THE DoD ENTERPRISE MODEL

Volume II: Using the DoD Enterprise Model
- A Strategic View of Change in DoD -

A White Paper

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The Constitution
of the United States of America

Preamble

We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, *provide for the common defense*, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

PREFACE

Each week seems to bring new challenges for the Department of Defense. Downsizing continues to reduce available resources. New missions for US forces are being forged in the context of an emerging foreign policy for the post cold war era. First and foremost, these forces continue to provide for the defense of the nation, but now extend their activities to peacekeeping, humanitarian assistance, disaster relief and other missions that draw on the unique capabilities of the DoD.

With these challenges, come great opportunities. The President has set forth a new agenda for the nation. This agenda mandates change in how the entire Government performs its missions to meet the needs of the American people. The Vice President has just concluded a groundbreaking National Performance Review (NPR) to establish the concrete actions necessary to make Government work better. Congress has passed the Government Performance and Results Act (GPRA) that calls for results-oriented strategic management using agency-wide measures of performance.

The Office of the Secretary of Defense established the Corporate Information Management (CIM) program to leverage DoD information resources to help make the activities of the Department far more effective and efficient. ASD (C³I) has been assigned to lead this program. In response to the major new challenges and opportunities facing the Department, the CIM initiative has broadened its focus to address strategic re-engineering of defense activities using a DoD-wide approach and enterprise model.

> The lesson of industry is that information systems alone can not yield dramatic business improvements; a synergy between better methods, management, organization structure, values, people, rewards, skills and training, technology, and information is absolutely necessary to achieve breakthrough change and mission excellence.

A DoD-wide perspective — an "enterprise" perspective — is necessary to balance investments across the Department and optimize changes for maximum impact on operational

effectiveness. This enterprise approach promotes "end-to-end" integration of activities resulting in a capability to focus all defense forces and resources on existing and emerging missions.

Responding to the challenges and opportunities of the post cold war era will require bold leadership and unprecedented change to all parts of DoD. US industry leaders who are re-engineering their enterprises to be more effective and efficient at meeting customer and stakeholder needs are discovering the critical success factors that spell the difference between success and failure. An enterprise must:

- Establish its overall mission, "first principles," and values.

- Empower its people.

- Understand and describe its "business" and operations.

- Have leadership set the top vision, goals, objectives, measures, strategies, and programs.

- Guide change from first principles: eliminate, standardize, consolidate, leave-alone, incrementally improve, or totally re-engineer processes.

- Organize around end-to-end processes that deliver solutions to customers and consumers.

- Perform a strategic analysis to justify specific innovations and improvements.

- Make a compelling case for change which is fundamentally linked to the vision, objectives, and measures established by the leadership.

- Obtain corporate "buy-in" and commitment from empowered people.

- Maintain focus and dedication until results are measurably achieved.

This White Paper is Volume II of the DoD Enterprise Model. It provides a broad context for using the Enterprise Model to re-engineer and improve processes, organizations, people, and information systems — in fact to change all elements of the Department of Defense.

Each of us is responsible for change, and each of us is accountable to the American people for seeing that they receive "dollar value for every dollar spent in defense." How should we proceed? Unfortunately there are no simple answers or instant solutions. CIM has established a sound foundation. This White Paper builds on the CIM foundation to address the challenge facing us today. It provides a new frame of reference for defense activities, and a process that can help guide the DoD into the 21st Century. This proposed "roadmap for change" is just a beginning. *We firmly believe that DoD must become a "learning organization" where everyone, leaders and "doers," participate in setting the vision and goals, and work together to achieve them.* Therefore, what we offer here is an opportunity to engage in a dialogue that will result in a better defense for the nation in the challenging years ahead. Please join this journey to the future!

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1. STRATEGIC DIRECTION

The nation's leaders have framed the need for dramatic, sweeping changes grounded in the enduring missions and core capabilities of the Department:

> *"Our goal is to make the entire federal government both less expensive and more efficient, and to change the culture of our national bureaucracy away from complacency and entitlement toward initiative and empowerment. We intend to redesign, to reinvent, to reinvigorate the entire national government."*
>
> President Bill Clinton

> *"As I try to describe myself, I am an operator, hopefully with a strategic view .... In these last 10 years I've learned a lot about how business works, and I would hope to spend a lot of my time on bringing best business practices to the Department of Defense ... My sense in traveling the country is that the public is less concerned about what we're doing overseas or our commitments than whether we are getting a dollar value for a dollar spent in defense. And I would hope at the end of our years of working together we will have persuaded them, Mr. President, that they are."*
>
> Adm. Bobby Ray Inman

> *"... 'There always comes a moment in time when a door opens and lets the future in.' For more than four decades the Defense Department has built its strategy and programs on dealing with the cold war. The ending of the cold war has opened a door, and the future is waiting to come in. By our actions, and by the new strategies we develop, we can shape the future, instead of being shaped by it."*
>
> Dr. William J. Perry
> Deputy Secretary of Defense

> *"Notwithstanding all the changes that have taken place in the world ... We have this mission -- to fight and win the nation's wars ... because we are able to fight and win the nation's wars, ... we are also uniquely able to do ... other new missions ... peacekeeping, humanitarian relief, disaster relief ..."*
>
> General Colin Powell
> Chairman of the Joint Chiefs of Staff (Ret.)

The breakthrough innovations envisioned in the Vice President's National Performance Review (NPR) provide general direction for all Federal agencies to be more responsive to customer needs, results-oriented, accountable, innovative, and cost effective. A key milestone in institutionalizing the changes recommended by the NPR was the passage of the Government Performance and Results Act (GPRA) in 1993. This Act complemented the goals and objectives of the earlier Chief Financial Officers Act of 1990.

The GPRA makes it clear that a strategic, enterprise-wide approach is necessary to meet the mandate of the President and the Congress:

"... the head of each agency shall submit to the Director of the Office of Management and Budget and to the Congress a strategic plan for program activities. Such plan shall contain:

(1)   a comprehensive mission statement covering the major functions and operations of the agency;

(2)   general goals and objectives, including outcome-related goals and objectives, for the major functions and operations of the agency; and

(3)   a description of how the goals and objectives are to be achieved, including a description of the operational processes, skills and technology, and the human, capital, information, and other resources required to meet these goals and objectives ..."

The GPRA makes the crucial link between mission, goals, objectives, **and the measures of performance** that form the basis for evaluating results. Defense leadership, committed to innovation and improvement, can systematically change all aspects of the DoD enterprise. The cycle of change starts with leadership vision and direction, and ends with the full involvement

of empowered people — the soldiers, sailors, airmen, Marines, civilian workers, and the contractors who perform and support the defense mission.

2. THE DoD CHALLENGE

DoD today is facing a period of uncertainty and decision brought about by the end of the cold war. In the past, defense drawdowns have led to an erosion of US military capability and preparedness. Our nation's current leadership is committed to a strong defense. However, the parameters of the nation's defense — its mission, structure, and resource envelope — are open to debate and decision. Figure 2-1 shows the problems facing DoD in the new era.
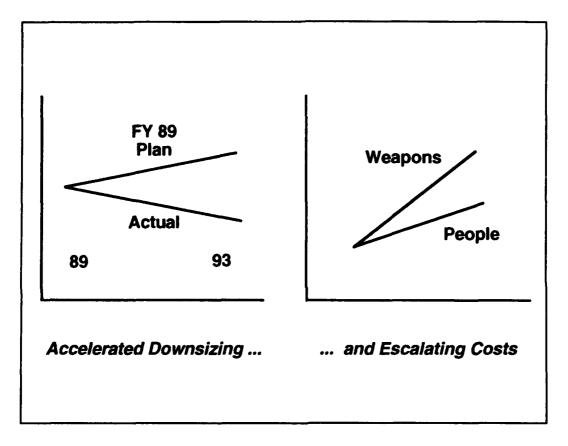

Figure 2-1. THE CURRENT DoD REALITY

■ Budget trends are down due to the need to reduce the national deficit and address pressing domestic needs.

■ The costs of weapons and people are rising, in most cases outpacing inflation. In spite of this trend, the defense of the nation depends upon technical superiority backed by the best educated, trained, and motivated people.

The Department is being called upon to contribute in new ways to national security, even as national security itself is being redefined. Figure 2-2 shows the new dangers facing the nation.

- Proliferation of Weapons of Mass Destruction

- Residual Nuclear Arsenal in the Former Soviet Union

- Regional Aggression

    - Large-scale aggression
    - State sponsored terrorism

- Internal Instability, Conflict

    - Ethnic, religious, other
    - Subversion, lawlessness vs friendly governments

- Reversal of Reform in the Former Soviet Union

- Deterioration of Economic Ties

Figure 2-2. NEW DANGERS FACING THE NATION

- Regional conflicts threaten the stability of the world order. Flash points may arise from ethnic or sectarian strife, fragmentation of existing nations, and the struggle of peoples around the world to achieve democracy and freedom. Hunger and economic deprivation can create conditions of instability that may lead to civil or regional war. The end of the cold war makes it more difficult to define clearly the national interest and priorities. However, it also affords great opportunities for US leadership, working with the world community, to realize peaceful change and long term global stability framed by our deepest values of freedom, democracy, and human welfare.

- The proliferation of weapons of mass destruction poses a threat to every nation. This danger is exacerbated by the ease with which technology can be spread. Counterproliferation requires intensified efforts to constrain suppliers and reduce incentives for nations to seek such weapons.

■ Our nation cherishes democracy and works to protect and promote it worldwide. The defense community will assist nations to strengthen their democratic institutions and resist anti-democratic forces.

■ Economic growth is a vital part of our security. Without it, the country cannot sustain and support our forces. Increasingly, world influence is based on the "power" of productivity, trade, and national wealth. The defense community will help create the human and technical infrastructure for a renewal of US competitiveness, as well as providing skilled and rewarding work for Americans.

2.1 DoD POSTURE RELATIVE TO THE CHALLENGE

DoD is not fully postured for the new environment of the 1990s and beyond. Figure 2-3 illustrates some of the key concerns. While the cold war era left us with the best military in the world, inherent weaknesses in the "way we do business" threaten to erode our strength just when it is needed most.

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│        ●     Stovepiped Islands of Functionality            │
│                                                             │
│        ●     Bureaucratic/Inflexible                        │
│                                                             │
│        ●     Risk Averse                                    │
│                                                             │
│        ●     Layered Organizations                          │
│                                                             │
│        ●     Unmanaged Overhead                             │
│                                                             │
│        ●     Constrained by Outmoded Laws and Policies      │
│                                                             │
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Figure 2-3. CURRENT DoD CONCERNS

■ Stovepiped islands of functionality limit interoperability and create duplication and waste. Our functions cannot continue to be managed from a parochial perspective. Total processes must be managed so that external and internal customers and consumers receive affordable, quality products and services they need, when and where they need them, in peacetime, crisis, transition, and war.

- Bureaucratic practices that rely on layers of rules and regulations enforced by rigid management hierarchies are barriers to improvement. These practices prevent the Department from leveraging the capabilities of the commercial sector, and stifle innovation. The Department must become simpler, leaner, and flatter.

- Reward systems that protect the "status quo" are the very antithesis of what is needed to meet the dynamic challenges of the 1990s. DoD people must be rewarded for taking prudent risks and accepting responsibility for results.

  - Unmanaged overhead wastes scarce resources needed to get the real work done. Unnecessary overhead must be eliminated, and management focused on solving problems by enabling change.

  - Outmoded laws and policies tie manager's and worker's hands frustrating those who are motivated to improve defense activities. The entire Federal Government must streamline its personnel, procurement, and financial laws and policies, and find new ways to energize its people to achieve excellence and quality. DoD cannot do it alone, but DoD can be a leader in the effort to reinvent Government.

2.2   THE ALTERNATIVES FOR DEFENSE

Figure 2-4 graphically depicts the choice facing the Defense Department. The alternatives are stark — either improve effectiveness and efficiency dramatically or face real losses in capability to meet mission objectives. The defense enterprise is a zero-sum system. Resources must be redeployed rapidly from non-value-added activities and wasteful practices into modernized forces, improved readiness, and increased sustainment capability. Every dollar that is redirected into mission-critical and essential support activities tips the balance toward future success on the "battlefield" and greater competitiveness at home.
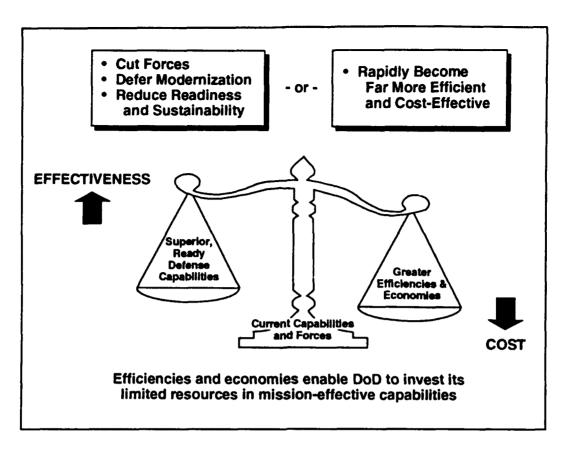
Figure 2-4. ALTERNATIVES FOR DEFENSE

3.   WHAT IS REQUIRED — A NEW DoD PARADIGM

The Department of Defense is a major enterprise. The principles that apply to other enterprises apply to the DoD. In particular, new approaches to business process re-engineering and enterprise integration developed by industry, as well as the knowledge of how to reinvent and renew Government pioneered in Federal, State, and Local "laboratories for change" can be used to improve the defense activity. As we improve the defense enterprise, we must always keep our ultimate objectives in mind: to realize the hopes and expectations of the American people and the world community for peace and order, democracy, human welfare, economic growth, and a better environment. All our efforts must be measured against our nation's values, principles, and national interests.

The defense community must make fundamental changes in the way it performs its activities if it is to provide the nation with the defense it requires and demands. Figure 3-1 shows the shift to a new frame of reference — a new paradigm — for DoD. The downward slope in Figure 3-1 graphically depicts the current negative trend relative to the requirements. **Incremental improvements, what the Japanese call "KAIZEN," will not shift the Department to a higher plateau of performance. Breakthrough innovation and change — a new paradigm for defense activities — is needed to meet the challenges of the 1990s.**

The most important element of the new paradigm is a new attitude and behavior on the part of the defense community. The segmentalist approach of the past must be replaced by a corporate mentality that stresses common purpose, joint effort, and sharing of resources. People must be empowered and enabled to innovate and improve their work processes at all levels to reach shared goals and achieve corporate objectives and measures of performance. The new paradigm is not a capital investment in hardware or software. Instead, it is a leadership commitment in people and integration, resulting in an immediate, measurable improvement in DoD's posture relative to the mission need. Building on this solid foundation, a process of continuous functional improvement can lead to the positive trend shown on the right side of Figure 3-1.
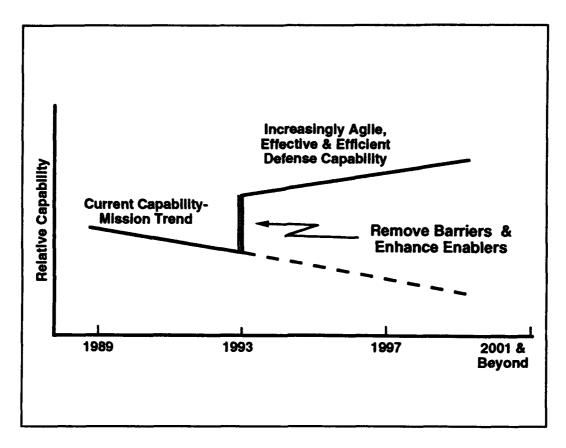
Figure 3-1. PARADIGM SHIFT TO A NEW DIRECTION FOR DoD

Enablers of Change

Figure 3-2 illustrates how the Department, committed to innovation and improvement, can systematically change all aspects of the DoD enterprise. The cycle of change rests on leadership vision and direction, and the full involvement of empowered people — the soldiers, sailors, airmen, and Marines, civilian workers, and contractors who perform and support the defense mission. Change addresses all facets of the DoD enterprise that must be improved including policies, processes, data, culture, organization structure, people, and information technologies. Isolated changes to one or another part of the enterprise are no longer sufficient. Synergistic changes that examine all elements and explore all options to find the best solution are now a necessity.
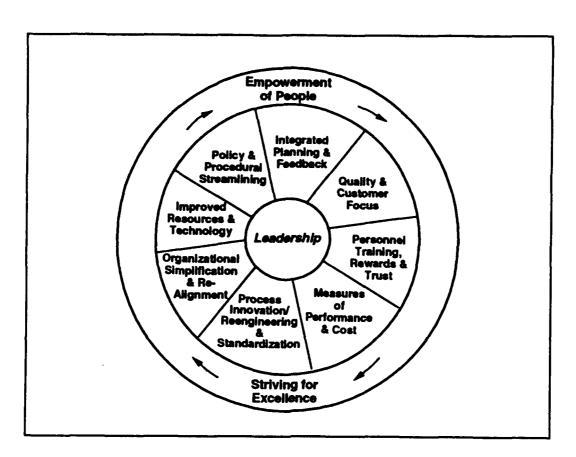
Figure 3-2. ENABLERS OF CHANGE - CYCLE OF
INNOVATION & IMPROVEMENT

4. CORPORATE INFORMATION MANAGEMENT (CIM)

CIM is a key DoD initiative for managing information for better decision making, resulting in a far more effective, efficient, and flexible Department of Defense. CIM is not a revolutionary idea. Rather, it is the bringing together of the best available "common sense" business and government information management methods, practices, and tools, in a focused program for change.

The planned major reductions in resources available to the Department require significant changes to the "way DoD does business" and conducts operations so that assigned missions can continue to be executed successfully. Information can help commanders and managers leverage other resources to achieve their mission objectives within the realities and priorities of the national budget.

The key to using information to leverage resources and improve operations in the field is process re-engineering (a radical shift to a new plateau of performance) and continuous process improvement (incremental gains in performance). This disciplined approach can:

- Determine the "business" needs and the best way to accomplish them at all levels of the enterprise.

- Identify the information resources required for better decision making and more productive work.

- Deliver quality information, when and where needed across the DoD, at affordable cost.

Figure 4-1 shows how information management helps improve all elements of defense. It illustrates how information can leverage personnel, materiel, and dollars to develop and provide the capabilities needed to employ forces to achieve defense missions. Good information helps commanders and managers make better decisions on how to use resources, and achieve their operational mission objectives. By viewing the components of defense in this way, we can see that it is essential to balance the effectiveness of "warfighting" operations (to include the new missions of peacekeeping, humanitarian assistance, etc.), with the efficiencies required in the sustaining base.
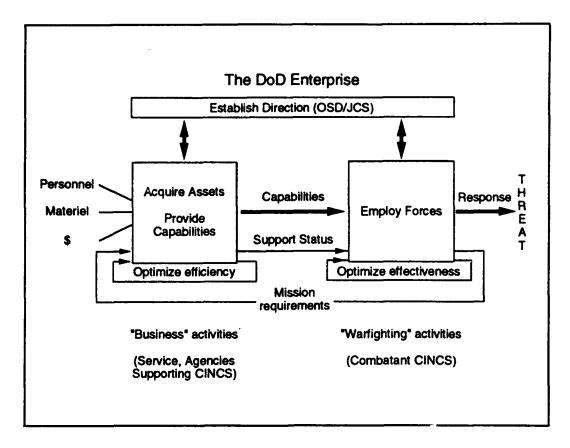
Figure 4-1. OPTIMIZE THE DoD ENTERPRISE

4.1 THE CIM MODEL — OVERARCHING CONTEXT FOR ENTERPRISE CHANGE

Figure 4-2 shows the CIM Model which was provided in the Corporate Information Management Executive Level Group (ELG) Report of January 1990, signed by Mr. Donald Atwood, then Deputy Secretary of Defense. The figure highlights a strategic, or leadership, view of the enterprise. The CIM Model links the leadership direction of an enterprise to the processes and data it employs to accomplish its mission, and to the systems that support these processes. Because we live in an "Information Age" this model can be an enabler of change for every process, function, and organization in DoD.

At its highest level, the CIM Model of the enterprise shows how leadership direction is implemented in changes to values, methods, processes, data, organization structures, skills, job descriptions, and reward systems. At its lowest level the CIM Model describes information systems and a computer and communications infrastructure.
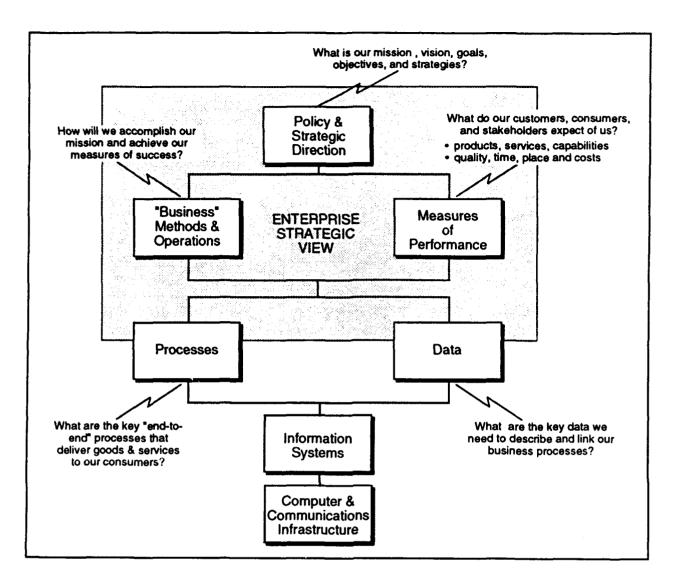
Figure 4-2. ENTERPRISE STRATEGIC VIEW

The CIM model contains these elements that describe any enterprise:

Policy & Strategic Direction. Enterprise values express the beliefs of the broad community the enterprise serves, and the people who execute its missions. The mission of the enterprise gives it purpose and scope, in the context of the external reality and national objectives and priorities. Stakeholders and customers help its leadership establish a vision for the future, goals, near-term objectives, strategies and action programs.

"Business" Methods and Operations. The strategic direction of the enterprise is implemented through "business" methods and operations which represent management choices

of the best way to achieve an end result by applying the right practices, technologies, tools, and resources. At the 1936 World's Fair Henry Ford exhibited two dramatically different ways to build an automobile:

- a carriage maker using an anvil and hammer to make automobile parts; and

- a press that automatically stamped out the parts from a pre-formed die.

The results were impressive to the American people who saw the improved quality, speed, and production achievable by enhancing human skills with sophisticated machines. We are now in a transition to the Information Age, when knowledge and human imagination will dominate the factors of productivity and performance.

Measures of Performance. Goals and objectives of an enterprise are planned and evaluated against measures of performance (such as outcomes, quality, time, productivity, and cost), based on the expectations of stakeholders, customers, and consumers:

- Effectiveness demonstrates how well an enterprise contributes by achieving mission results.

- Efficiency measures how well an enterprise uses resources to provide quality, timely, affordable products, services, and capabilities.

Process Models. Business methods and operations are implemented through processes — the right combination and sequence of resources, technology, and work that transforms resource inputs into value-added outputs. Documenting processes lets managers understand and analyze them to find opportunities for improvements.

Data Models. Data is the "glue" that links processes and enables communications among people. Documenting data entities and their interrelationships is the first step in creating shared corporate databases of standard data elements for better decision making and resource management.

Information Systems. Systems are integrated complexes of people, procedures, technology, facilities, and information resources structured to accomplish a task. Information systems help groups of people to generate, manipulate, store, distribute, and use information to accomplish shared goals and objectives. Similarly, industrial systems help people use technology

and machines to do work. The Information Systems of the 1990s must be designed as integral parts of the entire business and work environment, so there is a seamless integration of information into all DoD activities.

Computer and Communications Infrastructure. Underlying information systems are a set of resources and technologies that transparently provide common services for processing and communicating data. These mechanisms can be delivered as "utilities" — achieving economies of scale, flexibility, reliability, availability, and security.

As noted above, *CIM is not just about information. It provides a framework for re-engineering and continuously improving all activities of the Department so they are far more effective and efficient in achieving assigned missions*. This means that organizations must become leaner, reward systems must motivate people to continually learn and adopt better methods, and policies must become flexible to allow innovation to occur.

4.2   STRATEGIC IMPLEMENTATION OF THE CIM MODEL ACROSS DoD

The CIM Model must be executed using an enterprise approach to achieve the full benefits of process re-engineering and continuous process improvement. The defense enterprise must be aligned from the top so that it is grounded in its mission, its leadership's vision and direction, and its strategies and action programs.

- Processes are grouped together for management responsibility and accountability. Sets of processes are nested in a hierarchy to achieve strategic, operational, and tactical objectives. The principal levels in the enterprise hierarchy are: defense-wide/mission area; "end-to-end" processes that cut across functional boundaries to deliver capabilities to combatant CINCs and other key users; functional areas such as personnel; and functional activities such as civilian personnel.

- Organizations manage resources, develop nested sets of plans to reach strategic, operational, and tactical goals, and execute processes and tasks. They imbed the chain-of-command, and provide the institutional framework for teams of people to accomplish missions and assigned tasks.

Figure 4-3 shows the DoD CIM Model applied to the four process levels by the key defense organizations that are assigned functional and technical responsibilities.
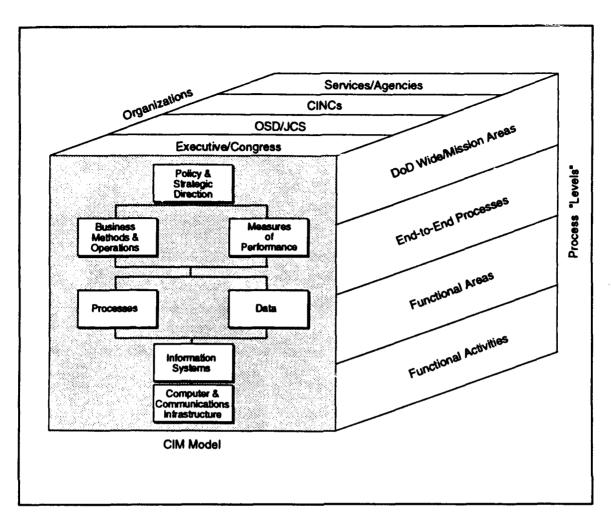
Figure 4-3. PROCESS LEVELS & ORGANIZATIONS

The shift to a new paradigm includes moving toward a "horizontal" enterprise structure, built around core and supporting end-to-end processes and empowered teams of people. This form of organization is able to focus all its resources on delivering the right solution to its customers and consumers. For DoD, this means that the "warfighter" will get ready forces and sustainment, when and where it is needed, in peace, crisis, transition, and war.

> *"Our goal is to get everyone focused on the business as a system in which the functions are seamless...Every time you have an organizational boundary, you get the potential for a disconnect. "*
>
> DuPont Executive

4.3 THE STRATEGIC SITUATION

Figure 4-4 shows, from a CIM perspective, the current strategic situation that impedes change and ultimately impairs the ability of the Department to accomplish its assigned missions.

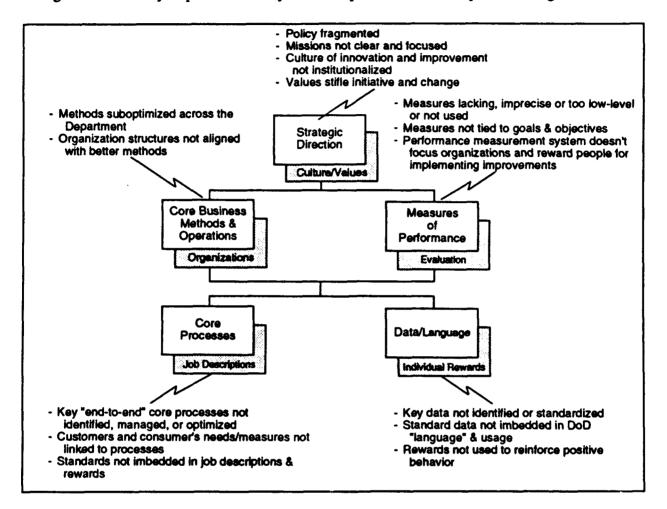Figure 4-4. THE STRATEGIC SITUATION

Key barriers to change and improvement in the Department related to the strategic problem include:

■ Lack of a common understanding and description of the entire enterprise and its mission needs.

■ Absence of a nested set of defense measures of performance that start with DoD goals and objectives and flow down into all activities and organizations for implementation.

- Fragmented "stovepipe" functions.

- No identification and analysis of the mission-critical "core" processes that begin with a clear customer requirement and end with the delivery of quality, timely, affordable products, services, and capabilities to satisfied consumers.

- No linking of strategic direction to end-to-end core and support processes.

- No systematic way to assess enterprise-wide impacts of proposed changes and weigh alternatives against mission needs and constrained resources.

- Impediments to better methods that are imbedded in outmoded, ineffective policies, procedures, values, and reward systems.

- A corporate culture that does not motivate people to take risks, learn from success and failure, and be accountable to their customers and consumers for the outcomes of their activities.

Barriers to better *performance* can be reduced. Enablers of *improvement* can be established. CIM has developed an enterprise approach — **a roadmap for change** — that can make the Department more effective, efficient, and flexible in meeting the challenges of the 21st Century.

5. THE ENTERPRISE ROADMAP

> *"If we could first know where we are, and wither we are tending, we could then better judge what to do, and how to do it."*
>
> Abraham Lincoln
> Speech at Springfield Illinois
> June 16, 1858 (emphasis added)

Figure 5-1 shows the Enterprise roadmap for change. It aligns the strategic elements of the CIM Model: policies, methods, measures, processes, and data. This prepares the way for implementing improved Information Systems operated on a common infrastructure consisting of platforms, communications, and generic applications (e.g., e-mail). Other required changes affecting organizations, people, and resources can also be identified and planned through this approach.
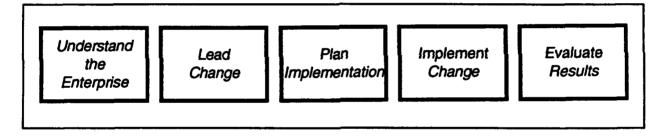
Understand the Enterprise	Lead Change	Plan Implementation	Implement Change	Evaluate Results

Figure 5-1. THE ENTERPRISE ROADMAP

Understand the Enterprise. The activities, data, and core processes of the DoD are described in a common DoD Enterprise Model (see Volume I: Strategic Activity and Data Models) so there can be a shared understanding between leaders, managers, and workers of what is being done, how well it is being performed, and which elements should be changed. The model reaches beyond the Department to accommodate functions that cross national, government, and industry boundaries. The needs and expectations of stakeholders, customers, and users are established in the context of international and national threats and opportunities.

Lead Change. Leadership defines the strategic direction of the DoD enterprise. The mission, established in the Preamble to the Constitution — to provide for the common defense

— grounds the enterprise in its fundamental purpose. Its values guide the behavior of its people. The leadership's vision for the future provides shared goals to strive for. These goals are translated into near-term achievable objectives and quantifiable measures of performance to posture the enterprise for excellence and results. Top-level strategies and programs are put in place to move the enterprise towards its target. For example, the leadership may select major processes and functions for total re-engineering, continuous improvement, or elimination altogether. Leadership direction is implemented effectively by aligning organizational structures with goals and objectives, establishing process ownership, and by imbedding measures of performance that are consistent with top-level goals and objectives in all activities and processes. If DoD leadership embraces an enterprise approach, and champions change, CIM will succeed.

Plan Implementation. Within the guidance set by strategic direction, workers and managers in all parts and at all levels of the enterprise plan to change their values, processes, data, organizations, people, and information systems. The plans for a given level of the enterprise form the context for the plans for subordinate levels. This nested set of plans is therefore consistent from the strategic to the operational and tactical levels. For example, overall plans for a functional area guide the plans for all the functional activities in the area. Top leadership must continue to provide sponsorship and direction for mid-level managers and workers. While the focus of CIM has been on information, it is important to address all aspects of the enterprise synergistically:

> The lesson of industry is that information systems alone can not yield dramatic business improvements; a synergy between better methods, management, organization structure, values, people, rewards, skills and training, technology, and information is absolutely necessary to achieve breakthrough change and mission excellence.

Implement Change. Planning must be followed by execution. Specific processes involving personnel, medical acquisition and other combat support functions are being changed now. C³I doctrine and processes are also being improved rapidly. CIM is laying the foundation for new defense information systems which will support these and all other defense activities

with quality, timely, secure, and affordable information services. Rapid migration to a common set (a "core") of information systems is mandated and fully underway. The focus on data standardization has been accelerated. A common utility of processing and communications capabilities is being designed and developed. By the second half of this decade, DoD will be postured for standard, open, flexible, cost-effective information systems that meet operational/ combat and combat service support/business needs.

Evaluate Results. Finally, as the GPRA requires, the outcome of changes must be evaluated to see how well expectations have been met. This helps stakeholders, customers, and consumers allocate scarce resources, and helps defense managers continuously improve their activities. In the new global competitive environment, the cycle of innovation and improvement must be never-ending: the challenge is to imbed the process of change into the institution, so it becomes part of every activity, and fully supported by information resources.

Figure 5-2 shows how the Enterprise Roadmap integrates all corporate elements to achieve an effective and efficient defense for the nation. It integrates strategic direction, methods and processes, measures, and systems which today are fragmented. And, it ensures change really happens by imbedding it in new values, organizations, rewards, and people's jobs, skills, and behavior.
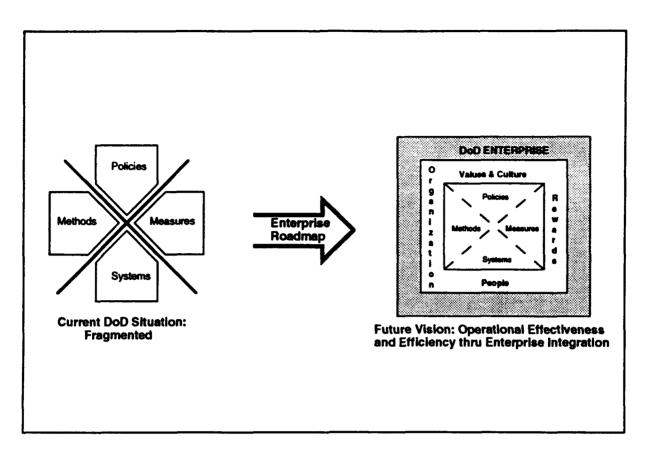
Figure 5-2. FUTURE VISION FOR THE DoD

The next sections discuss the key elements of this enterprise roadmap.

6. UNDERSTAND THE ENTERPRISE

Define the Mission	Identify Threats & Opportunities	Extend the Enterprise Model	Identify Customers & Consumers	Define "End-to-End" Processess	Benchmark Excellence

6.1 DEFINE THE MISSION

Define the Mission

The mission of DoD is to **"Provide for the Common Defense."** All other missions are nested within this fundamental purpose. The Enterprise Model allows managers to assign missions consistently to organization elements that are responsible for all DoD activities and processes.

6.2 IDENTIFY THREATS AND OPPORTUNITIES

Identify Threats & Opportunities

Actual and potential threats to US economic, political, military, and environmental interests represent the external conditions that drive the development of the National Security Strategy and the National Military Strategy. This guidance is translated into requirements for capabilities and into options for the use of military forces. The new global situation offers many opportunities to promote democracy, strengthen the economy, protect the environment, avert and deter aggression, and assist people in need.

6.3 EXTEND THE ENTERPRISE MODEL

Extend the Enterprise Model

Figure 6-1 shows the DoD Enterprise Model for all DoD activities. Volume I, "The DoD Enterprise Model" provides a full description of the strategic activity and data models for DoD. Conceptually, the DoD Enterprise Model spans all levels of activity and data in the Department. Functional area and functional activity managers extend the strategic view of the model and also tailor it for use by their organizational elements. As lower levels are developed, they are integrated into the overall Enterprise Model. The DoD Enterprise Model

becomes the template (the "common sheet of music") to integrate improvements and operations across the entire Department.
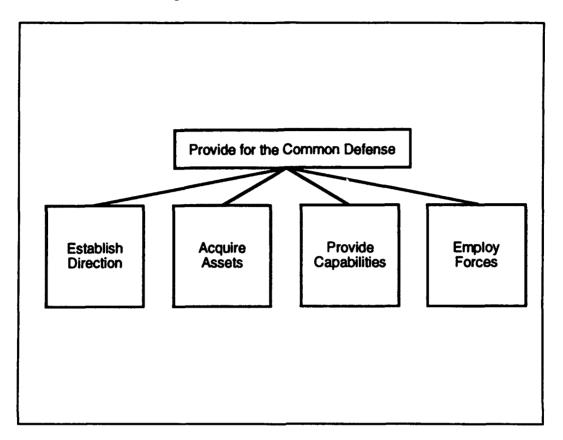
Figure 6-1. DoD ENTERPRISE ACTIVITY MODEL — TOP VIEW

■   **Establish Direction** guides all defense activities within allocated resources.

■   **Acquire Assets** obtains the products and services — the people, weapon systems, logistics supplies, and other assets — needed to develop forces and sustain operations.

■   **Provide Capabilities** develops ready forces, projects them to the area of operations, and sustains them during peace, crisis, transition, and war.

■   **Employ Forces** executes assigned missions of the Department, including warfighting, peacekeeping, and humanitarian assistance.

Figure 6-2 shows how the Enterprise Model is extended to all levels in the DoD. Volume I describes in detail how to use the Enterprise Model as a template and extend its activity and data components to all functional areas and activities in the Department.
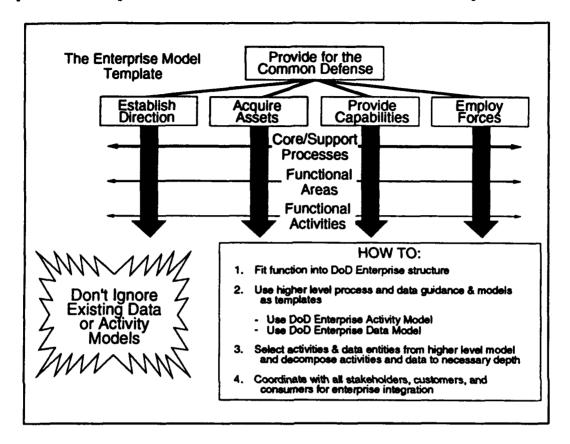
Figure 6-2. EXTENDING THE ENTERPRISE MODEL

Figure 6-3 shows the "data buckets" that provide leadership priorities for shared, corporate data. These strategic entities guide the development of a common set of standard data elements for use by every activity in the Department.
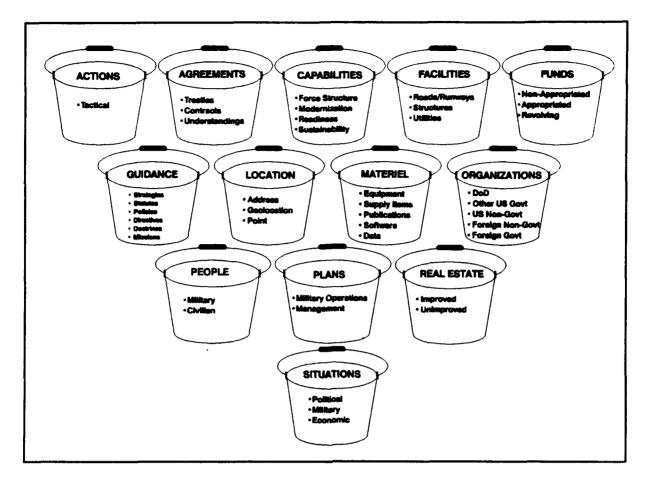
Figure 6-3. DoD ENTERPRISE MODEL — DATA BUCKETS

Future corporate databases will use these standard elements to support cross-functional integration and end-to-end processes across the entire Department as shown in Figure 6-4. Standard corporate data is essential to providing an accurate, timely, joint understanding of the status of forces and resources, and to making the best decisions to meet the immediate situation and posture DoD for its future challenges. It will allow defense activities to work together and people to communicate to achieve common goals.
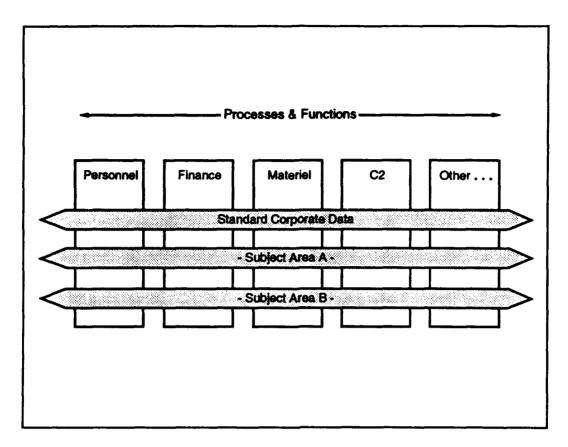
Figure 6-4. STANDARD CORPORATE DATA HELPS INTEGRATE
THE ENTERPRISE

6.4 IDENTIFY CUSTOMERS & CONSUMERS

**Identify
Customers &
Consumers**

Figure 6-5 shows the Enterprise customer/consumer relationships. This model provides the basic concept needed to change DoD culture and practice to be innovative, entrepreneurial, results-oriented, and efficient. It is totally supportive of military needs. **In fact, by strengthening the links between support activities and combatant CINC activities and needs, the Department can realize a seamless interface from its sustaining base to operations in the field.**

The customer/consumer framework is a dynamic link between the principal roles in the defense mission:

Consumer. The end-user who needs specific products, services, and capabilities, at the right place and right time, to perform assigned missions. The combatant CINC is the critical defense consumer (the "ultimate" end-user). Intermediate users exist throughout the Department.

Customer. The surrogate for the consumer, who consolidates and approves requirements, balances priorities, and authorizes expenditures of funds. There are a hierarchy of key customers from the American people, to Congress and the President, to the SECDEF, and OSD and the JCS.
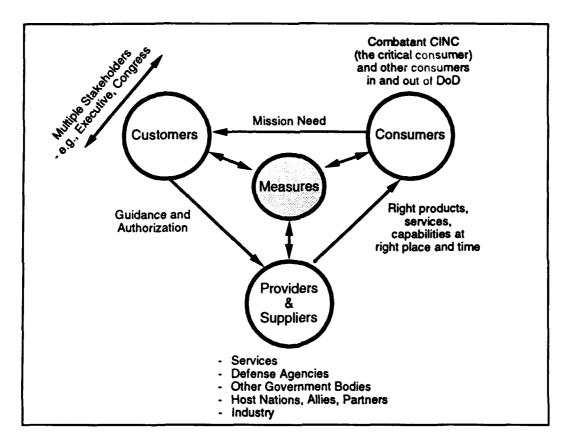
Figure 6-5. DoD CUSTOMER/CONSUMER RELATIONSHIPS

Producer and Supplier. The designer, developer, builder, and acquirer of assets and capabilities, and the direct supplier of goods and services to the consumer. The Services, Defense Agencies, Supporting CINCs, Industry, Host Nations, Allies and Coalition Partners, and other Government agencies are the producers and suppliers for the defense mission.

It is also possible to frame this model in the broader concept of "stakeholder." In general, stakeholders are any parties that have a legitimate interest in the outcomes of a process or activity.

Figure 6-6 shows how this dynamic model can be applied to DoD enterprise activities to portray the fundamental management, warfighting/peacekeeping, and support roles of the Department. There is a continuous, informed dialogue between the customers, consumers, and providers to arrive at a best balance of capability and performance within budgetary envelopes. The following sections describe the drivers and linkages that "glue" defense activities together to achieve mission results.
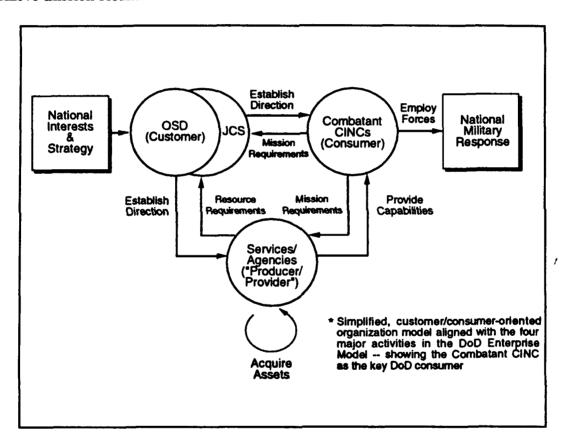
Figure 6-6. ENTERPRISE CUSTOMER/CONSUMER/PROVIDER ROLES

6.4.1 Employ Forces Drives Establish Direction/Determine Requirements

In order to meet Combatant CINC needs, OSD and the JCS must determine:

■ the differences between operational needs and current/planned capability;

- nested Joint and Service doctrine;

- force structure; and

- equipment, people, and support requirements.

A key question is: what critical Employ Forces processes must be considered in Establish Direction, and what "warfighting" processes should be visible to sustaining base managers and providers so they can do their job better? Clearly, support processes must have better access to information about:

- operational requirements for units, people, equipment;

- number of units/people/equipment to be supported and turnover (e.g., casualties, rotation);

- location — distance and lift;

- "OPTEMPO" — intensity and environmental factors (e.g., climate);

- duration of operations and resupply capability; and

- physical infrastructure (e.g., constraints of an immature theater).

> *AND: the CINC-consumer needs to know where his support is in the chain:*
> *is it enroute? in-country? backordered?*

6.4.2   Employ Forces/Establish Direction Drives Acquire Assets

Requirements and approved programs drive acquisition of: equipment; people; parts (sustaining & war reserve); facilities; AIS; and other assets.

Employ Forces/Establish Direction should have sufficient detail and operational context to drive an expanded Joint Requirements Oversight Committee (JROC)-type analysis of DoD acquisition versus Joint Task Force (JTF) requirements. The unsatisfactory alternative is that the JTF "adapts" to what it gets from Acquire Assets even when this doesn't match doctrine, tactics, force structures, or training.

6.4.3 Employ Forces/Establish Direction Drives Provide Capabilities (Plans) & Employ Forces Drives Provide Capabilities (Execution)

Employ Forces drives:

- management of assets;

- development of capabilities; and

- use of assets.

To have the right combination of the right "stuff" in the right places to meet assigned mission needs, support planners must understand the requirements generated by scenarios or contingency plans. During execution, robust real-time linkages must be established from the AOR to the sustaining base to fill requests for support or to have the right visibility of current status to make the "best" decision on who/what must go into the AOR to meet mission demand. The ability of the Department to project and sustain power — the pipeline and "umbilical cord" — must become as responsive, flexible, and efficient as the ability of world-class companies to link suppliers, providers, and customers.

6.5 DEFINE "END-TO-END" PROCESSES

Define "End-to-End" Processes

End-to-end processes cross functional and organizational boundaries to provide needed capabilities to end-users. They begin with a valid requirement approved and funded by a customer and end with the delivery of the right "stuff" (e.g., units, supplies), at the right place and right time, to a consumer in order to accomplish a job or an assigned mission. The customer/consumer model helps managers define value chains of end-to-end processes for DoD by identifying the key drivers, such as those described above.

Figure 6-7 illustrates the concept of end-to-end processes that cross the defense activities described in the DoD Enterprise Model.
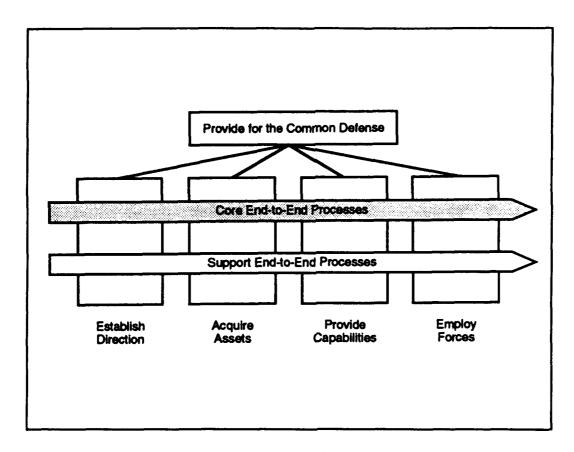
Figure 6-7. DoD ENTERPRISE "END-TO-END" PROCESSES

We can distinguish two types of processes,

"Core" defense processes, which are vital to the enterprise — they are mission-critical. For example, joint planning and operations is a core process. Core processes must be "world-class," whether they are performed by the military, civilians, allies, or industry partners.

"Support" processes, which are essential to performing the core processes or are required by law and policy. For example, personnel transactions are essential support processes. Within the support processes, there are administrative activities, such as office administration, which offer great opportunities for standardization across the DoD and the entire Federal Government. Support processes may also be candidates for outsourcing.

Identifying core and support processes facilitates strategic management of the Department. Putting together the right mix of skills and resources, processes and systems, from all functional areas, brings total defense resources to bear on missions. Therefore, re-engineering of end-to-end processes can yield the greatest benefit/cost impact for the enterprise.

End-to-end processes are built upon the traditional functions of the Department. They leverage excellence in "vertical" functions like finance by combining methods, people, and systems from different competencies to deliver total solutions to problems. As part of a "horizontal" end-to-end process, personnel, materiel, medical, finance, and other functions contribute to an end goal — mission success. Figure 6-8 (a three-sheet fold-out) shows six preliminary core processes as candidates for use by DoD.

Conduct Strategic/Operational Planning and Operations. This end-to-end process develops nested sets of strategic and operational plans, starting with the National Military Strategy, to accomplish the assigned missions of the Department, and executes the plans through the use of forces in the AOR.

Raise Forces. This end-to-end process develops doctrine and identifies the requirements for forces. It results in authorizations for personnel, equipment, supplies, and facilities, and an approved force program.

Maintain Force Readiness. This end-to-end process acquires the people, equipment, and items of supply needed to form forces ("man and equip" the force), integrates and trains the forces, and assesses the readiness of forces before they are delivered to Combatant CINCs.

Provide Forces. This end-to-end process mobilizes units to fill plan requirements, conducts pre-deployment training, transports units into the AOR, and integrates them into forces.

Sustain Operations. This end-to-end process determines requirements for sustainment in terms of equipment, supplies, and personnel, acquires these assets, transports them to the AOR, and delivers them to consuming units.

Return/Restore Forces. This end-to-end process brings forces and assets back from the AOR after completion of an operation, demobilizes units and individuals, transports units to their home station, restores damaged assets, and returns assets to the inventory.

CONDUCT STRATEGIC OPERATIONAL PLANNING AND OPERATIONS

Activities

TRIGGER
- Presidential Decision

| Develop National Military Strategy | → | Develop Joint Doctrine & Force Structure Requirements | → | Develop Joint Plans and Orders | → | Allocate Resources |

RAISE FORCES

Act

TRIGGER
- National Military Strategy
- Joint Doctrine
- Force Structure Requirements
- Manpower & Fiscal Guidance

Develop Service Doctrine	→	Determine Requirements for Units	→	Determine AC/RC Unit Mix	→	Determine Personnel Requirements
					Determine Equipment Requirements
					Determine Supply Requirements
					Determine Facility Requirements

MAINTAIN FORCE READINESS

Ac

TRIGGER
- Authorizations for Personnel, Equipment, Supplies, and Facilities
- Approved Program and Budget
- Service Doctrine

Acquire Personnel	→	Train Personnel	→	Distribute Personnel	→	Transport Personnel to Units
Acquire Equipment	→	Store Equipment	→	Distribute Equipment	→	Transport Equipment to Units
Acquire Supplies	→	Store Supplies	→	Distribute Supplies	→	Transport Supplies to Units
Acquire Facilities					

Products
- National Military Strategy
- Joint Doctrine
- Force Structure Requirements
- Manpower and Fiscal Guidance
- Approved Plans and Orders
- Mission Accomplishment

urces → | Constitute Forces | → | Provide Operational Intelligence | → | Conduct Operations |

Activities —————————————————

Products
- Authorizations for Personnel, Equipment, Supplies, and Facilities
- Service Doctrine

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ply

ity

| Develop Force Program & Budget Requirements | → | Apportion Approved Force Program and Budget | → | Develop Authorizations for Personnel, Equipment, Supplies, and Facilities |

Products
- Ready Units Assigned to CINCs & Components

Activities —————————————————

Units

Units

Units

| Man and Equip Units | → | Train Units | → | Assess Readiness |

Figure 6-8. CANDIDATE DoD END-TO-END CORE PROCESSES

2

PROVIDE FORCES

Activities

TRIGGER
- OPORD

Assess Existing Plan/ Develop New Plan → Make Final Unit Selection → Mobilize Units → Bring Units To Full Strength → Conduct Pre-Deployment Training

SUSTAIN OPERATIONS

Activities

TRIGGER
- Plans & Orders

Determine War Reserve Requirements For Equipment → Develop Program & Budget Requirements → Develop Authorizations Based On Approved Program & Budget → Acquire War Reserve Equipment → Store War Reserve Equipment

Determine War Reserve Requirements For Supplies → Develop Program & Budget Requirements → Develop Authorizations Based On Approved Program & Budget → Acquire War Reserve Supplies → Store War Reserve Supplies

Determine Requirements For Non-Unit Reserve Personnel → Develop Program & Budget Requirements → Develop Authorizations Based On Approved Program & Budget → Acquire Non-Unit Reserve Personnel → Train Non-Unit Reserve Personnel

A

Transport Units To POE → Transport Units To POD → Transport Unit To Assembly Area → Integrate Units Into Force

Products
- Replacement Personnel,
  Equipment, and
  Supplies in Place to
  Support Operations

Distribute War Reserve Equipment → Transport Equipment To POE → Transport Equipment To POD → Transport Equipment to Units

Distribute War Reserve Supplies → Transport Supplies To POE → Transport Supplies To POD → Transport Supplies to Units

Mobilize & Distribute Non-Unit Personnel → Transport Personnel to POE → Transport Personnel to POD → Transport Personnel to Units

Figure 6-8. CANDIDATE DoD END-TO-END CORE PROCESSES (Continued)

Activities

TRIGGER
· Presidential Decision

```
Develop Post-
Conflict Activities
Plan
```
→
```
Conduct Post-
Conflict Activities
```

```
Determine Unit
Re-deployment
Schedule
```
→
```
Prepare Unit
Equipment and
Supplies for
Re-deployment
```
→
```
Transport
Personnel to
POE
```
→
```
Transport
Personnel to
POD
```
→
```
Transport
Personnel t
Home or
Demobilizati
Station
```

```
Transport Unit
Equipment and
Supplies to POE
```
→
```
Transport Unit
Equipment and
Supplies to POD
```
→
```
Transport U
Equipment a
Supplies t
Home Stati
```

```
Prepare
Non-Unit
Equipment and
Supplies For
Re-deployment
```
→
```
Transport Non-
Unit Equipment
and Supplies to
POE
```
→
```
Transport Non-
Unit Equipment
and Supplies to
POD
```
→
```
Transport
Non-Unit
Equipment a
Supplies t
Depot
```

```
Select Non-Unit
Equipment and
Supplies for
Re-deployment
```

```
Prepare Salvage
Equipment and
Supplies For
Disposal
```
→
```
Transport
Salvage
Equipment and
Supplies to
Disposal Sites
```
→
```
Dispose of
Salvage
Equipment and
Supplies
```

I

Products
- Units Returned to Home Stations
- Reserve Personnel Returned to Civilian Status
- Non-Unit Equipment and Supplies Returned to Storage

Complete Post-Conflict Operations and Re-Deployment

Transport Personnel to Home or Demobilization Station

Demobilize Reserve Personnel

Transport Unit Equipment and Supplies to Home Station

Refurbish Unit Equipment

Transport Non-Unit Equipment and Supplies to Depot

Refurbish Non-Unit Equipment

Transport Non-Unit Equipment to Storage

Figure 6-8. CANDIDATE DoD END-TO-END CORE PROCESSES (Continued)

These end-to-end processes ("value chains") start with mission needs and measures, and end with products, services, and performance delivered to primary consumers (e.g., the Combatant CINCs). Intermediate customers and consumers must also be identified for each part of the value chain. If the benefits exceed the costs, process sponsors, "owners," and participants should re-engineer their (parts of) end-to-end processes to be more effective and efficient, taking into account the guidance and needs of interested customers, consumers, workers, and other stakeholders.

The candidate core processes shown in Figure 6-8 must be refined (or replaced), validated, and supplemented by key support processes. Then senior DoD leaders can establish strategic goals and measures for activities in support of the end-to-end processes. Functional managers can plan re-engineering and improvement initiatives to achieve. The leadership's end-to-end objectives, as well as specific functional area and functional activity objectives.

The activities in the Enterprise Model are linked to these end-to-end processes. Because the Enterprise Model is being extended down to all functional areas and activities, it will be possible to develop end-to-end process chains at different levels, consistent with strategic goals, objectives, and measures of performance. Ultimately the top direction of DoD will be linked to tasks, teams, and individuals. The "threads" that go through different functions create a set of powerful linkages that let DoD bring all its skills and resources to bear on each unique operational mission.

There are many ways to coordinate and leverage specific activities and organizational skills to contribute to the improvement of end-to-end processes: matrixing capabilities; teaming; appointing process owners and managers; establishing shared databases and integrated systems; and re-aligning structures to remove boundaries. An effective approach applies all these management tools, flexibly, as needed to meet each specific circumstance.

6.6 BENCHMARK EXCELLENCE

Benchmark Excellence

Benchmarking the performance of those enterprises that are acknowledged examples of excellence provides a real-world basis for leaders to identify processes that can or should be improved, and to set goals and measures of performance.

The cycle of change is accelerating worldwide, in part because organizations now understand that they must learn from their own and others successes and failures. For example, the Malcolm Baldridge Awards single out companies that have demonstrated and institutionalized quality in their products and processes. The methods and practices of these companies are widely studied and emulated. DoD must learn from Industry, other Government agencies, and other nations.

7. LEAD CHANGE

Establish Strategic Guidance	Establish Measures of Performance	Eliminate Barriers/ Establish New Culture	Identify First Principles	Guide Change

7.1 ESTABLISH STRATEGIC GUIDANCE

Establish Strategic Guidance

Defense leadership establishes DoD values, principles, missions, vision, goals, objectives, (quantifiable) measures of performance, strategies, and action programs. These respond to existing and emerging threats and challenges, and address the needs of stakeholders, customers, and consumers. **Direction is captured in a corporate strategic plan which is, conceptually and fundamentally, consistent strategic direction deployed at each echelon of the Department.** It is founded upon the National Security Strategy and the National Military Strategy, which result in Defense Planning Guidance for the organizations that manage and execute DoD activities. **The DoD Enterprise Model is the umbrella framework for all missions and functions. It enables the corporate plan to be developed and deployed consistently within and across all activities, levels, and organizations.**

The success of DoD's re-engineering and process improvement efforts will hinge largely on its ability to integrate and manage the variety of improvement initiatives currently under way, such as Process Re-Engineering, Functional Process Improvement, Enterprise Integration, DBOF, CALS, TQM, and Comptroller guidance on performance measures. In order to provide coherent leadership to elements of DoD facing the need to undergo significant change, it is essential that improvements be related to the DoD corporate plan and mapped to the DoD Enterprise Model. At each level, corporate goals, objectives, and performance and cost measures must be translated into more precise guidance and plans. Defense leadership must establish direction, sustain progress, and measure results through a systematic, disciplined process that involves every organization and individual in the Department.

Before detailed planning begins, defense leadership decides the focus of the plan and establishes the corporate strategy: eliminate, standardize, consolidate, leave-alone, incrementally improve, or radically re-engineer the process.

7.2   ESTABLISH MEASURES OF PERFORMANCE

Establish Measures of Performance

Waste and inefficiency in DoD programs undermines the confidence of the American people in the Government and may reduce the Department's ability to obtain future resources for vital defense activities. DoD managers are seriously disadvantaged in their efforts to improve program efficiency and effectiveness, because of insufficient articulation of program goals and inadequate information on program performance. This also handicaps Congressional policymaking and oversight.

Instituting a performance measures program in the DoD will improve program effectiveness and efficiency by promoting a new focus on results, service quality, customer satisfaction,and cost. It will help DoD managers and workers improve their activities, by enabling them to plan for meeting leadership goals and objectives, and by providing them with information about results and service quality. It will also help senior defense leadership develop a rational basis for allocating resources to achieve desired outcomes, and manage to customer and consumer expectations and results. Corporate measures of performance:

- are used to direct change and evaluate progress;

- are consistent with the Government Performance and Results Act (GPRA);

- help managers achieve a vertical and horizontal balance of efficiency and effectiveness across DoD Enterprise activities;

- emphasize outcomes and results; and

- show the return-on-investment of cross-functional, end-to-end process initiatives, e.g.,

    - Provide Forces

    - Sustain Operations

Figure 7-1 shows the different kinds of measures in relation to defense plans, processes, and outcomes.
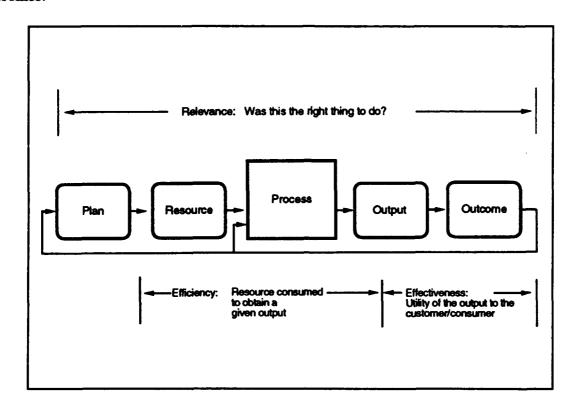

Figure 7-1. PERFORMANCE MEASURES

As part of the DoD corporate strategic process, general goals and objectives for the major functions and operations of the Department are developed in measurable terms and performance indicators are established. The measures are developed iteratively at all echelons, in increasing specificity, to form a nested hierarchy, as part of the strategic planning process. Vertical integration of measures enables senior leaders to assess results by aggregating up from actual program performance.

As the measures are used throughout the department, they are allocated to specific processes, and tasks. For example, readiness is allocated to equipping and training activities in the Enterprise Model. Providers and suppliers make the right information available to consumers so they can know what they can count on today and what must be improved tomorrow. The end result is a "best" balance between supply and demand across the department with the resources that are available for defense.

Measures should be unambiguous, easy to understand, useful to management and workers, benchmarked against best achievable practices, and standards, and easy to generate from available data. **Measures must be integrated horizontally across functional areas and activities so they can help achieve corporate customer/consumer goals of relevance, quality, time, cost, and productivity that are imbedded in end-to-end processes.**

> Measures help make the customer/consumer/provider/supplier linkages effective and efficient; consumers can specify their precise needs and measure their satisfaction with products and services; customers can order the right products and services, and evaluate the performance of providers and suppliers; and providers and suppliers can plan and deliver the right "things", at the right place and time, at lowest cost to meet customer/consumer needs and expectations.

7.2.1 PLAN IMPROVEMENTS USING MEASURES

Innovations and improvements should be designed to achieve the measurable goals and objectives, and specific indicators, established by DoD leadership and managers at all echelons. Measures of current and expected performance can be used to target candidate processes for improvement. High level measures can be imbedded in the DoD "end-to-end" processes so that:

- the processes most in need of re-engineering to achieve maximum impact and cost/benefit improvement can be identified;

- maximum results from re-engineering can be achieved by optimizing overall impacts on time, quality, mission-effectiveness, and cost; and

- the effect of a proposed change can be assessed against quantifiable user needs and systematically balanced against other proposed changes to satisfy resource constraints.

Figure 7-2 shows how the right balance of efficiency and effectiveness measures should be applied to the core, support, and support/administrative end-to-end processes as they are re-engineered.
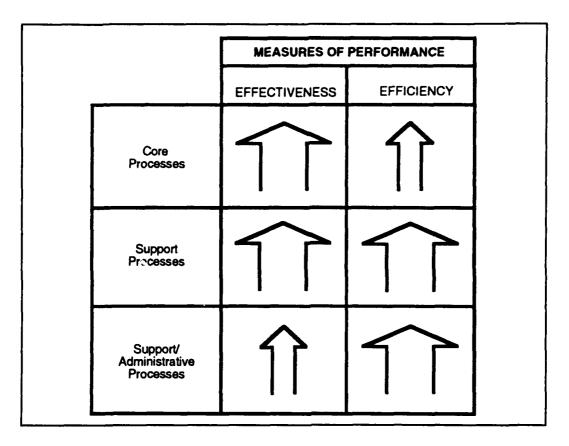
	MEASURES OF PERFORMANCE	
	EFFECTIVENESS	EFFICIENCY
Core Processes	⬆	⬆
Support Processes	⬆	⬆
Support/ Administrative Processes	⬆	⬆

Figure 7-2. RELATIVE WEIGHT OF MEASURES FOR RE-ENGINEERING DoD "END-TO-END" PROCESSES

Measu

res can also make new business methods and operations more effective. For example, customer measures of performance can be included in contracts to help ensure that outsourced defense activities continue to provide quality goods and services, when and where needed for the mission, in peace, transition and war.

7.3   ELIMINATE BARRIERS/ESTABLISH CULTURE FOR CHANGE

Eliminate Barriers/ Establish New Culture

Many organizations have found that the single most important success factor for excellence and mission-results is to remove procedural, social, and human barriers and move to a new culture that:

■   values and empowers people;

■   is customer driven, with clear, direct lines from individuals and work teams to their consumers;

- imbeds a process of learning and improvement in every activity and individual endeavor;

- encourages and rewards performance, dedication, involvement, and cooperation by reinforcing positive behavior with incentives and recognition;

- shares resources (particularly information) to achieve common goals;

- eliminates artificial boundaries between functions, organizations, and individuals;

- focuses energies and competencies, by modularizing, teaming, delayering, and creating the right linkages (matrixing & networking); and

- distributes responsibility and authority, putting real power in the hands of the people who must "make it happen."

The Vice-President's National Performance Review (NPR) made many of these points and the follow-up actions will inevitably create a new Government-wide operating environment for excellence. For example, more flexible personnel policies and procedures will soon be issued by OPM. DoD can and should be a leader in bringing this new culture to bear now on the defense mission.

7.4 IDENTIFY FIRST PRINCIPLES FOR RE-ENGINEERING

Identify First Principles

All enterprises should have a common set of first principles that leaders, managers, and workers consistently apply when they re-engineer their business and operations process. The following list is not an "absolute formula" for change, but a reasonable starting point:

- Apply the Critical Success Factors described in the Preface to this paper.

- Satisfy consumer needs for quality, timely, affordable and cost-effective products and services.

- **Re-engineer high-impact end-to-end process chains to move the enterprise from a "vertical" functional focus to a "horizontal" process orientation — optimize change across the enterprise.**

- Eliminate non-value-added activities and standardize when appropriate before investing in new technologies or automation.

- Identify and remove constraints and bottlenecks within and between processes — eliminate "white space" (without causing negative "side effects").

- Modularize processes to separate consumer-oriented activities from secondary and administrative activities — put non-core activities off the critical path and do them in the background if this provides the best balance of cost and performance.

- **Synchronize and harmonize change to reach a total solution that addresses methods, processes, structures, people, and information.**

- Explore and envision radically new ways to deliver value-added output: "break the mold."

- Avoid constraining potential changes by current organizational boundaries, self-imposed regulations, or baseline processes and procedures.

- Cross organizational boundaries to create synergistic solutions that focus core competencies, diverse skills, different cultures, and multiple strengths on mission results and outcomes.

- Use the DoD Enterprise Model as a common framework to promote mutual understanding and common answers to shared problems.

7.5   GUIDE CHANGE

Guide Change

There are as many different ways to guide and direct change as there are problems to solve and individuals to solve them. CIM provides a full toolkit of methods, techniques, and assistance from which each leader and organization must select the right mix of capabilities and configure it to the task at hand.

Figure 7-3 shows a sequence of activities, based on the guidance given in this paper, that can be used as a high-level framework by any leader, manager, or worker in DoD to dramatically re-engineer or gradually improve a major DoD function, an end-to-end process, or just a small routine task. Customer and consumer requirements are factored into leadership goals and objectives. Measures of performance are established. First principles for business

re-engineering are applied to change enterprise activities and end-to-end processes. Organization structures and job descriptions are renewed to align with new processes and imbed performance in individual behavior. Migration systems are selected. Advanced technology and better information systems are designed to support the new ways of doing business and conducting operations. Leadership goes through a disciplined, systematic decision making process to select the best investment strategy for the Department by assessing and filtering alternatives to balance effectiveness and efficiency across the enterprise.
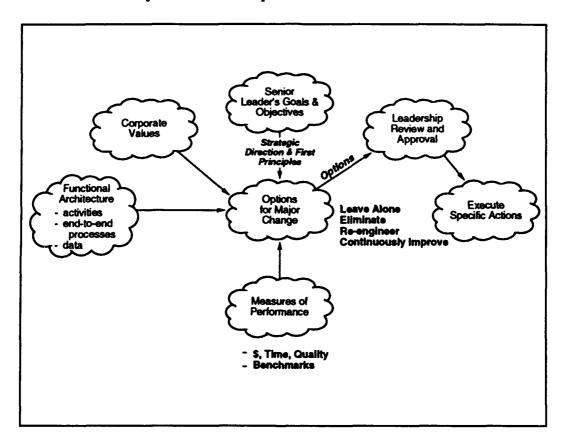
Figure 7-3. GUIDE CHANGE

Integrated Business Plans (Section 8 below describes these plans) and investment portfolios are the basis of systematic, optimized improvement decisions. Investment decisions are made consistent with guiding principles and the DoD corporate strategic plan that includes Corporate Performance Measures. The business case for making needed changes should not focus only on the effects of the investments on individual functional components but more broadly on the effects on overall DoD business performance and end-to-end processes. The

intention should be to promote investments that contribute to improvements in overall DoD performance.

Functional Economic Analysis (FEA) based on activity-based cost and management data can be applied by investment proponents to substantiate the financial viability of a proposed process improvement. Based on the affordability of contending investments, validated predictions of performance enhancements, and an assessment of economic, technological, and implementation risks, decisions are made pertaining to investment strategies and specific investment proposals for the enterprise. The decision process will:

■ evaluate the proposal from a DoD-wide perspective;

■ evaluate the implementation plan for synchronized change to values, processes, organizations, performance and reward practices, and systems;

■ examine its synergy with other proposals and projects in progress;

■ balance performance advantages against net expenditure impacts;

■ assess key risks and the risk-management plan; and

■ assess the sensitivity of the proposal to shifts in key parameters, such as changes in the mission.

8. PLAN IMPLEMENTATION

Establish Business Strategy	Re-Engineer & Improve Processes	Re-Align Organization Structures & Rewards	Plan Systems & Infrastructure

8.1 ESTABLISH BUSINESS PLAN

Establish Business Strategy

Initiatives for improving DoD's performance as a "business" can arise in four ways: through a new set of values and rewards; through radical re-engineering or continuous improvement of processes; through better management and streamlined organizations; and through improvement of the broad range of resources (such as people, information systems, and application-specific technologies) available to carry out the business processes. Figure 8-1 shows that change must be made to these four elements of DoD, in a balanced, harmonized, and synchronized approach.

8.1.1 Control Change Architecturally

Near-, mid-, and long-term architectures for processes, data, organizations, and resources/technology are develc ɤd as the mechanisms to systematically plan and guide change. The architectures address policies, practices, organization structures, culture, reward systems, methods, standards, processes, data, skills, and information systems. All elements of the Department and its external interfaces are considered simultaneously to achieve a "best" balanced total posture that meets mission and customer needs within budgetary constraints and acceptable risk envelopes.

8.1.2 Develop Business Focus

Organizations at all echelons should begin to take a more "entrepreneurial" approach to doing their job. The critical success factor is the link to the end-user: to identify real needs and requirements; develop affordable, quality solutions; and meet customer/consumer expectations. Working backward from the "consumer" to identify required products and services, and

measures of performance is a good way to define end-to-end processes, organizational activities, and needed improvements.
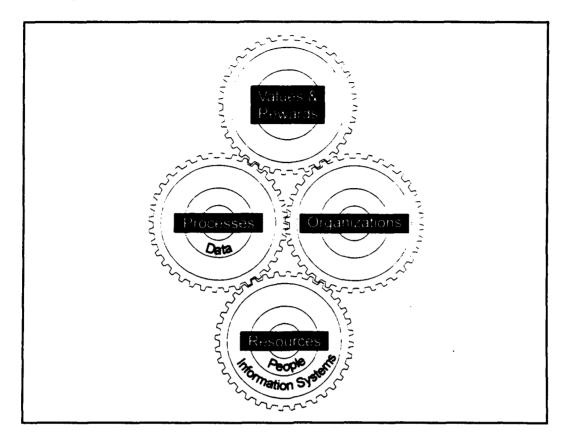

Figure 8-1. ALIGN VALUES/REWARDS, PROCESSES, ORGANIZATIONS
& RESOURCES

An open "market" environment can help satisfy customer/consumer needs for quality, affordable defense goods and services.   Current acquisition practices must be changed to integrate the defense industrial base with the commercial base — barriers that prevent the full use of commercial products and services must be eliminated. However, this is only one part of the answer. A new internal market can be established between the end-users of defense goods and services, and the DoD organizations (e.g., Defense Agencies) that provide them. The Defense Business Operations Fund (DBOF) initiative is an outstanding example of this approach. When this concept is applied with due regard for the real differences between the national defense role and commercial industry, it can create a climate of competition and excellence that strengthens mission achievement.

8.1.3 Form Partnerships and Alliances

The bi-polar arrangements of the cold war era have been replaced with multilateral coalitions and alliances for peace. Within industry, organizations are forming networks that merge unique strengths and core competencies.

A challenge for DoD organizations is to focus partnerships and alliances with other government agencies, allies, and industry groups around common goals and strategies, maximize total capabilities, share responsibilities and burdens equitably, and build enduring working relationships that withstand the stress of continual change. The views of all DoD stakeholders must be represented and balanced by working out solutions on a day-to-day basis rather than establishing rigid and bureaucratic rules of behavior. The DoD Enterprise Model helps to identify links with enteral customers and suppliers, as well as allies and coalition partners.

8.1.4 Outsource and Outplace

One key result of process re-engineering may be a decision to "outsource" a function, or reassign it to an organization that can perform it better inside or outside of Government. When reassignment occurs, it is important to establish management mechanisms to ensure performance targets are met.

Core functions that are mission-critical or are inherent Government responsibilities should be retained in-house. For example, direct warfighting functions and strategic planning should always be the responsibility of the uniformed military and civilian leadership.

The Department must exercise wisely all the tools available to it for carrying out its missions. Outsourcing (within and outside of Government), elimination of duplicative or wasteful functions, load-sharing with other Government agencies, transfer of functions that can be better performed elsewhere, and other innovative solutions must be explored as part of a total business plan. Imbedding performance measures into new management arrangements and contracts can ensure that the services and products continue to meet defense needs even if they are outsourced.

8.2 RE-ENGINEER & IMPROVE PROCESSES

> **Re-Engineer & Improve Processes**

The first priority in designing or improving a process is to be sure its output is relevant and useful. The second priority is to ensure the process meets management standards for efficiency and effectiveness. These essentials of process design and improvement can be summed up as,

"Do the right thing, and do it well"

Traditional management has focused on resource consumption, quantity of output, conformance to technical standards, and short-term, isolated improvements. This type of management leads to stagnation, waste, and ultimately mission-failure. A new focus on relevance, quality, timeliness, value, and results achieved by innovating and improving processes at all levels in the enterprise leads to excellence and mission success.

8.2.1 Analyze Existing Processes

There are many methods for analyzing processes for radical innovation and/or continual improvement, including Process Re-Engineering, Total Quality Management, Statistical Quality Control, Functional Process Improvement, and Activity Based Management/Cost. For example, Activity Based Management is a powerful tool to understand and manage businesses. It probes into work to determine the actual resources consumed by types of activities such as direct production, support, and administration. It refines this analysis to identify the consumption of different types of resources by different products and services. This is a rigorous basis for designing processes, determining unit costs, assigning processes to the most efficient organizations, planning to meet customer needs, and managing resources. This approach is most effective when it is imbedded in day-to-day running of the institution, as reflected in management, personnel, and accounting systems.

8.2.2 Analyze Alternatives for "To-Be" Processes

Candidate process improvements should be analyzed for their contribution to goals, objectives, and measures of performance, and for their feasibility, cost, and risk. The existing baseline is used to identify deficiencies and opportunities relative to goals and objectives. It is also a basis for prioritizing and planning innovations and improvements, which may be phased-in

incrementally. The Pareto principle, that 20% of the activity consumes 80% of the resources, can be applied to select and prioritize areas for analysis and improvement initiatives.

In general, the rule "eliminate, standardize, improve" should be applied. This means that non-value-added processes, like warehousing unnecessary inventory or delivering a service the customer no longer wants, should be eliminated first. Then, similar processes should be migrated to a single, standardized process baseline. This improves management control and the quality of outputs. For example, standard processes turn out interchangeable and interoperable components. Variations in outputs required by customers should be accommodated by a process of specialization starting from the standard. Standardization also facilitates consolidation to achieve economies of scale. Finally, value-added, standard processes should be upgraded to produce more relevant, higher quality, more timely, lower cost outputs, that consume less resources. While it is convenient to separate processes and products (outputs) for analysis purposes, the end goal is to improve both simultaneously, because a better product only lasts as long as the consumer needs it, while a better process can keep generating new and better products forever.

8.3 RE-ALIGN ORGANIZATION STRUCTURES & REWARDS

Re-Align
Organization
Structures &
Rewards

Historically, organizations developed vertically to provide strong downward controls, buffer the organization from its environment, and provide necessary support to "line operations." Often the only interface between vertical segments was through top management. Divisions and departments duplicated functions and hoarded resources. The degree of control in these organizations was appropriate for the Industrial Age — it is not the way to leverage people's initiative in the Information Age.

Government must become leaner and more flexible. The US military has traditionally exercised distributed command/control on the battlefield. US industry is adopting this approach in order to compete in the world market. The US Government can apply it to make the principle of "centralized direction and distributed execution" really work. There are many changes to organizations that contribute to excellent performance:

- **"Put people first."**

- Firmly ground organizations in the missions, vision, goals and strategies of leadership, and the needs of stakeholders, customers, and consumers.

- Align organizational structures with new processes.

- Flatten organizations to remove unnecessary layers of management.

- Ensure information flows freely and fully up and down organization levels and horizontally among people.

- Create direct, two-way, interactive links from people and activities to consumers who rely on their products and services.

- Ensure strong, effective representation of consumer needs by those who have authority to authorize and fund activities, using measures of performance for implementing checks and balances.

Figure 8-2 shows how to use the DoD Enterprise Model to align each organization with its mission, and the leadership's vision and direction.

Within the organization, process changes must be imbedded in day-to-day work. It is necessary to link process improvements to a new model for DoD values and rewards, and remove the discontinuities identified in Section 4 between the strategic direction and its implementation through people's behavior.

At the most fundamental level, people are the key to success of any endeavor. Figure 8-3 shows that customer/consumer needs and mission outcomes are achieved by the "defense team." Leaders communicate shared goals and objectives, and performance expectations, to the people and teams that have the individual and collective skills and knowledge to do the work. Institutionalizing DoD values, corporate goals, and shared objectives in people's behavior is the surest, long-term way to achieve enterprise integration and success.
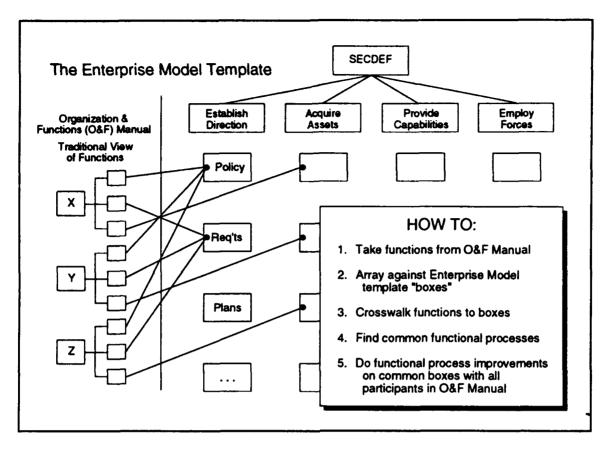
The Enterprise Model Template

SECDEF

Establish Direction | Acquire Assets | Provide Capabilities | Employ Forces

Organization & Functions (O&F) Manual
Traditional View of Functions

Policy

Req'ts

Plans

...

X

Y

Z

HOW TO:

1. Take functions from O&F Manual

2. Array against Enterprise Model template "boxes"

3. Crosswalk functions to boxes

4. Find common functional processes

5. Do functional process improvements on common boxes with all participants in O&F Manual

Figure 8-2. DoD ENTERPRISE ORGANIZATIONAL INTEGRATION METHOD

8.3.1 Empower People

The traditional organization chart shows management at the top, and line operators and workers at the bottom. The new corporate picture shows the leadership, line managers, and workers as part of a single team. Responsibility and authority is passed down the chain, along with accountability for performance and the rewards that go with success. The military has applied this management approach to grow its leaders and encourage initiative and flexibility on the battlefield. It requires clear, measurable guidance so that people know what behavior is expected of them. This guidance should be executable by those responsible for performing the work — goals must be imbedded in people's commitment and dedication, not imposed from above. It requires a new organizational and individual performance management system — one that focuses organizations on being in the "right business" (i.e., having a relevant, appropriate, doable mission, and flowing this mission down through the organization), and individuals on learning, teaming, contributing, and achieving results.
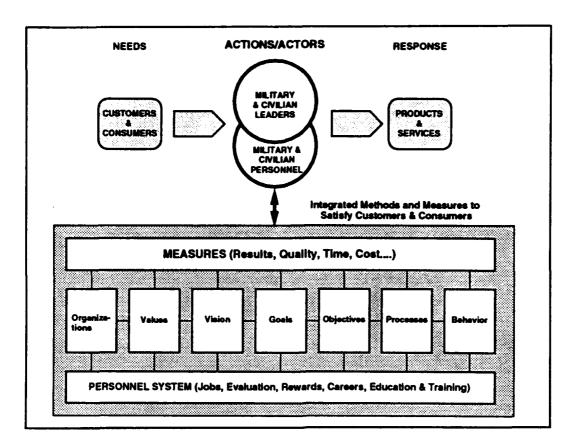
NEEDS   ACTIONS/ACTORS   RESPONSE

CUSTOMERS & CONSUMERS

MILITARY & CIVILIAN LEADERS

MILITARY & CIVILIAN PERSONNEL

PRODUCTS & SERVICES

Integrated Methods and Measures to Satisfy Customers & Consumers

MEASURES (Results, Quality, Time, Cost....)

| Organiza-tions | Values | Vision | Goals | Objectives | Processes | Behavior |

PERSONNEL SYSTEM (Jobs, Evaluation, Rewards, Careers, Education & Training)

Figure 8-3. ACTION/ACTOR VIEW OF THE ENTERPRISE

The focus of leadership should be on results versus the micro-management of resources and work processes; managers and workers need to be given the flexibility to change how they perform their work and manage their resources to best advantage.

The Department needs to shift to a culture that demands and rewards quality and excellence, removes barriers between functions and levels, encourages innovation and improvement, and reduces waste and overhead. The effect of downsizing on morale and motivation must be countered. As depicted in Figure 8-4, the "storm" of downsizing makes managers and workers retreat into safe havens. Change becomes harder to achieve without strong, supportive leadership, and a commitment to equity and human investment. A shift in attitude and behavior is critical to the success of Corporate IM, because ultimately it is people that make change happen.
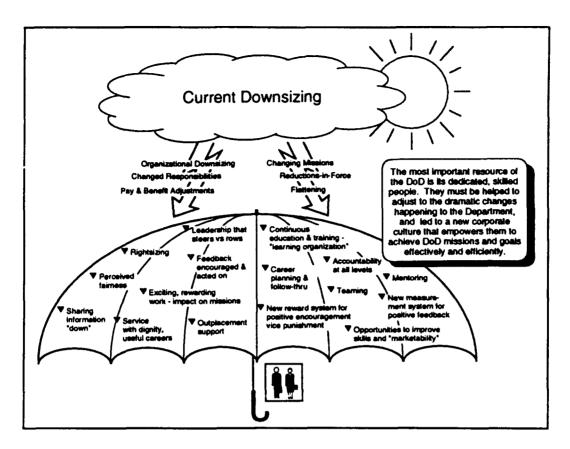
Figure 8-4. EMPOWER THE PEOPLE

Making people central to achieving assigned missions means that their needs, goals, and motivation must be made a true commitment and priority for DoD. At the end of the day, it is the military and civilian personnel who get the job done. And, defense is more than a "business" (though it is that also). Its core mission is vital to the continued survival and freedom of our nation. Therefore DoD people must have that extra measure of dedication and motivation to be able to realize a shared vision for a better future, serve their country and the world community, and meet their own and their families' needs. Figure 8-5 shows the central position of people in the defense equation.
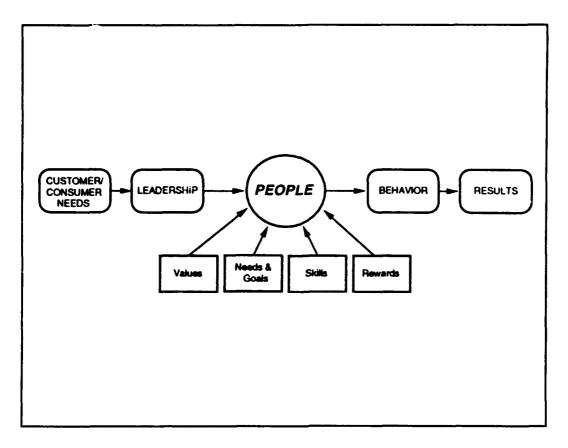
Figure 8-5. PEOPLE - DoD's MOST IMPORTANT RESOURCE

Work can be redesigned around groups and teams of people which focus on: stable processes and standard products for specific customers/consumers; specialized skills that can be matrixed across product lines and customers; research and development of new solutions; and internal support for planning, learning, quality, and process improvement. Jobs can be broadened and made more flexible by: fitting them into a team context; linking them to corporate objectives and measures; making training integral to the job; and giving the individual a meaningful role in improving how work is performed. Rewards can balance individual contribution and team success.

8.4 PLAN SYSTEMS & INFRASTRUCTURES

Plan Systems & Infrastructures

The basis for a new defense information system and infrastructure is being put in place now. Figure 8-6 shows the major elements of a new future structure of the Defense Information System. It provides generic, utility type services that span the entire needs of the Department, and mission-specific information systems for the sustaining and support base, and for military operations, such as command, control, and intelligence on the battlefield. The architecture interfaces and integrates with the US National Information Infrastructure (the US "Information Highway"), and with the infrastructures of allies and potential coalition partners. It can bridge these domains seamlessly because it is founded on the principle of open systems and national and international standards.
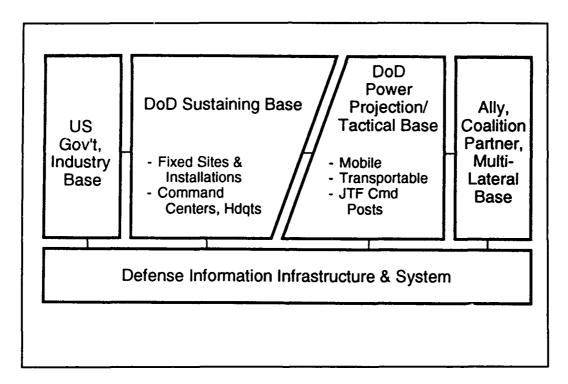
US Gov't, Industry Base

DoD Sustaining Base
- Fixed Sites & Installations
- Command Centers, Hdqts

DoD Power Projection/ Tactical Base
- Mobile
- Transportable
- JTF Cmd Posts

Ally, Coalition Partner, Multi-Lateral Base

Defense Information Infrastructure & System

Figure 8-6. DEFENSE INFORMATION SYSTEM CONCEPT

The following near-term ASD (C^3I) goals were issued in a memorandum signed by the Deputy Secretary of Defense on 13 October, 1993.

- Eliminate Duplicate Legacy Systems As Soon As Possible (3 Yr. Goal)

    - Establish a Functional Baseline (Process, Data, Applications, and Infrastructure)

- Standardize Data As Soon As Possible

- Continue Business Process Re-Engineering

- Achieve Other Infrastructure Goals:

    - Security

    - Utility

Figure 8-7 shows an evolutionary path to the new defense information system architecture. It is phased to reduce risks and deliver increments of capability and cost-savings to the Department.
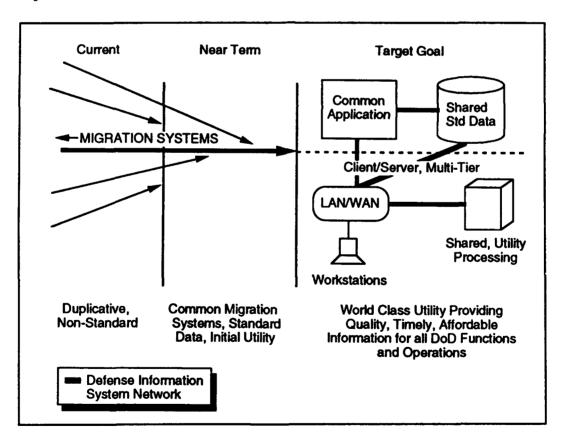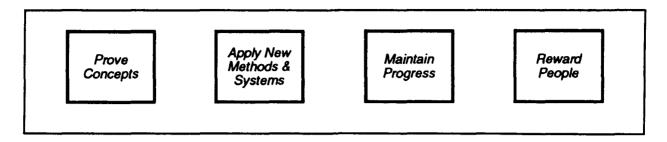

Figure 8-7. DEFENSE INFORMATION SYSTEM EVOLUTION ROADMAP

9. IMPLEMENT CHANGE

| Prove Concepts | Apply New Methods & Systems | Maintain Progress | Reward People |

9.1 PROVE CONCEPTS

Prove Concepts

New ways of conducting military operations and support must be tried-out and proved effective. The general process of trial, discovery, and improvement leads to solutions that can be implemented confidently in the "real-world." This process moves new processes and products rapidly from the "back room" (e.g., the laboratory), to the demonstration/test site, to full application in day-to-day use. Military methods, support methods, and administrative methods are all introduced through prototyping, proof-of-principle trials, demonstration/validation, and other mechanisms for "driving it before buying it." Powerful new approaches using simulation and modeling, distributed testbeds, and incremental fielding further lower risks. Figure 9-1 shows an Enterprise spiral model of change that converges on best DoD-wide shared solutions and speeds delivery of new capabilities to the field.
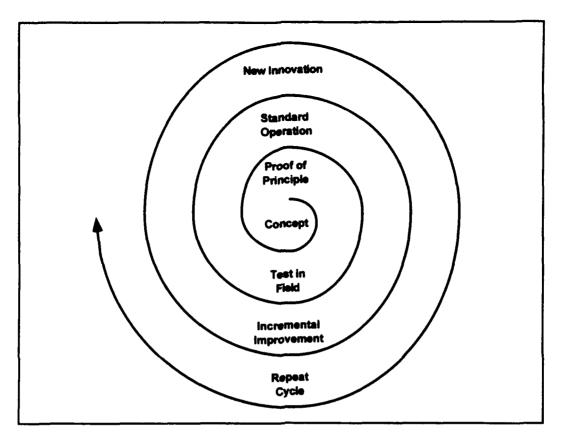
Figure 9-1. SPIRAL MODEL FOR CHANGE

9.2 APPLY NEW METHODS & SYSTEMS

Apply New Methods & Systems

As new methods are proven they can be introduced into current operations through incremental, evolutionary changes. This approach avoids disrupting critical operations. It allows people to adjust to new practices and technologies — to learn how to use new capabilities before they are introduced, and to make a smooth transition from current patterns of work to improved ways of doing their job. Of course, the long-term goal is to make major breakthroughs to new levels of operational performance. But "grand design solutions" just don't work — they are not timely or flexible. The enterprise approach is to envision and plan for "radical" improvement, but harvest the benefits incrementally. Figure 9-2 shows the new paradigm for enterprise evolution using incremental, low-risk, success-oriented steps.
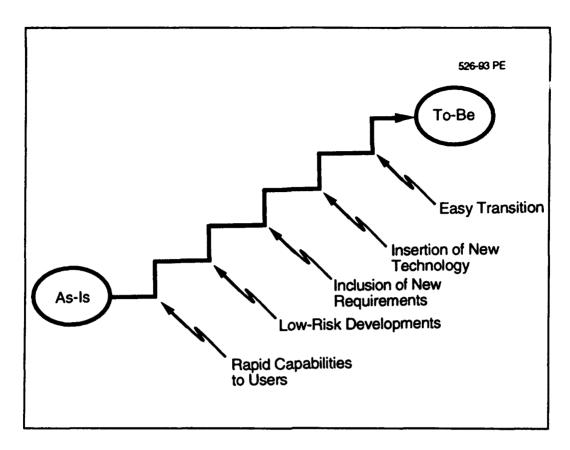
526-93 PE

To-Be

Easy Transition

Insertion of New
Technology

Inclusion of New
Requirements

Low-Risk Developments

As-Is

Rapid Capabilities
to Users

Figure 9-2. INCREMENTAL APPROACH

9.3 MAINTAIN PROGRESS IN ROUTINE AND MILITARY OPERATIONS

Maintain Progress

Once new methods and systems are installed and operating, the new level of performance must be maintained. With measures "built-in" to all processes, and fully supported by information systems, managers and workers can tell when they are meeting performance targets, and when they are beginning to fall short of expectations. Immediate corrective action is taken to return to standards. In fact, world-class experience shows that by continually assessing how processes, people, and systems are achieving objectives and satisfying users, errors and waste can be avoided before they occur! Figure 9-3 shows how continual measurement of enterprise activities feeds back immediately to the learning process that maintains progress and leads to a continuous cycle of improvement.
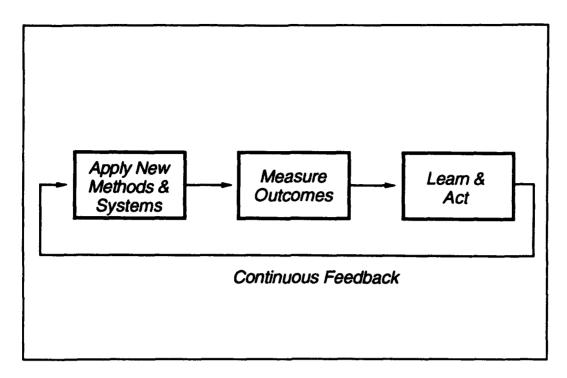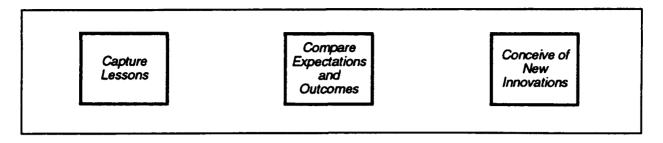
Figure 9-3. MEASURE, LEARN, AND ACT

9.4 REWARD PEOPLE

Implementation of change happens through people. They make DoD succeed or fall short of its goals and objectives. The new reward systems discussed above must be taken seriously and imbedded into daily practices. Rewards influence people's behavior in positive ways to achieve corporate objectives and measures. Balanced individual and team performance factors, carefully developed with the full participation of those affected, should be the basis for new incentives and motivators. People should be rewarded for doing the right things, innovating and improving their processes, and achieving results. They should be measured against targets that are achievable and that they have the resources and mechanisms to accomplish. Self-improvement through acquiring new skills should be rewarded. Gainsharing and other innovative approaches to returning a portion of corporate savings and efficiencies should be fully exploited.

10. EVALUATE RESULTS

This process comes at the end of one cycle of change and forms the basis for further change. It is the "loop back" that makes re-engineering and improvement a continuous cycle and an integral part of on-going operations.

10.1 CAPTURE LESSONS

Just as DESERT SHIELD/DESERT STORM was a major opportunity for the US military to learn how to fight regional wars more effectively, the CIM initiatives across DoD are an opportunity to learn how to re-engineer and improve all DoD activities. But to learn from change, it is necessary to capture lessons honestly, document them, and communicate them across the enterprise. The enterprise approach creates a forum for exchanging the best ideas and successes from across the department.

10.2 COMPARE EXPECTATIONS AND OUTCOMES

The GPRA requires an annual "Performance Report" that compares results with the objectives and measures established in the plan. The purpose of this report is to help managers focus attention on those areas that need improvement, and better allocate resources to achieve priorities. The enterprise approach extends this top oversight function to all levels and organizations in the DoD, down to individual workers and managers. The new "learning organization" makes full use of the knowledge it acquires from actual practice to continuously improve its processes, capabilities, products, and services.

10.3 CONCEIVE OF NEW INNOVATIONS

Conceive of New Innovations

Re-engineering and process improvement are acts of imagination, vision, and action. They require people to imagine a better future, and then act to make that future a reality. The lessons learned from previous changes and current performance become the basis for new concepts of operations, support, and administration.

The journey to the future never ends!

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