. We provide informed recommendations to the senior leadership of the Department of the Navy regarding the efficient and effective allocation of assets, consistent with the national security priorities of the President and the Secretary of Defense. We provide for the development of a superior, world-class financial management work force, and we commit to the American public the proper stewardship of the resources they commit to us.[35]

Mr. Greco highlights several strategic areas for providing superior financial competence within the 9000-member Navy and Marine Corps financial management team. Addressing human capital development, Mr. Greco states, "This means ascertaining the professional competencies needed to execute the financial management function, designating the appropriate educational and training resources, and ensuring that our workforce sees clearly a career path that is both rewarding and fills one of out most critical needs."[36]

The Financial Management Strategic Plan emphasizes the need to move the current financial management community beyond its traditional roles, into transformed roles that "are designed so that we become business partners with other business functional communities, leveraging our knowledge of the corporate enterprise to create greater value for it."[37]

Mr. Greco discusses the requirement to shape the business workforce now for future business management and operation challenges. Key strategies to infuse DoN

---

[35] Greco, The Honorable Richard, Assistant Secretary of the Navy, Financial Management and Comptroller. Transforming Today to Win Tomorrow, Financial Management Strategic Plan, DoN. April 2005; p. 3.

[36] Greco, The Honorable Richard, Assistant Secretary of the Navy, Financial Management and Comptroller. Transforming Today to Win Tomorrow, Financial Management Strategic Plan, DoN. April 2005; p. 7.

[37] Greco, The Honorable Richard, Assistant Secretary of the Navy, Financial Management and Comptroller. Transforming Today to Win Tomorrow, Financial Management Strategic Plan, DoN. April 2005. p. 9.

culture with a new business partnering behavior include enhancing the Presidential Management Fellowship program[38] and potentially implementing a Business Fellows Program to recruit and retain MBA graduates into the DoN workforce.

Mr. Greco specifically addresses business process transformation in three ways:

1. To improve the Navy's ability to identify potentially significant new technologies from commercial sources, and to rapidly and efficiently exploit these technologies for use in military systems.

2. To improve business practices through improved analytical tools and models by developing quantitative measures to assess the quality of the Navy's portfolio of system acquisitions. This endeavor shifts the Navy's requirements generation methodology from a program-centric model to a business portfolio model.

3. To propose innovative solutions to meet the needs of our core constituencies and act as a resource to help them achieve their goals.

Specific business plan elements for execution in 2005 include: develop a basic FM-101 course; engage in MBA-level recruiting and positions as proposed by the Defense Business Board[39]; establish a business process transformation group to support the Under Secretary; develop and execute a communications strategy to articulate clearly the elements of business process transformation.

5. DoN Information Management and Information Technology Strategic Plan for FY 2004-2005

The Secretary of the Navy (SECNAV) recently restructured the Chief Information Officer (CIO) office by creating the Naval Information Management (IM)/Information

[38] The Presidential Management Fellowship program attracts outstanding professionals from various graduate school programs, cultural backgrounds, and career fields who want to contribute to Federal public policy and program formulation. Fellows spend up to two years rotating through selected Federal agencies before committing to full-time Federal employment.

[39] The Board shall provide the Secretary of Defense, through the Deputy Secretary of Defense, independent advice and recommendations on effective strategies for the implementation of best business practices of interest to the Department of Defense. The ultimate objective of this advice is to enhance the efficiency and effectiveness of organizational support to the nation's warfighters. http://www.dod.mil/dbb/charter.html Last accessed November 13, 2005.

Technology (IT) Enterprise to strengthen, align, and integrate IM/IT efforts throughout the Department.[40] The DoN IM/IT Team is comprised of the DoN CIO, the Deputy CIO (Navy) and the Deputy CIO (Marine Corps). SECNAV created Deputy CIOs to collectively provide the executive leadership necessary to align Department-wide IM/IT efforts with warfighter priorities. In addition, as of July 2004 the Deputy CIO (Navy) serves as the Assistant Chief of Naval Operations for Information Technology [ACNO-(IT)] to advise and consult to the Chief of Naval Operations on IT matters.[41] Mr. David M. Wennergren is the current DoN Chief Information Officer and VADM James D. McArthur, Jr. is the current Deputy CIO (Navy) and ACNO-(IT).

The DoN IM and IT Strategic Plan FY 2004-2205 outlines the overarching focus:

Vision: community vision is a joint net-centric environment that delivers knowledge dominance to the Naval warfighting team.

Mission: Transform Naval Information Management/Information Technology to provide affordable, next generation capabilities to the warfighter.

Governing Principles: enable warfighter readiness; lead continuous IM/IT transformation; implement the President's Management Agenda, optimize information resources; build integrated, joint IM/IT solutions; ensure information access; measure performance; and adopt best practices.[42]

The Strategic Plan for FY 2004-2005 lists six goals that must be achieved in order to realize continued and future DoN IM/IT dominance. Specific business operation initiatives and/or concepts are highlighted in Table 2.1:

[40] DoN IM and IT Strategic Plan for FY 2004-2005, FY2005 Update; p. 1.

[41] See NAVADMIN 236/04, OPNAVNOTE 5430, or https://ekm.netwarcom.navy.mil/netwarcom/nnwc-nipr/index.htm for more information on ACNO (IT).

[42] DoN IM and IT Strategic Plan for FY 2004-2005, FY2005 Update. p. 5.

Goal 1:	**Develop and maintain a secure, seamless, interoperable Naval IM/IT infrastructure**	
	Objective:	Develop the architecture, standards, and protocols for the FORCEnet "blueprint."
	Success Story:	Navy/Marine Corps Intranet
Goal 2:	**Transform applications and data into web-centric Naval capabilities**	
	Objective:	Develop an Enterprise portal framework and deploy the Naval/Marine Corps Portal to provide access to Enterprise applications, web services, and authoritative data sources.
	Objective:	Create a Naval shared data environment to enable the sharing of information across the Enterprise.
	Success Story:	Department of the Navy Application and Database Management System (DADMS)
Goal 3:	**Provide Full Dimensional Protection that ensure Naval warfighting effectiveness**	
	Objective:	communities.
Goal 4:	**Ensure Naval IM/IT investments are selected, resourced, and acquired to optimize Naval mission**	
	Objective:	Implement a DON IM/IT capital planning process that validates IM/IT requirements as part of the POM/budget process and measures the value of IM/IT investments in meeting mission requirements.
Goal 5:	**Create optimized processes and integrated systems that enable knowledge dominance and Naval**	
	Objective:	Transform and streamline DON warfighting and business processes and systems.
	Objective:	Enable the cross-organizational sharing of knowledge among all decision makers.
	Objective:	Streamline IM/IT governance structures to ensure agile decision making
	Success Story:	Naval Reserve Knowledge Management Pilots, Navy Knowledge Online
Goal 6:	**Shape the IM/IT workforce of the future.**	
	Objective:	Transform the processes used to identify, recruit, manage, and sustain the IM/IT workforce.
	Objective:	Identify and sustain the required competencies and capabilies in the IM/IT workforce to meet current and emerging requirements.
	Objective:	Identify, develop, and provide relevant foundational IM/IT education and training for all Sailors, Marines, and Civilians
	Success Story:	Information Assurance Scholarship Program

Table 3.1 IM/IT Strategic Goals [Ref: DoN IM and IT Strategic Plan FY 2004-2005 (FY2005 Update)]

6. Navy Business Transition Plan

In September 2005, DoD released its Enterprise Transition Plan (ETP). The ETP, three volumes large, presents the overarching DoD business transformation strategy and includes each of the military unique business transformation plans. The ETP incorporated much of the work of the DoD Business Management Modernization Program (BMMP). See Appendix B for a detailed look at the BMMP and the congressionally mandated Defense Business Systems Management Committee (DBSMC).

Figure 3.6 depicts the DoN Business Transformation Vision as outlined in the ETP Volume I. Both the Marine Corp and Navy warfighting strategies are represented

along with five key business goals: seamless infrastructure, optimized processes/integrated systems, resource optimization, web-based capabilities, and aligning for transformation.

The Navy Business Transformation Plan highlights current efforts underway to achieve each of the specified five business goals including: numerous informational technology initiatives; Six Sigma, Lean, and process reengineering efforts; Functional Area Manager (FAM) portfolio management; human capital initiatives, enterprise resource planning; and financial management reform. For more information on the ETP, visit http://www.dod.mil/bmmp/ETP.html .

Figure 3.6 Navy Business Transformation Vision [Ref: DoD Enterprise Transition Plan; Navy Business Transformation]

a. Assessment of Business Management Integration and the Navy

The DoN and the Navy have issued several overarching business transformation strategies that highlight certain business objectives and goals. For instance, the Navy is currently adopting a Business Enterprise Architecture. To a limited extent, these strategies seem integrated and complimentary to the overall strategic

direction of the Navy. The Navy Transition Plan accurately summarizes numerous business initiatives. However, certain weaknesses stand out.

A systems framework is conspicuously absent from Navy business transformation management. Clearly, many business initiatives are underway. However, without integration, synchronization, and a systems perspective to link the initiatives, evaluate their contribution, prioritize development and implementation, and measure their results, the Navy produces a haphazard, inconsistent roadmap. Within its strategic documents, the Navy fails to identify the overall business transformation process, the players, the key decision-makers, and specific timelines. Rarely is a particular role or responsibility assigned to a specific person or organizational entity for execution. Measures linking the Navy corporate objectives are non-existent as is the cascading of measures from top Navy leadership through subordinate commands and eventually into employee performance scorecards. The Navy Business Transformation Plan assumes the requisite business knowledge is already possessed by the Functional Area Managers and that business integration among the 23 Functional Area Managers will occur.

The Navy CBC, meeting once every two weeks, presides over business transformation. Unfortunately, the CBC Board members perform this duty collaterally, as many of the Board members have other full-time responsibilities. In fact, the designated Sea Enterprise Transformation Program Office, N40, performs its business transformation duties collaterally as well. The Navy does not have a focused, dedicated, person or organizational entity to champion, integrate, and sustain the massive coordinating responsibilities incumbent upon a large organization embarking upon unprecedented business transformation.

C. BUSINESS INTELLIGENCE

Mr. Wennergren, the DoN Chief of Information Officer (CIO), presented a brief to the NPS student body during a SECNAV Guest Lecture. In this brief, Mr. Wennergren alluded to the incorporation of business intelligence into the Navy's IT and business systems and referenced several initiatives that are underway to support Navy end-users access and incorporate business intelligence into their daily decisions. Mr. Wennergren states:

> NMCI [Navy-Marine Corps Intranet], as well as the other networks that comprise the Global Information Grid (GIG), will enable data sharing that will allow the gathering, analysis, and use of data across the entire GIG. GIG Enterprise Services (GES) will operate over the common transport. GES includes all information services within the GIG. These core enterprise services will enable the federation of, and facilitate the composition of all information services across DoD using web services for machine-to-machine interface and browser-based capabilities for the human interface. The vision is for better, faster decision making through information sharing and agile creation of new capabilities through reuse of mission and/or business process elements. While having an enterprise network (like NMCI) is crucial to our ability to access authoritative data sources, the key to our success will be making these authoritative databases and systems available as web services, accessed through a portal. It will be this availability of information, regardless of whether we are at home, work, deployed, or on travel, that will truly unlock the intellectual capital of the Department and make it available "to the right person at the right time."

One DoN business intelligence initiative is Navy Knowledge Online (NKO). NKO is an example of an enterprise portal as depicted in Figure 3.7. Unlike an intranet, this portal can be personalized by each DoN member to reflect his or her interests, learning communities and business intelligence needs. Various "portlets" feed the portal display. Currently, NKO portlets include user-defined training opportunities, communities of practice, and news.

Figure 3.7 NKO Portal Display

NKO holds tremendous promise for allowing the DoN to integrate business intelligence applications into customized employee portals. This gets the business information into the right hands so that the best business decisions can be made whether in procurement, acquisition, or facilities management.

The future NKO portlets will be capable of displaying real-time organizational business metrics, inventory levels, budget information and any other pertinent business information that assists a DoN knowledge worker in accomplishing his or her work.

A second Navy business intelligence endeavor includes the adoption and incorporation of best business practices. First, the Navy specifically highlighted industry best practice adoption as an enabler of the Navy's transformation effort. Figure 3.6, taken from the 2005 DoN Communication Playbook, depicts the incorporation of best practices into the Navy as a central transformation tenet.

Figure 3.8 Navy Wants Best Practice [Ref: Playbook 2005 – Navy Strategic Communication Plan]

The following passage has a warfighting context, but can be easily applied to business operations:

> Sharing timely, accurate information across the fleet and the joint force provides a common operational picture. This heightened state of shared situational awareness is increasingly viewed as a cornerstone of transformation.[43]

Best practices function like the common operating picture: everyone shares the best available information to improve individual decisions and future plans.

a. Assessment of Business Intelligence and the Navy

The Navy recognizes the advantages and potential revolutionary implications of incorporating business intelligence processes and applications throughout the workforce. However, the current Navy focus is on information technology and integrating and rationalizing existing Navy IT systems through business enterprise architecture (BEA). While BEA and other IT solutions facilitate business intelligence sharing, deployment, and access, BEA and IT solutions do not explore the fundamental questions of "what" to do and "how" to do it. Designing an IT system to automate a flawed business process is not transformational.

The Navy must expand its incorporation of business intelligence to include the human capital, process, and practice components. Further, the Navy must establish a business intelligence clearinghouse that leads the methodical acquisition, analysis, management, and dissemination of business intelligence. This entity gives the Navy an expert capability for assessing the potential of adopting corporate business solutions within a military bureaucracy or inventing military specific business practices.

Though the Navy asserts it will only use business best practices, the Navy has not institutionalized a process for sharing best business practices across the organization. Good ideas remain stovepiped and organizations in need of business practice assistance continuously perform sub-optimally.

---

[43] Playbook 2005 – Navy Strategic Communication Plan, p. 9

D. COMMUNITY OF PRACTICE

The American Society of Military Comptrollers (ASMC) is the Navy business professionals' community of practice. ASMC, a non-profit educational and professional organization, is open to all DoD and Coast Guard Financial Management personnel.

ASMC's mission is to promote the education and training of its members, and support the development and advancement of the profession of military comptrollership. Military comptrollership is defined as the professions of financial management in the Department of Defense and Coast Guard. It includes the fields of: Accounting and Finance, Administrative Support, Auditing, Budgeting, Comptrollership, Cost Analysis, Financial Management, Management Analysis, Program Analysis, Resource Management, Statistics, and supporting activities.[44]

Organizationally, ASMC currently has 140 chapters with 17,000 members worldwide. ASMC sponsors an annual Professional Development Institute (PDI) to educate its members and support learning and best practice sharing.

ASMC maintains a certification program, the Certified Defense Financial Manager (CDFM). This professional certification program measures the knowledge and competencies of individuals in the military comptrollership profession. CDFM originated to supplement private sector certification with DoD unique contexts. Also, ASMC sponsors a National Research Program because "research has been defined as the systematic quest for undiscovered truth."

ASMC publishes a monthly magazine, The *Armed Forces Comptroller*, and a monthly newsletter, *National News*. ASMC also has a bulletin board on its website that allows anyone to post questions and answers to exchange valuable knowledge.

a. Assessment of Community of Practice and the Navy

ASMC provides a generic community of practice for Navy business professionals. Research was inconclusive on the value gained by being an ASMC member. The PDI and communication vehicles ASMC distributes build the business knowledge base, educate members, and share ideas. However, no evidence suggests that

[44] http://www.asmconline.org/

the Navy seeks out and incorporates ASMC member business advice on creative business ideas, innovative processes and practices, or strategic direction. Navy members of ASMC are not integrated into the comprehensive Navy business transformation roadmap; consequently, this professional resource goes underutilized.

Appendix A includes a review of the American Society of Civil Engineers (ASCE). The ASCE model provides additional constructs and networking programs to further cultivate a vibrant, engaged community of practice.

E. CORPORATE UNIVERSITIES

The Naval Postgraduate School (NPS) is an academic institution whose mission is "to provide relevant and unique advanced education and research programs that increase the combat effectiveness of United States and Allied armed forces and enhance the security of the United States."[45]

NPS, as the Navy's corporate university is:

1. Essential to Navy and DoD for ensuring combat effectiveness

2. Integral to joint and combined professional military education

3. Linked to the Unified Combatant Commanders and their requirements

4. Vital to other national security organizations, agencies & nations for national security

5. The nation's national security research university.[46]

Degree programs are facilitated through the following Schools, Institutes, and Interdisciplinary Programs:

Schools

- Graduate School of Business & Public Policy – accredited by the Association to Advance Collegiate Schools of Business (AACSB). The

[45] Naval Postgraduate School website: http://www.nps.edu Last accessed September 11, 2005.

[46] Naval Postgraduate School website: http://www.nps.edu Last accessed September 11, 2005.

MBA program is further accredited by the National Association of Schools of Public Affairs and Administration (NASPAA).

- Graduate School of Engineering & Applied Sciences – accredited by the Accreditation Board for Engineering and Technology (ABET)
- Graduate School of Operational & Information Sciences
- School of International Graduate Studies

Institutes

- Cebrowski Institute for Information Innovation and Superiority
- The Modeling Virtual Environments and Simulation (MOVES) Institute
- Wayne E. Meyer Institute of Systems Engineering

Interdisciplinary Programs

- Systems Engineering Academic Committee
- Center for Executive Education
- Center for Information Systems Security Studies and Research
- Space Systems Academic Group

In addition, several Research Centers of Excellence have been established at NPS under the auspices of the Associate Provost and Dean of Research. A Research Center is a group of faculty/staff with a significant concentration of expertise in a particular area normally with an emphasis on applications. Table 3.2 highlights several centers that support the NPS educational mission and link NPS to the operational needs of the Navy and/or DoD:

Centers Located at or Affiliated with NPS
Aerodynamic Decelerator Systems Center
Center for Autonomous Underwater Vehicle (AUV) Research
Center for Civil Military Relations
Center for Contempory Conflict (CCC)
Center for Homeland Defense & Security
Center for Information Systems Security Studies and Research (CISR)
Center for Interdisciplinary Remotely Piloted Aircraft Studies (CIRPAS)
Center for Joint Services Electronic Warfare Simulation and Modeling
Center for Material Sciences and Engineering
Center for MASINT Research
Center for The Study of Potential Outcome
Center for Radiation Hardened Effects
Center for Reconnaissance Research
Center for Recruiting Innovation
Center on Terrorism and Irregular Warfare
Center for the Study of Mobile Devices and Communications
Software Engineering Automation Center (SEAC)
Cryptologic Research Center
Navy/NASA Joint Institute of Aerospace Sciences
Research Center for Military Applications of Space
Spacecraft Research and Design Center
Turbo-Propulsion Laboratory
Undersea Warfare Center
Vertical Flight Technology Center

Table 3.2 Centers located at or Affiliated with NPS

NPS sponsors several continuous learning, distributed learning and non-resident programs. NPS is expanding its non-resident programs through on-line courses, video-teleconferencing courses, and partnering with other academic institutions. Current partnerships that augment NPS' defense-related focus include:

• The Air Force Institute of Technology; providing an education that allows the conceptualization, development and use of weapons systems by our military forces.

• Naval War College; Joint Professional Military Education.

• Johns Hopkins University; Systems Engineering.

• University of Maryland, Smith School of Business; defense-related joint MBA.

• Stanford University; homeland defense, bioterrorism research, and teaching

• UC Santa Barbara; education and research

The Naval Postgraduate School offers executive education in many forms including an Executive MBA. The Center for Executive Education has the mission to "create and deliver high quality programs that help senior executives to better understand emerging strategic and policy issues and practices in co the opportunities and constraints provided within their organizational setting."[47] The center is committed to expanding existing ties with industry and other organizations and institutions, and to study emerging technologies, practices, and policies in order to enhance the capabilities of DoN/DoD systems, commands, people, and information.

An additional component under the Center for Executive Education is the Flag University, the name given to the overall effort to provide for the professional development of the Navy Admirals (FLAGS)/Senior Executive Service (SES) communities. The Executive Learning Officer (ELO) is the Program Manager of the Flag University.[48]

In summary, NPS is a strategic part of the research and development of military knowledge and applications in the 21st century. Research and education is focused on the current threats and challenges of today's dynamic world, providing warfighting commands with relevant information and well educated officers. The student body is not only joint, but combined and interagency, offering valuable networking and operational insight. NPS is transforming its education delivery mechanisms and bolstering its research assets through innovation and partnerships to reach as many people as possible while providing an effective, beneficial learning opportunity for both the individual and the DoD.

---

[47] Center for Executive Education website: http://www.cee.nps.mil Last accessed November 2005.

[48] Executive Learning Officer website: http://elo.nps.navy.mil. Last accessed November 2005

a. Assessment of Corporate Universities and the Navy

NPS, as the Navy's corporate university, provides postgraduate business education through the GSBPP. Though fundamental business concepts and theories are taught and explored, the learning experience remains unsynchronized with Navy business transformation. Corporate Navy business strategies and initiatives are not thoroughly discussed within GSBPP classes. An interview with the former Dean of GSBPP, Professor Douglas Brook, provides insight into the Navy's approach to business education:

> The Navy's business school is not recognized institutionally as a place of expertise, it is not the crown jewel. The Navy still maintains the 'Hurry up and get back to sea so you can catch up' view of business education.[49]

Absent from the list of centers at NPS is a Navy business excellence center. The Navy is depriving itself of a robust business transformation capability: the integration of expert business faculty, business students, and a center of business excellence at NPS. The Navy's corporate business university remains largely underutilized as an asset that can significantly contribute to business transformation.

F. EMBEDDED HUMAN CAPITAL STRATEGIES

On June 21, 2004 the Navy issued its Human Capital Strategy. The Navy articulately communicates its 21st century workforce vision in this key passage:

> Winning the global war on terrorism requires us to leverage technologies, business practices, human resources, and leadership principles to realize the full potential of our people in a global information age. To achieve this success, we require a total force of dedicated, courageous, innovative professionals-Sailors, and Marines (active duty and reserve), civilians, contractors, and volunteers-who can master the challenges of this new operational and business environment. The naval services – the U.S. Navy and the U.S. Marine Corps – must accelerate their transition from the industrial/Cold War era to the 21st century's global/information age. The message is clear – the DoN's strategic environment is shifting rapidly, deeply, and in all dimensions – social, economic, and political.[50]

---

[49] Interview with Dr. Douglas Brook. July 2005.

[50] Department of the Navy Human Capital Strategy, June 2004. p. 2.

The strategy begins by accepting a changed world and outlines the new characteristics of the future maritime force:

- Fully integrated operations,
- Information and networking superiority,
- Agility and flexibility,
- Situational awareness and integrated joint logistics
- Rapid planning processes with speedy, streamlined information processing, and
- The ability to tailor joint strikes to deliver calibrated effects at precise times and places"[51]

The strategy explores major developments affecting the DoN's Human Capital and notes the need for a new organizational construct:

> The age of the bureaucratic model of organizational design is rapidly coming to an end. The external environment all organizations will confront in the future will likely be characterized by-
>
> - Unprecedented complexity and rapid change,
> - Proliferation of threats from unexpected areas,
> - Expansion of what is both unknown and unknowable,
> - Explosion of the volume of data and information as well as access to then, and
> - Shrinking reaction times, complexity, and unpredictability of change."[52]

The strategy asserts that the way work is accomplished will change in order to meet the above business environment and lists the following attributes of future successful DoN organizations:

- Having resilient operations that can withstand a multitude of threats,
- Possessing the ability to analyze data rapidly and make real-time decisions (shorter assessment, decision, and action cycle times),
- Fostering creativity and being agile and reconfigurable as the environment changes,

---

[51] Department of the Navy Human Capital Strategy, June 2004 p. 4.

[52] Ibid, p. 5.

- Being integrated, coordinated, and focused,
- Being quick to learn how to perform better and quick to unlearn habit causing poor performance, and
- Capable of constant discovery and implementation of measurable improvements."[53]

In closing, the Human Capital Strategy suggests that the Navy will create new models to replace the legacy "one size fits all" models and authority and accountability will be vested in a process owner.

a. Assessment of Embedded Human Capital Programs and the Navy

The 2004 Human Capital Strategy espouses many of the attributes required for the 21st century organizations and workers. Its people-focused and system-focused goals recognize the complexity of human capital development. However, the strategy suggests what needs to be done without providing a roadmap or execution strategy. Neither the roles and responsibilities for researching and implementing these ideas were communicated nor was there a commitment to an implementation timeline. There was no mention of introducing and implementing individual performance measures that link to Navy corporate goals. The strategy communicates clearly that the current Navy human capital systems must transform, but the answers to the fundamental questions of "what" to change and "how" to change remain obscure.

The strategy provides little evidence of how the Navy intends to cultivate and integrate a workforce willing to embrace, adapt, and exploit emerging business intelligence or discover new ways of measuring productivity. Topics such as new incentive programs, revamped recruiting processes, outsourcing, contractor integration, methods to improve analytical and research capabilities, or alternatives to the bureaucratic organizational model go unmentioned.

[53] Department of the Navy Human Capital Strategy, June 2004, p. 5.

G. CONSULTANTS

The Navy procured $59.6 billion of supplies and services in FY2004, up from $56.6 billion in FY2003.[54] Of this FY2004 total, approximately $10 billion was used to procure external management consultants or other professional expertise.[55] A review of the Navy top 50 companies for procurement includes well known consulting firms such as Anteon International, Booz Allen Hamilton, CACI International, and Bearingpoint. Typically, these firms specialize in strategic management, implementation of business initiatives, process reengineering, and business best practices.

The Navy does not have an institutionalized internal consulting group. Currently, several system commands are training employees to be Six Sigma Black Belt. These commands will deploy these "consultants" within their organizations to discover more effective and efficient methods of conducting business and delivering Navy products.

a. Assessment of Consultants and the Navy

As explored in Chapter II and Appendix A, the decision to hire external consultants rests with senior leadership. However, both Graniterock and Motorola CGISS chose to reach inside their own ranks to discover needed business reform, recommend actions, and direct implementation. Both corporations used external management consultants to augment internal expertise.

The Navy's level of internal, enterprise-wide business expertise is remarkably low. Bureaucratic systems have existed so long that original business acumen has never been developed as a Navy core competency; therefore, it is not surprising that Navy leadership has turned frequently to external consultants for strategic business advice. However, research indicates a network of internal "consultants" that is familiar with the consulting and facilitating craft can be invaluable. Appendix A contains internal consulting research.

---

54 http://www.dior.whs.mil/peidhome/procstat/P01/fy2004/P01FY04-Top100-table4-navy.pdf Last accessed November 2, 2005.

55 *Contracting Support Services Review Results*, powerpoint brief to Navy CBC. September 14, 2005

H. CHAPTER SUMMARY

This chapter assesses the current Navy business transformation effort using the author's identified six business transformation enablers: Business Management Integration, Business Intelligence, Communities of Practice, Corporate Universities, Embedded Human Capital Programs, and Consultants. Overall, the Navy's business transformation effort is guided by various visions and strategies; Sea Enterprise, the Human Capital Strategy, the DoN Financial Management Strategy, and the DoN CIO Strategy. Transformation requires that all of these strategies be coordinated and synchronized. Unfortunately, the Navy lacks this integrating mechanism. By not having this center of business transformation, other valuable Navy assets like ASMC, NPS, and the extended Navy workforce and partners, remain peripherally involved in the business transformation effort. Certainly much is being done to transform Navy business, but so much more could be realized with business management integration.

Who in the Navy rigorously and consistently evaluates current processes and suggests ways to inject new ideas, practices, and organizational constructs?

The next chapter, Center for Navy Business Excellence, investigates what that integrating entity might look like. CNBE will begin researching Navy business management and systems, recommending roadmaps and initiatives for significant business transformation.

IV. CENTER FOR NAVY BUSINESS EXCELLENCE

> **Question**: The Air Speed story is a very compelling story, I agree. How can we, from your leadership position, make it a more from the top down - here's where we all need to move to - taking some of those disciples and move them into parts of the enterprise that they may not be naturally comfortable with. You need that kind of infusion to make a difference.
>
> **Answer**: You've asked the question I've asked myself, "How do I do that?" I've got to figure out a way to do that. I've seen the structure; I've actually been through a lot of that with them. How do I take that and move it into the rest of the enterprise? That is a four year goal for me, to be able to do that. I don't have an answer. That is something I have to go work on. But that's what I'm going to do, so that four years from now it is an enterprise piece. And it needs to be top-down driven, I understand that, but also don't wait for me. It has to be all of us, to do that.
>
> *Admiral Mike Mullen's, Chief of Naval Operations, reply to a question asked at the Center for Executive Education, August 2005.*

A. INTRODUCTION

Chapter II reviewed two Malcolm Baldrige Awardees, Graniterock and Motorola CGISS. Using these two business performance excellence models, the author distilled six business transformation enablers that allow organizations to institutionalize sustained, effective business practices.

Chapter III assessed the current Navy business transformation effort using the six business transformation enablers. Unfortunately, the DoN business transformation process currently lacks an integrated, comprehensive, disciplined approach. The organization leading the Navy business transformation, DoN Corporate Business Council, lacks a dedicated change agent to discover, propose, and implement new business processes that contribute to the outcomes delineated in the DoN business transformation strategy, namely Sea Enterprise.

This chapter outlines a recommendation for one Navy business transformation change vehicle: the Center for Navy Business Excellence (CNBE). CNBE would incorporate the business transformation enablers reviewed in Chapter II, providing the

Navy with a strategic business research entity and a vehicle to coordinate and integrate the business transformation strategy into a tangible, measurable, business improvement roadmap. CNBE is anticipated to increase the Navy's likelihood of achieving the remarkable Sea Enterprise vision. As designed, CNBE would fill the strategy-execution gap outlined in Chapter III and arm the CNO with the capability, "To do that."

B. WHY A "CENTER?"

The title bestowed upon the recommended transformation vehicle is not as important as the function. A 2005 article in McKinsey Quarterly, an online publication of McKinsey & Company, strongly recommends big corporations adopt new organizational models complimentary of the recent rise in professional knowledge workers. The article contends that professionals, those workers productively using knowledge, require different collaboration models, enhanced horizontal coordination, and seamless peer interaction. Moreover, the article asserts that matrix organizations, ad hoc task forces, and co-heads of units serve only to complicate the organization and increase the amount of time required to coordinate work internally.

McKinsey & Company suggests modifying vertical structures to allow professionals to focus on clearly defined tasks and deploying off-line teams to discover new wealth-creating opportunities. The article further acknowledges that fundamentally redesigning a company's operations (the example used is a technology platform) usually "call for small groups of full-time, focused professionals with the freedom to 'wander in the woods,' discovering new, winning value propositions. Few line-managers have the time or resources for such a discovery process."[56] This article supports the argument that parent organizations can benefit from entities that are divorced from current operations, staffed with focused experts, and provided time to study and develop organization-specific business applications.

The McKinsey Quarterly argument parallels that of Mr. Bill Glenney's, Deputy Director of the CNO's SSG: the value to the Navy of bringing thirty persons to Newport, RI to investigate and develop revolutionary naval warfighting concepts is that they are

[56] Bryan, Lowell L. and Joyce, Claudia. *The 21st Century Organization*. The McKinsey Quarterly, 2005 Number 3.

unencumbered with additional duties and encouraged to think strategically and develop innovative warfighting solutions. The CNO's SSG constitutes an off-line, wealth creating organization.

Several organizational terms can be used to describe the organizational entity described above by McKinsey & Company and Mr. Bill Glenney: center, group, institute, office, team, or cell. A *center* per se is not the organizational construct suggested by either McKinsey & Company or Mr. Bill Glenney. However, organizational structure research contends that an independent research *center* can see the parent organization from a unique vantage point. The *center,* unencumbered by current operational goals, would be free to conduct contributory research, experiment, investigate, and pilot revolutionary practices and processes with the sole ambition of improving the parent organization and its stakeholders.[57]

The foremost value of CNBE to the Navy would be that it provides a nexus for Navy business excellence. This nexus of Navy business excellence would consist of research, consulting, and outreach components. This thesis recommends using *center* to convey both an entity that would be dedicated to core Navy business research and an entity that would possess Navy business excellence expertise. The suggested name of this new entity is Center of Navy Business Excellence.

C. CNBE'S MANDATE

CNBE would be established with this anticipated vision and mission statement:

1. Vision

The vision of CNBE would be to transform every Navy employee into a generator, distributor, and user of business intelligence – a high end knowledge worker. CNBE's network of knowledge workers could infiltrate the Navy hierarchy and bureaucracy, infusing decision-makers with timely, relevant business information. These same knowledge workers would seek to review and possibly introduce the next business

57 Appendix B provides four examples of military centers concerned with business transformation: Center for Defense Management Reform, the DoD Business Transformation Agency, the Army Enterprise Integration Oversight Office, and the Air Force Operations and Maintenance Center of Expertise.

process improvement. As the Navy's business excellence resource, CNBE would be no more than four phone calls away from talking to a recognized expert in any given business discipline worldwide.

CNBE would be internationally recognized by corporations, universities, governments, and U.S. citizens as the DoN's center for business excellence. Whether an E-3 on a submarine or a senior executive in the Pentagon, CNBE would be the first thought when one or both of the following events manifests itself: 1) solutions to business challenges are required; or 2) business opportunities and innovations are to be recommended for future research and implementation.

2. Mission

CNBE's mission is expected to be three-fold:

First, CNBE would provide to decision-makers relevant, critical, actionable business intelligence that reflects the current Navy business environment and operations so that decision-makers could make better informed decisions.

Second, CNBE would identify means by which the Navy could function more efficiently and effectively and would provide a consensus, stakeholder roadmap to facilitate the implementation of all proposed business initiatives. A key component of this roadmap would be performance measurement to evaluate the efficacy of implemented initiatives.

Third, CNBE would facilitate the outreach programs, communication vehicles, and business network operations required to implement and sustain business excellence.

Figure 4.1 graphically depicts the proposed mission of CNBE.

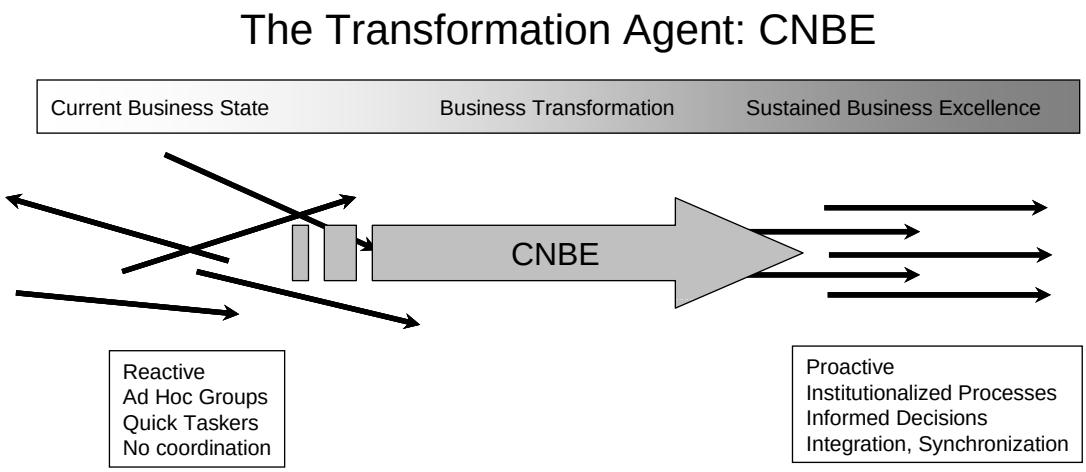

Figure 4.1 CNBE Mission

D. CNBE ORGANIZATIONAL DESIGN

CNBE people and activities would become the business integrating mechanism the Navy currently lacks. CNBE would integrate and leverage the six business transformation enablers defined in Chapter II: Business Management Integration, Business Intelligence, Communities of Practice, Corporate Universities, Embedded Human Capital Programs, and Consultants. Figure 4.2 depicts CNBE's anticipated integrating role.

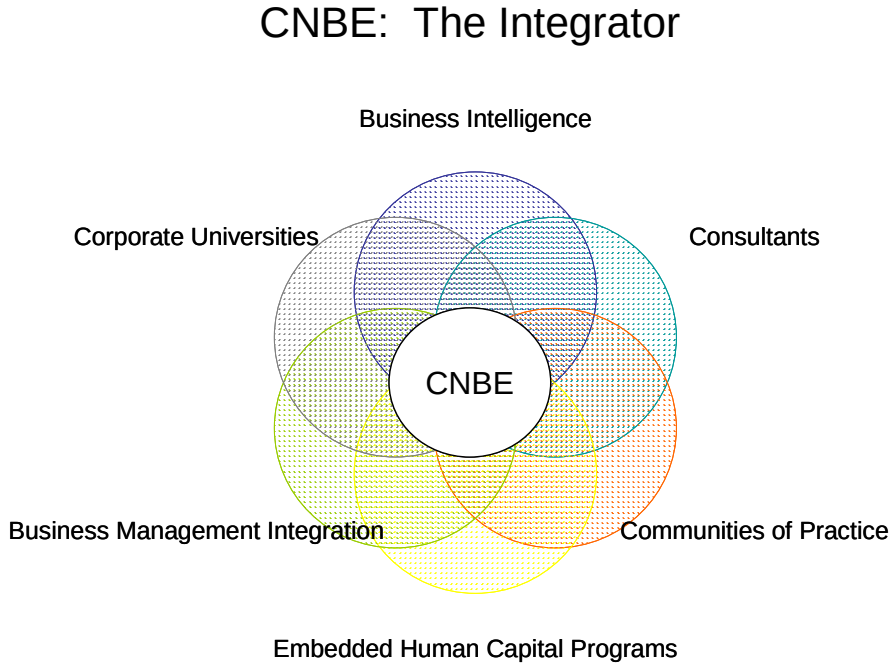

Figure 4.2 The Integrator: CNBE

To accomplish its mission while leveraging the six business transformation enablers, CNBE would be divided into two organizational structures: 1) *the physical core*: a cadre of CNBE personnel who staff the nexus of Navy business excellence; and 2) *the overlay*: the network of Navy business professionals, Navy organizations, and industry, university, and government organizations involved with or contributing toward business transformation through virtual environments, best practice sharing, and collaboration cells.[58]

The CNBE organizational design, purposefully absent of typical organizational lines and blocks, would reinforce the concept of organizational agility. The organization

[58] The overlay model resembles a concept presented by SSG XXII. A full description of the *Red Network* can be found in Appendix C.

would be very flat and would consist of only two levels: the Director and everyone else. This structure would encourage collaboration, horizontal coordination, and peer interaction.

Figure 4.3 depicts the anticipated CNBE core organizational design and Figure 4.4 depicts the anticipated CNBE overlay.

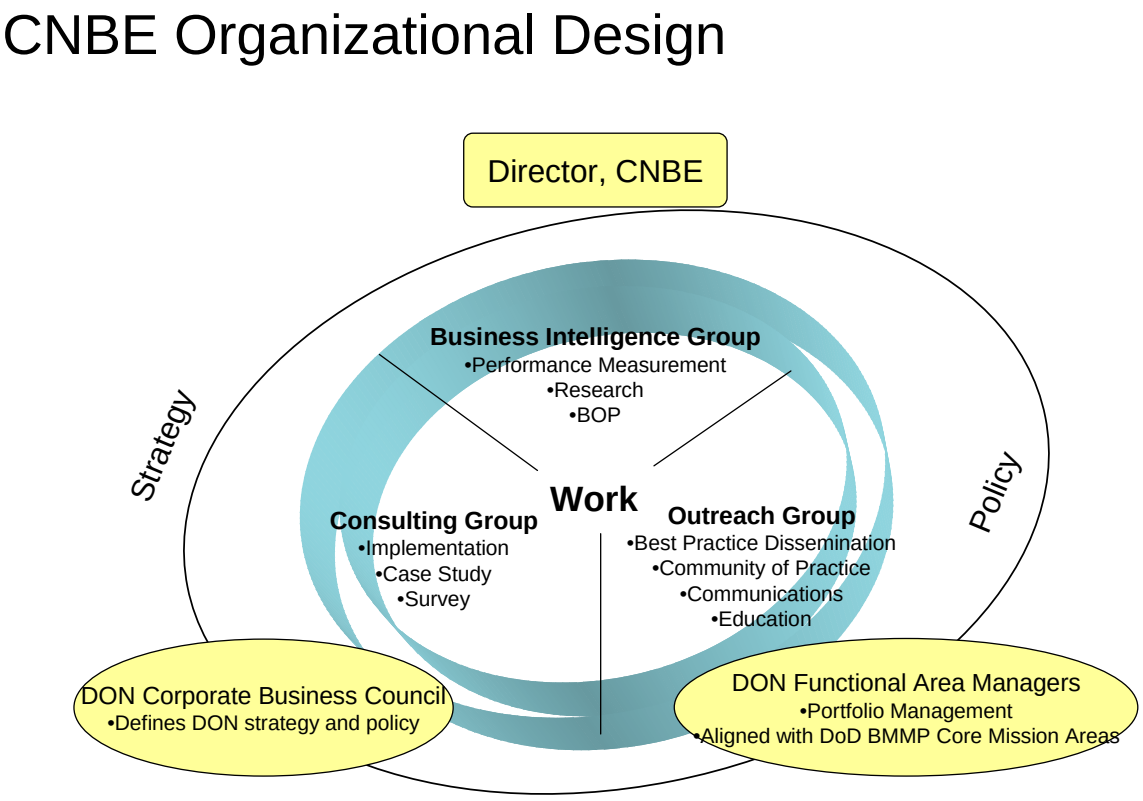

Figure 4.3 CNBE Organizational Design

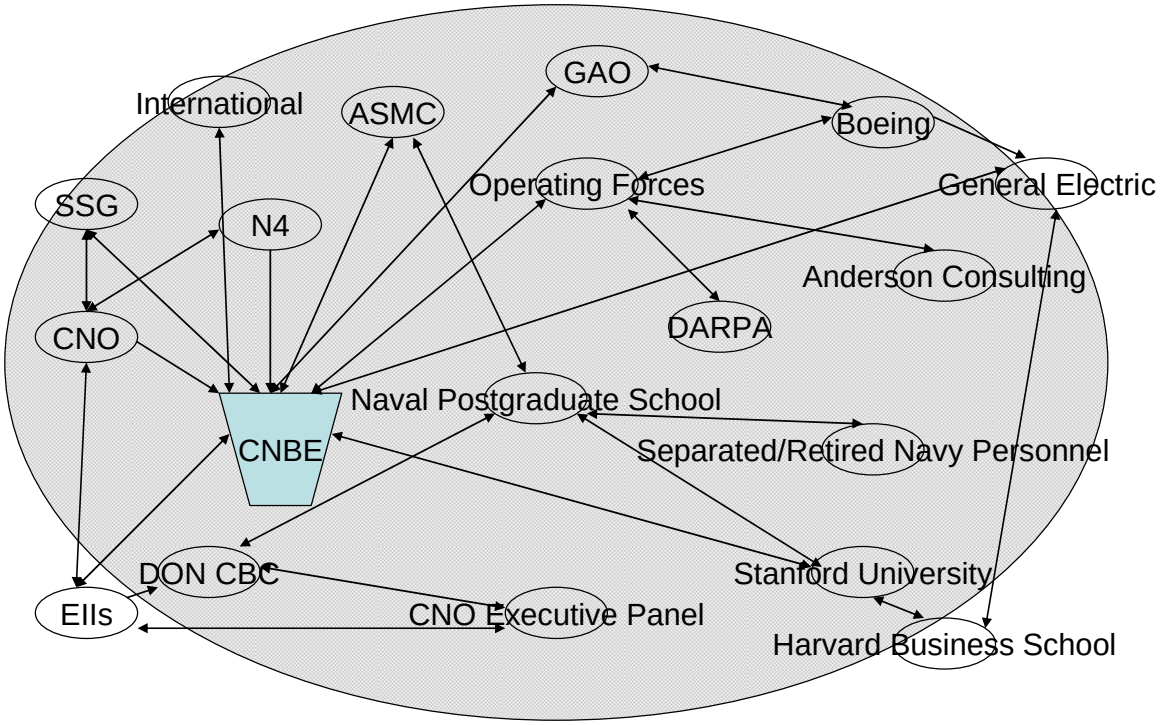

Figure 4.4 CNBE Overlay

A description of the three work groups tasked with integrating and synchronizing the Navy's business transformation efforts follows:

1. Business Intelligence Group

The Business Intelligence Group could perform activities similar to those associated with military intelligence: collecting and analyzing data in order to generate themes and trends that ultimately aid in predicting future events and/or actions with reasonable certainty. Specific work activities of the Business Intelligence Group would include:

Research: The Business Intelligence Group's research efforts would focus on collecting strategic business information, exploiting business information sources, collecting and amalgamating data, analyzing data, and most importantly, drawing insights

from data that can be used to predict or guide future business decisions. The Business Intelligence Group would launch programs both independently and collaboratively with academic institutions and private sector partners to research industry and academic business initiatives, processes, and organizational designs. Working with DoN CBC and Echelon II commands, the Business Intelligence Group would evaluate potential corporate business initiatives for incorporation within the Navy.

Evaluate: Using the performance measures generated through business intelligence, the Business Intelligence Group would deliberately challenge existing business operations, systems, processes, and organizational constructs in order to create dialogue that would lead to potential efficiency and/or effectiveness gains. The Business Intelligence Group would seek new opportunities to optimize business operations.

Develop Revolutionary Business Concepts: The business intelligence and insight gained through research efforts would guide the Business Intelligence Group in the design of new models, new processes, and new organizational constructs that eliminate redundancies, harness the knowledge of the DoN workforce, and contribute toward continuous business improvement.

A key enabling function of this proposed activity would be the introduction of an internal venture process. The Corporate Leadership Council[59] investigated eight corporations that built an entrepreneurial enterprise through the varied use and application of internal venture funds.[60] Conceptually, any DoN workforce member could submit a business case that recommends the creation, improvement, or termination of a business process or management technique. The Business Intelligence Group would perform the initial screening of proposed business innovations and then present the final ideas to the DoN CBC at a quarterly meeting.

The Nokia Venture Organization[61], depicted in Figure 4.5, demonstrates the conceptual flow of ideas into and through CNBE.

---

[59] The Corporate Leadership Council provides best practices and quantitative research and executive education to the largest global network of HR executives. For more information visit http://www.corporateleadershipcouncil.com/CLC/1,1283,,00.html Last accessed on November 1, 2005.

[60] Corporate Leadership Council, *Innovation and Agility: Leveraging Organizational Resources to Sustain Growth.* 2001

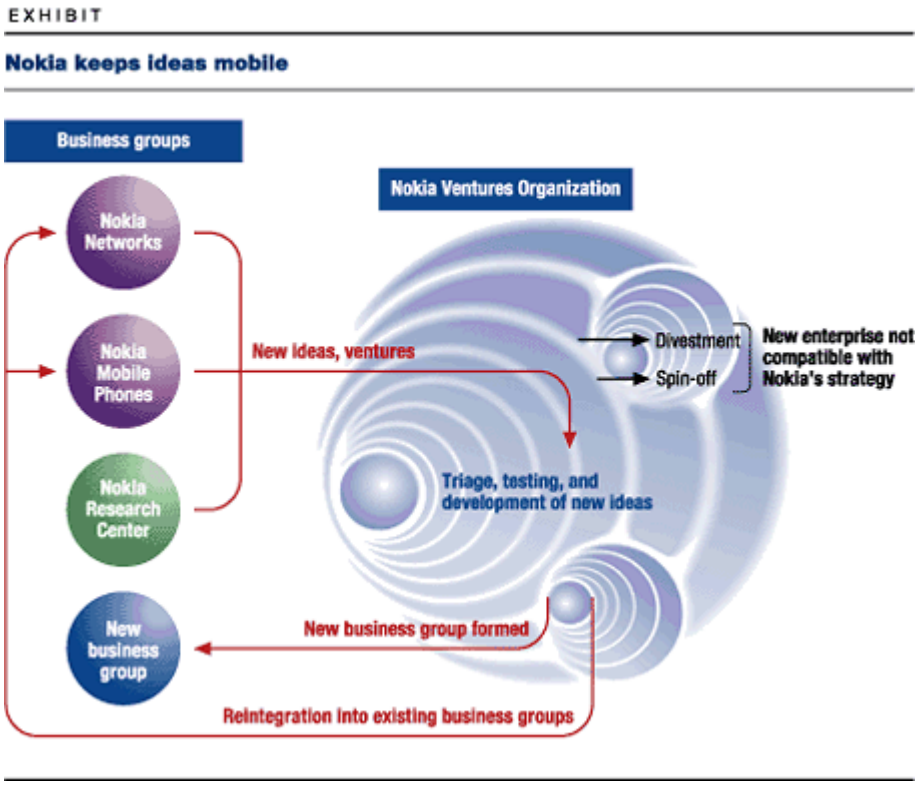

Figure 4.5 : Nokia Venture Organization [Ref: *The Innovative Organization: Why New Ventures Need More than a Room of Their Own*, McKinsey Consulting White Paper, 2001 Number 2.]

Inform: The goal of business intelligence would be to produce relevant, critical, actionable information that business leaders can use to make informed, rational decisions. Thus, the Business Intelligence Group would prepare, present, and disseminate its business intelligence in an articulate and clearly understandable format for the entire enterprise to view and use in shaping the future.

2. Consulting Group

The Consulting Group would exist for two primary reasons: 1) to assist Navy commands with adopting and implementing new business initiatives, and 2) to develop an internal consulting discipline available to the Navy. The Consulting Group would ensure that the proposed business concepts recommended by the Business Intelligence

[61] Day, Jonathan D. and Mang, Paul Y. *The Innovation Organization: Why New Ventures Need More Than a Room of Their Own.* McKinsey Consulting White Paper. 2001 Number 2, p. 3.

Group are successfully implemented, using either external management consultants or internal management consultants. Specific work activities of the Consulting Group would include:

Facilitate: The Consulting Group would facilitate the interaction among Navy commands and other business partners. The goal would be to establish a network of high energy knowledge workers that perpetuate continuous business improvement on their own. The Consulting Group would be an expedient and internal mechanism to provide facilitation throughout the Navy.

Consult: The Consulting Group would use its consulting expertise to translate business strategies, concepts, and initiatives into actionable steps for customers and offer implementation guidance and change management techniques. Consultants could lead change management workshops for commands embarking upon business transformations to increase the likelihood of success.

Conduct Case Studies: Consultants would write and disseminate case studies pertinent to Navy business issues. The case study library would be stored at CNBE, but disseminated throughout the Navy business professional Community of Practice and at Best Practice conferences. This would be an invaluable source of business intelligence and opportunity to integrate business innovation throughout the Navy.

Conduct Surveys: The Consulting Group would be charged with creating and maintaining an annual Navy business survey. This survey would include Navy business professionals, Navy leadership, Navy customers, and Navy business partners. The Consulting Group would analyze and present the findings of annual surveys to guide future Navy business transformation and business excellence. The Navy, through comprehensive and intelligent surveying, could possess a clear understanding of the outcomes and impacts of its business transformation initiatives on suppliers, contractors, workforce members, and Combatant Commanders.

Part of this survey would include an evaluation of CNBE. CNBE would be challenged to continue its own growth in concert with the needs of the Navy. CNBE would seek feedback and critiques of its practice and performance and adapt to incorporate legitimate and advantageous changes.

Optimize External Management Consultants: Working with the contracting community and FMB, the Consulting Group would optimize the Navy's use of external business management consultants. The Consulting Group would track which external management consultants are working on which business initiatives. The Consulting Group would seek ways to use external management consultants more effectively. For example, identifying and recommending specific external management consultants for certain tasks based on previous performance results and cost.

3. Outreach Group

CNBE would interact with many organizations outside the Navy to ensure the Navy remains current with business technology, trends, and research. The Outreach Group would be the Navy's conduit to the ever-evolving business world. Specific work of the Outreach Group would include:

Partner: The Outreach Group would establish exchange programs with industry, academia, and other governmental agencies to gain increased access and exposure to evolving business concepts. The Presidential Management Fellows program, industry exchange officers, Legislative Fellows, and others all represent business intelligence opportunities. The Outreach Group would network, debrief, integrate and support these personnel to gain the greatest insight into business practice and policy in industry, university and Congress.

Publish: The Outreach Group would coordinate business transformation and innovation publications and make available all studies, business case analyses, and other products developed within CNBE and the Navy. The Outreach Group would review industry white papers, academic research projects, and consultant publications and post these works to a Navy collaboration portal for knowledge worker access.

Disseminate Best Practices: To incorporate the ideas, practices and success stories of Navy organizations, the Outreach Group would institutionalize an annual Best Practice Forum. The Best Practice Forum would encourage sharing the Navy's best business practices.

Educate: The Outreach Group would work with specific commands of the Navy to ensure that all workforce members receive relevant, current business education. Components of this educational assessment would include: initial pipeline training, academic institution courses, career track education, and professional development education.

A key component of the education activity would be the creation of a Sea Enterprise Scholar Program. The Outreach Group would work with NPS to develop a Sea Enterprise Scholar Program. Specifically, the Outreach Group would sponsor and develop six elective courses that selected NPS business program students would take in preparation for follow-on orders to the CNBE core. A proposed CNBE curriculum, courtesy of Dr. Bernard Ulozas of SPAWAR, is presented in Appendix C.

Public Relations: The Outreach Group would work with Navy Public Affairs to consolidate and manage the strategic level Navy business transformation communication plan. The Outreach Group would ensure consistent and focused business communication by supplying numerous communication channels with relevant, engaging business topics.

E. CNBE PEOPLE

1. CNBE Leadership

CNBE would be led by the Director, CNBE. The Director would be responsible and accountable for the operations of CNBE. This person would be appointed by the CNO and serve a term of seven years.[62] Ideally, the Director would be experienced in Navy operations, possess intimate knowledge of business operations, demonstrate a profound understanding of the dynamics of the military establishment, and bring an impeccable reputation for integrity and honesty within the Navy and a proven leadership record.

The Director's work would be multifaceted. The Director would network and interact with contemporaries throughout the CNBE overlay and they would work with the

[62] See Appendix B for GAO research into recommended tour lengths of business leaders.

DoN CBC to advocate business excellence. Most importantly, the Director would provide top cover for the unimpeded, independent, and potentially contentious work of CNBE personnel.

2. CNBE Core Personnel

The people of CNBE would be recruited and hired to maximize business expertise and educational diversification. CNBE personnel would comprise the following disciplines: analyst, consultant, organizational behavioral psychologist, anthropologist, economist, accountant, education professional, business professional, information technology professional, and other subject matter experts as specific projects necessitate. CNBE would use simple and generic titles to eliminate potential workforce specialization, customer expectation, and organizational complexity.

The core size would initially be staffed at 30 personnel. The limited size would allow organizational agility and adaptability. This proposed size is consistent with the CNO SSG personnel count of 37 and the DoD Office of Force Transformation personnel count of 18.

It is anticipated that CNBE would be a sought after tour of duty for officers and civilians: an organization that would allow and encourage their full creativity, motivation, and genius to surface.

3. CNBE Core Personnel Sources

CNBE would staff its manpower requirements through various sources. Government civilians would occupy the majority of CNBE billets. CNBE would recruit a handful of core government civilian employees, called residents, with the remaining government civilian billets filled through adjunct programs: intern programs, visiting expert programs, and chair positions. The resident employees would provide continuity and stability to CNBE's mission. The adjunct employees would augment and integrate with the resident staff to form the optimal research team for any given topic.

The uniformed military would balance CNBE to ensure the warfighter remains the beneficiary of all endeavors. The Navy officer component of CNBE would flow from

several potential sources: follow-on tours for NPS GSBPP and United States Naval Academy graduates; Navy reservists; select senior Navy officers; and other sources as required. CNBE would seek to balance the Navy officer population with both civilians and Navy senior enlisted so that no one personnel type represents over 50% of the workforce. CNBE would have standing resident billets for the Human Resources, Information Professional, and Intelligence communities.

CNBE would incorporate the industry sector by sponsoring several visiting chair positions, sponsoring industry exchange programs, and sponsoring industry forums, conferences, and guest speakers. CNBE would possess the flexibility to compensate industry experts for their contributions to specific projects. CNBE would utilize existing DoN-industry exchange programs to baseline its model. CNBE would coordinate with these and other programs to ensure business intelligence is gathered and resultant benefits of the experience are documented.

CNBE would incorporate the academic sector by sponsoring several visiting chair positions and sponsoring academic forums, conferences, and guest speakers. CNBE would have the flexibility to compensate experts for their contributions to specific projects.

CNBE would also use the established Legislative Fellows program to gather business intelligence focused on Congressional issues. This business intelligence would aid the Outreach Group in framing specific business policy changes.

The task groups assigned to a particular business research or case study would be composed of a mixture of the above talent. This talent could be sourced from the CNBE core, GSBPP thesis students and professors, Presidential Management Fellows, selected government civilians, academic experts, industry experts, and management consultants.

F. CNBE PRODUCTS

CNBE would not seek to placate the Navy enterprise. Its research process and products would be based on facts and would seek the truth. CNBE would gather business intelligence through measurement, consultation, assessments, surveys, data-mining, interviews, and experimentation. CNBE would study both what works and what does not

work within the Navy business framework and recommend corrective actions to the DoN CBC. CNBE would share business intelligence through conferences, success stories, critiques, publications, and websites. CNBE would initiate pilot programs to determine the feasibility of business initiatives working in the Navy.

CNBE's products would include reports, studies, presentations, point papers, web-portal content, scorecards, business case analysis, evaluations, newsletters, assessments, ranking and prioritizations of business initiatives, strategic business guidance assessment, Navy business network expansion, external management consultant evaluation, and others.

The following topics represent potential CNBE research focus areas:

- Research that leads to the improved innovative capability of bureaucracies;
- Research that spawns revolutionary ideas about organizational development and performance;
- Business case analysis of privatization.

G. THE VALUE OF CNBE

The following themes summarize the expected value of CNBE:

1. Fill the Business Strategy-Execution Gap

CNBE would bridge the strategy-execution gap that currently exists in the Navy's business transformation management framework. CNBE, through its core and overlay organizations, would help Navy business leaders address the most pressing business concerns and assist Navy commands implement new business initiatives.

2. Offer a Point of Truth

CNBE would offer Navy leaders and customers an unbiased, fact-based presentation of the current Navy business environment and operation. The Navy must possess the truth before business decisions can accurately modify and improve the business-space.

3. Be Cost Effective

CNBE would conduct research and analysis that equals that of external management consultants but for significantly less money. CNBE personnel would also remain available throughout the implementation of business improvements.

4. Be Expedient

CNBE research and consulting would not require contracting. CNBE experts would deploy to any business-space expeditiously, including combat zones, and remain committed to the DoN team without profit motivation or business initiative hype.

5. Establish Business Continuity

CNBE would establish continuity within Navy business excellence. With this continuity comes a decreased likelihood of distracting start/stop business initiatives, political pet projects, and discontinuous institutional memory. The anticipated benefits of continuity are institutionalized learning, trust, networking, experience, and business consistency. Typically, five to seven years is required to implement and sustain transformational business programs.[63]

Figure 4.6 depicts the CNBE "bounding" effect that would contribute to continuity. This idea, inspired by Professor Douglas Brook, Director, Center for Defense Management Reform, captures the idea that CNBE would maintain a synchronized, core business strategy while "protecting" that business strategy from potential distractions.[64] The single arrow represents the agreed upon Navy business transformation roadmap. The dashed lines represent a strategic boundary. As long as new concepts and initiatives are within the boundary, they are synergistic with the established roadmap. Initiatives outside the boundary could detract, distract, or derail the business transformation roadmap. CNBE, in concert with DoN CBC, could manage this process to ensure every new initiative builds upon the last to maintain the transformation momentum.

---

[63] Interview with Mr. Mike Cook; Director, Quality Services, Graniterock. July 2005.

[64] Interview with Professor Douglas Brook; Director, Center for Defense Management Reform. July 2005.

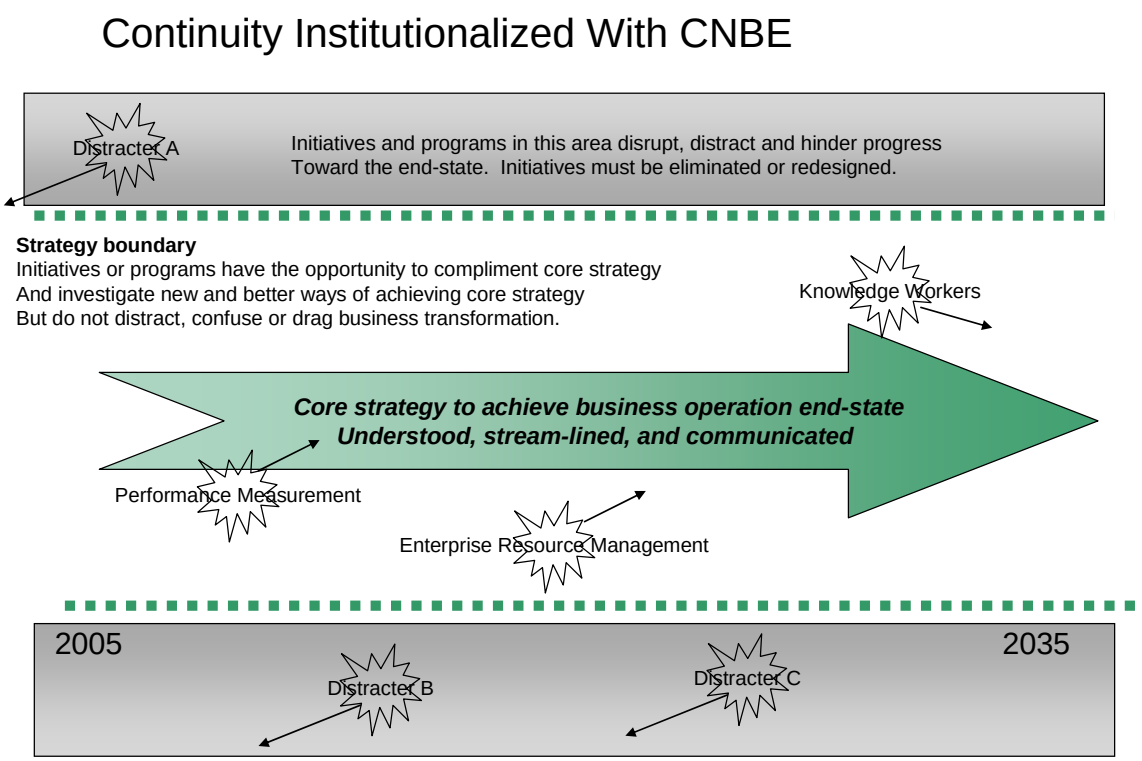

Figure 4.6 CNBE: Ensuring Business Continuity

6. Develop a Business Core Competency

CNBE would leverage external business contractor support, academic research, and industry practice to develop a business core competency within the Navy. CNBE would help develop an educated workforce that effectively applies business practice to the military operational environment. It is anticipated that this business core competency would create a culture of continuous business process improvement which would become pervasive.

7. Facilitate Sharing

CNBE would exist to create and sustain the network required to foster an innovative culture. With CNBE, best practice dissemination would be institutionalized, providing access and awareness to the best Navy business processes, practices, organizations, and future initiatives.

8. Create Enterprise Resource for Business Intelligence

Business intelligence generated by CNBE would be accessible by the entire DoN enterprise and could directly lead to an increase in operational readiness, responsiveness, and cost effectiveness.

H. EVALUATING CNBE

It is recommended that CNBE be created as a high performance organization with established performance measures. CNBE would track internal productivity, efficiency, and effectiveness measures and report these in its Annual Report. These measures would demonstrate to the DoN that performance measurement can work to guide and improve organizational effectiveness, productivity, and customer value.

At the conclusion of every year, the DoN CBC would meet to discuss modifications to the measures (i.e., "are we measuring the right things?") and the means of improving existing measures (i.e., "are we executing well?"). If, at the conclusion of the base FYDP, CNBE fails to attain a satisfactory performance measurement score, then the future of CNBE would be evaluated with full consideration given to CNBE termination. The CNBE workforce incentive structure must reflect this stipulation. CNBE will practice what it preaches!

I. RESOURCING CNBE

The core activities of CNBE would be mission funded through the CNO claimancy. Mission funding would allow CNBE to target its research efforts on critical business vulnerabilities and/or opportunities that are relevant to the Navy enterprise. The alternative resourcing method, reimbursable, would target customer focus areas which may or may not be a priority to the Navy. Reimbursable funding limits the breadth of CNBE research areas and potentially decreases the enterprise value.

Initially, an operating budget between $10 and $20 million would be required. This budget amount is analogous to comparable organizations: CNO SSG and DoD OFT. CNBE fiscal resources would be initially committed over one full Future Year Defense Plan (FYDP). Both research and development and operations and maintenance

funding could be used to fund CNBE. Essentially, the money allocated to CNBE would be decremented from the $10 billion spent on external management consultants in FY2004. There would be no additional cost to the Navy because CNBE would be using the research and operations dollars that these claimants would have otherwise committed to contractors.

Navy leadership would commit to fund CNBE through the FYDP before a final determination is made on the continued viability of CNBE. CNBE, like many start-up firms, would start with a few short term success stories but would need time to mature to demonstrate its full potential. For example, recruiting top talent and assembling the CNBE core will take a minimum of one year. The CNBE charter would include a "sunset clause" that stipulates that renewal of the CNBE charter after one FYDP cycle is contingent upon enterprise-wide satisfaction with the products and results of CNBE.

At some time, a fee for service strategy may be employed by CNBE to shape the work load. Expectations may be too high if Echelon IIs expect CNBE to tackle their specific business challenges first. CNBE would be very diligent in communicating its on-board capabilities and limitations to all stakeholders. However, if commands wish to utilize CNBE outside of mission funding, then they could establish a fee for service relationship that may allow CNBE to accomplish the task through other means.

J. CNBE LOCATION

CNBE would be pervasive throughout the DoN. The goal would be to transact most business through the intranets, portals, other IT solutions, ASMC meetings, and Best Practice Forums. However, a physical headquarters would be required to coordinate activities and launch initiatives. This nexus of business expertise would facilitate and integrate business management and operations throughout the Navy.

CNBE's core organization would be located in Monterey, CA at the Naval Postgraduate School. The choice of location is based on the following parameters:

- CNBE would be co-located with the Graduate School of Business and Public Policy and the Center for Executive Education at the Navy's

Corporate University. Location at NPS would facilitate interactions with expert faculty, staff, and students at the GSBPP;

- CNBE would be independent from current operations in the Washington, DC area;
- CNBE would have immediate access to academic and business partners in San Francisco, CA and Silicon Valley;
- Monterey, CA would assist CNBE in recruiting the best people for the core workforce and encourage business partners to attend CNBE sponsored conferences.

CNBE would also maintain representation in Newport, RI and the Pentagon. Newport's cell would facilitate interaction with the CNO Strategic Studies Group, Navy Warfare Development Command, Naval War College, and Naval Undersea Warfare Development Command, among others. CNBE would benefit from the close proximity to these innovation centers and would partake in annual events such as the Current Strategy Forum. The Pentagon cell would ensure CNBE stays abreast of the latest DoD and DoN business management and operations decisions, requirements, and influences.

K. CNBE ORGANIZATIONAL CONGRUENCE

To achieve the anticipated mission and maximize its usefulness to the enterprise, CNBE must be strategically situated within the Navy's organizational framework. The following two sections discuss the reporting relationship and tasking relationship of CNBE and the Navy.

1. Direct Report to CNO

Organizational congruence is a term used by Nadler and Tushman[65] to describe the degree that one organization increases the functional effectiveness of another organization. It is recommended that CNBE report directly to the CNO to achieve the

[65] Nadler, David A. and Tushman, Michael L. Organization, Congruence, and Effectiveness. *Organizational Dynamics* (Autumn 1980), American Management Association, New York.

greatest business effectiveness and performance. Research into university centers finds that center organizational location is crucial to success:

> Where centers fit within a university's organizational structure varies considerably. Where a center is located within the university's administrative structure may signify the level of support and backing afforded to it by the university's senior administrators and to some degree influence the level of interdisciplinary focus. It seems plausible that the higher the reporting authority, the more the centers are considered a university priority by the central administration, with the result that these centers are more likely to receive high levels of internal support, to be larger in scale, and to be interdisciplinary and less an extension of a single department.[66]

Two organizational models depict this central relationship. Figure 4.7 below uses the existing Sea Enterprise Framework to display the recommended relocation and name change to the existing Transformation Program Office (TPO).

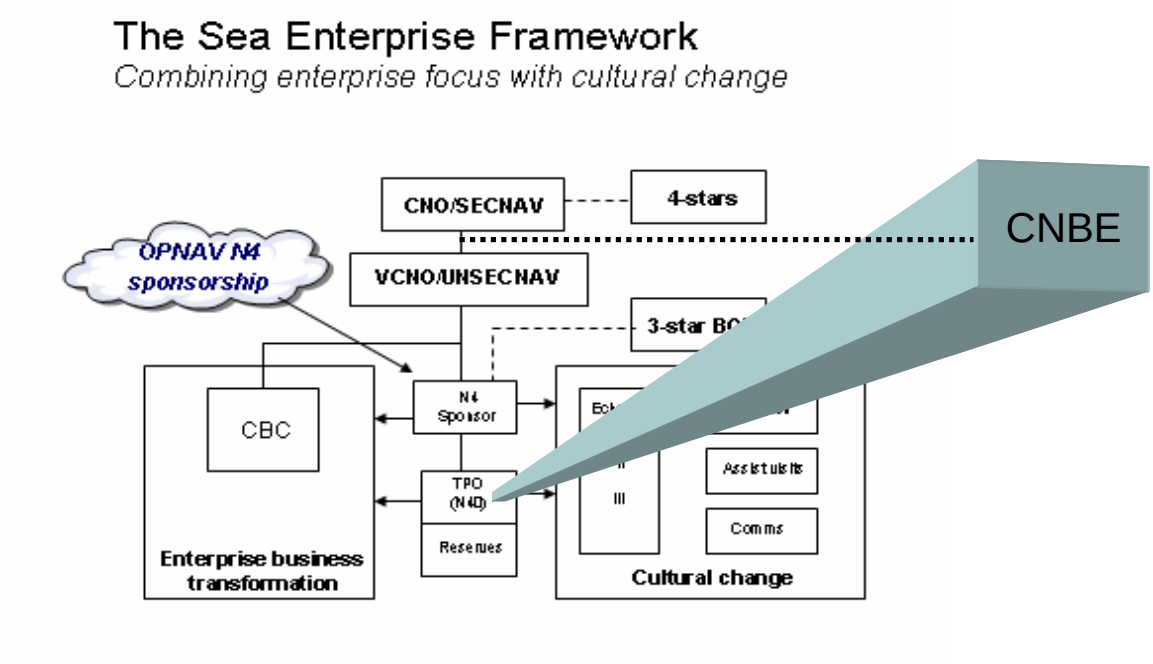

Figure 4.7 CNBE Organizational Congruence

Figure 4.8 presents a generic organizational chart.

[66] Stahler, Gerald J. and Tash, William R. Centers and Institutes in the Research University: Issues, Problems, and Prospects. The Journal of Higher Education, Vol. 65, No 5 (Sep. – Oct., 1994), p. 545.

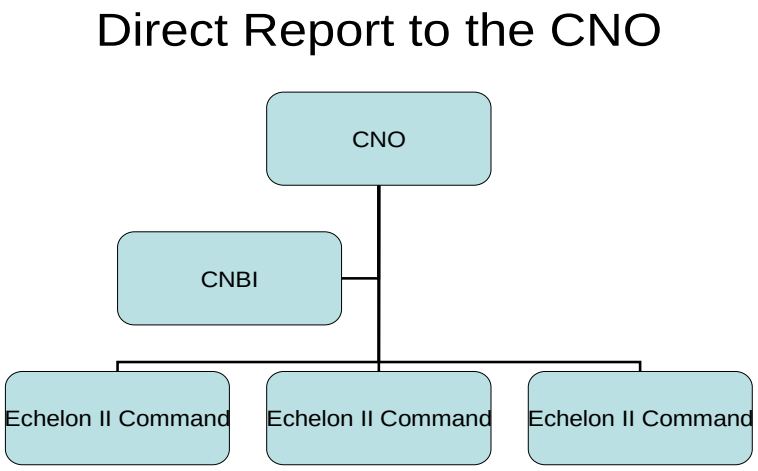

Figure 4.8 CNBE as a Direct Report to the CNO

This option is similar to the existing CNO Strategic Studies Group reporting relationship. The advantages of this arrangement would include:

1. CNBE would remain unencumbered and independent of a parent organization with the capability to offer unbiased, truthful research and analysis of the Navy business environment and operations.
2. CNBE would provide a "home" for Sea Enterprise and business transformation and would free N4 codes of collateral Sea Enterprise responsibilities.
3. CNBE would allow business professionals to focus on business functions while providing an integrated, shared business utility throughout the enterprise.
4. CNBE would be disassociated from potential Force Transformation and current operation resource competitions and distractions.

5. CNBE would maintain a direct relationship with the CNO for business transformation, innovation, and excellence issues. This relationship is modeled after the CNO's SSG and would create the Navy's "business SSG."

6. CNBE would be organizationally congruent with the DoD Business Transformation Agency, further aligning the Navy business transformation effort with the DoD business transformation effort.

7. CNBE would consolidate and then leverage business innovation and best practices and prioritize business development and implementation requirements throughout the enterprise, mitigating "Not Invented Here" local resistance.

The disadvantages of this option would include:

1. The number of direct reports to the CNO increases.

2. Echelon IIs may perceive that CNBE would usurp some of their business innovation and implementation flexibility.

3. Until proven credible and completely integrated, CNBE might be viewed by Echelon IIs as an "outside" organization that "does not understand our business."

2. CNBE Tasking

Conceptually, by working with industry, academia, and other governmental organizations, CNBE would research and generate plausible business improvement areas to present to the various levels of command throughout the Navy for approval and implementation. CNBE tasking would be generated from four sources:

Level 0: CNBE would act expeditiously to answer CNO directed studies.

Level 1: CNBE would work seamlessly with the DoN CBC to identify and prioritize business opportunities and challenges. CNBE research

and consulting activities would support better business decision making and augment the Navy's enterprise initiative portfolio management.

Level 2: CNBE would be accessed by all Echelon II commanders for business research and implementation assistance.

Level 3: Most importantly, CNBE would be accessible to every Navy employee: civilian, military, or contractor.

It is anticipated that CNBE would concentrate its efforts within the Level 1 tasking, providing the DoN CBC with a robust, analytic business research capability and internal consulting expertise.

L. CHAPTER SUMMARY

This chapter outlines the proposed concept of operations for CNBE. The chapter begins with an excerpt from a conversation between the CNO, Admiral Mullen, and a student at the Center for Executive Education at NPS. In this conversation, the CNO remarks that he lacks the capability to disseminate Navy best practices. This chapter outlines one possible transformation agent, CNBE, which would provide the CNO with the capability to research and institutionalize Navy best practices.

This chapter examines the proposed organizational design and work of CNBE. Upon implementation, CNBE would incorporate the six business transformation enablers and significantly increase the likelihood of achieving the goals of Sea Enterprise. CNBE would institutionalize sustained, effective business practices through its three work groups: Business Intelligence Group, Consulting Group, and Outreach Group.

It is expected that CNBE would provide the Navy with an internal business asset to address and present to the enterprise informed, researched solutions to the Sea Enterprise strategy omissions detailed by LT Jason Miller in his thesis, *An Analysis of the Sea Enterprise Program*. According to LT Miller's research, those omissions that currently contribute to an ineffective Navy business transformation include: Clarity of

Purpose; Uniformity of Effort; the Process and Measure of Harvested Savings; Culture; Communication and Awareness; Savings Targets; and Educated Driving Force.

The next chapter, Conclusions and Recommendations, provides concluding remarks based on corporate and Navy business excellence research and recommends the next steps to make CNBE a reality.

V. CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY

This thesis evaluates the current Navy business transformation process and recommends a new organization to coordinate and synchronize Navy business transformation management. By examining corporate business excellence and related academic and industry literature, the author concluded the Navy can do more to realize Sea Enterprise goals. After investigating two Malcolm Baldrige National Quality Award recipients, Graniterock and Motorola CGISS, the author distilled six business transformation enablers: Business Management Integration, Business Intelligence, Communities of Practice, Corporate Universities, Embedded Human Capital Programs, and Consultants.

Using the identified six business transformation enablers, the author examined Navy business transformation strategies, including the 2005 Navy Business Transition Plan, and several Navy organizations involved in executing Navy business transformation. Research concluded that while the Navy's business transformation strategy may be sound, there exists a significant strategy-execution gap within the current business transformation management that retards the Sea Enterprise effort.

To fill this gap, focus the business transformation effort, and assist in transitioning Navy business transformation strategy into institutionalized processes and practices, this thesis examines one possible solution: Center for Navy Business Excellence. Only with dedicated, focused, and integrated business transformation management can the Navy begin to achieve measurable results. CNBE, the author's suggested vehicle, initiates the first step toward business excellence. A point of truth must be established to communicate the Navy's business-state through rigorous research and open, honest dialogue.

The following conclusions and recommendations are derived from the research conducted into business excellence and the subsequent examination of CNBE.

B. CONCLUSIONS

Business transformation within the Navy has already proved cumbersome and will continue to present challenges and difficulties. However, the Navy has no choice but to change and adopt 21st century business practices. Every dollar wasted on duplication or inefficiency is a victory for the enemy and further erosion of the Navy's buying power.

By acting now, future impacts of both domestic and global social and economic perturbations can be mitigated by developing a living, comprehendible, business transformation roadmap. Advancements in technology, sophisticated human capital programs, and military business system research must be explored, exploited, and then intelligently implemented to start the Navy down a path toward a mature, sustainable state of business excellence.

The author offers the following five thesis conclusions:

1. CNBE Could Institutionalize Sustained, Effective Business Practices

To develop truly revolutionary business concepts and integrate business transformation, the Navy must immediately establish one transformation agent to lead and coordinate the business transformation effort. CNBE could function as the Navy's business transformation agent. Once entrusted with the resources, authority, and accountability necessary to accomplish this monumental task, CNBE could institutionalize sustained, effective business practice throughout the Navy.

2. CNBE: The Missing Leverage

The Navy's survivability depends on continued business reform. Without focus, advocacy, and passion, the business transformation mandate may be subsumed by current operations or other distractions. CNBE would provide the Navy a single, integrated business transformation vehicle through which business research, business experts and best business practices can be leveraged throughout the Navy in pursuit of the most effective business operations. CNBE's proposed continuum of work - research, implementation, and outreach - would provide the resources and tools necessary to institutionalize business learning throughout the Navy. In time, the Navy would develop

Navy-specific business processes, practices, and a business professional community that contribute to a sustained business excellence model.

3. CNBE Would Maintain Business Continuity

CNBE would provide the continuity and focus required to implement lengthy business transformations. Due to the frequent rotation of both civilian and military Navy business leaders, business transformation is currently discontinuous and inconsistent. By establishing CNBE, the Navy could gain a corporate business memory asset. CNBE would transcend leadership changes and the dynamic business environment, providing the Navy with a business reference point year after year.

4. CNBE Would Augment DoN CBC

There is no evidence to suggest that the DoN CBC has been effective in achieving measurable Sea Enterprise savings, improved enterprise business performance, culture change, or institutional learning. CNBE would be the business transformation catalyst necessary to create and sustain a business transformation process. CNBE's robust, off-line Business Intelligence Group would research and prioritize business initiatives, conduct business case analysis, and introduce new business topics in concert with DoN CBC goals. CNBE's analysis and products would function as the Navy's honest broker throughout the business transformation process, providing a valuable point of truth to DoN CBC for Navy business assessment and capability. More importantly, CNBE would develop a culture that practices enterprise-wide business intelligence, linked measurement, and performance accountability to achieve improved performance results.

5. CNBE Would Facilitate Engagement

Business transformation cannot be implemented from the top without a receptive and adaptive culture. The senior leadership can set the conditions, develop the architecture, communicate the vision and breakdown the parochial organizational boundaries, but the people throughout the organization must accept the responsibilities of change by adopting and contributing to new business processes. CNBE's Outreach Group would communicate the business transformation strategy, roadmap, success

stories, and overall progress to every Navy stakeholder. This engagement strategy would also include feedback from Navy business professionals. The business change imperative must resonate with every Navy worker to achieve complete organizational penetration.

C. RECOMMENDATIONS

The author offers the following recommendations:

1. Brief the CNO and DoN CBC on the Proposed CNBE Concept

The author should brief the DoN CBC on the proposed CNBE concept. The intent of this brief is to measure the interest of DoN CBC members in pursuing CNBE as business transformation vehicle. DoN CBC members would provide initial feedback to the briefer and recommend improvements or other modifications to the proposed CNBE concept. Following this initial CNBE socialization and brainstorming session, the author should brief the CNO on the proposed CNBE concept for future implementation.

2. Socialize the CNBE Concept with Echelon II Commanders

The author should brief and or distribute the proposed CNBE concept to Echelon II Commanders and other key Navy business stakeholders. The intent of this socialization is to measure the interest of key stakeholders in pursuing CNBE as a business transformation vehicle. Stakeholders would provide initial feedback to the briefer or distributor and recommend improvements or other modifications to the proposed CNBE concept.

This effort should occur at the same time as the brief to DoN CBC to prevent potential influence from one group or the other.

3. Convene a CNBE Charter Group

Navy leadership should assemble business excellence advocates to refine the concept of operations and complete the blueprint for CNBE. The Charter Group would

visit proposed CNBE locations, develop a short-list of potential CNBE Directors, secure future year funding, and work with personnel commands and community managers to establish staffing levels.

4. Establish a MOU with CNO's SSG to Embed a Business Professional

The Navy should establish a Memorandum of Understanding with the CNO's SSG to embed a business professional within the upcoming SSG concept generation cycle. This person can be independent from the core SSG Fellows and Associates but will be immersed in the SSG innovation process, research techniques, and concept development teams. This learning experience will be invaluable upon the stand-up of CNBE and the initiation of business research and business concept and process generation.

5. Develop and Introduce CNBE Scholar Program at GSBPP

The Graduate School of Business and Public Policy (GSBPP), in conjunction with CNBE, must develop and introduce the CNBE Scholar Program. This program would recognize those students who desire to elevate their business studies while attending NPS.

The CNBE Scholar program would augment the core MBA program with specialized classes that may include: The Nature of Business/Organizational Intelligence; Human Capital Analysis; Workforce Education, Training, Development, and Motivation; Overcoming Organization and Institutional Resistance to Change; Information Technology Tools – Internal; Information Technology Tools – External; and Cultural Implications of Organizational Adaptation.[67]

The program includes an immersion semester where students spend time at leading corporations, selected Navy commands, and partner business schools like Harvard Business School or Amos Tuck School at Dartmouth to fully experience the current business environment. Upon selection as a CNBE scholar, students work with sponsors to target a specific thesis research topic and formulate an aggressive, innovative

[67] Adopted from Dr. Bernard Ulozas, Human Capital Researcher, Space and Naval Systems Warfare Command. For detailed course description see Annex E.

learning experience that incorporates the business experience and education during the immersion semester. CNBE scholars complete a follow-on tour with CNBE.

D. SUGGESTIONS FOR FUTURE RESEARCH

The author suggests the following topics for future research:

1. Develop the CNBE Scholar Program

Research various scholar programs to discern the best framework to employ at the GSBPP. Work with other business schools, corporations, NPS faculty, and FMB to define the elective curriculum, immersion semester, and resourcing.

2. Establish a CNO SSG Liaison

Research the possibility of establishing a business professional billet within the current SSG concept team framework. Revolutionary navy warfighting must be funded and with early awareness, the likelihood of proactive, affordable funding increases. A resident business expert or SSG Fellow/Associate can gather intelligence on proven SSG processes, methodologies, networks, and cultural norms for possible incorporation into CNBE. This billet also functions as the liaison between SSG and CNBE to ensure business systems support future navy warfighting concepts.

3. Institutionalize a Best Practice Summit

Research the Malcolm Baldrige Award best practice summit and other similar summits or conferences for possible incorporation into Navy culture. This event should showcase and praise the best and brightest in Navy business transformation and business excellence. Different categories of awards may be developed to differentiate Navy's diverse business communities: research laboratories, facilities, surface, air, and education for example. Develop the award criteria.

4. Evaluate the Navy Business Transformation Governance

Follow-on research should be conducted to determine the relationship between DoN CBC, CNBE, CNO, Echelon II Commanders and other key business stakeholders. Clearly defined reporting relationships, responsibilities, and focused accountability must be established to effectively lead business transformation. This follow-on research, based on corporate and public sector best practice, would recommend a viable governing organization within the OPNAV staff, accessible to the CNO. For instance, research conclusions may indicate that roles and responsibilities of DoN CBC should be incorporated into CNBE or that CNBE should be part of the Director, Navy Staff organization instead of a CNO direct-report.

Included in this study would be an analysis of the Center for Navy Business Excellence title. The intended function of the CNBE organization is most important, but the name must accurately portray its role to both internal and external stakeholders. For example, an alternate title could be Sea Enterprise/Accountability Office.

E. CHAPTER SUMMARY

The Navy has devised numerous business improvement strategies, most notably Sea Enterprise. Few have lasted long past their initial champion's tenure, yet the need for business transformation continues to grow stronger. The current transformation effort lacks strategic goals, corporate metrics, and a common framework to drive accountability for business efficiency. No long-term, institutionalized approach exists to provide ongoing, researched-based decision support to senior leadership for real culture change and improved performance. Study of successful business excellence models reveal that Sea Enterprise effectiveness would greatly increase if an enterprise resource were established to centralize research, leverage best practices, and drive long-term institutional learning.

CNBE is designed to leverage six business transformation enablers throughout the Navy: Business Management Integration, Business Intelligence, Communities of Practice, Corporate Universities, Embedded Human Capital Programs, and Consultants. By incorporating these six enablers into Navy culture and business process, CNBE would centralize the strategic management of business transformation, unite current and future

business improvement opportunities into a holistic performance framework, provide an operational-level business performance excellence resource, and aid business initiative implementation throughout the Navy enterprise. It would report directly to CNO, as if it were a business oriented "Strategic Studies Group."

CNBE would provide the Navy with a cost effective, internal business asset to conduct rigorous business case analysis and research, evaluate external business management consultants, develop Navy business core competencies, and facilitate best practice sharing. These activities would be accomplished through a core cadre of business professionals and a networked overlay of Navy business stakeholders using 21st century business intelligence channels such as the internet and virtual communities.

To overcome internal business performance obstacles as outlined by LT Jason Miller and others, the U.S. Navy must expeditiously supplant its current bureaucratic organizations, outdated business models, and "industrial" culture with a significantly more effective and adaptive business framework underpinned by discipline, consistency, and accountability. CNBE would increase the likelihood that the Navy achieves the Sea Enterprise vision and would arm the Chief of Naval Operations with an expert business intelligence, implementation, and outreach capability.

The author recommends the following immediate actions:

- Brief the CNBE concept to OPNAV N4, DoN Corporate Business Council, Echelon II Commanders and CNO Strategic Studies Group;
- Brief the CNBE concept to the CNO;
- Convene a Charter Group to establish CNBE or a similar business transformation agent to move the Navy toward business performance excellence.

APPENDIX A: EXPLORATION OF BUSINESS TRANSFORMATION ENABLERS

A. INTRODUCTION

This annex provides an in-depth look at several concepts that enable organizations to successfully accomplish business transformation. The concepts discussed below have been found by industry and government experts to contribute to and even accelerate business transformation within an organization. The researched concepts have the potential to radically alter the behavior of people or organizational processes, thereby significantly contributing to the transformation strategies. This list is not inclusive of the potentially limitless business transformation enablers.

Each organization has its own culture, maturity, mission, and leadership; therefore, useful transformational enablers for one corporate organization may differ from another.

B. INTEGRATED BUSINESS MANAGEMENT

At the heart of business transformation is innovation. The National Innovation Initiative (NII) defines innovation as the intersection of invention and insight, leading to the creation of social and economic value.[68] The DoD Office of Force Transformation (OFT) captures the same innovation imperative in the follow passage:

> Innovation, so vital to the transformation process, is dependent upon creativity – the development of new organizational operational concepts, processes, and technologies. For meaningful innovation to occur, however, creativity alone will not be sufficient; implementation is equally important. Without interested customers to conduct experiments, demonstrations, tests, processes, and technologies for the conduct of real-world operations, innovations will not occur.

OFT offers the following innovation formula:

Innovation = Creativity x Implementation[69]

---

[68] National Innovation Initiative Summit Report, p. 8.

[69] *Elements of Defense Transformation*. DoD Office of Force Transformation. October 2004; p. 14

This formula demonstrates the power of the two innovation building blocks: creativity and implementation. Creativity is not added to implementation, but multiplied. The effects of creativity joined with a successful implementation strategy can multiply and produce innovations far greater than just creativity or implementation on their own or added. It is imperative to encourage the growth of both creative solutions or concept generation and the processes for implementing recommended initiatives.

The Office of Force Transformation states that investment in the transformation process is critical to success:

> The first transformation challenge is the need to invest now in specific technologies and concepts that are deemed transformational while remaining open to other paths toward transformation. To transform the force, we must commit resources, yet remain detached enough from these commitments to continue an iterative process of innovation and experimentation that permits new insight to guide future investment decisions.[70]

1. Innovation at Intel Corporation

Innovation at Intel Corporation (Intel) is the lifeline to new product development, technological advancements, and continued business growth. Intel is a top 10 innovator as measured by patents issued.

In the brief, *Innovation at Intel,* two slides frame the innovation commitment:

Slide 2: Innovation is not for the faint hearted.

Slide 5: Today innovation happens…inquisitive minds, perseverance, enabling environment, and investment in Research Globally.[71]

Intel invested $4.7 billion in research and development in 2004, 13.97% of its $34.2 billion in net revenues.[72] This investment, focused on three major areas; communications, manufacturing, and computing, funds 75 Intel labs around the world and 7,500 research and development personnel. To sustain innovation talent, Intel

[70] *Military Transformation; A Strategic Approach*. DoD Office of Force Transformation. Fall 2003; p. 20.

[71] *Innovation at Intel*, January 2005. www.intel.com/technology Last accessed September 27, 2005.

[72] 2004 Intel Annual Report.

instituted a Fellows Program that allows outstanding technical contributors to progress in technical roles rather than managerial. These technical experts shape Intel's future direction (and human development direction as well). The investment outcome: 1,602 U.S. patents awarded in 2004 with over 12,000 patents in the pipeline.

Intel has institutionalized a process that sustains innovation. Figure A.1 depicts this institutionalized innovation process.

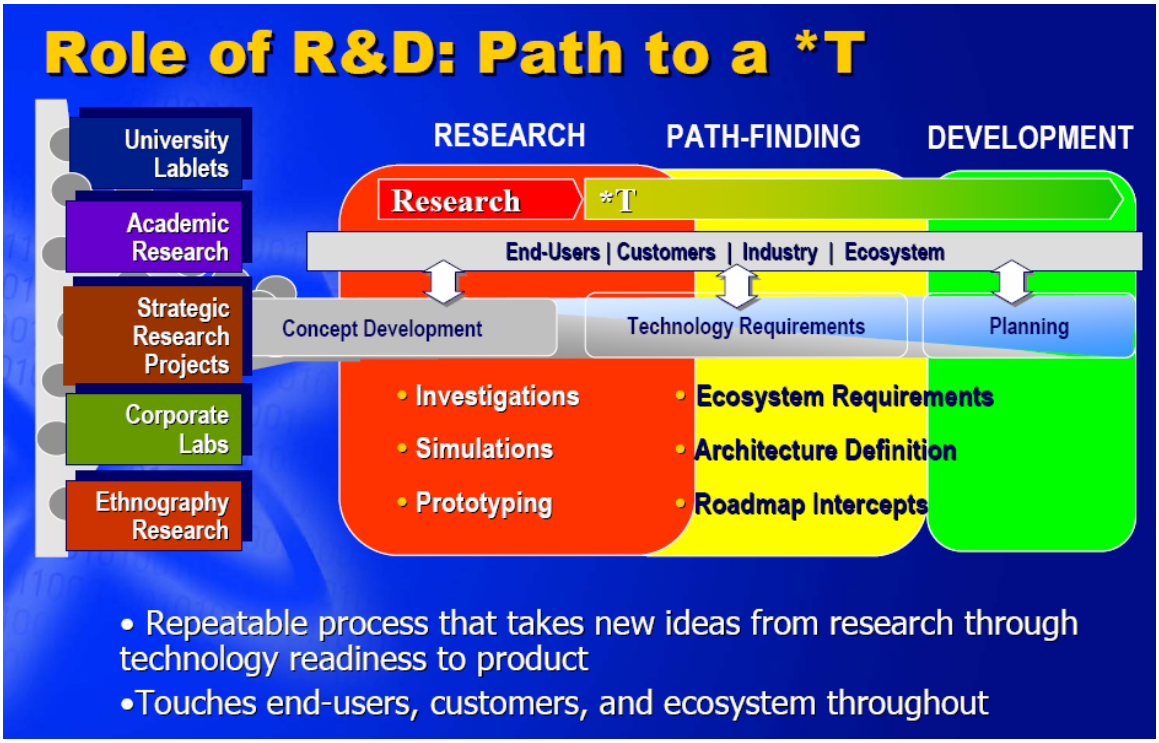

Figure A.1 Intel's Innovation Process [Ref: *Innovation at Intel*, January 2005]

2. Innovation at the Chief of Naval Operations' Strategic Studies Group

Founded in 1981 and located in Newport, R.I., the Chief of Naval Operations' Strategic Studies Group (SSG) is the Navy's revolutionary warfare concept generation team. The mission of the SSG is to research and develop naval warfare concepts that are:

1) non-consensual, 2) disruptive, and 3) other Navy research entities are not pursuing. In 2004 the Navy allocated $14.7 billion to research and development (RDTE, Navy), 12% of the Navy's $121.6 billion budget.[73]

By being at the forefront of the Conceptualization Phase of Naval Warfare, SSG ensures that the Navy is positioned advantageously for the future fight. As shown in Figure A.2, naval warfare develops within a development continuum with SSG the most forward looking Navy research entity.

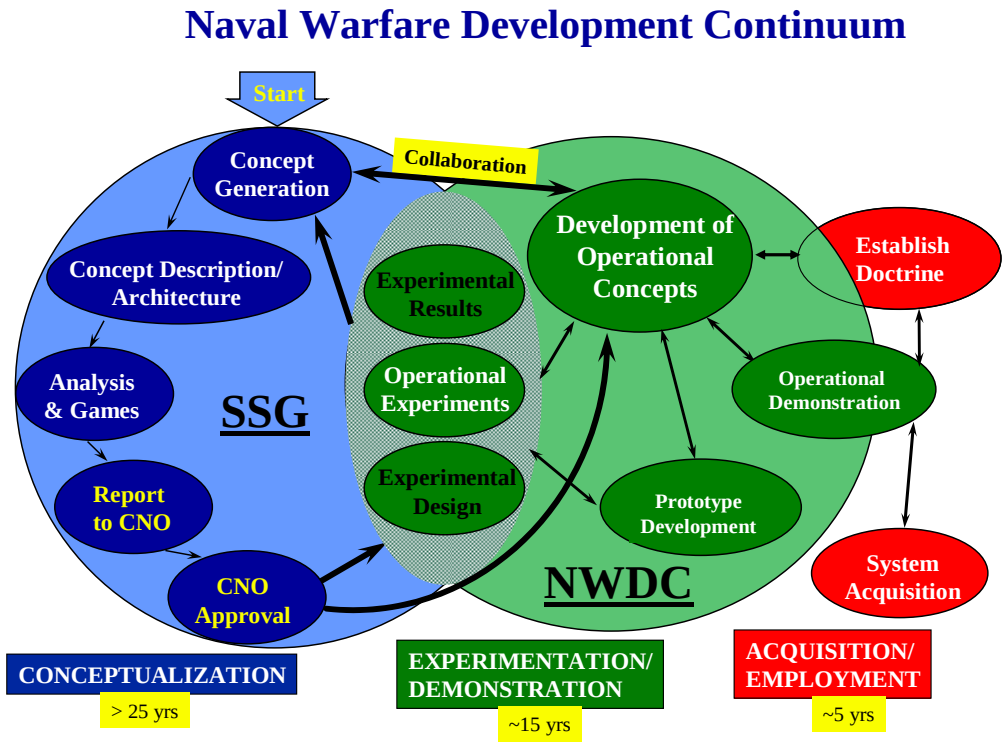

Figure A.2 Naval Warfare Development Continuum [Ref: *Process020403 (Process for Naval Warfare Innovation)*, downloaded from SSG's website: http://www.nwc.navy.mil/ssg/]

SSG has institutionalized its internal innovation process to ensure that only truly unique, revolutionary naval warfare concepts are generated and recommended. Each fiscal year starts with a new warfare research theme directed by the CNO. SSG

[73] *Highlights of the Department of the Navy FY2006/FY2007 Budget*, Office of Budget, Department of the Navy. February 2005; p. I-9.

leadership assembles the SSG Fellows, SSG Associates, and technologists beginning in October of the fiscal year to begin the concept generation research phase. Figure A.3 depicts SSG's phased innovation process.

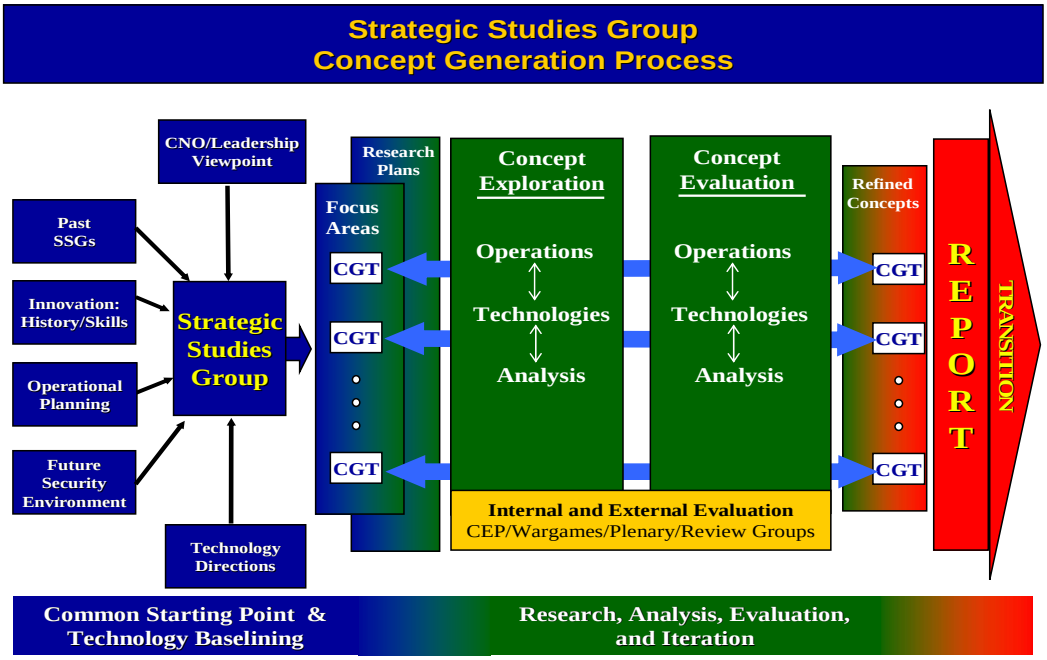

Figure A.3 SSG's Innovation Process [Ref: *Process020403 (Process for Naval Warfare Innovation)*, downloaded from SSG's website: http://www.nwc.navy.mil/ssg/]

The author had the opportunity to visit with the Director, SSG; Admiral James R. Hogg, USN (Ret) and Deputy Director, SSG; Mr. William G. Glenney IV in Newport, R.I. on September 22, 2005. The following transcript of the interview reveals the design factors of SSG's innovation process. Following the interview, a brief discussion the SSG research topic, *Deep Red*, is presented. Upon hearing and understanding the author's thesis question and research goals, Mr. Bill Glenney recommended that the author review this concept as part of this thesis work. The fundamental concepts embodied within Deep Red are applied in the next chapter, Center for Naval Business Intelligence.

3. Innovation at the DoD Office of Force Transformation

The DoD Office of Force Transformation military transformation process is shown in Figure A.4 to organize the researched business enablers into four categories: technology, processes, organization, and people. This approach to the transformation process mimics the two strategies presented above while incorporating uniquely military concepts.

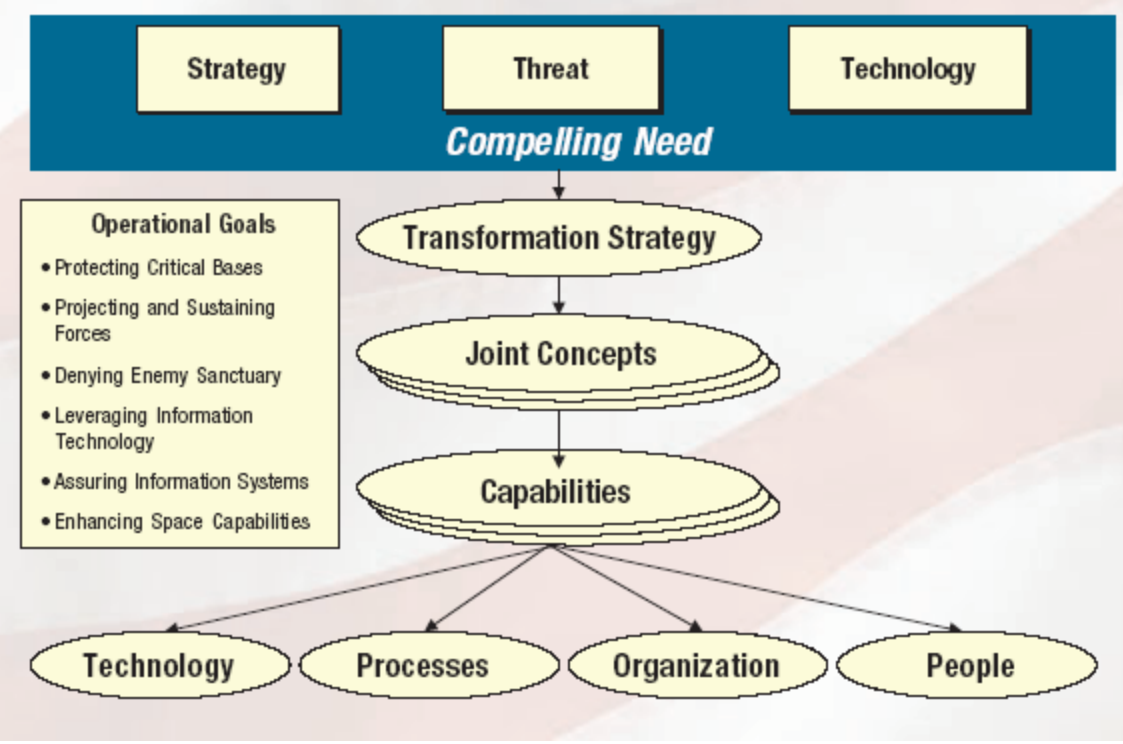

Figure A.4 Military Transformation Process [Ref: Military Transformation: A Strategic Approach, DoD Office of Force Transformation, Fall 2003]

4. Organizational Systems Framework

One way to address the issue of implementation is using a Systems Perspective. Figure A.5 depicts the Organizational Systems Framework (OSF) model created by Dr. Nancy Roberts, Professor at the Naval Postgraduate School in Monterey, CA. The OSF model provides a framework to analyze the various components required to achieve the expected outcome from a strategic initiative. The initiative must be aligned with

corporate strategies and objectives, the process design factors must be compatible with the initiative, the culture must be adaptive to the initiative, and there must be measurement of the initiative. By intervening in the design factors, leadership can correct for the deficiencies in organizational effectiveness or culture and significantly increase the likelihood of successfully implementing an initiative. The Malcolm Baldrige Award recipients reviewed in the previous section exemplify the exceptional outcomes that can be achieved when the OSF Model components of strategic direction, design factors, culture, and measurements align throughout an organization. The two innovation models that follow illustrate this point again: by adjusting the design factors of an organization, innovation can be accelerated and sustained.

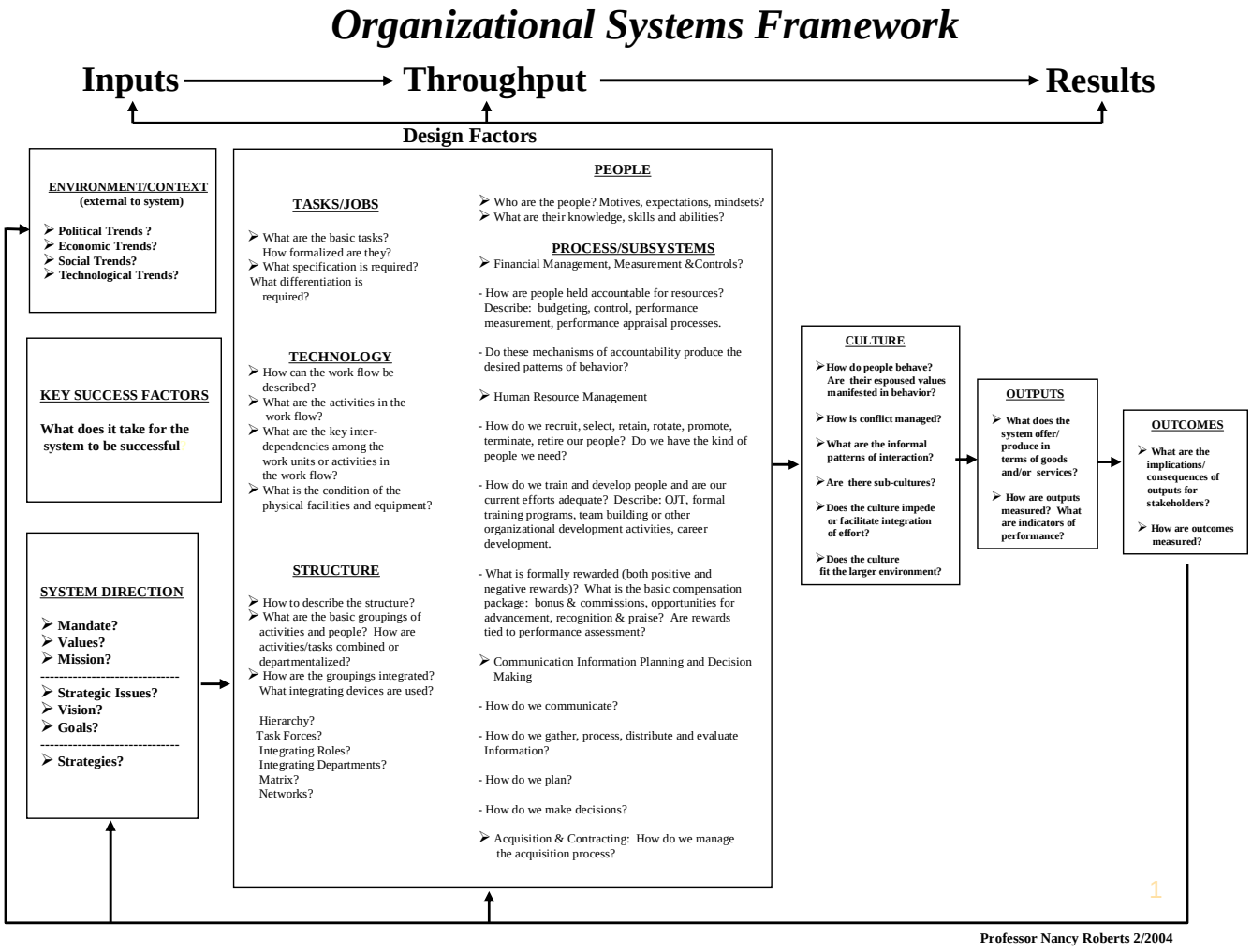

Figure A.5 Organizational Systems Framework Model [Ref: *MNOrgSysFrameworkMdl4*, Dr. Nancy Roberts: February 2004]

C BUSINESS INTELLIGENCE

1. Background

In 1995, the Central Intelligence Agency released its historical review program and it contained the following passage:

> This is not the proper place to pursue this matter further and discuss whether or not business would improve its lot by openly recognizing its intelligence requirement and organizing more specifically for it. It is useful to note, however, that World War I taught business leaders the

> value of the line and staff principle of organization and that World War II has already given them clear object lessons in operations analysis and on research and development. "Business Intelligence," full-fledged, may well be the next important step.[74]

The development of sophisticated computer software coupled with continually decreasing computer hardware costs has allowed an incredibly powerful business discipline to emerge within the last decade: Business Intelligence (BI). Business intelligence is exactly that; exploiting, gathering, and analyzing an organization's business inputs, processes, and outputs to gain competitive insight into cost, revenues, customers, and employees with the goal of providing accurate, timely, and relevant, or 'actionable,' information to business decision-makers. Business intelligence leverages the resident intellectual capital of an organization's employees and the google-bytes of available organizational data, both stored and real-time, into a decipherable and usable decision-support tool.

BI technologies attempt to help users understand data more quickly so that they can make better and faster decisions; ultimately, move the business towards previously unattainable objectives. The key drivers behind BI objectives are to increase organizational efficiency and effectiveness.[75]

The term business intelligence was introduced by Howard Dresner of the Gartner Group in 1989 to describe a set of concepts and methods to improve business decision making by using fact-based support systems.[76] The following definition of business intelligence augments Mr. Dresner's original vision:

> Business intelligence is a broad category of business processes, application software and other technologies for gathering, storing, analyzing, and providing access to data to help users make better business decisions. It can be described as the process of enhancing data into information and then into knowledge.[77]

---

[74] Kehm, Harold. Notes on Some Aspects of Intelligence Estimates. Central Intelligence Agency Historical Review Program, 18 Sep 95. http:www.odci.gov/csi/kent_csi/docs/v01i2a02p_0002.htm Last accessed July 27, 2005.

[75] Lokken, Bob. Business Intelligence: An Intelligent Move or Not? White paper. ProClarity Corporation. 2001, p. 1.

[76] Wikepedia: http://en.wikipedia.org/wiki/business_intelligence Last accessed June 12, 2005.

[77] Ibid.

The word intelligence is used purposefully. The challenges in business are the same as they are in war: collecting discrete facts based on time, location, or testimony (data), discerning patterns and meaning in the data (information), and knowing how to apply that information within the current environment (knowledge and insight).[78] Ancient Chinese military strategist, Sun Tzu, is given credit for discovering the importance of intelligence 2500 years ago. His passage, "Know yourself and others better, you would win all the battles," is a truth both for the military battles and business competitions whether in the past, present, or future.[79]

2. Producing Good Intelligence Analysis

Potential data inputs and gathering techniques are vast; observation, talking, listening, data mining, customer surveys, employee surveys, political and economic data and trends, and cultural facts and trends for example. This data is organized and structured into information.

Analysis is required to transform information into intelligence. Intelligence analysis is "a step in the production of intelligence in which intelligence information is subjected to systemic examination in order to identify relevant facts, determine significant relationships and derive key findings and conclusions."[80]

The key to deriving good intelligence analysis is people. An organization must recruit and retain workers with the right "intelligence" aptitude – the pattern thinkers, whose minds have that facility to examine the pieces, spot the key relationships among them, and recognize their implications and potential impact on the organization's current operations and/or future plans. These intelligence professionals must have a strong understanding of both their business and the basic intelligence processes, including human-source collection and intelligence forecasting. Analysts should be well versed in

---

[78] Wikepedia: http://en.wikipedia.org/wiki/business_intelligence Last accessed June 12, 2005.

[79] Wang, Qi. What is Intelligence Work. Paper submitted at Conference "Intelligence Economique: Recherches et Applications", 14-15 April 2003. http://www.inist.fr/iera/fichiers/iera10.pdf Last accessed on July 27, 2005.

[80] Ibid.

both business and intelligence analytical techniques. To ensure success, individual analysts require organizational support and procedures to produce truly actionable intelligence[81]

In conducting a study on modern business organization and practice, the CIA concluded that business executives and planners, along with military and government officials, lead more effective enterprises when engaged in intelligence activities in one form or another.[82]

The CIA defines insight as a new look at a collection of facts - a perspective which is neither standard nor obvious. Insight, the human capacity to discern unique relationships or conclusions, can be significantly augmented by business intelligence applications, but never replaced. People must be involved in the process.

Mike Schroek of PriceWaterHouesCoopers' comments, "Large organizations understand the value of the information and how important that information is to help employees do their jobs and gain competitive advantage."[83]

The vast majority (by some estimates close to 90%) of Fortune 500 companies have created intelligence positions, programs, processes, communities, centers, and even wholly owned and operated intelligence departments.[84]

3. Information Technology Applications

Information technology systems have significantly advanced the automation and organization of information within today's organizations. However, these systems unintentionally produced "information silos" offering minimal access and analytical

---

[81] Wang, Qi. What is Intelligence Work. Paper submitted at Conference "Intelligence Economique: Recherches et Applications", 14-15 April 2003. http://www.inist.fr/iera/fichiers/iera10.pdf Last accessed July 27, 2005.

[82] Kehm, Harold. Notes on Some Aspects of Intelligence Estimates. Central Intelligence Agency Historical Review Program. 18 Sep 1995. http:www.odci.gov/csi/kent_csi/docs/v01i2a02p_0001.htm Last accessed July 28, 2005.

[83] Duhon, Bryant. Business Intelligence: A Conversation with PriceWaterHouseCoopers' Mike Schroek. Hhtp://www.edocmagazine.com/print.asp?ID=24998 Last accessed July 28, 2005.

[84] Wang, Qi. What is Intelligence Work. Paper submitted at Conference "Intelligence Economique: Recherches et Applications", 14-15 April 2003. http://www.inist.fr/iera/fichiers/iera10.pdf Last accessed July 27, 2005.

capabilities for business users. A study conducted by International Business Machines Corporation (IBM) identified that the typical company utilizes only two to four percent of stored company data.[85]

The recent advancement of software application technology allows organizations to access and use their stored information. Business intelligence combines advanced information technology (IT) and business practice into one discipline. In a sense, business intelligence lies on an IT-business evolution continuum: 1) computers, 2) databases, 3) networks, 3) knowledge management, enterprise resource management, 4) enterprise business intelligence, 5) user-defined business intelligence (task/process specific data analysis), future…

The following two diagrams depict the role of business intelligence applications within an organization.

1. The Smart BI Framework, developed by Colin White, founder of Business Intelligence Research, is depicted in Figure A.6. Conceptually, the Smart BI Framework emphasizes the four forces that drive business operations and the IT Systems that support them. These four forces are people, plans, processes, and performance.[86]

[85] "Business Intelligence – The Missing Link." White Paper by Cherry Tree & Co. July 2000.

[86] White, Colin. The Smart Business Intelligence Framework. Business Intelligence Network. July 18, 2005. http://www.b-eye-network.com/view/1182 Last accessed July 26, 2005.

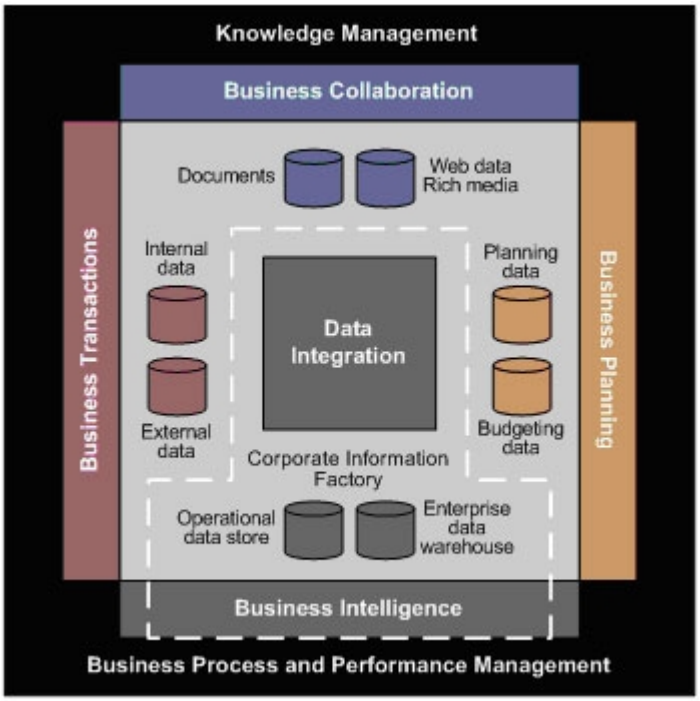

Figure A.6 The Business Intelligence Framework [Ref: The Smart BI Framework]

Figure A.7 depicts the business intelligence flow: gathered raw data transformed into user specified reports and analysis. Business intelligence applications integrate an organization's information repositories, allowing a user to conduct detailed analysis of stored and real-time data across functional or department boundaries, requesting specific queries, and producing detailed reports.

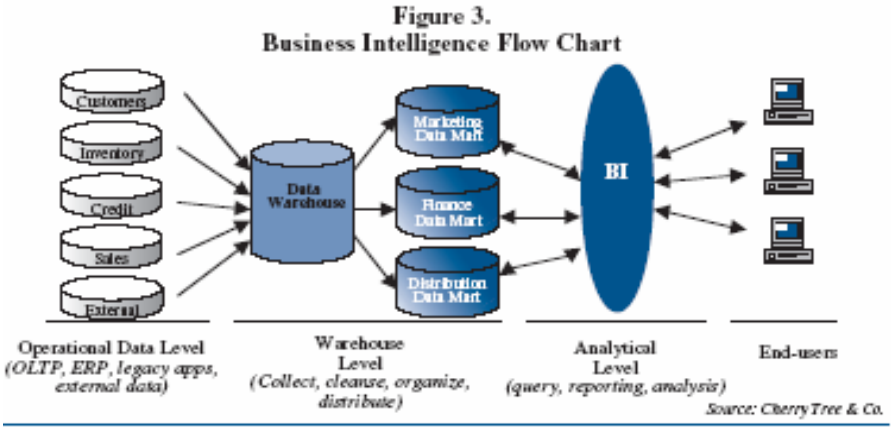

Figure A.7. Business Intelligence Flow Chart [Ref: "Business Intelligence: The Missing Link." White Paper by Cherry Tree & Co, July 2000, p. 2.]

For organizations seeking to incorporate business intelligence applications into their IT and business systems, the following guidelines may be useful:

- A business intelligence initiative must be business-driven and be linked to a specific business opportunity and/or result.
- Follow a top down/bottom up approach: leadership must provide a vision that allows the workforce to picture the benefits of incorporating business intelligence into the workplace. This ensures active participation at all levels.
- Take advantage of existing business intelligence best practices. Incremental roll-out, scalable, interactive
- Consider change management implications associated with business intelligence. The following quote highlights one of the goals of business intelligence:

> "Everywhere, managers face the same issue: How do I achieve greater results with fewer resources? Flatter organizations are expected to move more quickly as decision-making is pushed down into the organizational ranks, but how do you equip these newly empowered people? Today, instead of a few experts spending 90 percent of their time analyzing data, many people throughout an organization spend 5 to 10 percent of their time trying to make sense of it all."[87]

Therefore, to make everyone an analyst in his or her occupational field, business intelligence applications must be user-friendly. Develop and/or hire the skills necessary to efficiently conduct the interrelated business intelligence functions: data warehousing, multi-dimensional modeling, etc.

4. Business Intelligence Benefits

The reported benefits of business intelligence are numerous. A few specific benefits are listed below:

[87] Lokken, Bob. Business Intelligence: An Intelligent Move or Not? White paper. ProClarity Corporation. 2001, p. 2.

- Business intelligence empowers an organization to shape its future competitive environment. Business intelligence enhances a user's ability to understand business results, increases a user's business acumen, and helps to communicate the findings and insights so decisions can be made quickly.
- Business intelligence can help people deal with information overload by focusing them on key performance drivers, modeling the outcomes of potential options, and monitoring and tracking the results of decisions.[88]
- As the business environment becomes more and more uncertain, top management and knowledge workers throughout an organization need access to insightful intelligence analysis for relevant decision-making. Dynamic environments are unsuited for bureaucratic or standardizing behaviors. The real value is taking that historical information, combining it with some other demographic and competitive information, and becoming more predictive in nature. Companies are doing that as we speak.[89]

Figure A.8 outlines the benefits of business intelligence within the strategic, tactical, and functional levels.

[88] Lokken, Bob. Business Intelligence: An Intelligent Move or Not? White paper. ProClarity Corporation. 2001, p. 2.

[89] Duhon, Bryant. Business Intelligence: A Conversation with PriceWaterHouseCoopers' Mike Schroek. Sep/Oct 2002. Hhtp://www.edocmagazine.com/print.asp?ID=24998 Last accessed July 28, 2005.

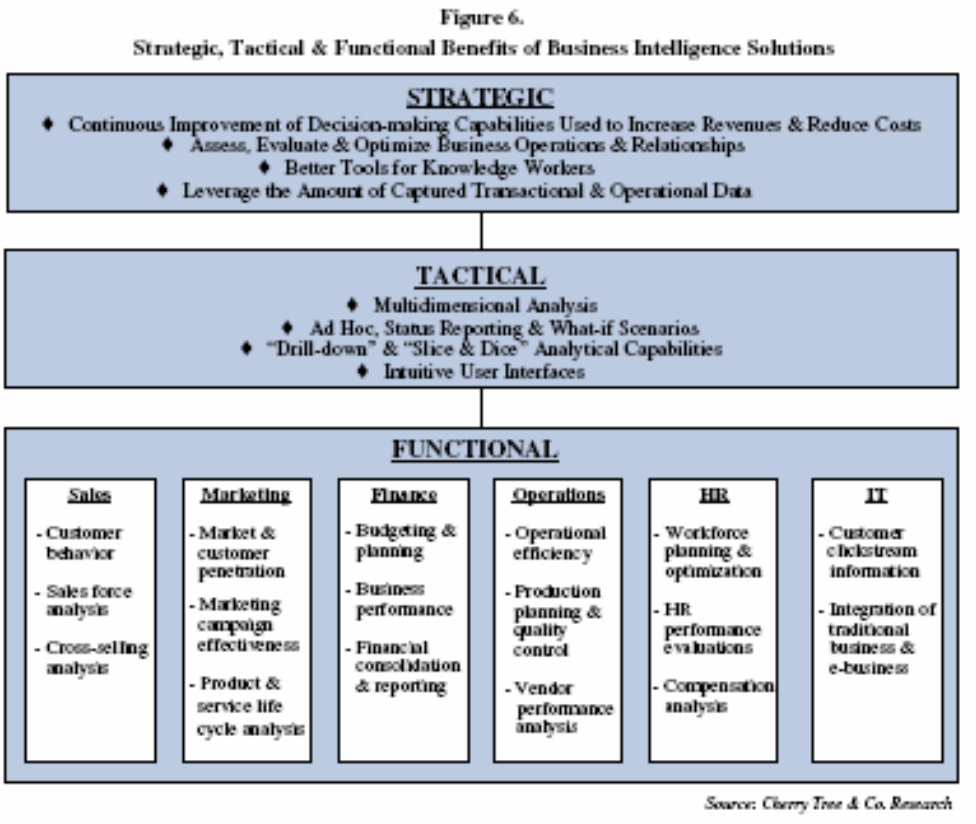

Figure A.8 Strategic, Tactical & Functional Benefits of Business Intelligence [Ref: "Business Intelligence: The Missing Link." White Paper by Cherry Tree & Co, July 2000]

5. The Future of Business Intelligence

Highlights from several research studies indicate that business intelligence has proven its worth and will continue to evolve.

The Ventana Research on Business Intelligence for Operational Performance indicated widespread use of business intelligence for operations. The research found that business intelligence deployments varied in size from small to over 10,000+ users. A large percentage of organizations accessed these applications on a daily or hourly basis, indicating that the applications were likely mission critical. The research concluded that the requirement to improve operational performance and management of operations areas were key reasons organizations incorporated business intelligence applications into IT and business systems. Ventana Research expects operational use of BI to accelerate and

expand in ways previously unrealized and become a major focus in global organizations in 2005 and beyond.[90]

"In all of the developed economies, organizations are shifting from "thing-work" to "think-work." This applies to government and the non-profit sector as well as the corporate sector. In the knowledge economy, fewer and fewer people make their living by making things, and more of them make their living by working with data, information, and knowledge. This means that practical thinking skills – including imagination, but certainly not limited to that – will be ever more in demand."[91]

"Over the last year of two, as priorities have changed, companies have used BI apps to take a look at where they could operate more efficiently and drive costs out of the business. Now we're finding that companies are focus on bottom-line results like product and customer profitability. The whole notion of what we call integrated performance management or balanced scorecard, which takes a look across the entire enterprise. We're seeing BI apps embedded into every function within an enterprise."[92]

D. BEST PRACTICE DISSEMINATION

1. Best Practice Background

The term "best practice" is bestowed upon those business methodologies or processes that have been deemed "the best" by industry experts. The title best practice also implies that consultants, academics, or industry leaders have tested, analyzed and generally concluded that the methodologies and/or processes are valid and sustainable. Best practices are often sought out and readily adopted by those organizations that are struggling or need improvement in a particular area of operations or management.

---

[90] Ventana Research. Business Intelligence for Operational Performance: Research Study White Paper. 2004.

[91] Australian Institute of Management (AIM) interview with Dr. Karl Albrecht, consultant, on his theory of organizational intelligence. http://www.aim.com.au/resources/article_kalbrecht.html Last accessed August 3, 2005.

[92] Duhon, Bryant. Business Intelligence: A Conversation with PriceWaterHouseCoopers' Mike Schroek. Hhtp://www.edocmagazine.com/print.asp?ID=24998. Last accessed July 28, 2005.

Organizations seeking best practices believe that by adopting already proven methodologies and processes that they will be able to improve their own weaknesses.

The term "good practice" is now replacing best practice. This term signifies the realization that every best practice is the best only momentarily, for a given set of circumstances and technologies within a particular timeframe. Each practice must continue to evolve or risk becoming obsolete yet again.[93]

E. EXTERNAL BUSINESS MANAGEMENT CONSULTANTS

No single organization has all the answers to the various business challenges that arise throughout any given year. Collaboration and cooperation with other business experts often yields alternatives that would have otherwise been ignored, rejected, or unknown. Today, many corporations turn to business management consultants outside their own organizations for assistance.

The role of the business management consulting industry is summarized below:

> An advisory service contracted for and provided to organizations by specially trained and qualified persons who assist, in an objective and independent manner, the client organization to identify management problems, analyze such problems, recommend solutions to these problems, and help, when requested, in the implementation of solutions. [94]

Management consulting firms may provide the following services:

> The identification and cross-fertilization of best practices, analytical techniques, change management and coaching skills, technology implementations, strategy development or even the simple advantage of an outsider's perspective. Management consultants generally bring formal frameworks or methodologies to identify problems or suggest more effective or efficient ways of performing business tasks.[95]

The management consulting industry statistics for 2004 are summarized in Table A.1 below:

---

[93] http://en.wikipedia.org/wiki/Best_practice Last accessed August 6, 2005.

[94] Canback, Staffan. p. 4.

[95] Definition of Management Consulting. Wikipedia. http://en.sikipedia.org/wiki/management_consulting Last accessed August 6, 2005.

Consulting Industry Summary: 2004

Worldwide Consulting Revenues 2004[1]	$120 billion
Projected Annual Compound Growth of Consulting Market, 2003-2007[2]	3.10%
IT Consulting Portion of Total Consulting Market[1]	60% to 70%
Additional Outsourcing Revenues 2004[3]	$240 billion
Employment in U.S. Consulting Firms[4] (Management and IT)	785,000

[1] Plunkett Research Estimate
[2] Source: Kennedy Information
[3] Primarily IT-related.
[4] U.S. Bureau of Labor
Source: Plunkett Research, Ltd., *www.plunkettresearch.com*

Table A.1 2004 Consulting Industry Statistics [Ref: http://www.plunkettresearch.com/consulting/consulting_statistics1.htm]

Various explanations exist to explain the continuing rise in consulting services. One opinion is discussed below:

1. Transaction Cost Theory

Transaction Cost Theory deals with the real costs of allocating resources in an imperfect world of misunderstandings, misaligned goals, and uncertainty. Transaction costs are mainly associated with the cost of operating an organization, not to be confused with production costs, the cost to produce a product or service.

An organization is formed to produce a product. At some point, inefficiencies creep into the production line, inventory management, or customer satisfaction. Specialized workers are added to the staff to ensure quality control is maintained, safety is ensured, and IT systems operate effectively. This adds to the internal transaction costs of operating an organization. An organization that started out to produce a product, now finds itself inundated with IT systems, marketing, strategic direction meetings, value-chain analysis, and similar activities and programs that increase the costs of operating an organization.

Management consultants are hired to reduce transaction costs. Production Managers do not have the time or the expertise to solve transaction related inefficiencies and still focus on production. In summary, the Transaction Cost Theory argument states that management consultants exist to solve the high transaction costs of today's business environment.

An extension of this theory also attempts to explain why companies hire external management consultants. External management consultants are increasingly in demand because it is more cost-effective to purchase this service through a market-based price setting model than to internally staff this expertise. This statement holds true depending on how the client is using the consultant.

Turner (1982) used a hierarchy of tasks to demonstrate the extent of a consultant's involvement with a client:

Task 1: Provide information to a client

Task 2: Solve a client's problem

Task 3: Make a diagnosis of the client's problem

Task 4: Make recommendations based on the diagnosis

Task 5: Assist with implementation of recommended actions

Task 6: Build a consensus and commitment around corrective action

Task 7: Facilitate client learning

Task 8: Permanently improve organizational effectiveness.[96]

Figure A.9 below depicts the optimum use of management consultants. When consultants provide tasks 1-5 above and remain objective and independent of the client, external consultants are more economical. However, as clients demand products and services that require knowledge of higher organizational specificity, then internal

[96] Canback, Stephen. Abstracted from Turner, A.N. Consulting is More Than Giving Advice. Harvard Business Review. September-October, 1982: 120-129.

consultants tend to be more economical. Figure A.10 also suggests that contracting terms and negotiations can solve some of the complexities and intricacies encountered while moving from Task 1 through Task 8.

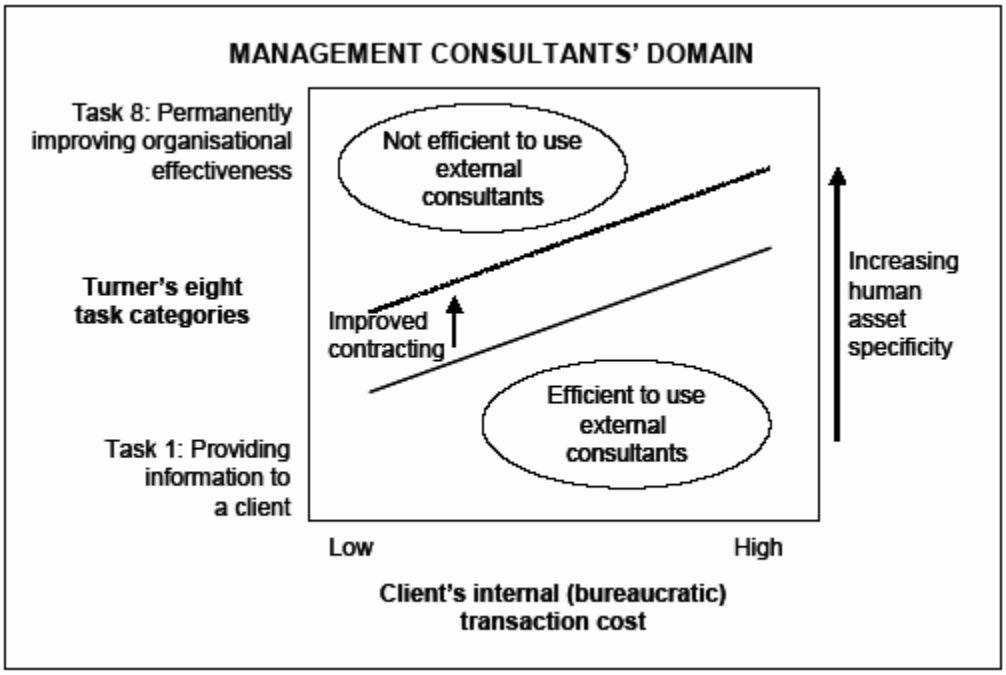

Figure A.9 Management Consultant's Domain [Ref: Transaction Cost Theory and Management Consulting: Why Do Management Consultants Exist?]

A review of the perceived outcomes of a hired consultant's service should answer the question of whether or not external consultants are valuable. One source actually commented that there is a surprising paucity of data regarding the actual use of these management fashions, but went on to report that the average company used 12.7 management techniques in 1994.[97] In his book *Management Gurus and Management Fashions,* Dr. Brad Jackson quotes business journalist John Byrne's recent observations: "What's different - and alarming - today is the sudden rise and fall of so many conflicting fads and how they influence the modern manager."[98]

[97] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001 p. 12.

[98] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 14.

The following passages begin to paint a picture of the value of an external consultant's service.

From Bain and Company:

- Several consultant-sponsored studies have concluded that, in the majority of instances, they [consultants] do not deliver at all.
- In their 1995 survey of 787 companies around the world, Bain and Company found that, while 72 percent of managers believed that companies who use the right tools are more likely to succeed, 70 percent of them said that the tools promise more then they deliver.[99]

Brad Jackson incorporates the opinions that others have on the value of external management consultants:

- Maintain the opinion that consultants often promote their own business management fad or hype the hottest business fad without verifying the applicability of the proposed business management tool or considering the culture or impact on the adopting organization.
- Express concerns about the effectiveness of business fads to meet their stated objectives but has also voiced some strong objections based on the harm they [business fads] can do to organizations:
    - Create unrealistic expectations that inevitably lead to disappointment and the lowering of morale.
    - Fads create dangerous shortages of some strategic elements and toxic overdoses of others
    - Can be internally divisive
    - Because fads tend to be programmatic and imposed externally and top-down within the organization, they have an in-built tendency to rob employees of their own initiative.

[99] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 18.

- Fads undermine a basic tenet of strategy – by simply copying what other organizations are doing, organizations lose a basic source of distinction and, therefore, weaken their competitive advantage within their marketplace.

The Management Training Partnership, conducted research in the U.K. and found that 75 percent of the personnel directors that they surveyed bought at least four management books a year. However, only one in five actually read them.[100]

John Byrne, a business reporter, depicts external consulting as a:

> self inflating bubble: consultants beget more consulting as they fuel the marketplace with new ideas and management fads. The incantations of these necromancers can make managers worry that their rivals have gotten hold of something more powerfully new – so they had better buy a little corporate juju of their own.[101]

Brad Jackson discusses the rise of business improvement initiatives or "fads" and why managers seem so hungry for latest fashion. The quote below warns of incorporating fads without understanding their applicability:

> unintended consequence of the mass marketing of management techniques has been that it has fostered superficiality to the point that it has become professionally legitimate in the United States to accept and utilize ideas without an in depth grasp of their underlying foundation, and without the commitment necessary to sustain them.[102]

Brad Jackson pleads with the academic infrastructure to reengage in the research and creation of business management theories and tools. His comment on the transfer of business improvement authority from the academic arena into the consulting arena is summarized below:

---

[100] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 30.

[101] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 15.

[102] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 16.

> This knowledge not only takes on a different form and function but the traditional academic "guarantors" of validity, generalizability and replicability are replaced by the presentation style, credibility and persona of the author [consultant].[103]

These popular business management consultants, or Management Gurus according to Brad Jackson, cheerlead for the next greatest business salvation. This hype sounds good and after the books and seminars the theories and case studies seem to make sense. Business leaders and managers leap into a selected business improvement technique without reviewing any documented measurement to substantiate the Guru's claims. Business leaders and managers buy-in to the press attention and the credibility and charisma of the Guru. Unfortunately, the ultimate travesty may be that Gurus try to make it too simple; they lose the complexity and subtleties of business when they espouse the virtues of the 7 Habits of Highly Successful People or the One-Minute Manager. Brad Jackson summarizes the conclusion of many leaps of faith in the following passage:

> New programs and initiatives that seize the corporate imagination on a wide-scale basis are regularly derided as "fads", "buzzwords", "flavors of the month", "quick fixes", and "silver bullets". This tendency has perhaps been most succinctly captured in the term "fad surfing" or the practice of riding the crest of the latest management panacea and then paddling out again just in time to ride the next one, always absorbing for managers and lucrative for consultants; frequently disastrous for organizations.[104]

Figure A.10 highlights some of the business improvement initiatives.

Example Business Improvement Initiatives

Year	Initiative	Founder
1993	Business Process Reengineering	Michael Hammer and James Champy
1992	Balance Scorecard	Robert Kaplan and David Norton
1985	Total Quality Management	Department of the Navy
1980s	Six Sigma	Motorola
1987	Activity Based Costing/Management	Robin Cooper and Robert Kaplan
1985	Value Chain	Michael Porter
1950s	Just in Time	Toyota Motor Company

Figure A.10 Recent Business Improvement Initiatives

[103] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 4.

[104] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 13.

Several other perspectives on the rise of management consultants and business improvement initiatives:

> the growth in the popularity of management guru books and seminars, far from being linked with an upturn in managers' confidence, in fact represents a response to widespread self-doubt among executives, even those at the top.[105]

> Consultants are a way around the issues that companies usually put into their 'too hard' basket.[106]

In the end, the decision to adopt a business technique rests solely with an organization's leadership. That leadership decision should be based on a fundamental understanding of the problem, the culture, and the desired outcomes upon implementing the chosen technique. No doubt some companies have documented results that prove the effectiveness of an adopted business improvement initiative – GE and Six Sigma for example. However, the following passage from Ingersoll-Rand's CEO, Herbert L. Henkel, clearly advises organizations to build the foundation before grasping at the most recently hyped business fad:

> Businesses must prepare carefully for the adoption of tools such as Six Sigma. Six Sigma is a powerful methodology, but companies need to implement it on top of a strong foundation of teamwork, commonly shared goals, and a commitment to change to make it worthwhile. Lots of companies make the mistake of launching into Six Sigma without this foundation, and their efforts miss their mark.[107]

F. INTERNAL BUSINESS MANAGEMENT CONSULTANTS

Investigation into how companies achieve innovation and business process improvement revealed multiple examples of corporate or institution internal consulting groups. Organizations employing this business model rely on a select group of highly

---

[105] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 34.

[106] Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001, p. 33.

[107] Ingersoll-Rand website. The Insider's Advantage. www.irco.com/pressroom/businessperspectives/generaloperations/insideradvantage_print.html Last accessed October 14, 2005.

trained and experienced professionals within the organization to research, analyze, and implement change and business improvement initiatives. Several articles echoed the following sentiment:

> The strategy implementers are facing challenges on several fronts. The internal consulting units established by many clients often take over implementation tasks. For example, companies such as Shell, Siemens, and Credit Suisse are making greater use of their in-house consultancies for IT and implementation-related projects.[108]

Typically, organizations using internal consulting groups believe that their personnel possess the knowledge and creativity to identify and improve business efficiencies, customer satisfaction rates, product quality, and process improvements in a manner equal to or better than external management consultants. Asked why he was standing up an internal consulting group, J. Walter Thompson's Vice President-Chief Strategy Officer for North America, Robert S. Scalea, stated, "We have to be able to compete with what I call the 'consult-ification of everything.'" Mr. Scalea regained the functional core competencies that had been abdicated 40 years earlier to external strategy consultants: business modeling, pricing strategy, product portfolios, and distribution strategy. [109]

Internal consultants provide the following key benefits:

- Respond easily to new problems as they arise or spot them before they become significant,
- Possess valuable corporate knowledge,
- Understand the culture and organizational politics surrounding change and/or innovation,
- Personally accountable for their work; their job does not end with a final presentation but continues through implementation and measurement,

---

[108] Schmidt, Sasha L; Vogt, Patrick; Richter, Ansgar. The Strategy Consulting Value Chain is Breaking Up. Journal of Management Consulting, Inc. Vol. 16, No. 1; pg 39. March 1, 2005. Lexis Nexis p. 4.

[109] Rothenberg, Randall. JWT's consulting division sets new marketing standard. Advertising Age, November 22, 2004, p. 15.

- Professional development; challenging environment for the company's most talented personnel,
- Once established, more economical than using outside consulting firms,
- Creating and retaining business intelligence and intellectual capital through their work that benefits the entire corporation.[110]

Ingersoll-Rand (IR) staffs its internal consulting group, IR Global Consulting, with 17 personnel to leverage talent and guide sustained change and improvements across the corporate enterprise. Serving as a business transformation conduit, the internal consulting group achieves change and innovation faster and cheaper due to its familiarity with IR business lines and culture. John Dyer, Vice President of IR Global Consulting, remarks:

> Our people within IR are the experts, and no one knows better than they do what their businesses need to run more efficiently and better serve their customers. Unlike outside consultants, we at IR Global Consulting strive to give the company's managers the tools, guidance and support to exploit fully the considerable industry and business intelligence they already possess.[111]

German industrial conglomerate, Siemens AG, has partly attributed its 1990s turn around to the investment in an internal business analysis group:

> Another tool we adopted from GE was benchmarking-and this helped us quite a lot during the 90s to make our people understand that change was necessary. We benchmark primarily against out best competitor. We do this with our own internal consulting team, a practice that was started by Klaus Kleinfeld, who would later run the U.S. business and will succeed me as CEO soon. We now have 170 people in the group, and they are as good as McKinsey or Boston Consulting.[112]

---

[110] Levey, Jonah. Outside In: The Benefits of Internal Consulting. Raines International website: www.rainesinternational.com/knolwedgedetail.cfm?articleID=2 Last accessed October 21, 2005.

[111] Ingersoll-Rand website. The Insider's Advantage. Last accessed October 21, 2005.

[112] Stewart, Thomas A. and O'Brien, Louise. Transforming an Industrial Giant: Heinrich von Pierer. Harvard Business Review, February 2005. Lexis Nexis.

Finally, the internal consulting business model seems to have a role in improving the business execution of public organizations. The following passage is from Dr. Hal Irvin, Executive Director, Organizational Development at the Georgia Institute of Technology;

> Internal consultants have become increasingly common in for-profit organizations, both because in-house staff has the advantage of relevant expertise gained by working within an organization on an extended basis and because of the high cost of outside consultants. Internal consultants can help transform organizations by tapping the talent within.[113]

Internal consulting research revealed two organizational model options for those entities interested in establishing a resident business analysis expertise: The GT Visit Model and the GE Embed Model. A brief description of both models follows.

1. GT Visit Model: Georgia Tech Consulting Services

Upon arrival at the Georgia Institute of Technology (Georgia Tech) in 1994 as the newly elected President, Dr. Wayne Clough focused on improving the administrative functions at Georgia Tech. Dr. Clough stood up Georgia Tech Consulting Services (GTCS) to achieve administrative excellence through an internal consulting business model. The goal: provide an affordable but effective consulting resource to campus units as well as continue to support Institute-level initiatives and projects.

A small, highly experienced cadre of five people comprises GTCS. Three business consultants with backgrounds in accounting, engineering, and consulting bring extensive corporate knowledge from previous jobs with companies like AT&T Company, Bell South Company, and Anderson Consulting. Two change management professionals complete the group, adding capabilities in technology based initiatives and organizational and cultural change issues. Structurally, this group falls under the Georgia Tech main office; therefore, GTCS consultant salaries are part of the main office overhead.

These five consultants were selected based on a framework of education, experience, and skill sets. "An ideal consultant has an educational background in business administration or industrial engineering, and experience in university

[113] Irvin, Hal. Tapping the Talent Within, National Association of College and University Business Officers (NACUBO) Business Officer, December 2000, p. 32.

administration or with an external consulting firm."[114] Key consultant attributes include strong process improvement, communication and interpersonal skills with a working knowledge of information technology.

GTCS performs Georgia Tech main office consulting services free of charge. In addition to main office work, GTCS leverages its talent and skills by offering its consulting services on a fee based schedule to Georgia Tech academic schools and other campus organizations. The reimbursable hourly rate of $30 (does not include recovery of consultants' salaries) is significantly less than a typical business management consultant hourly fee of $300. Most projects cost between $1500 and $3500 and have a duration between 6 and 12 months.[115] Prior to GTCS, an economic, institute-wide business improvement resource did not exist.

In either 'mission' or 'reimbursable' work, GTCS conducts the analytical work typically performed by outside consultants. GTCS' internal knowledge, capable of shaping solutions tailored to an academic environment, is a key benefit over outside competitive consulting agencies.[116] GTCS assists senior management and other clients understand functional area performance, target improvement projects, conduct organizational assessments, design and administer surveys, and conduct benchmarking and best practice studies and implementation. Each project has a disciplined approach with proposals, deliverables and timelines agreed to by consultants and clients prior to an engagement.

In this GT Visit Model, GTCS consultants leave their central office and travel to the client's place of business. To overcome the "us" and "them" paradigm, GTCS consultants only respond to requests for assistance; GTCS never targets a specific school or organization for improvement. When needed, GTCS also physically relocates consultants to the client's place of business to develop a strong working rapport. Without fail, GTCS consultants get clients involved in all aspects of analysis to build trust,

---

[114] *Internal Consulting Services Lead to Internal Best Practices*. Georgia Tech Consulting Services, 2005, p. 7.

[115] Interview with JulieAnne Williamson, Project Director, Georgia Tech Consulting Services, 27 Jul 05.

[116] *Internal Consulting Services Lead to Internal Best Practices*. Georgia Tech Consulting Services, 2005, p. 5.

credibility, and cooperation. "This participation unquestionably accelerated the pace of implementation and helped us achieve significant results quickly."[117] Upon completing a project, GTCS consultants return to the central office to begin their next assignment.

GTCS success can be partly attributed to top leadership's support and involvement. President Clough routinely imparts his vision and guidance through the works of GTCS, contributing toward Georgia Tech's administrative and business alignment. His support of GTCS also boosts GTCS credibility among current and potential clients.[118] Another important factor in GTCS' success has been consultant loyalty to the Institute. "Consultants are not only members of the campus community, but customers of the solutions they deliver."[119]

GTCS leaves realized savings, return on investment and improved effectiveness metrics up to their clients. GTCS has begun to drive local best practices at Georgia Tech through coordinating the Institutes' responses to state of Georgia best practice competitions, developing and coordinating a campus best practice competition; and building a database of campus best practices for Institute-wide dispersion.

Through business case analysis, process improvement studies and organizational assessments, GTCS has thrived since its inception, completing over 150 projects for Georgia Tech's front office and academic schools. It is important to note that Georgia Tech continues to use outside management consultants for specialized consulting advice – for instance, in developing the campus master plan.[120]

2. GE Embed Model: General Electric Company

General Electric Company (GE) has developed a robust internal consulting capability to achieve business process improvements. The framework for GE's internal consulting operations is Six Sigma, a quality management technique popularized by

---

[117] *Internal Consulting Services Lead to Internal Best Practices*. Georgia Tech Consulting Services, 2005, p. 4.

[118] Interview with JulieAnne Williamson, Project Director, Georgia Tech Consulting Services, 27 Jul 05.

[119] *Internal Consulting Services Lead to Internal Best Practices*. Georgia Tech Consulting Services, 2005, p. 7.

[120] Ibid, p. 4.

Motorola in the 1970s. Six Sigma relies on intense, analytical data research and modeling to remove the opportunities for process variation. The goal is to reduce variations within a process to one in 5 million occurrences, or three standard deviations from the identified process mean. Six Sigma's process improvement successes in manufacturing operations lead to its application in nearly every aspect of business operations.

Below the strategic business unit level of management, GE employees are selected and trained to become Six Sigma Black Belts, or experts capable of leveraging the rigor of the Six Sigma methodology to uncover and solve inefficient, redundant, or less than optimal business processes. Several differentiating levels of training exist in the GE Six Sigma quality system; Master Black belt, Black belt, and Green belt.

GE's strategic business unit leaders select employees from within its own ranks to receive central, corporate sponsored Six Sigma training. Upon completion of the Black belt training, employees return to their previous place of employment, but no longer perform their "mission" work. Instead, new Black belts remove themselves from the day to day operations and view their organization through strategic and operational lenses.

Black belts concentrate on quality improvement, identifying processes in need of streamlining, introducing ideas that bring more value to the process, cost saving mechanisms, and possibly recommending purchase or divestiture of products. Utilizing a collaboration technique called 'Workout,' Black belts summon the appropriate stakeholders to discuss solution options to an identified weakness or opportunity confronting the office. Black belts remain in their assignment for two to three years. During this assignment, Black belts function within a matrix organization, reporting to both a quality leader and a mission leader.

GE's strategic business unit leadership trusts that the benefits of investing in Six Sigma Black belt training and project execution will surpass the cost of lost "mission" work years. Six Sigma projects that employee identifies and completes.

By training its own employees, GE creates a networked, business expertise and competency that is widely dispersed through its corporation. Other benefits include: alignment of business process improvement processes; consistent quality themed

communication thread from the CEO to the office; common business lexicon understood throughout the corporation; instant Black belt credibility with coworkers and the avoidance of any "outsider" attitudes; Black belts have experience in the areas they are tasked to improve and given the time and resources to research, analyze, and implement solutions; operational effectiveness is significantly increased through a dedicated, tailored improvement process; and avoiding exorbitant, external management consultant fees.

It is important to understand the limits of 'Workout' and Six Sigma. Six Sigma is not a panacea for all situations. Time depending, intuition, spot judgment, or other evaluation methods may supplant the lengthy and rigorous requirements of a Six Sigma analysis. The Black Belt toolbox contains more than Six Sigma solutions.[121]

In summary Georgia Tech and General Electric chose to cultivate a cadre of internal management consultants. Georgia Tech argued that the market-rate of $300 per hour for external consultant service was too expensive and that the external consultants did not possess the familiarity with the academic culture.[122] General Electric opted for internal consultants within its business units using the cost argument and the decision not to outsource intellectual capital. Both organizations opted for their own analytic team that can also implement new innovations.

G. COMMUNITIES OF PRACTICE

"Learning cannot be designed: it can only be designed for – that is, facilitated or frustrated"[123]

A lot of literature has been written in the last two decades about the need for organizations to learn. This may seem obvious, but countless examples can be referenced

[121] Interview with Timothy Derrick, Master Black Belt, GE Wind Power Systems. 24 August 05.

[122] Interview with JulieAnne Williamson, Project Director, Georgia Tech Consulting Services, 27 Jul 05.

[123] Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998. p. 229.

that indicate organizations fail to listen and incorporate the predictions from key customers, employees, or economic trends; consequently, these firms find themselves irrelevant and more likely, bankrupt.

Organizational learning is the ability of an organization to gather, share, and incorporate experiences and information into everyday practices with the goal of improving these practices. Organizational learning is only as good as the learning achieved by the organization's people. People must be aware of a potential learning experience and have the means to capture and disseminate this experience to other co-workers so the practice can be upgraded by incorporating this new, or learned, information. Figure A.11 depicts the components of learning.

Figure A.11 Components of Learning [Ref: Wenger, *Communities of Practice*]

Researchers have studied and published several theories on social learning. Specifically, Dr. Etienne Wegner and Jean Lave, published a study in 1991 that introduced the concept of *communities of practice*. Dr. Wegner defined communities of practice in the following way:

Being alive as human beings means that we are constantly engaged in the pursuit of enterprises of all kinds, from ensuring our physical survival to seeking the loftiest pleasures. As we define these enterprises and engage in their pursuit together, we interact

with each other and with the world and we tune our relations with each other and with the world accordingly. In other words, we learn.

Over time, this collective learning results in practices that reflect both the pursuit of our enterprises and the attendant social relations. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared enterprise. It makes sense, therefore, to call these kinds of communities, *communities of practice*.[124]

Further, Dr. Wegner included specific language that differentiates a community of practice from any other aggregation of people:

A community of practice is not just an aggregate of people defined by some common characteristic and the term is not a synonymous for groups, teams or networks. Further:

- Membership is not just a matter of social category, declaring allegiance, belonging to an organization, having a title, or having personal relations with some people.
- A community of practice is not defined merely by who knows whom or who talks with whom in a network of interpersonal relations through which information flows.
- Neither is geographical proximity sufficient to develop a practice.[125]

Therefore competent membership in a community of practice would include:

Mutuality of engagement – the ability to engage with other members and respond in kind to their actions, and thus the ability to establish relations in which this mutuality is the basis for an identity of participation.

Accountability to the enterprise – the ability to understand the enterprise of a community of practice deeply enough to take some responsibility for it and contribute to its pursuit and to its ongoing negotiation by the community.

Negotiability of the repertoire - the ability to make use of the repertoire of the practice to engage in it. This requires enough participation (personal or vicarious) in the history of a practice to recognize it in the elements of

[124] Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998. p. 45.

[125] Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998. p. 74.

its repertoire. Then it requires the ability - both the capability and the legitimacy – to make this history newly meaningful.[126]

Figure A.12 depicts the interaction of these three characteristics of Communities of Practice.

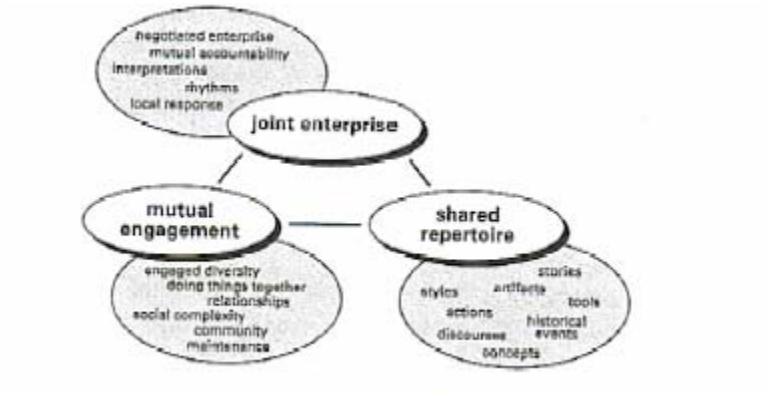

Figure A.12 Community of Practice Characteristics [Ref: Wenger, Communities of Practice]

Two additional insights complete the community of practice definition:

A community of practice is a living context that can give newcomers access to competence and also invite a personal experience of engagement by which to incorporate that competence into an identity of participation. When these conditions are in place, communities of practice are a privileged locus for the *acquisition* of knowledge.

A community of practice is a good context to explore radically new insights without becoming fools or stuck in some dead end. A history of mutual engagement around a joint enterprise is an ideal context for this kind of leading-edge learning, which requires a strong bond of communal competence along with a deep respect for the

[126] Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998. p. 137.

particularity of experience. When these conditions are in place, communities of practice are a privileged locus for the *creation* of knowledge.[127]

Using the context above, the officer and enlisted communities within the DoN constitute communities of practice. For example, the Surface Warfare community not only has its own designator and warfare badge, but is identified through the style, competence, and practice of its officers. Once engaged, Surface Warfare officers learn from and contribute to the perpetuation of mastery of naval command at sea. Both acquisition and creation of knowledge is exchanged among Surface Warfare officers. The Surface Warfare community is both a formal (Surface Warfare Officers Association) and informal (social) network of officers who use the tools developed by this community to enhance the practice of naval warfighting.

Communities of practice enable organizational learning. These communities of related people practice similar activities and engage with each other to acquire and create knowledge that continuously refines and improves their practice. This improvement benefits both the community's objective and the entire organization of which the community is a part. Dr. Wegner explains the importance of communities of practice in the following manner:

Communities of practice are organizational assets because they are the social fabric of the learning of organizations. It is their ability to cross institutional lines that makes them so critical. An organization's ability to deepen and renew its learning thus depends on fostering – or at the very least not impeding – the formation, development, and transformation of communities of practice, old and new.[128]

To adequately encourage and develop communities of practice within an organization effectively, leaders must believe that the following is true:

> Education, in its deepest sense and at whatever age it takes place, concerns the opening of identities – exploring new ways of being that lie beyond our current state. Whereas training aims to create an inbound trajectory targets at competence in a specific practice, education must strive to open new dimensions for the negotiation of the self. It places students on an

[127] Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998. p. 214.

[128] Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998. p. 253.

outbound trajectory toward a broad field of possible identities. Education is not merely formative – it is transformative.[129]

Not only is education transformative for an individual, but educating individuals plays a critical role in transforming the organization. New perspectives, coupled with emerging technologies and business management techniques equip workforce participants with the tools and confidence to invite and cope with change.

For organizations that have not yet realized the full value and potential of communities of practice, Dr. Wegner provides a start-up outline. This outline can be seen in Figure A.13 below.

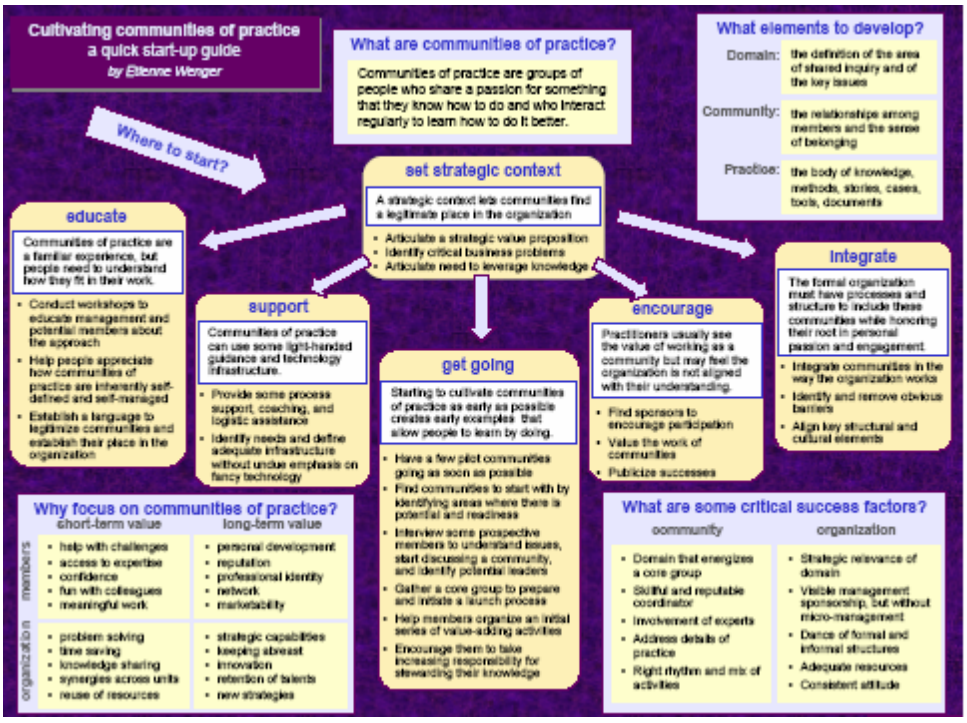

Figure A.13 Starting a Community of Practice

1. American Society of Civil Engineers

The American Society of Civil Engineering (ASCE) is the non-profit and educational organization for civil engineers. ASCE provides civil engineers the products,

[129] Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998. p. 263.

services, and resources designed to help civil engineers meet career goals — whether "getting your feet wet" in the profession or proudly looking back on a lifetime of achievements.[130]

ASCE's mission is "to provide essential value to our members, their careers, our partners and the public by developing leadership, advancing technology, advocating lifelong learning, and promoting the profession."[131]

As of 2005, ASCE's has 137,000 members. ASCE's headquarters has between 100-200 permanent employees to facilitate both the nurture and growth of the organization and the execution of initiatives.

ASCE's 2004 Revenues were $48 million and its 2004 expenses were $44 million. The single largest expense category was Publications and Advertising: $11 million.

ASCE uses three types of organizational structures to deliver products and education to its stakeholders: Committees, Institutes, and Communities of Practice. Figure 3.26 depicts the Institutes, Communities of Practice and a sampling of the Committees.

Over 6,200 civil engineers serve on more than 600 national committees that produce ASCE's annual convention, specialty conferences, publications, policies, building codes and standards, and other services that benefit ASCE and its stakeholders.

ASCE defines a profession as the pursuit of a learned art in a spirit of public service. ASCE further amplifies this definition by adding "a calling in which special knowledge and skills are used in distinctly intellectual plane in the service of mankind, and in which the successful expression of creative ability and application of professional knowledge are the primary rewards."[132]

ASCE demands that its members exhibit the highest standards of excellence in the educational field and in the performance of services while maintaining ethical conduct.

---

130 http://www.asce.org Last accessed October 2, 2005.

131 http://www.asce.org Last accessed October 2, 2005.

132 http://www.asce.org Last accessed October 2, 2005.

ASCE recognizes its obligation to society to advance its professional standards and to prescribe the conduct of its members. To that end, ASCE uses the following professional committees:

ASCE facilitates development of technologies through 200 technical committees that define the standards, direction, and focus of the profession. Technical committee members, 5,000 strong, participate in more than fourteen annual conferences and workshops and publish 10 journals with over 575 articles.

ASCE augments its technical committees with technical specialty Institutes. The Institutes work to advance the knowledge and practice of specific civil engineering specialties by focusing on the technical, educational, and professional issues within that area. Membership in an Institute brings civil engineers together with other professionals within a chosen specialty, providing members with a variety of additional resources.

ASCE has currently divided the civil engineering profession into fifteen Communities of Practice. The Communities of Practice allow civil engineers to easily find information pertaining to their area of specialty. Each section includes up-to-date headlines and news, a listing of upcoming events, discussion groups and numerous other resource listings.

To advance civil engineering practices and encourage greater technical knowledge transfer, ASCE pursues collaboration with 66 civil engineering organizations worldwide, and fosters the formation of and participation in regional and worldwide groups including: The Asian Civil Engineering Coordinating Council (ACECC) which implements the Civil Engineering Conference in the Asian Region (CECAR) every three years; The North American Alliance for Civil Engineering (NAACE) to address the needs of civil engineers in Canada, Mexico and USA; the Union Panamericana de Associaciones de Ingenieros (UPADI) that includes engineering organizations in Latin America; and the World Federation of Engineering Organizations (WFEO). The Society maintains local affiliates in 25 countries, including 6 international student groups, and serves members in 159 nations.

ASCE addresses a wide variety of issues affecting the professional practice of civil engineering today including licensure, ethics, business practices, career

development, community service, leadership and management. The Journal of Leadership and Management in Engineering, the annual CEO Forum, online seminars, the How to Work Effectively with Consulting Engineers manual of practice, and the Peer Review for Public Agency program are some of the resources available to transfer knowledge to the profession. ASCE also developed a series of diversity awareness programs to better serve industry globalization and a growing diverse society. In addition, ASCE sponsors Summer Institutes to introduce students from under-served communities to the opportunities of the civil engineering profession, and has established a Diversity Award Program to recognize those who champion diversity initiatives.

CERF is a global not-for-profit 501(c)(3) organization, created by ASCE, focused on constructing an efficient and renewable future. In collaboration with the construction, engineering and environmental industries, CERF facilitates the advancement of innovation for a sustainable infrastructure. In particular, CERF operates innovative technology programs to speed innovation into practice in the areas of transportation, public works, energy systems and applications, and the environment. These programs are designed to unite and transform industries, and to improve the quality and performance of the built environment.

ASCE provides the 93,000-entry Civil Engineering Database, along with many other resources for practicing civil engineers including a complete catalog of ASCE publications. The Cybrarian Service is a Web-based service that can help you verify a title of an ASCE publication, locate Web sites relevant to your topic, or help you to use different Web search engines.

ASCE maintains a robust interaction with governments at all levels. The following communication channels offer members numerous avenues to contact elected officials on matters pertaining to civil engineering:

- Quick Links
- TEA-21 Reauthorization Action Center
- "Six Clicks" Advocacy Website
- This Week in Washington

- Report Card for America's Infrastructure
- The Report Card for America’s Infrastructure is a significant product developed and maintained by ASCE. To create the last Report Card, ASCE assembled a panel of 24 of the nation's leading civil engineers, analyzed hundreds of studies, reports and other sources, and surveyed more than 2,000 engineers to determine what was happening in the field. ASCE added three new categories to the 12 graded in 2001, including one for infrastructure security. This Report Card is published with the full endorsement of ASCE and reflects the combined competence of its members.

Outreach is accomplished through programs in State Government Relations, Policies & Priorities, Key Contact Program, and Programs/Resources.

ASCE has formed numerous coalitions. ASCE works with allied organizations from many areas to advance common goals and initiatives.

- Issues Focus
- Research ASCE's Priority Issues! Read in-depth information on issues important to the civil engineering profession, including bills introduced in congress and ASCE's outlook for the future.
- 16 Ways to Get Involved in Public Policy
- Follow these easy tips to get involved and influence public policy to improve the profession.
- Congressional Fellows Program
- Every year, ASCE sponsors one member to be a Congressional Fellow and work in a congressional office. Learn more about this exciting program and how you can participate.
- Leadership Training in Government Relations

- Also known as the Legislative Fly-In, ASCE members gather in Washington, D.C. in early March to learn about issues affecting civil engineering and lobby their elected officials.
- State Public Affairs Grants
- Win a grant for your Section to plan a government or public relations activity.
- Press Releases
- View recent ASCE press releases.
- Testimony & Correspondence
- Read communications from ASCE to the U.S. Congress, federal and state agencies, and state legislatures.
- Public Relations

Through programs such as the Report Card for America's Infrastructure and national sponsorship of PBS series, such as Building Big™ and Great Projects: The Building of America, ASCE enhances the image of civil engineers and builds public support for better investment in America's infrastructure. ASCE is engaging the next generation of civil engineers by showcasing young engineering talent through New Faces in Engineering, and by conducting public outreach activities such as Family Festivals. Stories featuring ASCE or civil engineers as experts have appeared in the Wall Street Journal, The New York Times, USA Today, The Washington Post, Business Week, U.S. News & World Report, The Los Angeles Times, CNN, The Discovery Channel, The News Hour with Jim Lehrer, National Public Radio and NBC Radio.

Specific emphasis is placed on recruiting new civil engineers through ASCE's Kids & Careers Programs. Targeting school age children, these programs begin a methodical development of civil engineering's role in today's world. Programs include:

- Exploring Civil Engineering
- What is Civil Engineering?

- The Past, Present and Future of Civil Engineering
- Technical Specialties/Disciplines in Civil Engineering
- Building Your Future in Civil Engineering
- History of Civil Engineering
- Interactive databases as a tool for school projects
- Teacher resources, both downloadable slideshows and workshops
- School Contests and Competitions

ASCE is the world's largest publisher of civil engineering information - producing more than 50,000 pages of technical content each year. The Society publishes the monthly magazine Civil Engineering, a monthly newspaper ASCE News, the quarterly Geo-Strata for the Geo-Institute, an annual ASCE bridges calendar, 30 technical and professional journals (available in print and online), and a variety of books including conference proceedings (available online), committee reports, manuals of practice, standards and monographs under the ASCE Press imprint. The 125,000-entry civil engineering database is available at www.pubs.asce.org, along with many other resources for practicing civil engineers including a complete catalog of ASCE publications.

Informing civil engineers about new innovations in civil engineering, the Society holds 15-20 technical conferences annually, with an average total attendance of 10,000. Each year, the Society also offers more than 275 continuing education seminars, workshops, distance learning programs and customized in-company training programs. ASCE offers Continuing Education Units (CEUs) and/or Professional Development Hours (PDHs) for conferences, seminars and workshops, and most distance learning programs to help professional engineers meet mandatory continuing professional competency requirements in their states.

H. CORPORATE UNIVERSITIES

General Electric launched one of the first corporate universities in 1955, a physical structure located in Crotonville, New York. However, it was not until the 1980s that significant numbers of corporations began to launch their own university programs.

During this period, many companies, witnesses a radically shortened shelf-life of knowledge, and began to determine that they could no longer rely on institutions of higher education to re-tool their work force. Instead, they set out to create their own "corporate universities" with the goals of achieving tighter control and ownership over the learning process by more closely linking learning programs to real business goals and strategies.[133]

Figure A.14 demonstrates the average retention rate depending on the learning medium.

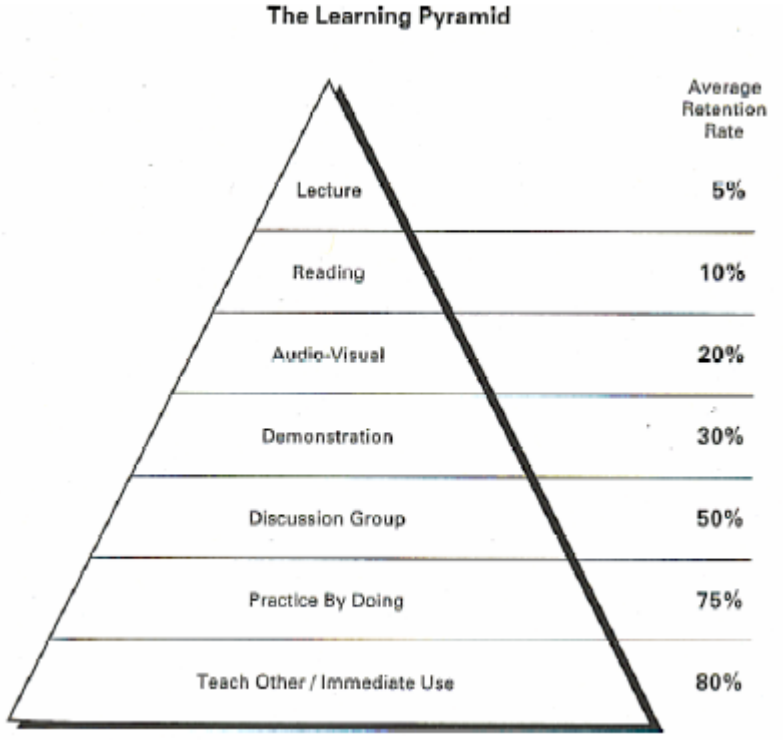

Figure A.14 The Learning Pyramid [Ref: Corporate University: Figure 2-2 The Learning Pyramid Abstracted from NTL Institute for Applied Behavioral Sciences]

Today, most companies have used technology advancements to move the university away from a physical entity and toward an innovative educational process that

[133] Meister, Jeanne C. Corporate Universities: Lessons in Building a World-Class Work Force. McGraw-Hill, 1998, p. ix.

allows employees to participate in life-long education while improving job performance. Companies that retain physical university locations, use these assets as an opportunity to bring-in employees from around the world to identify and discuss business threats and challenges, share best practices and network. Corporate universities have become the nexus of business innovation.[134] Often the opportunity to go to a company's corporate university is an honor and employees are expected to return with new business education, tools and insights that can be shared with coworkers.[135]

Tables A.2 and A.3 highlight the learning shifts.

Paradigm Shift from Training to Learning

Old Training Paradigm		21st Century Learning Paradigm
Building	**Place**	On Demand Learning - Anywhere, Any place
Upgrade Technical Skills	**Content**	Build Core Workplace Competencies
Learn by Listening	**Methodology**	Action Learning
Individual Internal Employees	**Audience**	Intact Teams of Employees, Customers, and Product Suppliers
External Universtiy Professors/Consultants	**Faculty**	Internal Senikor Managers and a Consortium of University Professors and Consultants
One Time Event	**Frequency**	Continuous Learning Process
Build Individual's Inventory of Skills	**Goal**	Solve Real Business issues and Improves Performance on the Job

Table A.2 Paradigm Shift from Training to Learing [Ref: Figure 1-5 Paradigm Shift from Training to Learning Abstracted from 1997 Corporate University Exchange, Inc.]

[134] Meister, Jeanne C. Corporate Universities: Lessons in Building a World-Class Work Force. McGraw-Hill, 1998, p. x.

[135] Interview with Mr. Tim Derrick, GE Energy Services.

Shift in Performance Based Learning

Training Department		Corporate University
Reactive	**Focus**	Proactive
Fragmented & Decentralized	**Organization**	Cohesive and Centralized
Tactical	**Scope**	Strategic
Little/None	**Buy-in**	Management and Employee
Instructor-Led	**Delivery**	Experience with Various Technologies
Training Director	**Owner**	Business Unit Managers
Wide Audience/Limited Depth	**Audience**	Customized Curricula for Job Communities
Open Enrollment	**Enrollment**	Just-in-Time Learning
Increase in Job Skills	**Outcome**	Increase in Performance On-the-Job
Operates as a Staff Function	**Operation**	Operates as a Business Unit
"Go Get Trained"	**Image**	"University as Metaphor for Learning"
Trainer Dictated	**Marketing**	Consultative Selling

Table A.3 Shift in Performance Base Learning [Ref: Figure 1-6 Key Components of Shift to Performance-based Learning Abstracted from 1997 Corporate University Exchange, Inc.]

Ten clear-cut goals and principles lie at the heart of the corporate university's power to galvanize employees into the kind of first-rate work force needed for success in the global marketplace. These goals are:

1. Provide learning opportunities that support the organization's critical business issues.
2. Consider the corporate university model a process rather that a place of learning.
3. Design a curriculum to incorporate the three C's: Corporate citizenship, Contextual framework, and Core competencies.
4. Train the value chain, including customer, distributors, product suppliers, and the universities that provide tomorrow's workers.
5. Move from instructor-led training to multiple formats of delivering leaning.
6. Encourage leaders to be involved with and facilitate learning.
7. Move from a corporate allocation funding model to on "self-funded" by the business units.

8. Assume a global focus in developing learning solutions.

9. Create a measurement system to evaluate outputs as well as inputs.

10. Utilize the corporate university for competitive advantage and entry into new markets.[136]

An effective Corporate University achieves the following for its organization:

- Helps the organization exceed organizational performance objectives by equipping employees and future leaders with appropriate development opportunities

- Drives higher quality programs at lower costs by managing enterprise-wide learning resources for consistency, and using deliberate processes for vendor review, selection, and management

- Defines value generated for the organization through learning by implementing a relevant measurement system that monitors investments in learning in relation to business results

- Focuses learning programs on business needs through a model of enterprise-wide education with central oversight to address needs of business units with unique learning and development requirements.[137]

In summary, a corporate university facilitates. Both companies and students view attendance at a corporate university as an opportunity for individual career breakouts and springboards into the next level of responsibility, contribution and/or management.[138]

---

[136] Meister, Jeanne C. Corporate Universities: Lessons in Building a World-Class Work Force. McGraw-Hill, 1998, pp 30 and 31.

[137] http://www.corpu.com/services/cu_design.asp Last accessed September 29, 2005.

[138] Interview with Professor Douglas Brooks. July 2005.

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX B. ORGANIZATIONAL IDEAS AND MODELS THAT OFFER POTENTIAL IMPROVEMENTS TO DON BUSINESS TRANSFORMATION

A. GOVERNMENT ACCOUNTABILITY OFFICE

The Government Accountability Office (GAO) is an independent, nonpartisan, professional services agency in the legislative branch of the U.S. federal government. GAO's mission is to support the Congress in meeting its constitutional responsibilities and to help improve the performance and ensure the accountability of the federal government for the benefit of the American people. GAO accomplishes this mission by providing reliable information, informed analysis, and recommendations to the Congress, to federal agencies, and to the public. In summary, GAO examines how taxpayer dollars are spent and advises lawmakers and agency heads on ways to make government work better.[139]

David M. Walker, Comptroller General of the United States, Chief Accountability Officer, and Head of GAO, has testified to numerous Congressional subcommittees and issued several GAO reports on the current status of financial management in the DoD. Specific events include: 1) April 13, 2005 Mr. Walker delivered testimony titled, *DoD BUSINESS TRANSFORMATION: Successful Business Transformation Requires Sound Strategic Planning and Sustained Leadership (GAO-05-520T)*, before the Subcommittee on Readiness and Management Support, Committee on Armed Services, U.S. Senate, and 2) April 28, 2005 Mr. Walker delivered testimony titled, *DEFENSE MANAGEMENT: Key Elements Needed to Successfully Transform DoD Business Operations (GAO-05-629T)*, before the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia, Committee on Homeland Security and Governmental Affairs, U.S. Senate. On June 8, 2005 GAO officials Gregory Kutz; Managing Director, Forensic Audits and Special Investigations, and Randolph Hite; Director, Information Technology Architecture and Systems Issues, delivered testimony titled, *DoD BUSINESS TRANSFORMATION: Sustained Leadership Needed to Address Long-standing Financial and Business Management Problems (GAO-05-723T)*, before

[139] GAO-05-776SP: GAO's Fiscal Year 2006 Performance Plan, p. 4.

the Subcommittee on Government Management, Finance, and Accountability, Committee on Government Before, House of Representatives.

GAO's 2005 analysis of DoD's recent business transformation efforts and financial management systems is not complimentary:

> GAO has reported on inefficiencies and inadequate transparency and accountability across DoD's major business areas, resulting in billions of dollars of wasted resources annually. These problems have resulted in GAO's designation of eight DoD areas as high-risk – DoD's overall approach to business transformation – is needed to conform the other seven areas. DoD also shares some responsibility for six other government-wide high-risk areas, including strategic human capital management. Although DoD's senior leaders have shown commitment to business management reform, little tangible evidence of actual improvement has been seen to date.[140]

The eight specific DoD high risk business areas and the year each area was added to GAO's list[141] are shown in Figure B.1. The six other high-risk areas that DoD shares some responsibility for include: 1) Strategic Human Capital Management, 2) Managing federal real property, 3) Protecting federal information systems and the nation's critical infrastructure, 4) Establishing appropriate and effective information sharing mechanism to improve homeland security, 5) Modernizing federal disability programs, and 6) Managing interagency contracting.

---

[140] GAO-05-520T: Successful Business Transformation Requires Sound Strategic Planning and Sustained Leadership, April 13, 2005. Testimony from Comptroller General of the U.S. to U.S. Senate Subcommittee on Readiness and Management Support, p. i.

[141] This thesis does not elaborate on each high-risk area. For additional information on GAO's eight DoD specific high-risk areas please see GAO-05-520T: Successful Business Transformation Requires Sound Strategic Planning and Sustained Leadership, April 13, 2005. Testimony from Comptroller General of the U.S. to U.S. Senate Subcommittee on Readiness and Management Support

Table 1: Years When Specific DOD Areas on GAO's 2005 High-Risk List Were First Designated as High Risk

Area	Year designated high risk
DOD approach to business transformation	2005
• DOD personnel security clearance program	2005
• DOD support infrastructure management	1997
• DOD business systems modernization	1995
• DOD financial management	1995
• DOD weapon systems acquisition	1990
• DOD contract management	1992
• DOD supply chain management[a]	1990[a]

Source: GAO.

[a]This area, formerly entitled DOD inventory management, was expanded to include distribution and asset visibility.

Figure B.1 2005 GAO High-Risk Business Areas for DoD [Ref: DoD BUSINESS TRANSFORMATION: Successful Business Transformation Requires Sound Strategic Planning and Sustained Leadership (GAO-05-520T)]

The following critiques come from GAO's April 28, 2005 testimony on DoD's current business systems modernization and financial management:

1. Senior administration leaders and advisors have demonstrated a commitment to addressing DoD's management challenges. However, little sustainable progress has been made to date, and at present, no one individual at the right level with an adequate term in office is responsible for overall business transformation efforts.

2. DoD has difficulties overcoming cultural resistance to change and the inertia of various organizations, policies, and procedures rooted in the Cold War era.

3. While this [Defense Business Systems Management Committee] committee may serve as a useful planning and coordination forum, it is important to remember that committees do not lead, people do.

4. Over the past decade DoD has significantly increased its spending on contractor-provided information technology and management support

services, but it has yet to fully implement a strategic approach to acquiring these services.

5. DoD has not established a clear linkage among institutional, unit, and individual results-oriented goals, performance measures, and reward mechanisms for undertaking large-scale organizational change initiatives that are needed for successful business management reform.

The following critiques come from GAO's Jun 8, 2005 testimony on DoD's current business systems modernization and financial management:

1. The Secretary of Defense has estimated that improving business operations within the DoD could save 5 percent of DoD's annual budget, which based on fiscal year 2005 appropriations represents a savings of about $25 billion.

2. Long-standing weaknesses in DoD's financial management and related business processes and systems have resulted in a lack of reliable information needed to make sound decisions, hindered its operational efficiency, adversely affected mission performance, and left the department vulnerable to fraud, waste, and abuse.

3. DoD's current business systems investment process, in which system funding is controlled by DoD components, has contributed to the evolution of an overly complex and error-prone information technology environment containing duplicative, nonintegrated, and stovepiped systems.

4. DoD has not assigned overall management responsibility and accountability for a business transformation effort.

5. Fundamental problems with DoD's financial management and related business operations continue to cause substantial waste and inefficiency, have an adverse impact on mission performance, and result in the lack of adequate transparency and appropriate accountability across all major business areas.

6. DoD does not have the ability to provide timely or accurate information on the location, movement, status, or identity of its supplies. Although total asset visibility has been a department-wide goal for over 30 years, DoD currently estimates that it will not achieve this goal until the year 2010.

7. The seriousness of DoD's business management weaknesses underscores the importance of no longer condoning "status quo" business operations at DoD.

8. Until DoD has complete, reliable information on the costs and number of business systems operating within the department, its ability to effectively control the money it spends on these systems will be limited. Furthermore, given that DoD does not know how many business systems it has, it is not surprising that the Department continues to lack effective management oversight and control over business systems investments.

9. Specific guidance in the 2005 Appropriations Act furthers the oversight and management of DoD business systems; however, control over the budgeting and funding of such business systems remains at the component level. As a result, DoD continues to have little or no assurance that its business systems investment money is being spent in an economical, efficient, and effective manner.

Throughout GAO testimonies and reports reviewed through September 2005 on business transformation and financial management systems, three key GAO recommendations for improvement emerge:

1. Develop and implement a Business Enterprise Architecture
2. Establish central control over systems investment funds
3. Provide sustained leadership.

The following paragraphs explore these recommendations more thoroughly.

1. Develop and Implement a Business Enterprise Architecture

GAO suggests developing and implementing a DoD Business Enterprise Architecture (BEA). A BEA is a strategic framework that forecasts future IT and business application requirements and provides a roadmap on how to achieve the envisioned end-state. A BEA also delineates all interface parameters for information technology and business application systems. By establishing business rules, protocols, and technical specifications upfront and Department-wide, the BEA facilitates interconnectedness of systems, information sharing, and streamlining of IT system investment and oversight. BEA is a hot topic in both industry and government and will be further discussed in the next section, DoD Business Modernization and Systems Integration Program Office, and again in Chapter IV.

Figure B.2 shows the estimated operating business systems in the DoD. The Navy has over 50% of the total number of business systems in the DoD.

Table 3: Reported DOD Business Systems by Domain and Component

Domain	Air Force	Army	Navy	DFAS	Other defense agencies	Multiple owner	Not determined	Total
Acquisition	20	16	122	2	15	2	2	179
Financial management	41	88	233	93	59	15	71	600
Human resources	84	332	151	30	65	26	25	713
Installations and environment	36	63	259	1	12	6	96	473
Logistics	166	193	1,512	4	76	39	15	2,005
Enterprise information environment	4	17	10	0	8	0	1	40
No domain	18	18	66	13	18	2	5	140
Total	369	727	2,353	143	253	90	215	4,150

Source: GAO analysis.

Note: Based on analysis of BMMP reported business system inventory as of February 2005.

Figure B.2 DoD Business Systems [Ref: DoD BUSINESS TRANSFORMATION: Sustained Leadership Needed to Address Long-standing Financial and Business Management Problems (GAO-05-723T)]

2. Establish Central Control Over Systems Investment Funds

GAO advocates centrally funding business systems investment. Investments in modernizing the DoD's business systems must be directed toward

an integrated corporate system solution, not the perpetuation of the service-unique stovepiped, duplicative systems environment that exists today.

Functional authority must be coupled with fiscal authority to truly transform business operations. Those who are responsible for business systems modernization must control the allocation and execution of funds for DoD business systems.

3. Provide Sustained Leadership

GAO recommends that one person be responsible and accountable for the overall business transformation effort within the DoD. To achieve Departmental, strategic business integration and sustained leadership over DoD's business transformation efforts, DoD must create a full-time executive-level II position. The GAO has termed this position the Chief Management Official (CMO). Functioning as a change agent, the CMO would serve as the Deputy Secretary of Defense for Management. This position elevates, integrates, and institutionalizes the attention essential for addressing key stewardship responsibilities, such as strategic planning, financial management, and business systems modernization, while facilitating the overall business management reforms within DoD. The CMO must possess sufficient stature and clout to overcome service parochialism and entrenched DoD organizational silos.

The CMO responsibility cannot be a collateral duty of the Secretary of Defense or Deputy Secretary given the complexities of both business operations and 21st century warfighting. However, the CMO does not manage business operations; day to day business operations and implementation of business initiatives remain the responsibility of the service secretaries and others.

GAO recommends appointing the CMO for one seven year term with the potential for reappointment. This term length allows the CMO to provide leadership continuity and strategic business plan transition assistance between two potentially differing Presidential agendas. Additionally, GAO research concluded that between five and seven years is required to successfully

implement and sustain significant change initiatives in large organizations. CMO candidates must possess a balance of professional expertise in the business management area, DoD management experience, and favorable leadership results in change management initiatives within large, complex organizations.

The CMO would operate much like a corporate Chairman of the Board. The CMO would chair the newly created Defense Business Systems Management Committee and integrate the work of the cognizant business area authorities.[142] The CMO would enter into an annual performance agreement with the Secretary of Defense that sets forth measurable individual goals linked to overall DoD organizational business transformation goals. GAO suggests that compensation, both salary and bonuses, be tied to the attainment of agreed upon goals. The CMO's achievements and compensation would be reported to Congress every year.

B. DOD BUSINESS MODERNIZATION AND SYSTEMS INTEGRATION PROGRAM OFFICE

The DoD Business Management Modernization Program (BMMP) was set up in July 2001 to modernize DoD business operations and systems by defining department-wide future business capabilities and to control current and future business systems investments. The Business Modernization and Systems Integration (BMSI) Program Office is accountable for the creation, implementation, and execution of the BMMP. The mission of the BMMP is stated below:

> The Business Management Modernization Program (BMMP) will drive greater innovation and higher levels of efficiency throughout the Department Of Defense. Our mission is to transform business operations to achieve improved warfighter support while enabling financial accountability across the Department of Defense. BMMP will implement enterprise level business capabilities that will accelerate department-wide improvements in business processes and information systems. We plan to accomplish this mission by relying on three principles: clear standards, clear lines of authority, and tiered accountability.

[142] The Ronald W. Reagan National Defense Act of 2005 mandates that the DoD implement a Business Enterprise Architecture. NDAA FY 2005, Section 332 outlines the Business Enterprise Architecture governance.

The Ronald Reagan National Defense Authorization Act of FY 2005 significantly enhanced the BMMP structure and oversight responsibilities. Specifically, the Ronald Reagan National Defense Authorization Act of FY 2005 (NDAA FY2005) mandated the following: 1) the creation of the Defense Business Systems Management Committee (DBSMC) to govern the DoD business modernization effort, 2) the creation of specific Certification Authorities (CAs) that must review and approve any business system or application that exceeds $1 million within their assigned functional area of responsibility, and 3) the creation of Investment Review Boards (IRBs) to oversee, review, and support the CA's functional area of responsibility.

Business enterprise architecture (BEA) is a business term introduced in the last decade. Two converging trends have made enterprise architecture an imperative within large, complex organizations: 1) the unmanaged proliferation of non-integrated IT and business application solutions throughout the organization, and 2) the technological advancement of enterprise resource management software applications from technology firms Oracle, SAP, and IBM that can now integrate existing and new business and IT applications into complete systems.

The 'architecture view' of systems (both business and IT systems) is defined in the ANSI/IEEE Standard 1471-2000 as: "the fundamental organization of a system, embodied in its components, their relationships to each other and the environment, and the principles governing its design and evolution."[143] Many organizations are developing a business enterprise architecture to provide a clear and holistic vision of how systems (both manual and automated) will support and enable their business. An effective enterprise architecture comprises a comprehensive view of the business, including its drivers, vision and strategy; the organization and services required to deliver this vision and strategy; and the information, systems and technology required for the effective delivery of these services.

BEA is a concept that aligns business objectives with supporting IT system development and deployment. The BEA concept revolves around centralized processes

[143] Platt, Michael. Microsoft Architecture Overview; Executive Summary. July 2002; p. 1. http://msdn.microsoft.com/library/en-us/dnea/html/eaarchover.asp?frame=true Last accessed August 3, 2005.

and decentralized decision-making and implementation. Information and business architectures are aligned when business people have the information they need to run the business. This means accurate and on time information.

The governing board of the BEA issues standards, policies, and configurations that must be adhered to by all subordinate entities. Subordinate entities, adhering to the stipulated architecture framework, retain responsibility for funding and implementing business systems required to complete their assigned missions.

The DoD business enterprise architecture (BEA) must conform to the Federated Business Enterprise Architecture (BEA). The Federated BEA, led by the Office of Management and Budget and in its fourth year of existence, is the U.S. Government's initiative to align and integrate all U.S. Department and Agency business systems. The ultimate goal is that the President of the United States has real-time, accurate business information from every Department, facilitating more effective and efficient delivery of public services.

Similarly, DoD components must configure their business enterprise architectures to conform to the policies, business rules, standards, and configurations of the DoD BEA. This cascading business enterprise architecture ensures the successful exchange of information from the field to the President of the United States. Specifically, the DoD BEA has six business priorities: 1) Financial Visibility; end state is complete, real-time access to all financial information within the DoD to include planning, budgeting, accounting, and cost, 2) Acquisition Visibility; end state is complete, real-time access to component acquisition program information, 3) Material Visibility; end state is complete, real-time access to Component supply chain management, 4) Personnel Visibility; end state is complete, real-time access to Component personnel information and status, 5) Real Property Accountability; end state is complete, real-time access to real property inventory, and 6) Common Supplier Engagement; end state is a single, coordinated DoD "face" so that all Components interact with contractors and vendors similarly. Figure B.3 depicts the concept of common enterprise configurations and the requirement that all components align their respective business systems.

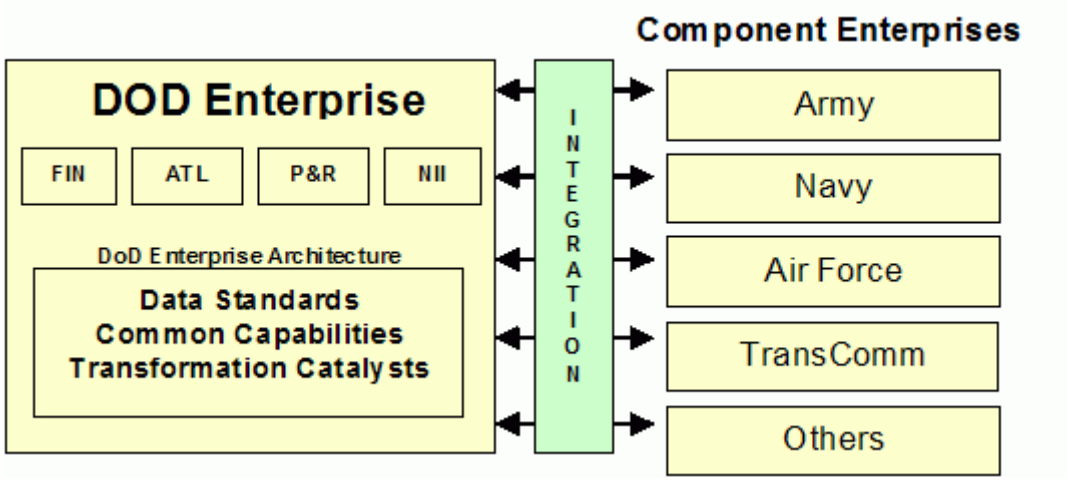

Figure B.3 The Interaction of the DoD BEA and Service BEAs [Ref: BMMP Website http://www.DoD.mil/bmmp/about.html]

Currently, BMMP has divided the business system enterprise into five Core Business Missions (CBM); 1) Human Resources Management, 2) Weapon System Lifecycle Management, 3) Real Property & Installation Lifecycle Management, 4) Material Supply & Service Management, and 5) Financial Management. These core missions are inherent within each of the stovepiped warfighting support functions as depicted in Figure B.4. BMMP's goal is to bring clarity and definition to the core business missions embedded within each functional area, modernize the supporting business systems, and deliver a more effective and efficient product to the warfighter.

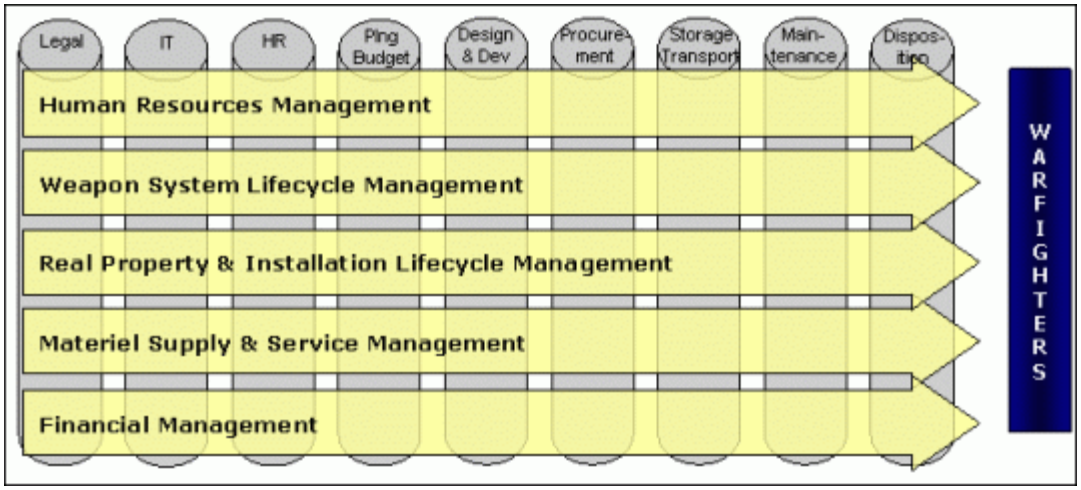

Figure B.4 Business Transformation Framework [Ref: BMMP Website http://www.DoD.mil/bmmp/about.html]

The Defense Business Systems Management Committee (DBSMC), chaired by the Deputy Secretary of Defense, is the highest authority in the DoD BEA. As mandated by NDAA 2005, the DBSMC establishes strategic direction and plans for the Business Mission Area, oversees the capabilities implementation within DoD business operations, recommends policies and procedures to sustain business transformation, ensures Component business systems interoperability, and among other duties, communicates all plans throughout the DoD. The DBSMC is required to meet quarterly. Figure B.5 depicts the organizational structure of the DBSMC.

Certification Authorities (CAs) have the responsibility to review, approve, and oversee the planning, design, acquisition, deployment, operation, maintenance, and modernization of specifically designated functional areas. Over time, the CA will gain function-specific expertise in end-to-end business solutions that support the warfighter. The CAs listed below were designated within NDAA 2005:

- The Under Secretary of Defense (USD) Acquisition, Technology, and Logistics (ATL); responsible and accountable for all business systems in support of acquisition, logistic, or installation and environment activities.
- The USD Comptroller (C); responsible and accountable for all business systems in support of financial management or strategic planning and budgeting activities.
- The USD Personnel and Readiness (P&R); responsible and accountable for all business systems in support of human resource management activities.
- The Assistant Secretary of Defense (ASD) Networks and Information Integration (NII) and the DoD Chief Information Officer (CIO); responsible and accountable for all business systems in support of information technology infrastructure or information assurance activities.

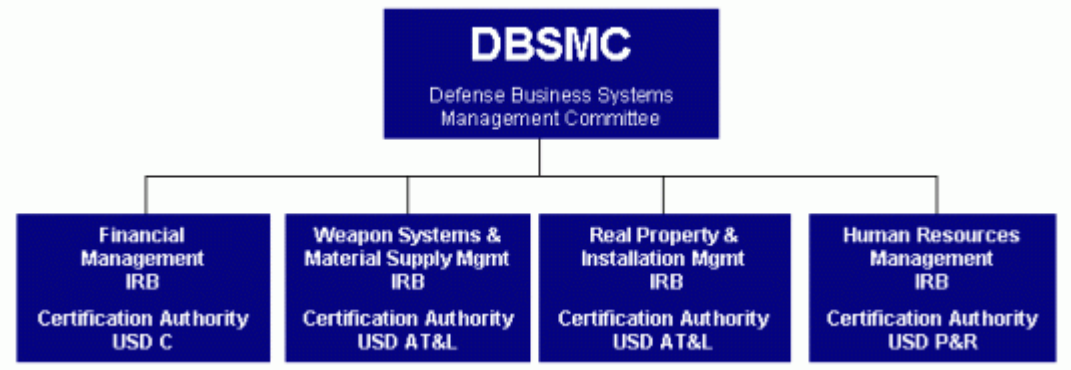

Figure B.5 BMMP Governance and Organizational Structure [Ref: BMMP Website http://www.DoD.mil/bmmp/about.html]

Each CA has an Investment Review Board (IRB) to provide oversight to the proposed business system investments. IRB membership is comprised of representatives from the services, components, and combatant commands, as appropriate, based on the types of business activities and systems being reviews. IRBs exist to ensure business system consistency and interoperability throughout the DoD, review for approval and prioritize each business system investment that exceeds $1 million, and enforce alignment and compliance to the DoD BEA. The IRBs dedicated to each CA/Core Business Mission are shown in Figure B.6.

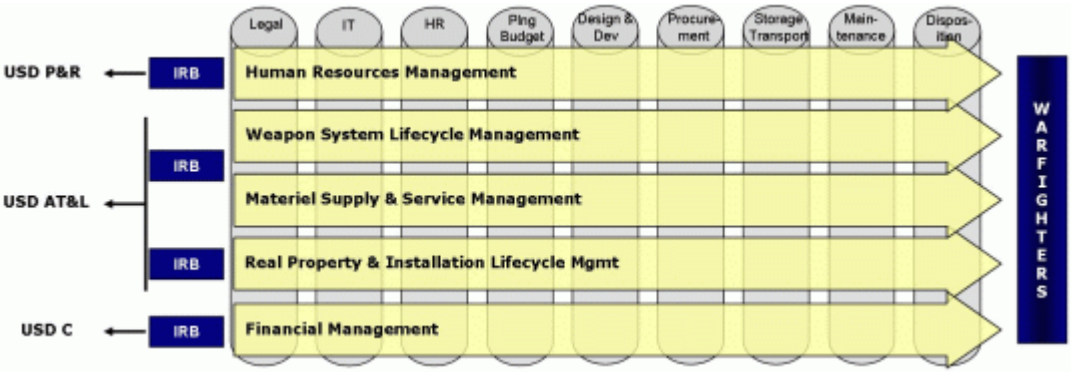

Figure B.6 IRB-Core Business Mission Alignment [Ref: BMMP Website http://www.DoD.mil/bmmp/about.html]

Funding for the BMMP was included in the President's FY 2005 budget. Specifically, the budget language states, "This is a comprehensive, multi-year initiative to

overhaul DoD management processes and the information technology systems that support them. The budget includes almost $100 million per year in RDT&E funding for fiscal 2005-2009 to continue the evolution and extension of BMMP." This funding does not include the actual procurement of business systems needed by the organizations to meet their missions. This is strictly BMSI operational funding to continue BEA research and development.

On October 5, 2005 the Defense Business Systems Management Committee approved the Defense Departments Enterprise Transition Plan and version 3.0 of its business enterprise architecture. The DoN's Business Transition Plan is located in Appendix C. Version 3.0 of the BEA provides business rules, requirements, data standards, system interface requirements, financial accounting structures and corresponding implementation schedules for military services.[144]

C. RESEARCH CENTERS

Research centers and institutes became prominent organizational entities following World War II as universities competed for federal research funding. Debates rage on whether centers provide value to core intellectual research or just compete with "home" or "sister" organizations for already limited resource funding. In their research paper, Stahler and Tash find that:

> although centers will never replace academic departments, research centers are a necessary organizational structure for bolstering a university's sponsored research program and for encouraging interdisciplinary collaboration. Centers should be utilized for carrying out what they do well, given the pooper resources, leadership, and university support – a flexible organizational unit that harnesses a university's research resources to address society's needs.[145]

In the event a center is established, Stahler and Tash recommend the following general guidelines:

1. A center must have the support of the central administration to flourish.

[144] Onley, Dawn S. Defense *Department Business Transition Plan Debuts*, Post-Newsweek Business Information, Inc. October 5, 2005. http://web.lexis-nexis.com/universe/printdoc

[145] Stahler, Gerald J. and Tash, William R. Centers and Institutes in the Research University: Issues, Problems, and Prospects. The Journal of Higher Education, Vol. 65, No 5 (Sep. – Oct., 1994), p. 552.

2. An organization should not initiate a center if it is not prepared to provide adequate resources to fulfill the center's mission and sustain its viability.

3. Once established, focus on the leadership of the center and develop a clear set of expectations of what the center is to accomplish.

4. If a center is intended to be truly interdisciplinary, the locus must be placed centrally within the organizational structure. Economies of scale in terms of access to people, places, and information along with developing key relationships are improved if the center is unencumbered by a "home" college, agency, or organization.

5. However, a center must develop close relationships with its "home" organizations and share as much as possible.

6. Centers must be reviewed on a regular basis to determine whether they are achieving their goals.[146]

Among the disadvantages, Stahler and Tash highlight:

> A center's research is often shaped by the program needs and interests of funding agencies as opposed to the more academic research goal conducted in departments, resulting in a lack of intellectual core. Unfortunately, this applied focus of pursuing the socially demanded research interests of funding agencies is sometimes perceived within academic circles as 'chasing dollars,' as having less significance than more basic research, as being pedestrian in quality, and as being less prestigious than research conducted along more traditional disciplinary bounds.[147]

Several major Navy reorganizations have occurred within the last three years that point to the advantage of the centralized, consolidated management of certain functions. Specifically, Commander, Navy Installations stood-up on October 1, 2004 to manage the entire Navy shore infrastructure. On September 30, 2005 all Navy information technology was consolidated under the Assistant Chief of Navy Operations (Information Technology). This trend exists for business system management and operations as well.

---

[146] Stahler, Gerald J. and Tash, William R. Centers and Institutes in the Research University: Issues, Problems, and Prospects. The Journal of Higher Education, Vol. 65, No 5 (Sep. – Oct., 1994), pp 551-552.

[147] Stahler, Gerald J. and Tash, William R. Centers and Institutes in the Research University: Issues, Problems, and Prospects. The Journal of Higher Education, Vol. 65, No 5 (Sep. – Oct., 1994), pp 544-545.

1. Center for Defense Management Reform

Dr. Douglas Brook, Dean of the Graduate School of Business and Public Policy at NPS from March 2002 through June 2005, is the Director of the Center for Defense Management Reform. Dr. Brook has over 30 years experience in both industry and defense financial management. Dr. Brook served as the former vice-president of government affairs for The LTV Corporation, Acting Director of the U.S. Office of Personnel Management from 1992 to 1993, and Assistant Secretary of the Army for Financial Management from 1990 to 1992. During research, Dr. Brook noticed that the business initiatives introduced in 1992 and those introduced most recently in 2005 may have new names, but essentially target the same business inefficiencies and process failures that the DoD has struggled with for many years. He noticed that similar management reform themes repeat themselves over the years. These initiatives do not transition from one political or military administration to the next.

Formed in April 2005 by Dr. Brook, the Center for Defense Management Reform operates within the NPS Graduate School of Business and Public Policy. The Center has three core objectives:

> 1. To serve as the forward-looking source of education and action research to support current and future Defense leaders who embark upon management reform agendas;
>
> 2. To serve as a resource where expertise about current commercial and governmental best practices and private sector management models combine with catalogued knowledge of the history, theories, themes, successes, and failures of past Defense reforms to guide the design and execution of future reform;
>
> 3. To operate as a point of coordination for academic, professional and governmental entities engaged in the topic of defense management reform.[148]

The products of the Center for Defense Management Reform will include: research analyses, publications, business case studies, conferences, and NPS courses and course content. These products will be available to any defense organization on a reimbursable fee schedule. Contributing staff will consist of NPS business degree

[148] Brooks, Professor Douglas. Center for Defense Management Reform Prospectus. July 2005.

students and NPS professors who possess interest and expertise in areas requested by customers or research sponsors. The targeted customer base is both DoD top leadership and functional leaders within the finance, acquisition, and related communities.

The ultimate goal of the Center is to become the recognized expert source on issues of Defense management reform by using an interactive research model to meld best practice thinking and reform efforts and their impact on DoD.[149]

2. Army Enterprise Integration Oversight Office

The Secretary of the Army established the Army Enterprise Integration Oversight Office (AEIOO) to: 1) provide Departmental policy, guidance, and direction for all Army enterprise resource planning solutions, and 2) ensure synchronization of business processes with operational (warfighting) processes.[150]

Within the AEIOO, the Enterprise Solutions Competency Center (ESCC) exists to affect successful business IT transformation. A multi-functional organization, ESCC is comprised of a core of resident experts augmented as necessary by an extended, virtual network. ESCC customers include Army Business Domains, Program Executive Offices (PEOs), Program Managers (PMs) and development teams.

The ESCC serves three roles: 1) to oversee and synchronize Army enterprise integration development efforts and activities internal and external to the Army, 2) provide support and assistance during business improvements, and 3) evaluate performance of implemented business initiatives through metrics.[151]

3. DoD Business Transformation Agency (BTA)

The consolidation of business system management into management support organizations is most recently demonstrated by the DoD's establishment of the Business

---

[149] Brooks, Professor Douglas. Center for Defense Management Reform Prospectus. July 2005.

[150] Army Enterprise Integration Oversight Office website: http://www.army.mil/aeioo/aeioo/ Last accessed November 3, 2005.

[151] Enterprise Solutions Competency Center website: http://www.army.mil/aeioo/erp/competency.htm Last accessed November 3, 2005.

Transformation Agency. On October 7, 2005, Deputy Secretary of Defense, Gordon England, created the BTA to serve three roles:

a. Consolidate DoD business acquisition oversight and approval through the newly created Defense Business Systems Acquisition Executive (DBSAE). The DBSEA will act as the Component Acquisition Executive (CAE) for DoD enterprise–level business systems and initiatives. Twenty-eight DoD business programs and initiatives transferred from DoD organizations into the BTA.

b. Integrate the work of the Office of the Secretary of Defense (OSD) Principal Staff Assistants (PSAs) in the areas of business process re-engineering, core business mission activities and Investment Review Board (IRB) activities.

c. Transfer and align the functions and responsibilities of business-focused PSA billets into a consolidated management support organization.[152]

4. Air Force Operations and Maintenance (O&M) Center of Expertise

To improve the Air Force capacity to facilitate sound resource judgments at the base and major command level through more detailed analytics, the Air Force is establishing an O&M Center of Expertise (CoE). The CoE analytical service will provide (1) on-demand consultant support to installation and major command comptroller staff; (2) clear, unbiased analysis to financial management customers at installation and major command levels; and (3) expert training to enrich the financial community's ability to offer analytical support for critical resource decisions. Experts will provide new insights on operations and maintenance costs, and Air Force comptrollers will have better tools for advising Air Force commanders on effective and efficient operations.

[152] England, Deputy Secretary of Defense Gordon. Establishment of the Defense Business Transformation Agency (BTA) Memorandum dated Oct 7, 2005.

D. DEFENSE RESOURCES MANAGEMENT INSTITUTE

The Defense Resources Management Institute (DRMI) is an educational institution located at the Naval Postgraduate School in Monterey, CA. DRMI's courses educate participants on the development, operation, and maintenance of management systems of the U.S. DOD and other governments. This education enhances the student's capability to reasonably manage defense resources. Over 15,000 U.S. participants and 15,000 international students from 160 countries have attended DRMI courses since its founding in 1965.[153]

DRMI, sponsored by DOD's Office of Program Analysis and Evaluation, focuses 50 percent of its time and resources on developing the skills of international military officers and civilians in defense resource management.[154] This partnership facilitates increased communication and operational agility between U.S. and international militaries.

Courses are open to U.S. and foreign military officers and civilians who are mangers working in any functional field concerned with resource allocation. Three courses of instruction exist: 1) a four week Defense Resources Management Course for U.S. participants, 2) an eleven week International Defense Management Course, and 3) the four week Senior International Defense Management Course for international flag officers and their civilian equivalents. DRMI also conducts an average of ten two-week Mobile Courses annually within the U.S. and overseas.

These courses, taught at the NPS location in Monterey, CA by twenty-three NPS professors, explore topics such as systems analysis and decision making, probabilities and uncertainty, production and unit cost analysis, simulation modeling, and project management. Professors use a combination of interdisciplinary study, team teaching, and small group discussions, augmented by a mixture of case studies and guest speakers to effectively convey the course material.

---

[153] Course Catalog FY 2006, Defense Resources Management Institute, p. 12.

[154] Interview with Dr. Natalie Webb, Associate Professor, Defense Resources Management Institute; September 2005.

E. THE MOVES INSTITUTE

Founded in 1996, the Modeling, Virtual Environments and Simulation (MOVES) Institute is an internationally recognized center of excellence in modeling and simulation located at Naval Postgraduate School in Monterey, CA. The MOVES Institute is affiliated with the Computer Science Department, Graduate School of Operational and Information Sciences at NPS.

This center of excellence operates as a consortium; combining the creativity and innovativeness of professionals from industry (17 contributors), university (20 contributors), and government (28 contributors) to enhance the operational effectiveness of joint military forces throughout the world. The consortium values openness, objectivity, and technical expertise to expand the knowledge base and potential modeling and simulation applications of all contributors.

MOVES Institute exists to address the technical problems and human integration issues associated with combat modeling and simulation. Specifically, MOVES Institute expertise includes combat modeling systems, training systems, virtual environments, augmented reality, web technologies, networks, artificial intelligence and interoperability. When compared to conventional training, field experimentation, or physical prototype development, models and simulations have the potential to significantly decrease research costs while increasing flexibility and capability in training and analysis. [155]

MOVES Institute integrates the consortium research and application with NPS student studies by offering a focused Masters or Doctorate degree at NPS. The degree tract includes course work featuring the fundamentals of computer science, human-computer interaction, and data analysis, virtual worlds and simulation systems, probability, statistics, stochastic modeling, data analysis, human-performance evaluation and human-behavior. Currently, over 30 students are enrolled in the MOVES degree programs.

[155] The MOVES Institute homepage: http://www.movesinstitute.org/ Last accessed October 3, 2005.

MOVES Institute holds an annual open house at NPS to showcase research projects completed by MOVES thesis candidates and share and collaborate with other modeling and simulations professionals on a wide variety of field applications and future trends.

An advisory board, consisting of resource sponsors, industry leaders, Navy leaders, and professors, provides guidance to the MOVES Institute on funding, research, and products.

F. DON BUSINESS INNOVATION TEAM

> The Department of the Navy (DON) Business Innovation Team (BIT) serves as the Navy's catalyst for electronic business innovation, process improvement, and best practice knowledge sharing. Since inception, the BIT piloted over 60 eBusiness solutions with Fleet and shore activities, improving efficiency and operational effectiveness within the logistics, acquisition, C3I, medical, administration, and training communities. Over a third of these projects have been implemented beyond the original pilot organization, producing a tangible return on investment of over 6 to 1 for the enterprise.
>
> To fulfill its SECNAV chartered mission of providing the DON with a clearinghouse of technology and process best practices, the BIT, in collaboration with SPAWAR, developed the Virtual Knowledge Repository (VKR). VKR is available to DON and DoD researchers as a means of identifying existing business process improvements and technology solutions from across the enterprise and to improve the visibility of all available capabilities. Built on the successful Technology eXchange Clearinghouse (TXC) eBusiness pilot project, VKR allows researchers to search targeted information sources (DON, DoD, and commercial), find the latest technology news, and access a research library dedicated to satisfying DON-specific requirements. The end result is reduced time to market for new war fighter capabilities, increased reuse of existing tools, and maximum benefit from limited IT investment dollars.[156]

The above excerpt from the DoN BIT website leads the reader to believe that DoN has a vibrant business innovation entity that devises pilot projects to save billions of dollars, creates virtual knowledge sites, and maintains the allegiance and sponsorship of

[156] DON Business Innovation Team website: http://www.navsup.navy.mil/portal/page?_pageid=477,262593&_dad=p5star&_schema=P5STAR Last accessed September 12, 2005.

the Secretary of the Navy and DoN CIO. Unfortunately, DoN BIT received zero funding for FY 2006 and is now essentially defunct.

In a phone conversation with Dr. David Roberts, a prior Don BIT contracted employee, the business innovation team consisted of twelve employees. 75% of these employees were contractors. The team worked with and through both Navy Supply Systems Command (NAVSUP) and DoN CIO.

Typically, the team worked with customers to create a pilot project that had the potential to fundamentally change current business operations and save money or provide a better product. Projects could be submitted by any member of the DoN workforce but had to be vetted by a Board, consisting primarily of Admirals. Projects receiving approval were funded by customers and averaged $500,000 per project. In a good year, the team had upwards of 100 pilot projects under study, or an operating budget of $50 million. These studies primarily focused on information technology and C4I improvements throughout the Navy.

The business innovation team demonstrated that with sound project management, disciplined research, and rigorous analysis, pilot projects could be implemented into the Navy to improve business operations and save billions of dollars in the out years. The team produced quality products and demonstrated performance outcomes that met or exceeded customer expectations. Project management included tools such as use requirements, spend plans, and deliverable timelines.

Despite demonstrated success and DoN CIO advocacy, DoN BIT lost FY 2006 funding. Dr. Roberts contends that the business innovation team was a bright light in a sea of chaos. He remarked that defense contractors thrive in Navy transformation chaos, offering their latest solution to a Navy issue. Unfortunately, the Navy lacks the business expertise to determine the validity of a proposed solution and the program oversight expertise once the contract has been awarded. "The Navy can eat its seed corn this year, but then it will have nothing left to plant next year," remarked Dr. Roberts on the need for continued business research. The Navy needs to rekindle the bright light by

reinstating a business innovation entity focused on long-term business transformation and mastering the core processes of requirements generation, system engineering, and financial management.

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX C. CNO SSG INTERVIEW

Summary of interview conducted in Newport, RI on 27 Sep 05 between Mr. Bill Glenney, Deputy Director, SSG and LT Gordon Meek, NPS Student.

Interview Discussion Topics

Introductory comments from Mr. Glenney to LT Meek:

- Diversity
  - Inherent value in diversity of experience, intelligence
  - 70% of SSG population rotates every year:
    - Civilians every 2 years
    - Fellow every 9 months
    - Assoc every 7 months
  - Constant flux of thinking
  - Admittedly, not perfect
  - Industry part of CNBE very good idea
  - SSG has had some legal issues trying to incorporate industry personnel into their teams.
- Time
  - Takes time to allow the intellectual process to work
  - Map idea generation across time; show how ideas morph, terminate, create, and resolve
  - Can't do it during an offsite
  - Takes an environment
- Environment
- Hit on the importance of developing an institutionalized approach in order to achieve the greatest innovations.
- Hit on the importance of building a professional network to bring in expertise. SSG does not have all the experts or all the answers. But, it is no more than four phone calls away from speaking with an expert on any given topic: Nobel Prize winners, industry leaders, etc. The SSG has the capability and network to arrange a meeting with anyone in the world in the pursuit of naval warfighting innovation.
- CNBE should be able to do this: within a few phone calls, speak with business experts like Jack Welch, W. Deming, and others to receive expert advice or critique.
- SSG has developed a process that can research and report out on any topic. If tasked by the CNO, the SSG could conduct a Sea Enterprise based research project. The composition of the SSG Fellows and SSG Associates would change to accommodate the required business expertise in the officer corps. Assembling business experience to

confront a Sea Enterprise theme would be harder than assembling operational or warfighting experience.

- Disconnect arguments for business transformation from force transformation. If they are connected, odds are that corporate transformation will be a distraction and be relegated in importance to current operations and force transformation.
- Very clear given the evidence that we need to change business operations.
- The best way to get innovations in front of the CNO is through the SSG.
- Business intelligence is exactly the right term to use when speaking of a potential mission of CNBE.
    - Society for Competitive or Business Intelligence
- In the thesis, offer up CNBE for a good debate – challenge the analysis, challenge everything – may not be the answer
- CNBE concept is similar to the Deep Red concept first presented by SSG XXII to the CNO in January 2004.
- Morph-collaborate-build
- Maybe one of the first theme for CNBE is to find a proxy for profit
    - Profit motivation can be changed to resource allocation motivation
    - Undercurrent of SSG XXIV that acknowledged industry may have more insights into warfighting than previously believed. Example of organizational agility.
- SSG in Newport because:
    - Location away from the pressures of the beltway
    - Cloistered environment
    - Discussion without retribution within community
    - Powerful leader at top to protect, influence, advocate, listen
    - Balance with network contacts

1. How is SSG's contribution unique to naval warfighting?
    i. Competition from think tanks – or are they part of the process?
    ii. What if SSG goes away – impacts?
    iii. How is this contribution relevant to today's Navy?
    iv. Explain the rigor, results, and relationships used to develop this contribution.

Topic 1 Discussion:

- Admiral Vern Clark, the previous CNO, was committed to the success and growth of SSG. CNO Vern Clark invested over 17 hours with SSG last year, quite a few considering the value of one CNO-hour. Admiral Clark trusted the SSG in its judgment and recommendations. The new CNO, Admiral Mike Mullen, has committed to the same

support and is changing a few administrative features of the SSG to make it more innovative. It takes leadership commitment to achieve success, both at the SSG level and at the CNO level. The CNO must set the environment, provide the top-cover, and encourage honesty from the SSG to receive the best innovations.

- SSG differentiates itself in 2 ways:
    - Time frame: nobody else in the entire DoD is looking out to 2035 and beyond, trying to ascertain what technologies, strategies and force composition will be required to defeat U.S. adversaries and protect national interests.
    - SSG integrates and synthesizes future technologies and strategies into the overall context of naval warfighting capabilities. Other entities research and propose concepts, but independent of and in isolation of the overall warfighting construct. Alignment and synchronization of all the contributing parts is key to allowing the best innovation.
- The CNO has stated that he expects SSG to be his honest broker on the future of naval warfighting. The CNO goes to great lengths to ensure the discussion environment is completely open and honest encouraging a forthright exchange of ideas and opinions; good and bad.
- SSG works collaboratively with other defense related think tanks and research groups. SSG has worked with and exchanged reports and information with RAND, conducted annual visits to several high-tech firms to learn of recent and future technologies and innovations, and has developed an open communication with defense industry leaders.
- The CNO does not learn of a RAND report and then turn to the SSG for confirmation. All research and reports are integrated into the future defense environment. The is no competition between SSG and "outside" defense analysis groups.

1. Discuss the perception of SSG within the Navy, DoD, and military industry base.
    i. How is this credibility and respect gained/maintained?

Topic 2 Discussion:

- Top level leadership is crucial. ADM Hogg, the SSG Director, has developed a professional and responsive relationship with each of the CNOs since he became the Director.
- SSG products demonstrate the cultivation of original thought and a methodical research approach to innovation. ADM Mullen is currently praising the work of SSG XXIV.
- SSG leadership has been willing to accept new direction and various levels of influence over the years. Admiral Boorda wanted to terminate SSG, but ADM Hogg suggested a new focus that was in line with the needs of the Navy at the time. ADM Boorda agreed and SSG

changed its mission from XX to XXX. ADM Clark requested both revolutionary naval warfighting concept formulation and the roadmap to achieve those concepts. The time horizon that SSG has looked out has changed over the years, ranging from 30 years to zero years.

- SSG's influence in naval warfighting development has been dependent upon the personality of the CNO. Some CNOs embrace SSG research and concept development enthusiastically, others have been more cautious.
    - One CNO believed that the Navy would adopt innovations when it was obvious that that innovation was beneficial – on the Navy's own timeline. Mr. Glenney disagrees with this philosophy, arguing that there is no evidence that suggests the Navy has ever adopted a revolutionary warfighting concept "on its own." Most concepts have been pushed.
- Like many programs and ideas, the SSG's concepts and recommendations confront the "Not Invented Here" syndrome.
- Mr. Glenney voiced his opinion that the Navy erred when it moved Navy Warfare Development Command (NWDC) away from Naval War College (NWC) and under Combined Fleet Forces Command (CFFC).
    - CFFC not focused on the 30 year out war. They have enough to do worrying about with today's battles.
- Mr. Glenney argued the right incentives/rewards must be instituted within the process to achieve expected and beneficial outcomes.
- The Navy has always measured performance on things accomplished today, not allocated value to the possibility of future accomplishments or shaping the environment for the future.
- A segue on the geographic location of CNBE:
    - Outside the beltway to remain separated from current operations of the Pentagon
        - Option 1: locate near the top business school
        - Option 2: locate at NPS; near Stanford and Silicon Valley plus outside the beltway
- A segue on the organizational location of CNBE:
    - Mr. Glenney maintains that this is a crucial decision
    - If possible, remove CNBE from the possibility of current operations distractions. Today's problems always win out over long term planning and thinking
        - Option 1: Status quo in N4; CNBE fits in with the N40/Corporate Business Council construct
        - Option 2: N4; make it a N4X code – out to the side similar to the CNO-SSG relationship
        - Option 3: N4; after major reorganization of N4 that results in a current focused and future focused organization.

        - Option 4: Independent and reporting to the CNO like the CNO-SSG relationship. However, ADM Mullen is trying to decrease the number of direct reports.
        - Option 5 was voiced by LT Meek: ASN (FMC). Mr. Glenney did not see a reason that CNBE could not be effective if placed in the ASN (FMC) organization.
- A segue on the leadership backgrounds of CNBE
    - Option 1: SES 4 or 5; SES has gained a lot of credibility and clout under ADM Clark.
    - Option 2: Retired Admiral with the right credentials.
    - Option 3: 1 star Admiral with the incentive that if he/she does well they get their second star
    - Option 4: Business leader

2. How does SSG measure its effectiveness?
    i. Incorporation into QDR, National Military Strategy, Sea Power 21, or other planning documents?
    ii. Briefs to Congressional, DoD, Navy committees?
    iii. Incorporation into doctrine or policy?
    iv. Industry R&D funding?
    v. Is simply researching and conversing about future naval possibilities successful?

Topic 3 Discussion:

- No discussion.

3. Discuss the type of people SSG recruits.
    i. Knowledge workers
    ii. Backgrounds – Why officers only?
    iii. Skills
    iv. Education
    v. Communication abilities
    vi. Leadership qualities
    vii. How does the alumni network foster continued participation in strategy?

Topic 4 Discussion:

- First and foremost, everyone must be able to work on a team. Most SSG work is accomplished in the Concept Generation Teams, about 3 people in size.
- CNO selects all SSG Fellows (O6 pay grade). ADM Clark selected O6s and then became involved in their career management, attempting to take advantage of their SSG experience and apply it to the Fleet. ADM Mullen intends to do the same plus one additional step: ADM Mullen wants to see the O6 slate for all "special billets" before it goes

forward to the Joint Commanders or other top O6 jobs. ADM Mullen wants to be able to select and send the very best to SSG.

- SSG Associates (O3/O4 pay grades) must submit an application package that contains transcripts, recommendations from professors, and professional experience. ADM Hogg personally interviews and selects all Associates. ADM Hogg asks probing questions to find the candidates with the best team skills – the intangible attributes critical to success.
- There is a dual benefit of incorporating Associates into the SSG:
    - Associates bring an energetic, youthful perspective to the concept generation process and upon completion they become disciples of naval warfighting innovation.
    - The SSG process demonstrates that there is a place for innovation and collaboration in the Navy.
- Civilians SSG members are nominated by their commands. Commands know that they are staking their own reputations on the line so only nominate the most technically qualified personnel. Candidates go through eight interviews before their final selection to the SSG.
- SSG has conducted a "10 year experiment" to get the proper balance of command and control right. The SSG Fellows and Associates must not be encumbered by too many directives or guidance. Innovation is best with very little written down. After 10 years of trying differing levels of control, SSG leadership now possesses the knowledge to balance their control, guidance, etc to stimulate the most innovation. Lessons to pass on:
    - Provide little written guidance because SSG has found that too much guidance has unintended consequences.
    - Be very careful with word choice
    - The less written down allows for more agility and responsiveness to the environment.
    - Guidance will include forcing functions: dates for deliverables.
- SSG has been criticized for being technologically-centric. SSG feels this is an outcome of the Navy's culture which is also technologically-centric.
- Segue on CNBE mission:
    - CNBE needs to help CNO get a path from 2005 to the end-state. SSG calls this path a blueprint or a roadmap. Creating the conditions today that will achieve the desired outcomes of tomorrow.
    - CNBE people would become the world's experts on the applications of Six Sigma within the Navy.
- The SSG Alumni form there own community of practice. This network is vibrant. Several examples of continued interconnectedness: SSG Alumni are invited to an annual conference in Washington, DC where recent concepts are introduced, SSG alumni are copied on all

SSG publications, and SSG alumni continue to exchange information throughout their careers. Alumni are requested by name for their SSG experience and innovativeness to fill other critical roles throughout the Navy.
    - Example: SSG Fellow, CAPT Bernard Jackson, completed research titled Beyond Horizons, focusing on Sea Warrior. His research was so compelling that he was detailed to Navy Personnel Command (PERS-31B) to immediately implement his recommendations.
    - Beyond Horizons is also the fastest incorporation of any SSG concept into practice. CAPT Jackson presented his brief to the CNO and other attending Commanders on a Thursday and the following Tuesday it was shown to one of the attending Commander's key staff.
- Remember, you must change rewards to change behaviors
    - LT Meek note: Change incentives/rewards of FMB?
- Sea Enterprise is moving in the right direction, but Mr. Glenney does not see that Sea Enterprise has gained the traction that the CNO had intended.
    - All SEAPOWER 21 concepts had the same marketing plan: An overarching SEAPOWER 21 Proceedings article release and a specific supporting concept (Sea Enterprise) follow-up article. ADM Mullen wrote the Sea Enterprise article.
    - FORCEnet, an integrating concept within SEAPOWER 21, was not immediately embraced by the Fleet. The CNO and Commandant of the Marine Corps had to draft additional policy guidance to enforce the FORCEnet concept and construct. That guidance, FORCEnet Functional Concept Document, was released in May 2005.
- CNBE will poke eyes. CNBE will need top-cover if the truth is to be told.
- CNBE must show that the cost of not changing the way the Navy does business will be detrimental to the Navy's future readiness.

4. Discuss the importance of having a strong organizational leader.
    i. Experience, vision
    ii. Relationships with Navy, politicians, industry
    iii. Compensation- is this a factor to recruiting the right person?
    iv. Continuity
        1. Over the years several types of people have been SSG Directors (active duty officers, political appointees, civilians). Is one better than the other for the mission?

Topic 5 Discussion:

- An organizational leader must:

- Be naturally in-tune with the environment in which they operate
- Know the parent organization well
- Be personable
- Possess a superb reputation
- No doubt that being a 4 star officer helps
- Be respectful and careful at developing relationship with CNO
- Be in charge of the organization for many years: Continuity:
  - Critical to nurture diversity, time and environment.
  - Flux is good below leadership, but not the leader themselves
- Feedback
  - ADM Hogg conducts outbriefs with every person and tries to address legitimate criticisms and incorporate suggestions.
- Leader must provide top cover. This is crucial to the development of the organization.
  - Top cover is preventative
  - Top cover ensures a non-attribution environment

5. Explain the implications to the future of naval warfighting if long-term strategic research and planning was nonexistent and/or unstructured.

   Topic 6 Discussion:

   - Mr. Glenney is an advocate that a portion of the Navy should be concentrating on the future
   - Mr. Glenney completed a study a few years ago that determined that the SSG represents 1/1000 or so of the total Navy TOA. Pretty small percent of corporation looking at the future.
   - Only industry comparison that looks beyond 5-10 years is Honda. Honda looks 100 years out.
   - People will always debate the right timeframe for "long-term" planning.
   - Navy actions today impact the future. So very important to get it right.
   - If the Navy is not looking to the future, then it has no input to shape the future operating environment.

6. Comment on the need for the Navy to transform its business processes to support the revolutionary warfighting concepts envisioned by SSG.
   - GAO reports, cost of new technologies, acquisition program cost overruns, inventory management, supply chain management, use of management consultants, etc.

   Topic 7 Discussion:

- There will always be people who argue against changing if everything is OK today.
- Segue on CNBE:
    - Mr. Glenney believes that there may be valuable insight gleaned from the study of TQL in the Navy.
    - Can't turn your back on an initiative like TQL
    - As soon as the pressure was off – TQL disappeared
    - How do you know what CNBE recommends will stick?
    - The Navy must change its culture so that in 10-15 years the Navy is where it ought to be.
    - Give it roots to grow
    - CNBE generates corporate history.
    - Develop a process to achieve the desired outcome
    - N40 has Sea Enterprise as a collateral duty
    - Sea Power Pillars
        - N77 co-chairs Sea Strike and Sea Shield.
        - What view do we want at the table

7. Do you believe that a business transformation must occur to ensure a successful force transformation?
    - The Sea Enterprise concept.
    - What business infrastructure (process, people, IT, education) is needed to support the envisioned naval force of the future?
    - Are we on a path to acquiring/achieving that business plan?

    Topic 8 Discussion:
    - The two are inextricably linked, but
    - The need for corporate transformation is so compelling that is must be independent of force transformation
    - Corporate transformation is a necessary, but not sufficient condition for Force Transformation
    - Force Transformation is neither necessary, nor sufficient for corporate transformation.
    - There is also no evidence that just because the Navy achieves Force Transformation that an equal and accompanying Corporate Transformation has occurred. Do not think the outcomes that Sea Enterprise set out to achieve have been achieved just because Force Transformation has success.

8. Comment on the potential benefit of a SSG-like entity for long-term, analytical business research that guides the business transformation and business excellence mission just like SSG does for warfighting excellence?
    i. ADM Hogg has mentioned informally that CNBE might be a "breakthrough concept with potential value for the Navy."

Topic 9 Discussion:

- Jump start CNBE now because the Navy does not have this capability.
- The Navy needs to institutionalize the business innovation process.
- The Navy currently does not have a process for evaluating business initiatives within the entire Navy context.

9. If SSG was approached by CNO to study business transformation in the Navy, how would SSG set-up the problem, conduct its research, and present its analysis?

Topic 10 Discussion:

- Incorporate Glenney's slides on the 4 Phases.
- Expectation management
- Champion that must support the CNBE concept for several years
- Will not be a quick solution

Research by SSG XXII concluded that clear gaps exist in the Navy's ability to uncover and then evaluate vulnerabilities to emerging and unconventional military threats. In a world characterized by complexity, uncertainty, and rapid change, failure to gain insight into today's enemies could prove disastrous.

During the Cold War, the Navy possessed robust Red Team capability that analyzed and modeled its adversary, primarily the Soviet Union. The color red denotes U.S. enemies and blue denotes U.S. and U.S. friendlies. Red Teams, comprised of extremely knowledgeable and creative people, role-play various military scenarios through the perspective of the enemy. The recent deterioration of Red Team effectiveness can be attributed to the following factors: a lack of authority; a lack of protection; a weak integration of expertise within the team; a focus exclusively on "known" threats; and processes filled with stovepipes, programmatic shackles and intellectual blinders.

SSG XXII studied effective Red Team and found the following shared characteristics:

- Organizationally independent from the people and commands whose work they will challenge;
- Protected through resourcing and lines of authority that are not effected by the result of their work;
- Supported by the top level leadership;
- Multi-disciplinary with a wide diversity of intellect, education and experience in order to develop alternative perspectives;
- Equipped with the expertise to meet the challenge of thinking like an adaptive, cunning, and motivated adversary,
- Free to challenge any an all assumptions; and
- Incentivized to win.

SSG XXII closes out its research by stating, "Generating real insight demands an atmosphere imbued with creativity and intellectual honesty. Successful Red Teaming is an absolute requirement for warfighting success."

Deep Red is the term SSG XXII gives to the new organization that will manage today's Red Teams and threat assessment process. Deep Red's mission is to generate and disseminate insights learned from studying today's adversaries and threat environment to Navy decision-makers, providing real-time, accurate, "actionable" intelligence.

The Deep Red organizational entity is a small cadre of highly skilled, diversified people who facilitate the processes that establish effective Red Team products and conduct in-depth analysis of the Navy's vulnerabilities to emerging and unconventional threats. However, the true power of Deep Red to deliver expert analysis resides in its authority to access all people and information throughout the Navy and well into other established organizations.

Deep Red will cultivate relationships and build a network of interconnected organizations that have the capacity to respond to and augment the intelligence available to the Red Teams. This Red Network, expanded to include government, industry, and academia, provides perspectives, insights, concepts, and ideas that the Deep Red cadre or Red Teams would never be able to achieve on their own. Deep Red becomes the hub of a massive, unbounded, persistent network of professionals contributing to the modeling of enemy thinking and actions.

Once threats of new technologies or intentions are uncovered, Deep Red will initiate further assessment to determine the Navy's course of action. This understanding of the enemy will focus Research and Development programs. Deep Red will also enable consistent and reliable Combatant Commander reachback capabilities into the Red Network, pulling real-time analysis of enemy characteristics and intentions upon request. Reachback networking will provide persistent, evolving insight based on current enemy actions, the battlespace environment and Navy capabilities.

Lastly, SSG XXII proposed Deep Red incorporate a concept called Massive Multi-User Persistent Environment (MMPE). At its basic level MMPE is an internet-based virtual environment that allows real-time interaction among hundreds to thousands of distributed users. MMPE seeks new levels of insight into adversary thought and actions through: collaborating and sharing innovative ideas among many users; leveraging massive amounts of intellectual capital to challenge all existing assumptions; and discovering new technologies and concepts, including organizational constructs and human capital requirements, to win in the 21st century.

In conclusion, SSG XXII recommended to the CNO that a Deep Red organization should be established that possesses an expert cadre of personnel to spearhead the development of a Red Network, in-depth emerging threat assessment, reachback networking, and further refinement of the MMPE concept.

Chief of Naval Operations Strategic Studies Group XXII, Coherent Adaptive Force: Ensuring Sea Supremacy for SEA POWER 21, January 2005, 6-1 through 6-11.

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX D. CNBE SCHOLAR CURRICULUM [157]

Course 1

The Nature of Business/Organizational Intelligence: Sources, Collection, Analysis, Packaging, Distribution.

Recommend that folks from CIA/FBI and other intelligence seeking organizations be represented to tell us how we should go about collecting strategic information. Skills developed include identification and exploitation of sources, collection and amalgamation of data, analysis of data, preparation and presentation of information, and dissemination of actionable data. Project would focus on mock organization investigation.

Course 2

Human Capital Analysis

Recommend people from Accenture, McKinsey, ASTD, SHRM, Randstad, Kelly Services participate to provide diagnostic and demographic data on the nature of the workforce, including issues such as measuring the productivity, innovation capability, and appreciative/depreciative aspects of a workforce. Skills developed include analyzing workforce structures, determining costs/benefits of various sourcing models, assessing models of workforce shaping, and measuring workforce output. Project would focus on is/ought analysis of real/simulated workplace.

Course 3

Workforce Education, Training, Development, and Motivation

Recommend resources from major government and commercial firms, OdNet practitioners, penal institution personnel to speak to issues about leveraging learning as a means to enhanced productivity. Skills developed include design of organizational learning and development strategies in a dynamic knowledge-based workforce, implementation of motivational tools and techniques, differentiation of workforce categories, and integration of work and learning in the workplace. Project would involve creating a seamless work/learning space.

Course 4

Overcoming organization and institutional resistance to change

Recommended practitioners from sales, marketing, advertising, and other persuasion-industry representatives to address the difficult process of bringing ideas to

[157] Adopted from Dr. Bernard Ulozas, Human Capital Researcher, Space and Naval Warfare Systems Command.

fruition. Skills developed include deploying means to influence and persuade, involving oral, written, and mass media communications methods, preparing communications strategies, and assessing the effects of various forms of influence. Project would result in a targeted persuasion campaign at a select, high-resistant component of the organization.

Course 5

Information Technology Tools - Internal

Participants include bona fide experts in knowledge capture/knowledge management in large organizations who have captured the essence of their organizations in terms of output and rhythm and who have used this information to make successful decisions. Skills developed include identification and utilization of software tools to monitor work processes, work flow, and the workforce. Project would comprise the design of a prototype digital dashboard/nerve center for organizations to utilize in decision making.

Course 6

Information Technology Tools – External

Participants include members of organizations who have stood up virtual communities/communities of practice/ social networks both as independent entities and as components of the parent organization to indicate the extent to which network centric concepts can be applied to organizational centric operations. Skills developed include the assembly of a virtual organization, a design of the structure of a virtual Navy business component, and creation of collection mechanisms to gather and analyze performance and productivity metrics. Project would result in the design of a self-assessing and reporting virtual organizational component.

Course 7

Cultural Implications of Organizational Adaptation

Participants include anthropologists, sociologists, psychologists, and other organization behavior analysts who speak to issues of culture, environment, ethics, values, and stages of organizational development, particularly disruptive periods. One might imagine an organization going through birth, growth, and maturity cycles without considering disruptive periods and events such as adolescence, marriage/divorce, infirmity, and death. Skills developed include the development of diagnostic techniques for organizational assessment, application of treatment protocols and interventions, assessment of short and long term measures, and deploying methods of follow-on or after-care programs. Project would involve the creation of a treatment plan and a stay-well maintenance plan for a dysfunctional and a robust organization.

Course 8

Mission Work and Thesis

The final course involves each student being sent to an identified organization within the enterprise to perform an intelligence gathering mission which will lead to the formulation of a complete organizational assessment. Students will be offered a choice of institutions from a list of identified Navy needs. Throughout the course, the student will work with six mentors at various stages of the process from project initiation, to data gathering, to relationship building, to diagnosing and reporting organizational wellness quotient, to preparing a communications plan for repair/rejuvenation, to a final communiqué. Skills mastered in previous classes will augment the development of new or refined skills including assessing the condition of a work environment, recommending appropriate findings/fixes/functions, preparing and defending the final report and publishing a case study for the CNBI library.

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF REFERENCES

BOOKS

Jackson, Brad. Management Gurus and Management Fashions. Routledge, LonDoN and New York, 2001

Meister, Jeanne C. Corporate Universities: Lessons in Building a World-Class Work Force. McGraw-Hill, 1998

Wegner, Etienne. Communities of Practice. Cambridge University Press. 1998.

ARTICLES

Australian Institute of Management (AIM) interview with Dr. Karl Albrecht, consultant, on his theory of organizational intelligence.

Bryan, Lowell L. and Joyce, Claudia. The 21st Century Organization. The McKinsey Quarterly, 2005 Number 3.

Canback, Stephen. Abstracted from Turner, A.N. Consulting is More Than Giving Advice. Harvard Business Review. September-October, 1982: 120-129.

Case, John. The Change Masters. Inc. Magazine, March 1992.

Cherry Tree and Co. "Business Intelligence – The Missing Link." July 2000.

Corporate Leadership Council, Innovation and Agility: Leveraging Organizational Resources to Sustain Growth. 2001.

Day, Jonathan D. and Mang, Paul Y. The Innovation Organization: Why New Ventures Need More Than a Room of Their Own. McKinsey Consulting White Paper. 2001 Number 2.

Duhon, Bryant. Business Intelligence: A Conversation with PriceWaterHouseCoopers' Mike Schroek. AIIM e-doc magazine.

Georgia Tech Consulting Services. Internal Consulting Services Lead to Internal Best Practices. 2005.

Irvin, Hal. Tapping the Talent Within. National Association of College and University Business Officers (NACUBO) Business Officer, December 2000.

Kehm, Harold. Notes on Some Aspects of Intelligence Estimates. Central Intelligence Agency Historical Review Program, 18 September 95.

Klamper, Amy. Navy seeks to issue a new order: Abandon shipyards. GOVEXEC.com, March 9, 2005.

Levey, Jonah. Outside In: The Benefits of Internal Consulting. Raines International.

Lokken, Bob. Business Intelligence: An Intelligent Move or Not? White paper. ProClarity Corporation. 2001

Lowe, Sherry. Business Objects Corporate Press Release. Business Objects Helps Graniterock Manage Mountains of Data.

Nadler, David A. and Tushman, Michael L. Organization, Congruence, and Effectiveness. *Organizational Dynamics* (Autumn 1980), American Management Association, New York.

Onley, Dawn S. Defense Department Business Transition Plan Debuts, Post-Newsweek Business Information, Inc. October 5, 2005.

Platt, Michael. Microsoft Architecture Overview; Executive Summary. July 2002.

Rothenberg, Randall. JWT's consulting division sets new marketing standard. Advertising Age, November 22, 2004

Schmidt, Sasha L; Vogt, Patrick; Richter, Ansgar. The Strategy Consulting Value Chain is Breaking Up. Journal of Management Consulting, Inc. Vol. 16, No. 1; March 1, 2005.

Scully, Megan. House Pushes Navy to buy more ships in 2006, GOVEXEC.com, June 22, 2005.

Stahler, Gerald J. and Tash, William R. Centers and Institutes in the Research University: Issues, Problems, and Prospects. The Journal of Higher Education, Vol. 65, No 5 (Sep. – Oct., 1994).

Stewart, Thomas A. and O'Brien, Louise. Transforming an Industrial Giant: Heinrich von Pierer. Harvard Business Review, February 2005.

Ventana Research. Business Intelligence for Operational Performance. White Paper. 2004.

Wang, Qi. What is Intelligence Work. Paper submitted at Conference "Intelligence Economique: Recherches et Applications", 14-15 April 2003.

White, Colin. The Smart Business Intelligence Framework. Business Intelligence Network. July 18, 2005.

With 2005 Transformation Roadmaps Scrapped, OFT Focuses on QDR. Inside the Pentagon; August 4, 2005.

GOVERNMENT DOCUMENTS

21st Century Challenges; Reexamining the Base of the Federal Government (2005); GAO-05-325SP

Brooks, Professor Douglas. Center for Defense Management Reform Prospectus. July 2005.

Clark, Admiral Vern. Projecting Decisive Joint Capabilities, Proceedings, October 2002.

CNO's Playbook 2005 – Navy Strategic Communication Plan.

Contracting Support Services Review Results, powerpoint brief to Navy CBC. September 14, 2005.

Course Catalog FY 2006, Defense Resources Management Institute.

Department of the Navy Human Capital Strategy, June 2004.

DoD Office of Force Transformation. Elements of Defense Transformation. October 2004

DoD Office of Force Transformation. Military Transformation; A Strategic Approach. Fall 2003

DoN Corporate Business Council Charter, 22 October 2004.

DoN IM and IT Strategic Plan for FY 2004-2005, FY2005 Update.

England, Deputy Secretary of Defense Gordon. Establishment of the Defense Business Transformation Agency (BTA) Memorandum dated October 7, 2005.

GAO-05-520T: Successful Business Transformation Requires Sound Strategic Planning and Sustained Leadership, April 13, 2005.

GAO-05-776SP: GAO's Fiscal Year 2006 Performance Plan

Greco, The Honorable Richard, Assistant Secretary of the Navy, Financial Management and Comptroller. Transforming Today to Win Tomorrow, Financial Management Strategic Plan, DoN. April 2005

McCarthy, VADM Justin. The Case for Transformation. Brief to the Executive Business Course, 08 Jun 05.

Miller, LT Jason. *An Analysis of the Sea Enterprise Program*, NPS thesis; June 2005

Mullen, ADM Michael G. Sea Enterprise: Resourcing Tomorrow's Fleet. Proceedings, 2004

NAVADMIN 236/04

Office of Budget, Department of the Navy. *Highlights of the Department of the Navy FY2006/FY2007 Budget*. February 2005

Office of Force Transformation. Force Transformation Trends. 25 April 2005.

President's Management Agenda. Office of Management and Budget. August 2002.

Rumsfeld, Secretary of Defense Donald. Transformation Planning Guidance, April 2003

SSG XXII Report, January 2005.

CORPORATE DOCUMENTS

2004 Intel Annual Report.

2005 Criteria for Performance Excellence, Baldrige National Quality Program

Fact Sheets from NIST, Frequently Asked Questions about the Malcolm Baldrige National Quality Award.

Innovation at Intel. January 2005.

National Innovation Initiative Summit Report

WEBSITES

Army Enterprise Integration Oversight Office website:
http://www.army.mil/aeioo/aeioo/

ASCE Website: http://www.asce.org

ASMC Website: http://www.asmconline.org/

Center for Executive Education website: http://www.cee.nps.mil

Corporate University Website: http://www.corpu.com/services/cu_design.asp

DON Business Innovation Team website:
http://www.navsup.navy.mil/portal/page?_pageid=477,262593&_dad=p5star&_schema=P5STAR

Enterprise Solutions Competency Center website:
http://www.army.mil/aeioo/erp/competency.htm

Executive Learning Officer website: http://elo.nps.navy.mil

Ingersoll-Rand website. The Insider's Advantage.
www.irco.com/pressroom/businessperspectives/generaloperations/insideradvantage_print.html

MOVES Institute homepage: http://www.movesinstitute.org/

Naval Postgraduate School website: http://www.nps.edu

White House Headquarters Services:
http://www.dior.whs.mil/peidhome/procstat/P01/fy2004/P01FY04-Top100-table4-navy.pdf

Wikepedia: http://en.wikipedia.org/wiki/business_intelligence

Wikipedia. http://en.sikipedia.org/wiki/management_consulting

Wikipedia. http://en.sikipedia.org/wiki/management_consulting

Wikipedia: http://en.wikipedia.org/wiki/Best_practice

INTERVIEWS

Brook, Professor Douglas. Director, Center for Defense Management Reform. Interview by LT Gordon Meek, July 2005.

Cook, Michael. Director, Quality Services, Graniterock. Interview by LT Gordon Meek, Watsonville, CA office visit, June 2005.

Derrick, Timothy. Master Black Belt, GE Wind Power Systems. Interview by LT Gordon Meek, phone conversation, 24 August 05.

Eoyang, Carson. Associate Provost Naval Postgraduate School. Interview by LT Gordon Meek, office visit, June 2005.

Glenney, William. Deputy Director, CNO Strategic Studies Group. Interview by LT Gordon Meek, Newport, R.I. office visit, 21 September 05.

Higgins, Professor Sue. Deputy Chair, Cebrowski Institute. Interview by LT Gordon Meek, Naval Postgraduate School office visit, June 2005.

McCarthy, VADM Justin. Director, Material Readiness and Logistics (OPNAV N4). Interview by LT Gordon Meek, Naval Postgraduate School, October 2005.

Thrower, Lloyd. DoD Business Management Modernization Program. Interview by LT Gordon Meek, phone conversation, July 2005.

Webb, Dr. Natalie. Associate Professor, Defense Resources Management Institute. Interview by LT Gordon Meek, Naval Postgraduate School office visit, September 2005.

Wennergren, David G. DoN Chief Information Officer. Interview by LT Gordon Meek, electronic mail, July 2005.

Williamson, JulieAnne. Project Director, Georgia Tech Consulting Services. Interview by LT Gordon Meek, phone conversation, 27 July 05.

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
   Ft. Belvoir, VA

2. Dudley Knox Library
   Naval Postgraduate School
   Monterey, CA

3. Admiral Michael Mullen
   Chief of Naval Operations
   Washington, DC

4. Admiral Vern Clark (Ret)
   Washington, DC

5. Honorable Gordon England
   Acting Deputy Secretary of Defense and Secretary of the Navy
   Washington, DC

6. Honorable Richard Greco, Jr.
   Assistant Secretary of the Navy (Financial Management and Comptroller)
   Washington, DC

7. Vice Admiral Ann E. Rondeau
   Director, Navy Staff
   Washington, DC

8. Vice Admiral Justin McCarthy (N4)
   Director, Material Readiness and Logistics
   Washington, DC

9. Vice Admiral Walter Massenburg
   Commander, Naval Air Systems Command
   Patuxent River, MD

10. Vice Admiral Phillip Paul Sullivan
    Commander, Naval Sea Systems Command
    Washington Navy Yard, DC

11. Admiral James R. Hogg (Ret)
    CNO Strategic Studies Group
    Newport, RI

12. Mr. William Glenney
CNO Strategic Studies Group
Newport, RI

13. Vice Admiral Thomas Hughes (Ret)
Conrad Chair, Graduate School of Business and Public Policy
Monterey, CA

14. Dean Robert Beck
Graduate School of Business and Public Policy
Monterey, CA

15. Dr. Nancy Roberts
Graduate School of Business and Public Policy
Monterey, CA

16. Dr. Richard L. Dawe
Graduate School of Business and Public Policy
Monterey, CA

17. Professor Douglas Brook
Center for Defense Management Reform
Monterey, CA

18. Rear Admiral Daniel Stone
Commander, Naval Supply Systems Command
Mechanicsburg, PA

19. Rear Admiral Michael Loose
Commander, Naval Facilities Engineering Command
Washington Navy Yard, DC

20. Rear Admiral Christopher Weaver
Commander, Navy Installations
Anacostia Annex, DC

21. Ms. Ariane Whittemore (N4B)
Deputy Director, Material Readiness and Logistics
Washington, DC

22. Mr. Vince Walls (N40)
Director, Logistics Planning and Innovation
Washington, DC

23. Commander Dave Nystrom (N401E)
Office of the Director, Logistics Planning and Innovation
Washington, DC

24. Dr. Bernard J. Ulozas
Space and Naval Warfare Systems Command
San Diego, CA

25. Mr. Lloyd Thrower
DoD Business Management Modernization Program
Washington, DC

26. Professor Sue Higgins
Cebrowksi Institute
Monterey, CA

27. Honorable David Wennergren
DoN Chief Information Officer
Washington, DC

28. Professor John Shank
Naval Postgraduate School
Monterey, CA

29. Lieutenant Jason R. Miller
Surface Warfare Officer's School
Newport, RI

30. Lieutenant Gordon E. Meek
Graduate School of Business and Public Policy
Monterey, CA