



# NORFOLK NAVAL SHIPYARD

# PRESIDENT'S QUALITY AWARD APPLICATION

**2001**

*Norfolk Naval Shipyard  
High Performance Leadership System Guide  
And President's Quality Award Application 2001*

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## 1. Mission and Services

**Mission.** The Norfolk Naval Shipyard (NNSY) exists to support the fleet. Its primary mission is to repair, overhaul, dry dock, convert, modernize, and inactivate ships, and to provide logistics services in support of fleet readiness. Approximately one-third of the U.S. Navy fleet of ships is currently in the Norfolk area, which is the customer base for the services we provide. Having operated under four flags (British, Commonwealth of Virginia, Confederate, and the United States), this facility has provided vital service in every war fought in our nation. Destroyed by fire three times in its 230-year existence, the Shipyard has returned each time to become the foremost ship repair facility for the U.S. Navy.

**Major Markets/Service Areas.** NNSY is one of four Government shipyards that serve the fleet. The other three shipyards (Puget Sound, Pearl Harbor and Portsmouth shipyards) share the market and ship workload assigned by the U.S. Navy. NNSY competes with a few privately owned shipyards, including Newport News Shipbuilding in Virginia, the nation's largest private shipyard. Our market growth is controlled by manpower caps set by the U.S. Navy as well as our ability to demonstrate the value of our services to the Navy in terms of providing **quality, cost, and on time delivery performance.**

**Services.** NNSY can perform any technical, fabrication, manufacturing, and engineering work required by its customers at the Shipyard, or through rapid-deployment of our special teams to ships and facilities anywhere in the world.

**Location.** The Shipyard is located on the southern branch of the Elizabeth River in Portsmouth, Virginia, in the southeast region of the state known as Hampton Roads.

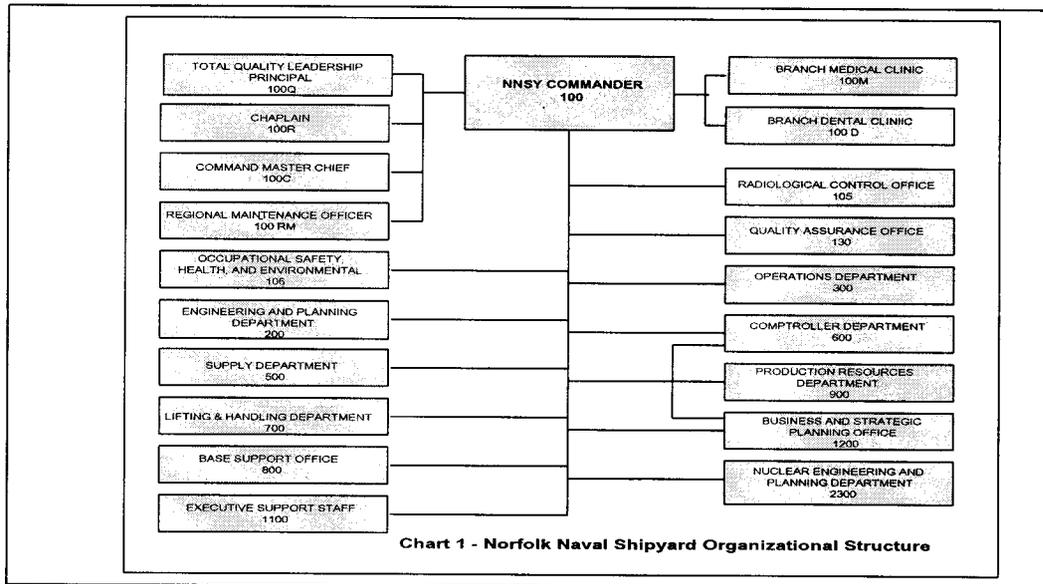
**Size.** NNSY is composed of several noncontiguous areas totaling 801 acres, of which the basic industrial area is 498 acres (179 acres in the Controlled Industrial Area). There are 17 production shops located in 48 buildings for a total of over 2.4 million square feet. Total facility value including the annexes exceeds \$2.1 billion. With four miles of waterfront, seven dry docks, 30 miles of paved streets, 19 miles of railroad track, 400 cranes, its own police force, fire department, and dedicated regional municipal electricity and steam generating plants, NNSY functions like a city within a city.

**Major Equipment, Facilities & Technology.** NNSY assets include hundreds of major equipment items (e.g., Dry Docks, Machine Tooling, Containers, Cranes, Software, etc.) with a value ranging from \$25,000 to well over \$100 million. NNSY facilities and technology provide naval architecture, structural, mechanical, electrical, and electronic design, ship repair products and services, habitability design and installation, piping, hydraulics, boiler repairs, simulations, refueling, and other major capabilities for the U.S. fleet.

**Employee Profile.** NNSY maintains a skilled and effective workforce of approximately 6,800 engineers, technicians, craftsmen, and supporting personnel linked by state-of-the-art computer systems. Our production workforce consists of 70 percent engineers and highly skilled mechanics and technicians, who have the expertise needed to maintain technical excellence and deliver quality results to our customers. The average age of NNSY's workforce is 45 years.

**Safety and Environmental Requirements.** NNSY complies with safety, health and environment regulatory requirements, including Occupational Safety and Health Act (OSHA), Clean Air Act (CAA), Clean Water Act (CWA), Resources Conservation and Recovery Act (RCRA), Toxic Substance Control Act (TOSCA), Safe Drinking Water Act (SDWA), and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

**Current Organization Structure** Chart 1 shows the current organizational structure of NNSY. This organizational structure includes a matrix organization called the High Performance Leadership System (HPLS), which is displayed on **Chart 1-1**, page two of the Application.



**High Performance Leadership System.** A cooperative group of labor and management representatives (referred to as the Leadership Committee) implement NNSY's high performance system by promoting leadership, values and performance excellence jointly with the organization departments and under the direction of the Shipyard Commander. The Committee has elected a smaller body of Senior Labor and Management personnel (the Leadership Council) to lead and review organizational performance. The Council manages six leadership teams who are responsible for evaluating data, and proposing actions to improve performance in their assigned areas of performance leadership.

**Culture - NNSY Vision Statement. (See Application page 2).** NNSY's Leadership organization has, as its fundamental core, the cohesive power of an aligned Labor-Management relationship. This relationship has transcended classical barriers of the past that impede collective improvement, and further recognizes and supports the policy set forth in Executive Order (EO) 12871, Labor-Management Partnerships. The Shipyard's progress in achieving the objectives of EO 12871 can best be summarized by the comments of the Metal Trades Council (MTC) Conference Committee Chairperson in a report on Reaffirmation of EO 12871 which said, "My Brothers and Sisters in labor, I must say that at Norfolk we really do have a UNION and employee involvement in the partnering / leadership initiative" ... " ANYTHING done at this yard is brought before the Leadership Council for approval where... UNION and management have an equal say." We be-

lieve those comments truly reflect the fundamental cultural and leadership change that has helped NNSY emerge as a world class organization.

***Quality Principals and Tools.*** Our unique position in the ship repair and overhaul industry has evolved from dedicated and systematic quality practices. NNSY has consistently utilized current quality management and business practices, such as Total Quality Management (TQM) and Total Quality Leadership (TQL). Our long-standing commitment to quality practices and performance improvement has resulted in NNSY receiving the Senate Productivity and Quality Award Medalion Award for Continuing Excellence in 1983 and 1989, and the PQA Quality Improvement Prototype Award in 1989. In 1999, NNSY initiated a High Performance Leadership System (HPLS) to systematically align our quality principles, policies, tools, and practices to Baldrige performance criteria. This initiative forms our long-term continuous improvement program, and resulted in NNSY becoming a PQA Program Finalist in 2000. NNSY has continued to mature its HPLS, and has also initiated a Shipyard-wide program of self-assessments of key activities and work practices for continuous improvement in support of the Shipyard's Strategic Plan.

## **2. Principal Factors Determining Performance Success**

***Quality, cost, and on time delivery*** drives performance success with the end result of on-time delivery of ships back to fleet, within cost and delivery date requirements.

***Productivity and Cost Reduction Thrusts.*** NNSY's Strategic Plan focuses on improving shipyard productivity, which will allow customers to get more work accomplished for each dollar spent at NNSY. In fiscal year 1999, we returned \$34.5 million to our customers, enabling them to procure additional maintenance work. Through August of FY 2000 we have returned \$7.4 million to our customers, for a two-year total of \$41.9 million. Financial gains in FY 99 generated a negative Accumulated Operating Result (AOR) surcharge for FY 01 billing rates, which translates to another \$10 million cost reduction to customers.

***Quality Efforts.*** NNSY has recently instituted a quality program that has been implemented, led, and managed by the NNSY Quality Council. The Navy has recognized this program as the most effective quality efforts at any Naval Shipyard or SUPSHIP activity. Successful quality improvement is recognized and analyzed by the Objective Quality Evidence (OQE) documented by official changes to the Technical Work Document (TWD). NNSY has recognized significant improvement in the first time quality of TWDs, the management of making necessary changes including problem response time, and incorporation of these important changes into selected repeat work for accomplishment on future availabilities.

In addition, this program involves providing Project Quality Engineers (PQE) for each project. Assigned to the Quality Department, PQEs are responsible for evaluating new project processes to estimate risks and recommend risk mitigation strategies.

### ***Improving Organizational Effectiveness by:***

- Establishing a Leadership Committee and a Leadership Council
- Establishing six High Performance Leadership Teams, which address key criteria areas

- Improving alignment between Shipyard performance goals and day-to-day operations (utilizing win-win agreements and Inspired Leadership workshops)
- Establishing an annual Organization Effectiveness Cycle (OEC)
- Developing partnerships with public and private industries
- Eliminating unneeded facilities
- Reducing energy costs through proactive conservation initiatives
- Improving efficiencies through the use of state-of-the-art equipment and machinery
- Conducting Inspired Leadership workshops for supervisors on all projects to connect the projects' goals to the Shipyard's Strategic Plan

***Increasing Employee Satisfaction and Involvement through:***

- Conducting team-building initiatives between union, management leaders, and employees
- Establishing quick-hit teams to improve Shipyard communications, increase waterfront quality of work life, develop a process to communicate metrics on the waterfront, and deliver material to waterfront employees
- Committing to increasing employee skill levels through education and training
- Administering annual employee satisfaction evaluations to determine where improvements need to be made
- Conducting Knockout sessions where employees identify and provide solutions to productivity barriers
- Providing 7 Habits of Highly Effective People to all Shipyard employees, focusing on personal accountability, personal leadership and ethical behavior

**3. Customer Requirements**

NNSY customers are assigned by appropriate U.S. Navy agencies and include:

- TYCOM & Tasking organizations (AIRLANT, SURFLANT, SUBLANT, SUBPAC)
- Ship's Force
- PGM Directorates (NAVSEA PMS 312, 377, 392)

Our customers' key requirements are **cost and on-time delivery** of ships back to the fleet, accomplishing key events on time during work performance, **quality of the work performed**, legal and regulatory compliance, and positive relationships with ships force.

**4. Supplier and Partnering Relationships**

NNSY suppliers and partners and the key products and services provided by them are:

<i>DLA</i>	<i>Consumables, raw materials, repair parts</i>
<i>NAVICP</i>	<i>Repair parts, management of critical items; SS, LI material, ship components</i>
<i>GSA</i>	<i>Tools, paints, services, office supplies</i>
<i>FISC Norfolk</i>	<i>Logistical Support, Acquisition Policy, Administrative Support</i>
<i>PWC</i>	<i>Facility maintenance, utilities, vehicles</i>
<i>LANTNAVFAC ENG COM</i>	<i>Military construction funding (project design and build)</i>
<i>Other</i>	<i>Miscellaneous materials suppliers and vendors</i>
<i>CNRMA</i>	<i>Port services, resource support, mail handling, MWR, facilities, property</i>

Our Collaborative Partnerships include:

<i>FISC Annex</i>	<i>Logistics services, interface to FISC Norfolk</i>
<i>RSG</i>	<i>SRA/IMA, NRMD</i>
<i>SUPSHIP-Newport News</i>	<i>Oversee and manage contracts for partnered work</i>
<i>SUPSHIP-Portsmouth</i>	<i>Oversee and manage contracts for partnered work</i>
<i>PLANNING YARDS</i>	<i>Engineering direction, technical support</i>
<i>Newport News Shipbuilding</i>	<i>Exchange of skilled personnel</i>
<i>PUBLIC SHIPYARDS</i>	<i>Exchange of skilled personnel, technical expertise, process knowledge</i>
<i>NSSG</i>	<i>Corporate software configuration, ADP services</i>
<i>PRIME CONTRACTORS</i>	<i>Sole source major components, machinery, services, technical support</i>
<i>NAVSEA PROGRAM MANAGERS</i>	<i>Support, Technical direction</i>

**Supplier Selection.** In cases where NNSY has the authority, we employ special provisions whereby quality, cost, and past/recent performance of selected suppliers is rated green, yellow, or red, to improve supplier selections.

**Supplier/Partner Requirements.** Our suppliers must meet our requirements of cost, quality and on-time delivery of the materials and services. These factors have a direct impact on the availability of the materials and services we need to meet ship departure dates. Additional supplier/partner limitations and special requirements include Federal Acquisition Regulations (FAR), Department of Defense Federal Acquisition Regulations (DFAR) and other applicable regulatory and statutory authority.

**Strategic Factors Important to NNSY.** The political environment may involve a future round of Base Realignment and Closure (BRAC); therefore, NNSY's success depends on providing the highest level of quality, cost, and on time delivery of services to our customers, and demonstrating unquestionable value to all our stakeholders. Our firm belief is that strong leadership creates value for our customers, drives our mission/market success, and improves our employee work environment and productivity. Our beliefs are reflected in our 2000 strategic goals:

- Raise the Bar (Best Ever Public or Private Shipyard For Cost, Quality, and Schedule on Every project) thus demonstrating unquestionable value to the Navy and the Community.
- NNSY is a world class organization where employees are proud to work.

**Future Challenges.** Of particular importance to NNSY is the Navy's determination of the number of fast attack submarines to maintain in the fleet, and the resultant impact on future shipyard workloads. NNSY has recently re-established its position in submarine overhaul/refueling work, and to ensure the most efficient processes and current technologies will be used, has selected key process best practices from observing work executed at other United States shipyards.

We believe we have made steady progress in defining and planning for accomplishment of strategic factors. These strategic factors are now producing measurable results in our critical requirements areas, such as On-Time Delivery of Material, Tools and Services. This performance goal includes significant reductions of material churns, items on material hot-lists, and integration of Planning Yard material needs into future planning projects with NAVSEA.

***Introduction of New Technologies.*** New technologies are constantly being introduced at the Shipyard to enhance quality and productivity. A recent example is the Automated Propeller Optical Measurement System (APOMS), which is a laser-based measurement system that permits the measurement of complex surfaces to very precise tolerances. This system has potential utility in other industries, such as aircraft and auto manufacturing. APOMS has now been upgraded for “full quadrant” surface inspection, enabling significantly faster surface area inspection and production.

Recent collaboration between submarine engineers and production workers has resulted in a new process for scaffolding installation that significantly improved the interference removal cycle time. Engineering developed scaffolding that could be hung from overhead spaces, which greatly facilitated the interference removal process and reduced cycle time from 4 to 2 ½ months.

***New Organizational Alliances/Partners.*** NNSY partners with the local shipbuilding industries in an effective manner, which allows for the work assigned to NNSY to be accomplished as scheduled. Local private industries such as Newport News Shipbuilding and Drydock, U.S. Marine and Earl Industries services are obtained through the Navy's Supervisor of Shipbuilding in support of NNSY work. These services have grown from \$30 million in FY 99 to over \$86 million projected for FY 00. Use of these services has stabilized the NNSY employee levels, supported the local economy and achieved efficient and effective work accomplishment by having diversified labor and technical sources available and familiar with NNSY to meet surge requirements.

## 1 Leadership

Norfolk Naval Shipyard (NNSY) provides ship maintenance and modernization, ship repair services, and planning yard logistics services. Our customers, including Ships' Commanding Officers and Crews, NAVSEA, and TYCOMs choose to use our Shipyard services for these reasons:

- NNSY cost effectiveness favorably influences the rates that comparable private shipyards can charge the U.S. Navy;
- Unique among shipyards, NNSY works on "any ship, anytime, anywhere" - at a stabilized man-day rate;
- NNSY provides a level of technical excellence that is unsurpassed in the shipyard profession; and
- NNSY employees work hard to provide all the comforts of home to ship's force during their stay

### 1.1 Organizational Leadership

Our unique position in the ship repair and overhaul industry has evolved from dedicated and systematic practices over time. Historically, NNSY has consistently utilized current quality management and business practices, such as TQM and TQL. For the last three years, NNSY has executed major leadership initiatives involving every department and code in the shipyard.

In 1999, NNSY implemented a Baldrige-based, "world-class" leadership organization structure and fact-based process that systematically links our strategic goals, mission, and vision to our organizational performance. NNSY's leadership structure and performance management practices are closely aligned with NAVSEA's Command Performance Inspection (CPI) program, which assesses the performance of its subordinate commands against the same performance excellence criteria. We have implemented Baldrige practices through the deployment of a High Performance Leadership System (HPLS), which includes the Leadership organizational structure procedures, and a performance management database. HPLS is integrated with our organizational structure, which is focused on our core business strategy of providing service to the fleet. (See Chart 4-3).

In January 2000, we received a site visit from the President's Quality Award examiners. From their feedback, we developed a matrix for addressing identified gap items in alignment with the HPLS team concept. In June 2000, we received a follow-up visit from the Command Performance Inspection team. Their report noted significant improvement in items they had cited as gaps in their 1997 inspection report in addition to providing recommendations for future improvement.

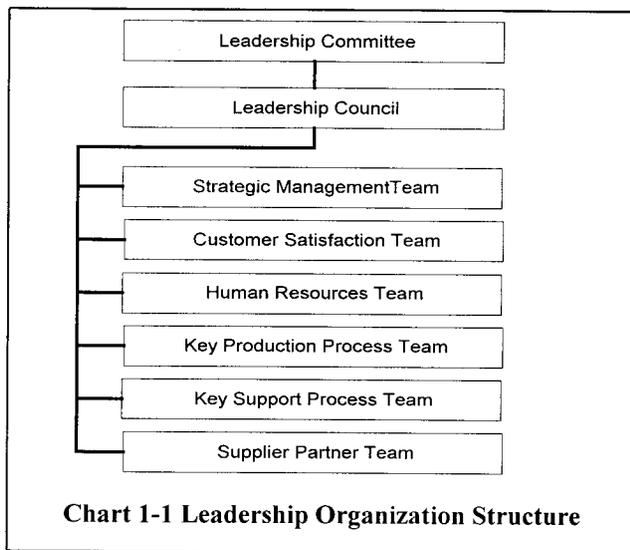
#### 1.1a Senior Leadership Direction

Senior Leadership sets organizational direction through the NNSY Leadership Organization structure. The Leadership Organizational structure is a cooperative group of management and labor representatives who promote leadership, values, and performance excellence under the direction of the Shipyard Commander (See Chart 1-1).

This organizational structure is comprised of a Leadership Committee (a group of 51 people, including all department heads, all Union presidents, and representatives from all the functional

areas) and Leadership Council (a representative group of nine labor and management representatives who are elected from the Committee.) The Council meets weekly, and the Committee meets monthly and as necessary. The Committee is responsible for the day-to-day operation of the Shipyard, and provides senior leadership direction and personal involvement in sustaining a focus on our customers and stakeholders, as well as a strong emphasis on empowerment, innovation, competitiveness, learning, and setting NNSY organizational directions.

The Leadership Council directs ongoing initiatives and efforts related to leadership development, strategic planning, and other areas as assigned by the Committee. A major Council responsibility is to oversee the collection, review and analysis of the key performance data needed to achieve outstanding results in the following areas: Customer satisfaction, Shipyard services, financial performance, employee well-being and satisfaction, supplier and partner performance and overall organizational effectiveness and efficiency.



The Leadership Council manages six leadership teams, which are organized around the Baldrige category areas. These teams review unique metrics (measures) and evaluate performance trends in their specific areas of responsibility, which are linked directly to accomplishing Shipyard work. The six leadership teams evaluate facts, and develop corrective action plans to improve organizational performance. The Leadership teams provide consultative support to NNSY's line departments, which are charged with the day-to-day execution and accomplishment of work. (See Chart 4-3).

NNSY's organizational direction is aligned with the NAVSEA's mission and stated goals. The senior leadership communicates organizational direction to the stakeholders through the prominent display of our Mission, Vision and Guiding Principles on posters and on workstation screen savers. The posters are prominently displayed in areas where NNSY stakeholders and customers visit frequently, including building lobbies, cafeterias, and break rooms.

**NNSY Mission Statement**

*We exist to support the fleet. Our primary mission is to repair, overhaul, drydock, convert, and modernize ships, and to provide logistic services in support of fleet readiness*

**Leadership Committee Mission Statement**

*We repair warships to go in harm's way. The leadership team will unite and inspire the men and women of Norfolk Naval Shipyard to become the center of excellence in warship repair, provide rewarding work, preparing ships that enable our nation's sons and daughters to fight and win*

**NNSY Vision Statement**

*Norfolk Naval Shipyard will simultaneously deliver cost, schedule, and quality performance to our customers, as judged by them*

*Norfolk Naval Shipyard will be the centerpiece of Regional Maintenance for the area as part of the fleet-wide team. Regional Maintenance will require a new fully integrated partnership with the NNSY workforce and other Atlantic Fleet resources to reduce infrastructure and costs*

### NNSY Guiding Principles

*Simultaneously deliver technical excellence and quality, cost and schedule performance to our customers*

*Productively seek, listen, respond to and satisfy the needs of our customers and coworkers, and base decisions on the best available information with full consideration of the impact on all concerned*

*Treat people with courtesy and respect, provide a safe and efficient work environment, foster equal opportunity, recognize employee's contributions, and work together as labor/management partners*

*Continually seek improvements for our customers, our employees, and in our business practices*

*Empower people to take initiative, with authority and responsibility assigned to the lowest appropriate level. Base relationships upon competence, trust, teamwork, employee development and the highest standards of integrity and excellence*

*Be active community members and responsible stewards of a clean and safe environment*

NNSY's Leadership Organization communicates and reinforces these organizational directions through day-to-day verbal and written contact with our customers and stakeholders, as well as during the monthly performance review process (**see Chart 1-2**). Organizational direction is further communicated through the High Performance Leadership System (HPLS) web pages hosted on NNSY's intranet. The Shipyard publishes a bi-weekly "Service to the Fleet" newsletter, which includes a "Commander's Comments" section, where the Shipyard Commander comments on progress in organizational initiatives, such as development of the Shipyard's vision. Organizational direction and priorities are also the topic of "Communication Quick Hit" briefs, which are presented semi-annually to our workforce.

**Stakeholder Value, Needs, and Expectations.** The NNSY Leadership Organization places high value on the expectations and needs of our stakeholders, and has re-organized itself to better respond to stakeholder needs. Our major stakeholders include:

- Chain of Command above NNSY
- NNSY Customers
- Workforce
- Suppliers and Partners

**Stakeholder Expectations Evaluation.** To ensure that we meet the needs and expectations of our stakeholders, the Strategic Management Team (SMT) annually conducts the Stakeholders Expectation Evaluation. Stakeholder Expectation Evaluation result trends are entered and tracked in our HPLS database. The results of the Stakeholder Expectation Evaluation are used to identify strategic goals and strategies aimed at satisfying our stakeholders' needs and expectations. Selected strategic performance goals are prioritized, and then transformed into strategic action plans and strategic performance measures. (**See Section 2.1a**) During the monthly Performance Review, NNSY's Leadership Organization reviews the strategic performance measure trends and the evaluation scores to date. The Leadership Organization then takes timely and appropriate action to drive the trends toward their target value, indicating improvement in our stakeholders' satisfaction level.

**Establishing an Environment for Empowerment, Innovation, and Learning.** NNSY Leadership is committed to a comprehensive and individualized development process so that all our employees have the character and competence to confidently succeed in a change environment

and face new business challenges. To achieve this, NNSY has partnered with Franklin-Covey™ (FC). NNSY facilitators and internal consultants, certified by FC™ to develop each of NNSY's 6800 employees in the principles and processes of personal and interpersonal effectiveness in the Seven Habits of Highly Effective People; 4 Roles of Leadership (for team development and alignment with organizational goals); Organizational Effectiveness Cycle (to align the organization with customers and stakeholders); and, Inspired Leadership (to align individual units with the Shipyard Strategic Plan, the organizational Strategic Plan goals, and to apply the principles of 7 Habits).

These development efforts reinforce NNSY's commitment to achieving a high performance organization and are characterized by the following:

- Individual growth in character, ethics, and maturity
- Individual and team empowerment, specifically the voluntary acceptance of accountability for processes, performance goals, and decisions
- Innovation, courage, and ability to take reasonable risks and test new ideas, and
- Ability to lead and manage successfully at increasingly challenging levels of proficiency

During each 7 Habits workshop, the Shipyard Commander delivers (in person or via videotape) a 1-hour message on the vision, values and strategic goals of the Shipyard. The NNSY Leadership Organization reinforces these principles through semi-annual employee "Quick Hit" Communication briefs and during the monthly Performance Review. NNSY's Leadership web site, management-level meetings, and "Service to the Fleet" articles also provide knowledge about the High Performance Leadership System.

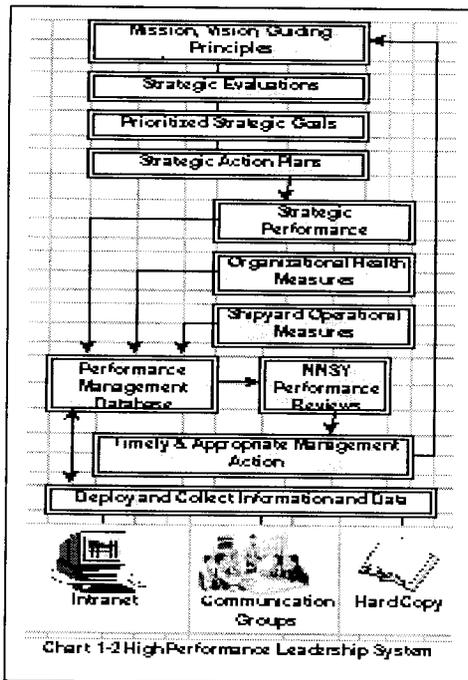
***Setting Directions and Seeking Future Opportunities.*** The NNSY Leadership Organization uses a High Performance Leadership System (HPLS), which includes the Council, Committee, team organizations, and the organizational review process as the primary structure to set directions and seek future opportunities (**See Chart 1-1**). HPLS includes a performance management database application that stores organizational data upon which the Leadership Organization relies to make important decisions. Our HPLS process begins with strategic planning during which mission, measurable visions, guiding principles, strategic evaluations, and prioritized strategic performance goals and strategic action plans are developed. (**See Chart 1-2**)

***Future opportunities*** for new Shipyard business are identified through execution of strategic evaluations and strategic action plans (**See 2.1 and 2.2**). These evaluations and plans identify target opportunities and key decision-maker needs. After determining these requirements, we work to ensure that NNSY services match those needs. We then communicate our new capabilities to our key decision makers. Strategic goals set organizational direction, and are transformed into strategic performance goal measures (regression trend charts) and are maintained in the HPLS performance management database. Strategic performance measures are then reviewed monthly to ensure that NNSY accomplishes its strategic plan.

### **1.1b Organizational Performance Review**

The NNSY Leadership Council and representatives from the six HPLS teams conduct monthly Performance Reviews using trends of strategic performance measures, organizational health

measures, and Shipyard operational measures in the HPLS database. The NNSY Leadership Council, leadership teams, and functional departments take timely, corrective and preventative actions to ensure that the NNSY mission, vision, guiding principles and strategic goals are achieved as planned. Collectively, these measures ensure that NNSY systematically evaluates its overall "State of Health". The HPLS performance management database enables NNSY leadership to review a single measurement system that consolidates information from all Shipyard departments. This data comes from operational and project management systems that are an integral part of managing day-to-day Shipyard activities.



As reflected in Chart 1-2, the following key performance indicators are reviewed each month:

*Strategic Performance Indicators* – Trends of strategic action plan progress and trends of strategic evaluations including stakeholders’ expectations, risks, organization capabilities, customer and market, competitive environment, customer satisfaction, work systems, education and training effectiveness, employee satisfaction and supplier/partner capabilities.

*Organizational Health Indicators* – Trends of systematic evaluations of community impact, customer listening and learning, customer contact requirements, information and data effectiveness, benchmarking, education and training needs, work environment, support services evaluation, design process evaluation, high performance work systems, and supplier and partner process.

*Shipyard Operational Indicators* – Trends of Shipyard production and support department measures of cycle time, schedule durations, internal customer satisfaction, rework or cost of quality and productivity.

**Translating Organizational Review Findings Into Actions.** Based upon these fact-based measures, participants in the Performance Review translate trends of measures into priorities for organizational improvement and opportunities for innovation. Priorities for improvement are documented in our HPLS performance management database alongside the corresponding trend in a group of fields entitled probable cause/analysis, corrective action/next step, and assignment of responsibilities and target dates for completion and tracking. The Leadership Council assigns or revises priorities of activities and projects, makes work assignments, identifies opportunities for appropriate rewards for work well done, and reinforces our vision, guiding principles, strategic performance goals, and business results targets. Execution of the actions developed during each Performance Review are reviewed for alignment using vision related questions like:

*"What is the impact of the facts (performance) we see here on our mission, vision and strategic goals?" "If we initiate this recommended action plan or change priorities on this project, what is the impact, both short and long term, on our mission, vision, strategic performance goals, and business results?"*

**Performance Review Results Deployment.** Our recent Employee Satisfaction Evaluation results identified dissatisfaction with a number of areas involving leadership and management practices,

while the overall employee satisfaction trend showed minimal improvement over the previous evaluation results. These results were documented in the performance management database, trends were evaluated, and narrative reports were developed and discussed during the monthly performance review. Areas for improvement were identified through satisfaction scores and cause analysis of employee comments. An action plan was developed, and corrective actions were then deployed to appropriate NNSY work units (**See Chart 1-2**). This ensured that analysis, action planning, and execution decisions were based directly on performance review results data, while maintaining alignment with higher level organizational alignment with vision, guiding principles, and strategic action plans (**See 5.3, Employee Satisfaction**)

**Findings/Employee Feedback to Improve Leadership and Management Effectiveness.** A Leadership survey initiated by the Leadership Organization in September of 1998 showed significant weaknesses in the areas of trust, communication, and group effectiveness. After reviewing the results, actions taken by the Leadership Organization included development of the Leadership Committee/Council structure, the deployment of a Shipyard-wide Employee Satisfaction Survey, and an organizational initiative to develop “Quick Hit” teams to take immediate short-term actions to address Leadership weaknesses. A subsequent Leadership survey taken a year later showed significant improvement in Shipyard leadership as viewed by union, management, and their direct reports. (**See Figure 7.5-8**)

**1.2a Organizational Responsibility and Citizenship**

One of the NNSY’s guiding principles is to “Be active community members and responsible stewards of a safe and clean environment”. Consistent with its guiding principles, NNSY complies with safety, health and environment regulatory requirements, including Occupational Safety and Health Act (OSHA), Clean Air Act (CAA), Clean Water Act (CWA), Resources Conversation and Recovery Act (RCRA), Toxic Substance Control Act (TOSCA), Safe Drinking Water Act (SDWA), and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). NNSY uses several measures to evaluate its environmental performance, which include hazardous waste generation levels, waste recycling and notices of environmental violations issued (**See Figures 7.5-10, 7.5-11, and 7.5-12.**)

In 1999 NNSY was identified as a Superfund site, and has proactively worked with DOD on remediation efforts. In addition, the Shipyard Commander sits on the Board of the Elizabeth River Project; a cooperative local, state and federal effort begun in the early 1990’s to restore one of the most polluted rivers in America.

**Addressing Societal Impacts.** NNSY addresses the current and potential impacts of our products, services, facilities, and operations on society by administering a Community Impact Evaluation. This evaluation, conducted annually by the SMT, addresses the current and potential impact that NNSY has on our surrounding communities. The community participants in the Community Impact Evaluation include:

<i>Portsmouth City Management Staff</i>	<i>Elizabeth River Project Team</i>
<i>Chesapeake City Management Staff</i>	<i>Tidewater Community College Administrators</i>
<i>Portsmouth Chamber of Commerce</i>	<i>United Way</i>
<i>Local Red Cross</i>	

Areas addressed in this evaluation include: risks to community; effectiveness; legal compliance; ethical actions; regulatory compliance; key practices; operations; facilities; services; and, products. Evaluation results are used to identify timely and appropriate actions to improve the satisfaction of the surrounding communities with NNSY. The trend of Community Impact Evaluations conducted to date is tracked in the HPLS database and are examined in our monthly Performance Review.

***Anticipating Public Concerns with Products, Services, And Operations.*** The Executive Support Office regularly monitors local media coverage (local newspapers and publications) for any coverage relating to the Shipyard's direct and indirect impact on the community, and reports this information to the Shipyard Leadership Organization for review and response. NNSY participates in quarterly meetings with key city officials, Chamber of Commerce, NNSY/Portsmouth Association (a collaborative effort of community, business leaders, and Shipyard management) and employees to ensure that there are a balance between Shipyard and community efforts.

***Ensuring Ethical Business Practices In All Stakeholder Transactions And Interactions.*** NNSY provides training annually to all Shipyard employees that deal with NNSY suppliers/partners and customers. This training is based on the DOD Joint Ethical Regulation that provides the ethical standards for this interaction.

In addition, all new employees receive ethics training during employee orientation. All employees receive training on deliberate malpractice, which deals with ethic issues regarding the certification of quality work. The Shipyard Commander has written a number of articles for the "Commanders Comments" column in the Shipyard newspaper, "Service to the Fleet", that communicate management's expectations of ethical behavior throughout the organization, such as personal accountability and responsibility. The 7 Habits training workshops, made available to all employees, provides training on the ethics of integrity and character how it relates to the individual, the community, and the Shipyard as a whole.

### **1.2b Support of Key Communities**

NNSY senior leaders and employees continuously support and strengthen our key communities, including local community services, education, the environment, and practices of trade or business associations. The cities of Portsmouth and Chesapeake, VA are NNSY's key communities due to proximity, common support services, and percentage of Shipyard employees residing in those areas. Our organization leads and contributes as a citizen in its surrounding key communities through the execution of a series of regular community projects, including those presented in **Chart 1-3**. Additionally, NNSY has been a leader among the regional military commands in contributing to the Combined Federal Campaign (CFC) for the last six years. **(See Figure 7.5-13)**

The NNSY Leadership Organization plans and manages community projects that focus on helping the surrounding communities. NNSY meets quarterly with city management and the NNSY/Portsmouth Association to assess potential community projects and how they integrate with the Shipyard, and where NNSY can contribute to support the community. The effectiveness of our community projects and activities is assessed in the Community Impact Evaluation.

<b>NNSY Contributor Organizations</b>	<b>NNSY Community Projects</b>	<b>Value to Community</b>
<i>Shipyard Commander</i>	<i>Local Red Cross Board of Directors</i>	<i>Saves Lives</i>
	<i>Member, Elizabeth River Project Leadership Council</i>	<i>Clean, Safe Waterway</i>
	<i>Member, Mayor's Committee to Preserve History</i>	<i>Historical Culture</i>
	<i>Public Access to NNSY Shipyard and ships present</i>	<i>Community Acceptance</i>
	<i>Development of NNSY Trophy Park</i>	<i>Historical Culture</i>
	<i>Quarters A Open House</i>	<i>Historical Culture, and community acceptance</i>
	<i>Portsmouth City Manager Meetings</i>	<i>Assist with city issues, promotes NNSY-city interface and good will</i>
	<i>Member, Portsmouth Rotary Club</i>	<i>Rotary Club Community Projects</i>
<i>Environmental Division Head</i>	<i>Co-chair Elizabeth River Project Leadership Council</i>	<i>Clean, Safe Waterway</i>
<i>Employees</i>	<i>Partnership with Tidewater Community College (TCC)</i>	<i>Use of NNSY facilities for apprentice program</i>
	<i>TCC Environmental Intern Program</i>	<i>Use of NNSY facilities for environmental projects</i>
	<i>TCC Waverly Sykes Training Center</i>	<i>Use of NNSY facilities for safety, environmental and fire fighting training – public, private, other Navy</i>
	<i>Virginia Dept. of Environ. Quality Analytical Task Force</i>	<i>Improve policy for environmental regulations</i>
	<i>Emily Spong Elementary School Partnership</i>	<i>Improve student educational motivation</i>
	<i>Mutual aid agreements for emergency &amp; police support</i>	<i>Provide resources for emergencies and police issues</i>
	<i>Chapel Newsletter</i>	<i>Provide spiritual guidance for employees</i>
	<i>Mayor's Sister Cities Commission</i>	<i>Promote good will between NNSY sister cities</i>
	<i>Shipyard Portsmouth Association</i>	<i>Promote cooperation and communication between the Shipyard, community, and business sector</i>
	<i>All American Week</i>	<i>Improve good will by celebrating cultural diversity and employee satisfaction</i>
<i>NNSY Family Days (average 4000 attendees)</i>	<i>Improve goodwill and employee satisfaction</i>	
<i>Red Cross blood campaigns (FY96 - 866 pints)</i>	<i>Saves Lives</i>	
<i>Armed Services YMCA</i>	<i>Improve goodwill and employee satisfaction</i>	

Chart 1-3 NNSY Community Support Projects

## 2 Strategic Planning

Norfolk Naval Shipyard (NNSY) sets strategic directions and performance goals based upon our mission, vision, guiding principles and the results of our strategic planning process.

We revised our strategic planning foundation in 1999, with a systematic review and prioritized selection of five strategic performance goals. In June 2000, the Leadership Council, Leadership Committee, and HPLS team Chairs and Co-Chairs met to review the progress of the 1999 performance goals, and determined that those performance goals did not adequately address the new strategic direction of the Shipyard. The Leadership Committee, based on organizational data collected during the previous 10 months, consolidated the 1999 performance goals into two high-level strategic goals that were aligned with the Shipyard's desired direction. The group then developed and assigned new performance goals to the responsible HPLS teams. HPLS teams track performance goal measures, recognize undesirable trends, and develop action plans to ensure the Shipyard accomplishes its strategic plan through the monthly performance review.

NNSY's 2000 strategic plan aligns with the latest revision of the NAVSEA 1999-2001 Strategic Plan of the Naval Shipyards, and our performance goals are aligned with NNSY's key business success factors of cost, quality, and on time delivery. Our strategic plan is deployed to levels of the organization as displayed in **Chart 1-2**.

### 2.1 Strategy Development

NNSY strategic directions are designed to strengthen our performance and competitive position, achieve customer and employee satisfaction, and ensure that our mission is accomplished and our vision is realized. NNSY's Leadership Committee participates in the strategic planning process to align our strategic goals with our mission, vision, and guiding principles based upon fact-based, systematic evaluations and current performance data. NNSY performs a comparative analysis against the three other Naval shipyards (by class of ship) to assess its relative performance, incorporating the results into strategic planning and process improvement activities.

#### 2.1a Strategic Development Process

The Strategic Management Team (SMT), with direction from the Leadership Council, develops strategic recommendations and leads the Leadership Committee through the strategy development process on an annual basis. This process is executed as follows:

**Step 1: Develop/Renew Mission, Vision, and Guiding Principles.** NNSY's mission, vision and guiding principles are presented in **Section 1.1a**, which are re-evaluated and improved through the strategy development process.

**Step 2: Conduct Strategic Evaluations.** Our strategy development process includes eight strategic evaluations designed to yield data and information essential to NNSY's environmental factors. The appropriate HPLS team has been assigned evaluations, and has the responsibility of conducting the evaluations according to a published HPLS Key Events Schedule. The evaluations are listed below, grouped according to subject focus.

**Stakeholder Expectations - SMT**

Senior Executives (Chain of Command)	NNSY Employees	HPLS Teams
Major Customers	Suppliers and Partners	Problem-Solving Teams

**Organization Capabilities - SMT**

Work Design and Organization (WDO)	Research and Development	Team Effectiveness
Recruitment	Key Processes (KP)	Support Activities (SA)

**Risks - SMT**

Financial	Opportunity	Societal
Technological	Political	Plan for Migration

**Competitive Environment - SMT**

Competitor Market Share	Satisfaction Estimate	Service Life Cycle
"Plan" to be Best Choice	Retention/ Inclination of Return	Key Service Features
Success of "Plan"	Price	Information and Data
Availability and Response Time	Support	Uniqueness of Service

**Customer and Markets - SMT**

Identification of Customer Key Decision Makers	Contact with Competitors' Customers	Target Opportunities
Contact with Customer Key Decision Makers	Customer and Market Knowledge	New Service Design
Identification of Competitors' Customers	Sales of Service	Key Process Redesign
Best Value Positioning		

**Customer Satisfaction - CST**

Quality of Life	Responsiveness	Safety
Work Quality	Cost Management	Planning Communication
Execution Communication	Planning	Schedule Adherence
Work Integration		

**Employee Satisfaction - HRT (Includes Work Systems and Training and Development)**

Benefits	Equal Opportunity	Performance Appraisals	Facilities
Compensation	Work Improvement Plans	Loyalty	Career Development
Safety	Employee Development Programs	Motivation	Accountability
Career Opportunities	Training Delivery and Deployment	Leadership	Decision Making
Work Processes	Innovation	Work Loads	Work Targets
Work Environment	Job Security	Recognition	Tools and Equipment
Teamwork	Promotions	Rewards	Hiring and Retention
Training Cost	Training Effectiveness	Communications	Job Satisfaction

**Supplier and Partner Capabilities -SPT**

Requirements	Best Value	Selection
Management Staff	Equipment	Technical Staff
Service Features	Improvement Plans	Quality
Influence	Facilities	Stability
Loyalty	Collaboration	

Table 2-1 Evaluations

**Step 3: Prioritize Strategic Performance Goals.** The NNSY Leadership Council and SMT use a weighted priority matrix to prioritize all of the performance goals that have been produced. Each performance goal is scored on a 5-1 point rating scale for each Baldrige Results area:

5 : To a very great extent	2 : To a small extent
4 : To a great extent	1 : Not at all
3 : To a moderate extent	

**Table 2-2 Rating Matrix**

**Table 2-3** is an example of how a rating and weighted point matrix is used to develop a performance goal score. The ratings are given in response to a question such as “To what extent will accomplishing this performance goal improve Customer Focused Results?”

The maximum score for each item is determined by multiplying the points available in that item (using Baldrige 1999 criteria points) by 5 (the highest rating). This gives a total maximum score of 2250 points. Each performance goal is rated, and the average rating received is entered for each results area. The average rating is then multiplied by the Baldrige points, and the score is entered in the last column of the matrix. Performance goals are then sorted by highest to lowest score, and prioritization is complete.

	Baldrige Points	Max Score	Performance Goal Rating	Performance Goal Score
Improve Customer Focus	115	575	4	460
Improve Financial/ Market Results	115	575	5	575
Improve Human Resource Results	80	400	3	240
Improve Supplier/ Partner Results	25	125	3	75
Improve Organizational Effectiveness Results	115	575	4	460
		2250		1810

**Table 2-3 Strategic Performance Goal Prioritization Matrix**

**Step 4: Select Final Strategic Performance Goals.** When the list of candidate performance goals is long and resources are limited, the SMT supports the Leadership Council and other HPLS teams in selecting a smaller list based on matrix scores. Normally, five to seven performance goals are selected from longer lists produced by this process.

**Step 5: Evolve Performance Goals into Strategic Action Plans.** Strategic action plans are the responsibility of the appropriate HPLS teams. Strategic action plans include tasks, which lead to the completion of a milestone - The strategic action plan is considered complete when the final milestone has been accomplished.

Strategic action plans include short- and long-term actions. The SMT facilitates the summarization of individual strategic action plans into the Shipyard Strategic Action Plan, and tracks progress against completion targets. The final Strategic Action Plan is communicated to Shipyard employees through the Intranet. This ensures visibility throughout NNSY.

**Step 6: Create Strategic Performance Measures from Strategic Action Plans.** The SMT establishes measures for each strategic performance goal. Strategic performance measures track planned versus actual percent of completion of strategic action plans. Like all regression trend charts in the HPLS performance management database, strategic performance measures have

targets (planned percent of strategic action plan completion) and measures (actual percent of completion).

**Step 7: Review Strategic Performance Measures at Monthly Performance Review.** During the monthly Performance Review, the Leadership Council and HPLS team participants review trends of strategic performance measures. When trends are unsatisfactory or marginal (red or yellow condition), the Leadership Council evaluates the corresponding strategic action plan and assigns timely and appropriate action to realign the performance goal to its target completion date. Based upon progress of strategic action plans, all or part of the strategic evaluations are repeated during the year.

**2.1b Strategic Performance Goals**

NNSY’s strategic performance goals were based upon strategic evaluations, which provided the data needed to assess NNSY’s “state of health”, and identify opportunities for further improvement. Our performance goals were developed to address the factors most important to our organization, and are listed below in **Table 2-4**.

<b>Strategic Goal 1: Raise The Bar (Best Ever Public Or Private Shipyard) For Cost, Quality, And Schedule On Every Project, thus demonstrating unquestionable value to the Navy and the Community</b>			
<b>Performance Goals</b>	<b>Performance Measures</b>	<b>Targets</b>	<b>Teams</b>
1. Meet All Planning & Execution Milestones & Key Events	Percent milestones/key events met CNO Schedule Adherence (Percent ahead or behind) Project Schedule Performance – SP	End Avail Score Card >4.0 CNO SP < 1.0 SP<1.0	KPT
2. Meet The ICP Approach On Each Project. Within Project, “Action” Is Triggered At .9	Project Cost Performance – CP	CP <1.0	KPT
3. Mechanic Has Everything To Do The Job Right 1 <sup>st</sup> Time	Excess WIP	Work In Process <40%	KPT
4. Clarify and Meet or Exceed customer needs, wants, and expectation	Customer Satisfaction Scores	>80%	CST
5. Evaluate and improve key support processes	Internal Customer Satisfaction	>80%	KST
6. Improve Supplier/Partner Performance	Improved integration of ship work On time delivery of material  Completion of MILCON projects on time	On time completion of avail SF SP<1.0 95% of identified material available at start of avail On time completion of MILCON and interim milestones SP<1.0	SPT
7. Review & set targets based on current production process performance	DL Turnaround time Material Churn QPI	<1 day < 10% <1.0	KPT

**Table 2-4 NNSY Strategic Performance Goals**

Strategic Goal 2: NNSY is a world class organization where employees are proud to work			
Performance Goals	Performance Measures	Targets	Teams
1. Improve employee satisfaction level	Employee Satisfaction Scores	80% (Nov 2001)	HRT
2. Enable workers to be more productive	Employee productivity	8 for 8	KPT
3. Enable foreman to be on deck plate more by reducing administrative requirements	Supervisor Deck Plate time	4 hrs	KST
4. Supv/workers should have ownership and accountability	Personal accountability feedback on SUPDESK	Sep 2000 Implementation	KPT
5. Issues defined openly and honestly	Communication Quick Hits	2 times/year	HRT
6. Seek and apply employee input to continuously improve efficiency, quality, process cost, cycle time reduction, rework, productivity, and employee satisfaction	Knockouts Cost Savings/Quality Improvements, Cycle Time reductions	\$1M savings documented/annually	HRT/ KPT
7. First time quality work will continuously fall toward minimum levels of defects and rework	QPI	<1.0	HRT/ KPT

Table 2-4 NNSY Strategic Performance Goals

## 2.2 Strategy Deployment

The NNSY Leadership Organization (see **Chart 1-1**) deploys the Strategic Plan and its components (strategic action plans and strategic performance measures) to all levels of the organization as shown in **Chart 1-2**.

### 2.2a Action Plan Development and Deployment

Using the strategy development process discussed in **Section 2.1**, NNSY develops and deploys a strategic plan that includes: Strategic goals, performance goals with measures, and targets, and the associated strategic action plans. Based upon the results of our most recent strategic planning sessions, our key short and long-term strategic action plan performance goals (with HPLS team assignments) are presented in **Table 2.4**.

Strategic action plans are projects with allocated resources and corresponding strategic performance measures for tracking progress. The HPLS teams are tasked with developing their action plans, which includes developing milestones and identifying the resources needed to accomplish their plans. The Leadership Council allocates resources to accomplish strategic action plans after examining strategic priorities, existing workloads, and resource availability.

#### *Performance Projection (GPRA criteria)*

Two-to-five year projections of strategic performance measures developed in our strategy development process (**Section 2.1**) are developed in two steps:

Step 1: Select strategic performance measures and forecast trends indicating future date when strategic performance goals should be completed and its benefits achieved.

Step 2: Use strategic performance measure and action plan projections to compare NNSY performance to our competitors or comparative organizations. In this comparison, key measures

(See Table 4-2) are used for comparisons of NNSY strategic performance versus competitors and comparative organizations. Trends of these comparisons are tracked in the HPLS database.

**Strategic Plan (GPRA format).** NNSY maintains an internal Strategic Plan written in a format to comply with the guidance provided in the Government Performance and Results Act of 1993 (public law 103-62, section 306), which is commonly referred to as GPRA. The contents of this internal Strategic Plan include:

- Mission Statement
- Outcome Goals (strategic end objective)
- Strategic Action Plans (project plans)
- Relationship to Performance Plan
- External Factors (conditions outside NNSY)
- Program Evaluations (eight strategic evaluations)

**Performance Plan (GPRA).** The basic intent of the GPRA Performance Plan is to compare actual to planned results. This is accomplished during the monthly Performance Review, where the strategic performance measures and strategic action plans are examined and compared to planned progress and performance for each strategic goal. Additionally, the GPRA requires fiscal year review of strategic performance goal accomplishment against the plan, and requires documenting variances from NNSY's strategic plan. In the event that a formal GPRA Performance Report is required by NAVSEA, the NNSY will document the process it currently has in place.

**Top Level Strategic Plan Summary.** A top-level summary of our strategic plan is maintained and distributed to NNSY stakeholders and customers to ensure communication of our mission, visions, guiding principles and strategic goals. NNSY also publishes and distributes a brochure that provides highlights of the Shipyard's strategic plan.

### 3 Customer and Market Focus

#### 3.1 Customer and Market Knowledge

***Incorporating Key Service Features Into Marketing And Service Planning.*** The Strategic Management HPLS Team (SMT) systematically determines short- and long-term requirements, expectations, and preferences of NNSY customers by conducting the Customer and Market Evaluation. The areas addressed in this evaluation are listed in **Section 2.1 (Strategy Development)**. NNSY utilizes the results of this determination to ensure that our products, services and key processes meet the needs and expectations of our customers, and that we are in a position to develop and capture appropriate opportunities within the scope of our mission.

NNSY also performs comparative analysis to ensure our level of service performance meets our customers' key requirements of cost, quality, and on time delivery, and incorporates this assessment in strategic plan and performance goal development.

The Customer Satisfaction Team (CST) has primary oversight of customer satisfaction and customer relations. The CST consists of representatives from different Codes to provide a cross-functional view and approach to customer satisfaction and business needs. This approach has both the NNSY and customers' best interest in mind. The CST manages customer measures, evaluations and practices, and takes timely and appropriate action to ensure that customer satisfaction is as close to 100% as possible, at all times.

***Determining or Targeting Customers.*** NNSY key customers are predetermined at a higher level within the U.S. Navy and include:

- TYCOM & Tasking organizations (AIRLANT, SURFLANT, SUBLANT, SUBPAC)
- Ship's Force
- PGM Directorates (NAVSEA PMS 312, 377, 392)

Our customers' key requirements are **cost and on-time delivery** of ships back to the fleet, accomplishing key events on time during work performance, **quality of the work performed**, legal and regulatory compliance, and positive relationships with ships force.

***Listening and Learning to Determine Key Requirements and Drivers.*** The CST conducts comprehensive Customer Satisfaction Evaluations to gather the data needed to identify and target opportunities to better meet our customers' requirements. For example, CST's evaluation of satisfaction scores and related customer comments identified that NNSY's cost rebate practices are not in alignment with the customers' need to have more accurate estimates. Improving estimating accuracy would enable the customer to more effectively plan and budget additional work to be accomplished during the project.

Another component of listening and learning is the Weekly Project Status Briefings conducted by the Shipyard Commander. Project Superintendents, Department and Shop Heads, and Commanding Officers attend these briefings, where NNSY management briefs each customer on the status and pro-

gress of their ship repairs. This forum provides the customer with an opportunity to further express satisfaction or dissatisfaction with the Shipyard at the command level on a weekly basis and also provide organizational direction for the command, as customer requirements are incorporated in NNSY's strategic planning process. Finally, CST uses a database application called Remedy (see section 3.2) to collect customer data, and keep listening and learning methods current with business needs and directions defined in NNSY's Strategic Plan.

### 3.2 Customer Satisfaction and Relationships

Recognizing the need to effectively manage customer satisfaction and relationships, NNSY has implemented a Customer Relations Management (CRM) application called Remedy™. Remedy™ provides the tools needed to be more responsive to our customers, and to provide closed loop problem resolution.

**Customer Access to NNSY.** The Remedy™ application provides NNSY points of contact for our customers to seek assistance, conduct business with us, and to voice complaints. Remedy™ is used by NNSY personnel as well as our customers, and provides CST with the data needed to evaluate customer requirements and relationship levels. Internally, Remedy™ enables frontline customer contact personnel to know who our customers and major suppliers are, and to whom to refer them for assistance. The NNSY person in contact with a customer is responsible for transferring the customer to the appropriate NNSY point of contact, or providing the needed assistance to customer.

Remedy™ also captures key customer contact requirements. The NNSY customer contact person is responsible for gathering information that satisfies sixteen specific question areas. This process allows NNSY to respond to the needs of its customers as outlined in our Guiding Principles. Our database of customers enables customer contact personnel to become familiar with who the customers are, as well as their major suppliers and partners. Listed below are the 16 data fields to capture customer data:

<i>NNSY employee making contact</i>	<i>Required response time</i>
<i>Date of contact</i>	<i>Customer name and title</i>
<i>Key issues and commitments</i>	<i>Customer group (or market segment)</i>
<i>Action assignments (who, what, when)</i>	<i>Product, service or project being discussed</i>
<i>Response cycle time (to get to the right person and to get resolution)</i>	<i>Mailing address (street, city, state, zip code)</i>
<i>Complaints (if received) with details</i>	<i>Shipping address (street, city, state, zip code)</i>
<i>Classification of complaint (type A, B or C)</i>	<i>Phone, fax number and (if available) e-mail code</i>
<i>Customer company or organization name</i>	<i>Next planned follow up contact date (who, when)</i>

Remedy™ is available on NNSY's Intranet for our personnel who routinely handle customer contacts. Remedy™ also allows customers to input customer concerns or complaints. NNSY personnel then reference information and respond to current status of customer concerns.

**Customer Contact Requirements Evaluation.** At least annually, the CST conducts the Customer Contact Requirements Evaluation to improve our key customer contact performance. This evaluation addresses the areas listed below and results are tracked in the HPLS database:

- Customer contact awareness and currency of information
- Customer contact personnel training, including soliciting customer feedback

The trend of Customer Contact Requirements Evaluations conducted to date is examined in our monthly Performance Review.

**Complaint Management Process.** The oversight and improvement of the NNSY Complaint Management Process is the responsibility of the CST. The process of handling customer complaints is to first receive, then classify complaints. Complaints are classified by categories as shown in **Chart 3-1** and by level of importance (1 or 2) as shown in **Chart 3-2**. Complaint-type classifications are identical to the categories used in the customer satisfaction cards and evaluations.

<i>Work Quality</i>	<i>Coordination</i>	<i>Execution Communication</i>
<i>Responsiveness</i>	<i>Productivity</i>	<i>Planning Communication</i>
<i>Quality of Life</i>	<i>Safety</i>	<i>Planning</i>
<i>Cleanliness</i>	<i>Cost Management</i>	<i>Schedule Adherence</i>
		<i>Work Integration</i>

**Chart 3-1 Complaint Type Classification**

<i>Level</i>	<i>Description of Level of Importance</i>
<i>1</i>	<i>Most important; urgent; address immediately because of criticality of issue</i>
<i>2</i>	<i>Routine importance; address through routine channels and practices</i>

**Chart 3-2 Level of Importance Classification**

The classifications of the complaint, according to **Chart 3-1** and **Chart 3-2**, are maintained in the Remedy™ CRM Database. Complaint trends are then evaluated by the CST, which develops corrective action recommendations to improve unsatisfactory complaint levels. Remedy™ provides the tool to systematically receive, document, forward, and track customer complaints and their resolution.

**Building Customer Relationships.** NNSY builds relationships with customers for repeat business through job performance and action plans based upon results of Customer Satisfaction Evaluations. Customer relationship building efforts include:

- **Personnel Support Briefings** - Provided as part of our Shipyard pre-briefings onboard ships for Shipyard availabilities.
- **Post Availability Meetings** – Held between the ship’s Commanding Officer and NNSY senior leaders selected on the basis of their involvement with the ship work that was accomplished.
- **Weekly Status Messages** – Authored by the ship’s Commanding Officer with comments and concurrence from the Project Superintendent, these messages are a weekly indicator of customer satisfaction.
- **Project office space for customer** – This allows our project leaders the opportunity to sample customer satisfaction daily and makes it easy for the customer to express issues or concerns directly to the NNSY project office.
- **Timely delivery statistics**

Additionally, the Family Service Center, located in the Chapel, provides humanitarian support services for ships' personnel during availabilities. Support includes a Licensed Clinical Social Worker, education specialists, and local charity outreach representatives.

**Keeping Approaches to Customer Access and Relationships Current.** NNSY has a proactive customer relationship building process that includes weekly status messages from the various ships' Commanding Officers, and a variety of other meetings. These activities are utilized to gather customer satisfaction data and to provide for an early method of detection of issues and concerns.

**Process for Determining Customer Satisfaction/Dissatisfaction.** The CST oversees or conducts the Customer Satisfaction Evaluation. The participants in this evaluation include all key customers, and addresses the areas listed in **Section 2.1**. Customer Satisfaction Evaluation score trends are examined during the monthly Performance Review. Remedy CRM data is also extracted and entered into the HPLS database each month. Trends of response times to customers are reviewed during the monthly Performance Review, and follow-up actions are then assigned based upon the results. The Leadership Council and CST ensure that the scope and content of the questions in our Customer Satisfaction Evaluations are consistent with current business needs and directions.

**Ship Customer Satisfaction Determination.** When performing ship services, we come into daily contact with the ship's crew and Commanding Officer. CST uses a Customer Satisfaction Card, shown in **Chart 3-3**, to capture customer satisfaction input.

Customer Satisfaction Card						
Week Ending:						
I am satisfied with NNSY this week in the areas of:						
(Please circle one in each observed area)						
Quality of Work	1	2	3	4	5	N/A
Responsiveness	1	2	3	4	5	N/A
Quality of Life	1	2	3	4	5	N/A
Cleanliness	1	2	3	4	5	N/A
Coordination	1	2	3	4	5	N/A
Productivity	1	2	3	4	5	N/A
Safety	1	2	3	4	5	N/A
Cost Management	1	2	3	4	5	N/A
Execution Communication	1	2	3	4	5	N/A
Planning Communication	1	2	3	4	5	N/A
Planning	1	2	3	4	5	N/A
Schedule Adherence	1	2	3	4	5	N/A
Work Integration	1	2	3	4	5	N/A

An NNSY representative distributes and collects the cards on a weekly basis. Each month data is loaded into the HPLS database. Customer satisfaction trends are evaluated during the monthly Performance Review. The NNSY Leadership Council and CST take timely and appropriate action to help drive trends to a level 5.

**Chart 3-4 Customer Satisfaction Card**

**Chart 3-3 Customer Satisfaction Card**

A key factor in cultivating and maintaining customer satisfaction with the ship Commanding Officer and ships' force is the use of project teams. Inclusion of the Ship's Force (SF) as a team member early in the process contributes to greater trust and understanding by all parties involved. Daily meetings between the Project Superintendent, zone managers, and SF lead to greater communication resulting in reduced surprises, and subsequently improved customer satisfaction. Customer concerns/problems can be resolved at the working level, or elevated and discussed at the Weekly Project Status Briefings.

Other customer satisfaction indicators are:

<i>NNSY awards for excellence</i>	<i>MWR ratings</i>
<i>Guarantee of work results</i>	<i>NAVICP congratulatory messages</i>
<i>Quality of life board meetings</i>	<i>Engineering Department initiatives</i>
<i>BQ advisory board meetings</i>	<i>Messages from satisfied customers</i>
<i>Navy Exchange advisory board meetings</i>	

The use of these multiple meetings and feedback sessions provides a broad spectrum of information that enhances customer relationships, keeps our approaches to satisfaction determination current, and provides for an early method of detection of issues and concerns.

## 4 Information and Analysis

### 4.1 Measurement of Organizational Performance

**NNSY's Performance Measurement System.** NNSY uses its HPLS performance management database to collect the information and data needed to achieve our strategic goals, to maintain strong organizational health, and to ensure our key processes and support activities meet or exceed established performance targets.

**Metrics Selection and Oversight by Teams.** To ensure that all data and information is collected, analyzed, and managed at the appropriate level, the Leadership Council chartered six High Performance Leadership System Teams to evaluate key information management areas within the Shipyard. Specific team responsibilities and membership are discussed in each team's respective focus areas.

Major HPLS team responsibilities (integrated with organizational departments) are:

- Determine the key metrics needed to evaluate organizational performance
- Review and analyze metrics data
- Develop and present recommended actions plans to the Leadership Council to address performance deficiencies

HPLS teams and their assigned result areas are listed below:

<i>Symbol -Section</i>	<i>Team</i>	<i>Results Area</i>
<i>LC-1</i>	<i>Leadership Council</i>	<i>Leadership</i>
<i>SMT-2</i>	<i>Strategic Management Team</i>	<i>Strategic Planning, Financial, Market, Citizenship</i>
<i>CST- 3</i>	<i>Customer Satisfaction Team</i>	<i>Customer Focus</i>
<i>HRT-5</i>	<i>Human Resources Team</i>	<i>Human Resources Focus</i>
<i>KPT-6.1</i>	<i>Key Process Team</i>	<i>Key Production Processes</i>
<i>KST-6.2</i>	<i>Key Support Team</i>	<i>Key Support Processes</i>
<i>SPT-6.3</i>	<i>Supplier Partner Team</i>	<i>Supplier Partner Performance &amp; Relationships</i>

**Table 4-1 Results Areas**

Representative key metrics tracked by the teams are listed below. Our HPLS performance management system is aligned with data collected through our other operational systems, and includes corporate metrics required by NAVSEA, and our strategic performance goal technical measures.

<i>SMT</i>			
<i>Financial Performance Measures</i>	<i>Market Performance Measures</i>	<i>Community and Citizenship Measures</i>	<i>Strategic Plan Progress Measures</i>
<i>Net Operating Result (NOR)</i>	<i>Market Share-Ship Maintenance</i>	<i>Community Impact Evaluation</i>	<i>Strategic Goal Schedule Variance %</i>
<i>Direct Labor Indicator (DLI)</i>		<i>Combined Federal Campaign</i>	<i>Strategic Goal Outcomes To Date</i>
<i>Overhead</i>			
<i>Workload</i>			
<i>Unbillable WIP (Work in Progress)</i>			

**4: Information and Analysis**

<b>CST</b>		
<b>Customer Satisfaction Measures</b>	<b>Customer Relationship Measures</b>	<b>Customer Service Performance Measures</b>
<i>Customer Satisfaction Scores</i>	<i>Number of Complaints by Category (A, B,C)</i>	<i>Planning</i>
<i>Quality of Life</i>	<i>Responsiveness</i>	<i>Schedule Adherence</i>
<i>Cleanliness</i>	<i>Cost Management</i>	<i>Work Quality</i>
<i>Safety</i>	<i>Execution Communication</i>	<i>Coordination</i>
<i>Productivity</i>	<i>Planning Communication</i>	<i>Work Integration</i>
	<i>Complaint Resolution Cycle Time</i>	

<b>HRT</b>		
<b>Work System Measures</b>	<b>Employee Development Measures</b>	<b>Employee Satisfaction Measures</b>
<i>Communication Quick Hit Evaluations</i>	<i>Training Effectiveness Evaluations</i>	<i>Employee Satisfaction Evaluation Scores</i>
		<i>Turnover by Shop</i>

<b>KPT</b>		
<b>Production Processes/Delivery Measures</b>		
<i>Project Cost Performance (CP)</i>	<i>Total Defects/100 Mandays</i>	<i>Material Churn</i>
<i>Project Schedule Performance (SP)</i>	<i>Discrepancy Log (DL) Response Time</i>	<i>% Excess Material at End of Availability</i>
<i>Total Excess WIP</i>		

<b>KST</b>		
<b>Support Activities Measures</b>		<b>Regulatory/Legal Compliance Measures</b>
<i>Safety: Lost Workday Case Rate</i>	<i>Data &amp; Information Users Evaluations</i>	<i>Waste Recycling</i>
<i>Total Cost of Ownership</i>	<i>Illness and Injury Rate</i>	<i>Hazardous Waste Generation</i>
<i>Physical infrastructure "footprint" and cost</i>	<i>Senior Leadership Survey</i>	<i>Hazardous Waste Disposal</i>
<i>Utility Consumption</i>		<i>Notices of Environmental Violations (NOV)</i>

<b>SPT</b>	
<b>Supplier/Partner Performance Measures</b>	<b>Supplier/Partner Contributions Measures</b>
<i>Contractor Performance and Results System (CPARS)</i>	<i>% Contracts urgent and compelling</i>
<i>On time delivery of Material</i>	<i>Overdue action items from the Resource Sharing Initia-</i>
<i>Milestones MISSED -with regard to contractor schedule inte-</i> <i>gration</i>	<i>Value of current NNS contracts</i>
<i>NNS key events/dates missed</i>	
<i>Quality - QDR rate</i>	

**Table 4-2 Team Results Measures**

**Competitive Analysis and Benchmarking.** Present sources of comparative data used by NNSY include the Performance Management and Control database (PMC), Advanced Industrial Management (AIM), and Code 1200 special searches. Regular cost/man-day comparisons are being performed as part of the NNSY Internal Control Price (ICP) new work bid process. This cost comparison examines both other government Shipyard data, as well as private sector data when available from non-traditional sources. The frequency for conducting non-financial benchmarks is at the discretion of the

Process Owner when issues or problems occur. The Business Improvement Office, Code 1200F has worked with the Key Process Team to begin the benchmarking process on the Shipyard's key processes.

**Tracking Overall Organizational Performance.** Metrics are reviewed and analyzed during regularly schedule team meetings using the HPLS performance management database. System-generated trends are evaluated, and the HPLS teams, working with the appropriate line organization, develop corrective actions for below target performance areas. The team then documents its analysis and recommended actions within the HPLS database, which provides a "corporate database" of performance management activity. During the monthly Performance Review, the Leadership Council and representatives from the six HPLS teams review this summary level analysis and correlation of appropriate metrics. Summary-level review includes organizational performance and improvement trends in these business results areas:

- Customer-Focused Results - CST
- Financial and Market Results - SMT
- Strategic Goal Progress - SMT
- Human Resource Results - HRT
- Supplier and Partner Results - SPT
- Organization Effectiveness Results - SMT, KPT, KST

The Leadership Council uses the HPLS performance management database to examine the individual trends of all data and information presented in **Sections 7.1 - 7.5**. The HPLS teams (with Council approval), assign thresholds to target values of all measures in the database. If a measure moves steadily towards its target value, it migrates from Red through Yellow to a Green "health status" based on the most recent data point:

*Green* is satisfactory - Performance is within established tolerance of the target value

*Yellow* is marginal - Performance is not satisfactory, but not yet "out of control"

*Red* is unsatisfactory - Performance is too far from the target value

To expedite the monthly Performance Review process, the Red/Yellow/Green Indicators (RYG) of the HPLS performance management database are used. Each HPLS team presents a metrics status overview, addressing specific problem measures (red/red or negative trend) and present recommended actions. HPLS teams, in coordination with the line departments, develop action plan proposals to address the performance deficiencies, which are presented to the Leadership Council for consideration. HPLS team action plans follow a standard format and consider the cost/benefit of various improvement options. The Leadership Council and HPLS teams solicit comments/recommendations and annotate this information in the database.

The Leadership Council evaluates proposed action plans, and then authorizes the HPLS teams to coordinate with the appropriate departments to execute the approved corrective actions. The Leadership Council approves action plans to ensure alignment with the Shipyard mission, vision, guiding principles, and strategic plan objectives. Based upon the analysis of results during the monthly Performance Review, the Leadership Council assigns actions that impact daily operations and priorities throughout the Shipyard. Special attention is focused on examining all strategic per-

formance measures derived from the Strategic Plan goals. In cases where performance conditions are Yellow or Red, the corresponding Strategic Action Plans are reviewed.

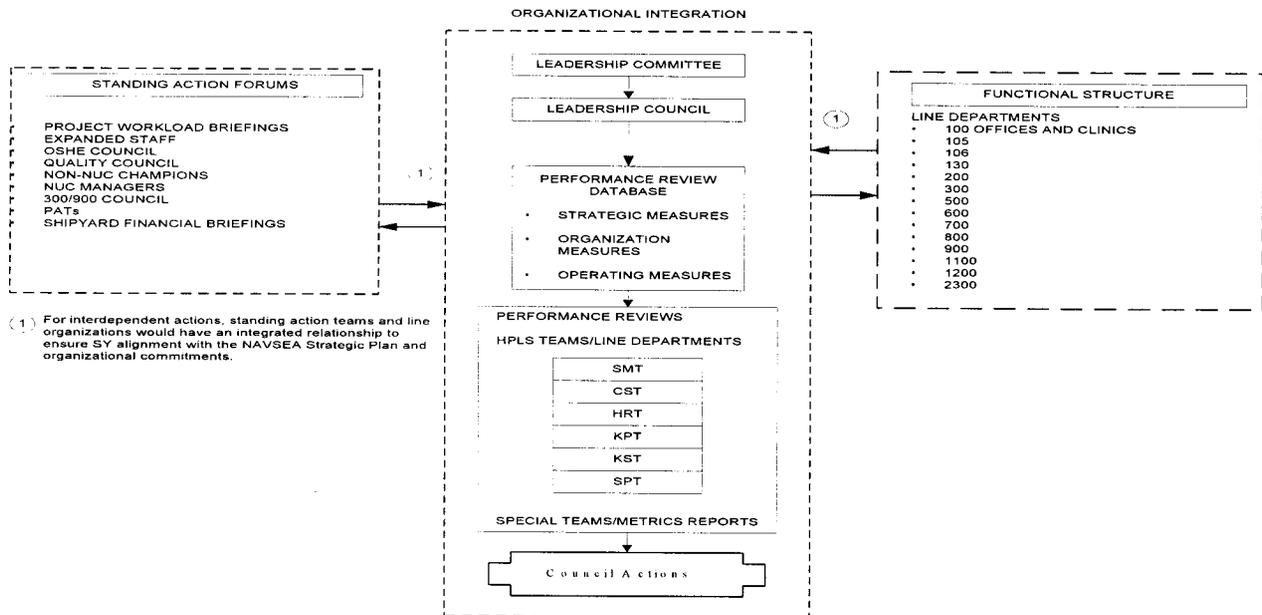


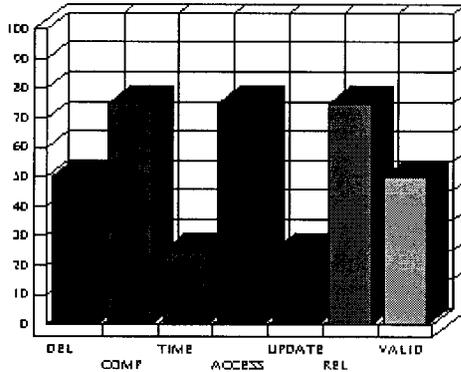
Chart 4-3 NNSY Integrated Organizational Metrics and Performance Management

NNSY has systematically aligned its HPLS structure and organizational metrics with day-to-day Shipyard activities performed by its functional departments and special teams (See Chart 4-3). We have also aligned our organizational metrics to integrate with NAVSEA’s Naval Shipyard Scorecard metrics requirements.

In addition to the monthly Performance Review, organizational performance data is routinely reviewed during our weekly Financial Brief and Production meeting, and monthly Expanded Staff meeting. This collective data is standardized and is consistently used to drive decision making.

**Keeping Our Performance Measurement System Current and Accurate.** The Information and Data Users evaluation, conducted by the Key Support Team (KST), is used to assess internal organizational needs in terms of information content and delivery. The KST conducts this evaluation on a recurring basis to update the HPLS performance management system to reflect current needs and available technology. The contents of the Information and Data Users Evaluation include questions associated with the following characteristics of the information and data: delivery, timeliness, update usability, deployment, completeness, access, and reliability validation. The results of the Information and Data Users Evaluation (date, score, and target) become the source of data for the corresponding performance measure in the HPLS database.

### Evaluation Percentage Scores



**Chart 4-4** reflects the results of the most recent Information and Data User Evaluation. All of the HPLS Evaluation charts throughout this HPLS Guide are available in the format shown in **Chart 4-4**. The evaluation files that produce these graphic charts contain narrative findings, recommendations, and scores. These evaluation files are deployed to all work units via the NNSY Intranet. HPLS teams are responsible for improving information and data problems reflected during this evaluation.

#### Chart 4-4 Information/Data Users Evaluation

The Information Resource Management Office (Code 1230) ensures reliability of information and data through network administration and management practices, including regular and timely backup of all information and data files on the network. The network hardware is also protected through use of power failure backup hardware systems and where possible, redundant information and data storage devices.

#### 4.2 Analysis of Organizational Performance

Organizational performance analysis is a primary input into our strategic plan development and deployment processes (**See Sections 2.1 and 2.2**). Additionally, by ensuring that the metrics selected for review reflect our key processes and business drivers, developed action plans are focused on improving performance in key organizational areas.

**Linking Organizational Analysis to NNSY Work Units.** Through the Performance Measurement and Control Database (PMC), Baseline Advanced Industrial Management (BAIM) and Project Sequencing System (PSS) information systems, specific performance targets of schedule and cost are set for all Shipyard projects and delineated down to the shop level through a daily production plan. Project status completion is entered into these systems to track cost and schedule information by project. This information is reviewed weekly by the Project Superintendents and briefed to management and NNSY customers. Monthly Expanded Staff meetings review the Shipyard's performance in cost, quality and on time delivery for all Shipyard work.

Organizational performance trends are evaluated by the HPLS teams to ensure that the codes and offices within the Shipyard are implementing business practices in alignment with Baldrige criteria, and desired performance levels are achieved. **Chart 4-3** shows how data analysis and operational actions are horizontally and vertically integrated throughout the organization.

Using the concept of what we call the "Baldrige Value Tree", the HPLS Teams and Leadership Council and Committee illustrate the cause-effect relationships of the metrics groups we manage (**See Chart 4-5**). The "cause" of growing stakeholder value begins at the bottom level of the tree as the HPLS Teams apply the excellent practices embodied within the HPLS System (HPLS Guide, Proce-

dures, Database, NNSY Intranet). Each level of the tree provides the foundation, and adds value, to each subsequent levels of the tree. The results of HPLS tools deployment lead to development of our measurable Strategic Plan followed by alignment of strategic goals with all other metrics group targets for performance measurement.

From these systemic foundations, HPLS teams focus on factors that improve employee work environment, well being and satisfaction, training and development, high performance work systems and supplier and partner results and contributions. Satisfied, well-trained employees and suppliers using a high performance work system produce ever better design, production, and support process results. These results lead to improved services and community citizenship. These performance groups drive human resource results, supplier/partner results, and organizational performance results upwards. Financial and customer satisfaction performance follows from happy customers and communities. The end result is continuously improving our value to our stakeholder - the final NNSY outcome goal.

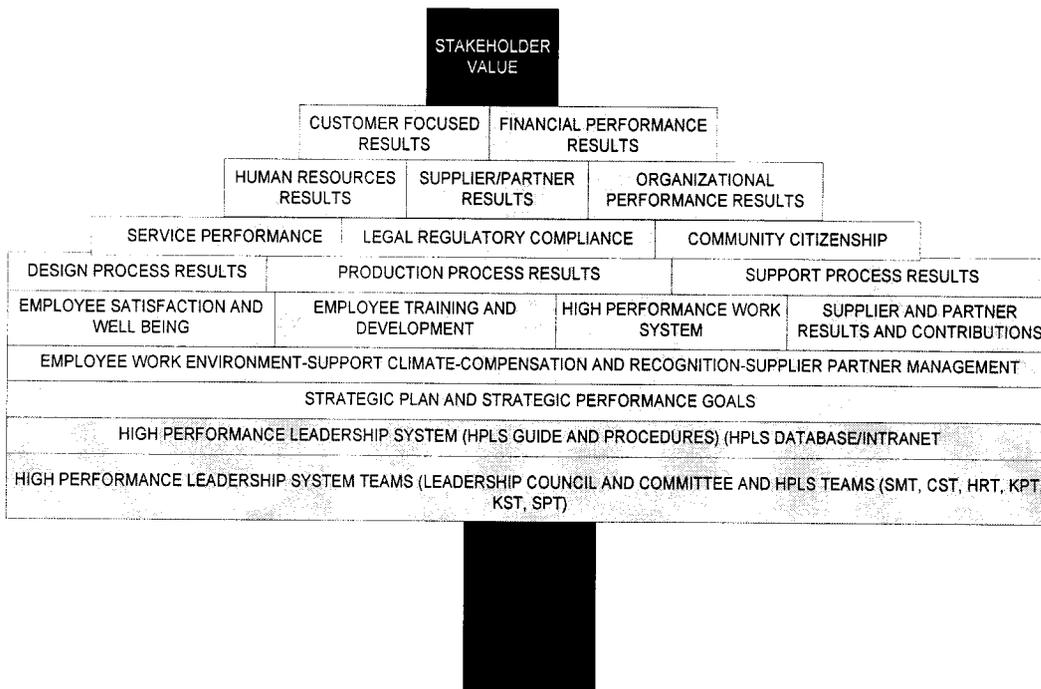


Chart 4-5, Baldrige Value Tree

## 5. Human Resource Focus

NNSY encourages our work force to develop and utilize its full potential, aligned with our Strategic Plan (See Sections 2.1 and 2.2). The NNSY work systems combine with employee education, training and development to build and maintain an environment conducive to performance excellence, full participation, and personal and organizational growth. The desired result is employee well being and satisfaction, and a workplace where everyone is able to lead based upon principles and to manage based upon facts.

### 5.1 Work Systems

Our Shipyard work systems revolve around project management (with specific start and end dates), key production processes (NNSY key processes are elements of the naval overhaul and repair industry, including welding, pipe bending, pipe fitting, sheet metal fabrication that enable the maintenance of ships in the fleet), and support processes (administrative departments, facilities management, etc.).

In our production and project management processes, we have instituted several practices to achieve higher performance levels:

- Partnerships with TYCOMs and NAVSEA to ensure effective planning
- Advanced Planning Teams
- AIM (Advanced Industrial Management)
- Co-locating engineers with mechanics
- Establishing availability project teams by ship class
- Partnerships with all Naval shipyards on material problems

Technical job design is the responsibility of our Production and Support departments, with focus on soliciting feedback from employees on specific work steps that need to be performed. Our departments also perform self-assessments to analyze business processes and export lessons learned. Our Quality Assurance Department then presents these business process findings on a bi-annual basis.

To better manage our business needs, we integrate with private sector contractors to maintain a steady Shipyard workforce level despite the workload peaks and valleys that are common in the shipyard industry. This provides NNSY the flexibility to meet surge workload demand, while providing a stable work environment and sense of job security for our employees. NNSY also uses flexible, alternate, and compressed work schedules, as well as seasonal workers to accommodate our business needs and maintain workforce flexibility.

Additionally, we have implemented several practices to encourage employee and work group contributions in order to achieve high performance in our operations, which are discussed below.

*The NNSY leadership organization (See Chart 1-1) and the High Performance Leadership System (See Chart 1-2) are integrated with Franklin-Covey human resource leadership and organizational practices. The result is improved performance throughout the Shipyard. For example,*

NNSY has developed an excellent working relationship with its labor **partners (See Figures 7.3-3 and 7.3-4)**. The HPLS structure, data collection and analysis, and corrective actions taken are one of the work systems we use to achieve high performance in Shipyard operations, and to remain current with business needs.

**Process Action Teams (PATs)** are comprised of specially selected employees and managers assigned to solve critical NNSY problems in cases where the root cause of the problem is not known. A PAT works directly with the HPLS Team to accomplish reengineering or process improvement assignments **(See Section 6.1 Process Improvements)**. For example, our Material PAT has instituted numerous process changes that have resulted in significant improvement to NNSY's on time delivery of material performance **(See Business Result, Figure 7.5-5)**

**Encouraging and Motivating Employees.** To encourage and motivate employees to utilize their full potential, NNSY has initiated a new practice called "Knockouts". Knockout sessions are designed to empower employees, and enhance communication throughout the chain of command. In a Knockout session, employees who perform the work identify and solve problems that prevent them from being productive in their jobs.

Knockouts are planned and executed by trained facilitators to encourage employee problem and solution identification, and result in "Quick Fixes" to identified issues. Decisions are then made on employee-sponsored ideas. Decision items are then tracked for 90 days to ensure full implementation, with feedback provided to employees on completed action items. After completion, a celebration is held to acknowledge employees' participation and to recognize successes. Knockout results are published for project leader reference, and for subsequent availabilities and usage throughout the Shipyard.

NNSY has implemented workshops to translate "Inspired Leadership" practices into consistent, excellent, everyday supervisory behaviors on the waterfront. Designed for mid-level managers, these workshops are attended by assistant project superintendents, zone managers, first line supervisors, work leaders, and others that are key to project level activities. A description of this process is as follows:

1. Align the project goals to the Shipyard Strategic Plan and build a set of agreed-to behaviors to achieve them.
2. Identify barriers to executing the above. These barriers are fed back into the HPLS for action.
3. Communicate weekly on significant progress against project targets, costs, schedule, and quality, contractor performance, and ship's force satisfaction.
4. Communicate weekly to reach consensus with team on critical work activities and targets for that week-make targets personal for everyone.
5. Engage everyone in dialogue to identify and understand barriers to achieving targets. Solicit and implement good solutions from everyone to clear barriers that week.
6. Ask for and obtain timely assistance from colleagues and bosses to clear all barriers the team can not resolve.
7. Examine less-than-expected performance immediately and privately; look for "system" root causes.
8. Address individual performance promptly and privately. Follow proper coaching and discipline procedures.

A primary goal of the "Inspired Leadership" process is to successfully achieve all project goals, and improve work life for everyone working on the project. Code 100Q is the program manager for the Inspired Leadership initiative, and evaluates the effectiveness of Inspired Leadership and other leadership system initiatives to ensure the expected organizational results are achieved.

**Practices that Reinforce High Performance Among Employees.** NNSY has a strong tradition of recognizing and rewarding its employees to support high performance in our key performance requirements of cost, quality, and on time delivery. Project teams are recognized on a weekly basis for superior performance, and high performing individuals are rewarded through our Special Act Award program. Other group reward and recognition activities include: firing the shipyard’s cannon, and articles in “Service to the Fleet”. Additionally, NNSY personally recognizes high performing individuals through the use of Quality Step Increases (QSI).

**Effectiveness of Compensation and Recognition Policies.** To determine the effectiveness of our compensation and recognition policies, HRT analyzes the results of the Employee Satisfaction Survey, which includes questions on this topic. The primary objective of this evaluation section is to determine the extent that NNSY’s compensation and recognition programs achieve high performance. Weaknesses in this evaluation result in development and execution of an action plan. The trends of the Compensation and Recognition Evaluations are maintained in the HPLS database and are examined in our monthly Performance Review.

To directly support the effectiveness of supervisors and workers as they achieve their weekly targets, NNSY has created a unique and innovative labor/management team, the “MTC/Deputy Team,” comprised of deputy superintendents and Metal Trades Council Chief Stewards. This team resolves, whenever possible, any and all labor relations issues that may arise in daily water-front production operations. One of their primary goals is to prevent problems or concerns from growing into major barriers to productivity and/or into serious worker dissatisfaction. The team is fully empowered to resolve these types of issues, whenever possible, and to utilize the NNSY Leadership Organization for issues the team determines require higher-level authority or support.

**High Performance Work System Results .** On an annual basis, the HRT assesses the effectiveness of NNSY’s various work systems. This assessment ensures that the NNSY’s work systems are accomplishing their goals and objectives and are truly enabling employees to achieve high productivity and quality performance levels, and addresses the following:

Cooperation	Tools & Equipments	Motivation and Rewards
Teamwork	Leadership	Performance Appraisals
Work Processes	EEO	Schedules and Workloads
Work Targets	Decision Making	Communication

The trends of HPWS Effectiveness results are maintained in the HPLS database and are examined in our monthly Performance Review.

Based upon the assessment results, the HRT initiates action plans to improve any weaknesses that are found. A major long-term NNSY initiative is the training of all NNSY employees in the Franklin Covey 7 Habits of Highly Effective People (**See Figure 7.3-5**). Employees involved in numerous Leadership initiatives will be trained in the Organization Effectiveness Cycle and the Four Roles of Leadership. NNSY managers and supervisors use metrics from the HPLS database with the Franklin Covey leadership to assess and establish best practices for improvement. This maintains a high performance work environment in which both the employee and NNSY are in a “win-win” scenario.

**Effective Communication, Cooperation, and Knowledge/Skill Training.** NNSY promotes communication, knowledge, and skill training through the practices listed below:

- **High Performance Work System Technology.** Messages between teams are sent to single individuals, to work groups, teams or to everyone on the Intranet, using the NNSY email system. The HPLS workflow system enables employees to effectively route software files from one team member to another.
- **Waterfront and Production Shop Briefings.** During daily briefings on the waterfront and in production shops, supervisors state clearly what is to be accomplished that day and the role that each employee plays in the execution of the day's work.
- **Communications Briefings.** On a semi-annual basis, all NNSY employees (in small groups) are briefed by communications teams on timely topics such as threats to our environment, cost performance, leadership development and initiatives. The groups discuss why we need to change and how we are going to change. The results of briefing effectiveness, and the coverage of Shipyard personnel participating in this communication process, are maintained in the HPLS database for analysis and review during our monthly Performance Review.
- **Knowledge and Skill Reinforcement.** Knowledge and skills are reinforced on the job as NNSY employees are trained to perform activities and associated key processes. The Shipyard uses briefings, training, testing, and the assignment of experienced personnel as mentors, all tailored to departmental needs.
- **Recruiting and Hiring New Employees.** The Human Resources Office (HRO), in concert with individual organizations, takes into account existing work processes, instructions, requirements, organization needs and projected workload to determine requirements for recruiting and hiring. The NNSY standard is to hire employees who meet skills, education and experience requirements and appear to be strong team workers with individual initiative, innovative and flexibility traits. This standard also ensures that hiring practices meet established diversity and fair work force practices. NNSY has determined the skills and characteristics to recruit new employees that are aligned with its guiding principles, which include team orientation, initiative, innovation and flexibility.

## 5.2 Employee Education, Training, and Development

NNSY education, training, and development programs support the achievement of our Strategic Plan, and build our employee knowledge, skills and capabilities that contribute to improved employee performance and professional development. NNSY has partnered with Franklin-Covey to support comprehensive individual development and help establish an environment for empowerment, innovation and learning. Each employee is trained in the Seven Habits of Highly Effective People, and as the need occurs, in the 4 Roles of Leadership. NNSY has also partnered with the Alliance for Continuous Improvement (AfCI)<sup>TM</sup> to support HPLS team and internal consultant training in Baldrige-based management practices.

**Balancing Organizational and Employee Needs.** Our approach to balancing the short- and longer- term organizational and employee needs is accomplished through the deployment of several programs. Those programs include: Apprentice Program, Engineering Recruitment Bonus

Program, Revitalization Training for Skills, Recruitment, Retention and Relocation Program, and continuing education programs for segments of our workforce.

The Apprentices Program has recently doubled in size to meet the challenges presented by an aging workforce. The Shipyard now has approximately 400 apprentices as part of the shipyard community. This program has been established to provide the trainees with trade theory and community college courses in a four-year course of study. This accredited program by the Department of Labor is one piece of our plan to maintain skills and lower the average age of our workforce in the coming decade. The course of study has a dual track approach with the trainee receiving either an associate degree or a certificate upon completion of the program. Upon graduation student trainees may be converted to full journeymen in their trade dependent on workload and manpower needs of the Shipyard.

Another recent approach was establishing a critical skills plan to meet the submarine workload surge forecast for the next few years. The resource shops, working with the Production Training Department, developed a plan to identify the skill types needed, and train employees to meet this workload. An outgrowth of the critical skill plan was a review of the skills needed to meet our overall workload in the future. The Production Department examined the needs and invested training dollars in some critical skill areas with mock-up training and familiarization training. The revitalization of our workforce and the changing needs in critical skill investment continues to be a focus of the Production Training Department.

***Education and Training Needs Assessment.*** Annually, our HRT assesses education, training, and development through administration of the Human Resources Evaluation. This section of the evaluation addresses performance plans and needs, including long-term employment development objectives and performance goals, and is repeated after improvements have been implemented based upon earlier evaluations. The following areas are addressed in the evaluation: basic skills, career development, job requirements, job rotation, and cross training.

The trends of the Education and Training Needs results are maintained in the HPLS database and are examined in our monthly Performance Review.

***Seeking and Using Input on Education and Training Needs.*** Our education and training programs are designed to support our approach to work and jobs. The HRT provides statistical workforce trends to assist NNSY organizations and employees (the subject matter experts) in designing education and training programs.

Training is designed to meet the Shipyard's pressing needs in several key areas: mandatory, process defined, skill related, environmental, and/or safety regulated. For the majority of the Production Department training, written instructions identify whom is responsible for conducting specific training. Mandatory training is provided in accordance with Department of Navy requirements, and includes courses in ethics, diversity, and sexual harassment. Management and leadership training includes OEC, Inspired Leadership, Knockouts, 4 Roles and Seven Habits to enhance skills in those areas.

***Education and Training Delivery.*** Delivery of conceptual, procedural and practical demonstration "hands-on" training courses is normally through the classroom process. Selected conceptual and procedural training courses are deployed via the NNSY Intranet, where hyperlinks are established for Computer-Based Training (CBT) lessons and tests. NNSY employees access the CBT and Tests from PC workstations that are located in some NNSY offices and work areas. Computers support organization-wide training and testing to improve knowledge and to share skills. Code 1230 has deployed several computer security and awareness programs on the Intranet in explosives handling, asbestos awareness and handling techniques, and torque wrench usage. In several areas PowerPoint presentations have been used to enhance delivery of course materials.

NNSY encourages its workforce to pursue self-development. Although a large portion of its training dollars are spent to provide necessary training for critical skills and workforce readiness, many employees are afforded the opportunity to take training that will enhance job performance. This is accomplished by taking short, focused courses (typically one week or less in duration) or longer academic courses taken at local colleges or universities.

***Education and Training Effectiveness Assessment.*** On an annual basis, the HRT assesses NNSY's education and training effectiveness section questions in the Employee Satisfaction Evaluation. The purpose of this assessment is to improve our education and training programs, taking into account overall performance, employee development objectives, and costs of education and training.

Training is documented for both internal and external delivery. This is primarily accomplished by having the trainee fill out post evaluations to determine the effectiveness of training received. Evaluations are then reviewed by the trainee's supervisor/instructor to determine if: 1) training met the employee's needs, 2) objectives were met, 3) training was cost effective and 4) there is future utilization or need of training.

Another area where training effectiveness is measured involves random retention testing. This requires periodic testing of the workforce on various work aspects (i.e. steam plant cleanliness), analyzing tests results to determine strengths and weaknesses and using this feedback to update future training courses. Real-time feedback is also given directly to employees via refresher training and training bulletins administered by supervisors in instances where information requires immediate dissemination to the workforce. **(See Figure 7.3-6)**

### **5.3 Employee Well Being and Satisfaction**

On an annual basis, the HRT conducts the Employee Satisfaction Evaluation, which includes specific questions regarding our work climate. One notable and innovative practice to improve the safety of the work environment is Hazmat Info-labeling. This process allows the photographing product and warning labels directly from the hazardous material containers that will be decanted and repackaged for issue to our workforce. This practice was designated as a NAVSEA "What a Good Idea" that should be shared with Corporate NAVSEA via the Business Process Interface Link (BPIL) web site. Additionally, NNSY has achieved full compliance with the Navy Occupational, Safety and Health Program Manual , OPNAVINST 5100.23E.

A key work environment measure tracked by the Key Support Process Team (KST) is Illness and Injury rates (See Figure 7.3-2).

**Support Climate.** On a semi-annual basis, the HRT conducts the Employee Satisfaction evaluation, which includes a specific section with questions related to support services. The purpose of the support services questions is to ensure that our organization supports the well being, satisfaction, and motivation of employees through services, facilities, activities and opportunities.

Our Work Environment assessment ensures that our organization maintains a safe and healthful work environment. This assessment is repeated for appropriate employee categories and types as necessary. The work environment results are maintained in the HPLS database and are examined in our monthly Performance Review. Work Environment action plans are developed based upon weaknesses found in this assessment. In addition, NNSY's Occupational Safety, Health and Environment Department (OSHE) capture data on environmental issues/concerns. (See Figure 7.3-2). Trends that indicate areas of concern by employees are dealt with through various mediums including corrective actions, formal classroom training, stand-up training taught by supervisors at the work site, and safety bulletins.

**Employee Satisfaction.** Since 1998, NNSY has administered an annual Employee Satisfaction Evaluation. This evaluation includes the essential factors that affect employee well being, satisfaction, and motivation, and assists us in assessing our work climate. The HRT, with Leadership Council approval, develops questions and rating score weights contained in the evaluation. Employee Satisfaction results are integrated into the NNSY's strategic planning process, including focus on work environment and employee support climate. Employee Satisfaction Evaluation trends are maintained in our HPLS database and are examined during the Performance Review Current Employee Satisfaction survey categories are listed below:

<i>Benefits</i>	<i>Hiring/Retention</i>	<i>Promotions/Opportunities</i>	<i>EEO</i>	<i>Travel</i>
<i>Communication</i>	<i>Job Satisfaction</i>	<i>Compensation</i>	<i>Performance Appraisals</i>	<i>Facilities</i>
<i>Leadership</i>	<i>Job Security</i>	<i>Safety</i>	<i>Schedules/Workloads</i>	<i>Services</i>

The HRT has analyzed and published the results of the 1999 evaluation (See Figure 7.3-1). Results were reported by demographics (race, gender, and employee level). The scores and employee comments have resulted in several planned actions by the HRT, such as revamping the employee satisfaction survey to improve question quality and resulting data, and to reduce processing cycle time for subsequent evaluations. Employee Satisfaction surveys are designed to collect data at the shop/code level, which provides HRT data needed to perform comparative analysis, and to better target corrective actions throughout the Shipyard organization. HRT assesses trends, and develops corrective action plans to address specific areas of employee dissatisfaction.

The HRT uses the results of the Employee Satisfaction evaluation scores and employee comments to target specific areas for improvement. The HRT has recommended specific corrective actions be taken to improve scores in the major categories of leadership, communication, performance appraisals, and promotion opportunities. Each of these areas represents the best targets of opportunity to significantly improve employee satisfaction levels.

## **6.1 Product and Service Processes**

At any point in time, NNSY is working on about one-third of the Navy ships in the Atlantic fleet. We manage our processes through mature, well-deployed, project-oriented systems driven by key customer requirements. NNSY's Key Production Process Team (KPT) is the HPLS team with boundary spanning oversight to evaluate our critical production processes, and to recommend actions to improve process performance. Our Quality Council is a cross-functional team of top and mid-level managers who are jointly responsible for designing, implementing, and managing NNSY's quality program. The Council is comprised of process owners and managers From Production, Operations, and Quality Assurance. Quality Council members serve in core positions on the KPT.

The goal of the KPT is to ensure that every activity in the chain is performed as well as possible to achieve total process performance goals including quality, cycle time, and process cost. To achieve this goal, process owners, in consultation with the KPT, employ continuous process improvement and process reengineering practices.

### **6.1a Design Processes**

***Design Processes.*** NNSY has established a policy of requirements for new processes to ensure the trouble-free launch of new process design. These requirements, applicable to the Production, Nuclear Engineering and Design Engineering Departments, incorporate the requirements of ISO 9004 and additional requirements established by the Shipyard. As customer/market and mission related requirements change, this instruction will be updated.

The Strategic Management Team (SMT) sets top-level key performance requirements for new processes as a result of the NNSY Strategic Planning process (**See Sections 2.1 and 2.2**). Strategic Goals become Performance Goals and Strategic Performance Measures include targets for key processes.

The KPT provides oversight to insure the new design process instruction is used for all new design processes in excess of \$100,000. Additionally, the team insures the process is used as a guide for other new design processes where there is high risk or otherwise significant risk of success with potentially major impact on productivity. A key member of the team is also responsible for day-to-day process improvements in the Production Department to insure proper oversight of these new processes. Process owners are designated within the shops and codes to review new process designs, and, for process designs that are less than \$100,000, use the instruction as a guide.

The Shipyard provides one or more Project Quality Engineers (PQE) for each CNO project. The PQEs are located in the Quality Department, which is represented on the KPT. Their duties include evaluation new processes being used on projects and new applications of existing processes to evaluate risks and recommend risk mitigation strategies as applicable.

**Using Benchmarking and Comparative Analysis.** During planning phases, benchmarking and comparative analysis is performed on all projects to compare the cost of previously performed similar work for jobs performed by this shipyard and other public and private shipyards. These comparisons are reviewed by top Shipyard management at the ICP (Internal Control Price) Review meeting prior to project start. If a lower estimated cost for similar work exists, the activity with the lower cost is contacted (in some cases, visited) to determine if a "best practice" exists, so the project can be performed at or below the benchmark. NNSY has recently applied benchmarking principles in design decisions regarding altering ships for female personnel.

The Shipyard has recently re-established its position in submarine overhaul/refueling work, which has not been performed here in several years. To ensure the most efficient processes and current technologies will be used, the Shipyard has selected key process best practices from observing work executed at other shipyards.

### **6.1b Production/Delivery Processes**

**Key Processes and Performance Requirements.** NNSY'S key production processes are: repair, overhaul, dry dock, convert, modernize, and inactivate ships, and to provide logistics services in support of fleet readiness. NNSY is continuously improving its key production processes, emphasizing the key performance requirements of: Cost, Quality, and On-time delivery.

**Managing Day-to-Day Operations.** In the area of Project Management, NNSY sets cost, schedule and quality performance targets for the individual Project Management Teams, and deploys these key requirements throughout the organization. Metrics such as cost performance (CP), schedule performance (SP), and excess Work in Progress (WIP) directly impact key customer requirements and drive work at the task levels. The KPT provides oversight of the targets established by the key process owners. **(See Figures 7.5-1, 7.5-2, and 7.5-7).**

NNSY tracks project management activities on a weekly basis. Project status briefs are performed in which the customer provides input and contributes to process improvement. These briefings provide a mechanism to ensure that processes accommodate key operational performance requirements of cost, quality, and on-time delivery.

NNSY manages its day-to-day operation of key production/delivery processes through the weekly Tuesday Financial Meeting, where CP and SP and quality measures are reviewed by all departments. Management tasks the departments to take real time corrective action to drive performance towards desired targets. The KPT reviews this same data, evaluates trends, identifies areas for improvement, develops improvement strategies with process owners, and reports results at the monthly Performance Review.

NNSY uses the Interim Quality Performance System (IQPS) as a systematic approach to collect quality data. The IQPS is an online database designed to provide access to real-time quality measures, providing the data used to identify performance trends and drive process improvements. Data from this system is used in the HPLS database to provide a high-level overview of quality performance. The Quality Council reviews this data, along with process owners in Production, Operations and Engineering to analyze trends and implement improvements.

Real-time customer input is incorporated into day-to-day management through use of the Customer Satisfaction Card (See Chart 3-3 Customer Satisfaction Card). Also, NNSY's Customers are included in requirement setting, status reports, variances, and evaluations (See Section 3.2)

**Key Production Process Improvement.** Targets and measures are applied to key process-related departments and shops. These departments and shops represent over 70% of the 6,800 (approximate) employees at NNSY as of the first quarter of fiscal year 1999. Continuous process improvement is accomplished by taking appropriate corrective and preventive actions as necessary to achieve key process target values of performance – then setting these target values higher (we call this practice *stretch* targets).

During the monthly Performance Review (See Section 1.1b), key process measures are compared to target values. Unsatisfactory variances from target values require corrective action and where possible, preventive action. These actions are recorded in the HPLS database with each key process measure. When marginal or unsatisfactory key process trends are encountered, process owners, in consultation with the KPT, implement key process improvement. When a key process is selected for improvement, it is documented and analyzed in detail.

The KPT examines process performance using NNSY corporate databases and statistical process control as well as the HPLS database. The KPT integrates with Code 130, Quality Assurance Office, who administers the IQPS. It captures and quantifies quality data from all Shipyard production, engineering, and quality departments.

A key performance requirement for submarine repair and maintenance is interference removal. An example of an improved process came out of Knockouts held to support submarine projects. As a result of the communication between engineers and production workers at the Knockout, a new scaffolding installation process was identified that could significantly improve the interference removal cycle time. Engineering developed scaffolding that could be hung from overhead spaces, greatly facilitating the interference removal process and reducing cycle time from 4 months to 2 ½ months. This improvement illustrates the benefits achieved through NNSY's work system practices and employee empowerment (See Section 5.1). As a result, the key schedule performance (SP) measure for this project was 0.94 (below the target of 1.00).

A key factor for success of the overhaul, repair and modernization key processes is having the right materials available to workers at the beginning of the job. A special Material Process Action Team, which is represented on the KPT, has been established to improve the process of getting the right material to the worker all the time. Two critical measures of this process are "Material Churn" and "Percent Material Prestaged". "Percent Material Prestaged" measures to what extent material is available when the project starts. "Material Churn" measures to what extent additional or different material has to be ordered once a job is started. This team improved ordering accuracy and long-range material accountability, resulting in a major process improvement (See Figure 7.5-5) which supports the Shipyard Strategic Goal #1.

NNSY was challenged by the discontinuation by the Navy of the "Navy Stock Fund" (referred to as BP-23) to develop a new way of purchasing long lead-time material (LLTM). This and our

recognition of other material acquisition problems has led to recent material management business practice re-engineering at NNSY. We have completely alleviated material acquisition disruption by working closely with our project customers for FY00 to develop improved planning schedules and by learning new ways to use existing material ordering technology and purchasing regulations. In fact, the twelve key aspects of the Material Management Process now in place across all projects at NNSY was adopted as the corporate best practice and directed to be implemented at all Naval shipyards. This new process, with the primary focus on delivery of the right material to the mechanic on the waterfront has resulted in substantial savings in the actual cost of managing material. Numerous public and private shipyard material management experts and senior managers have visited NNSY due to interest generated by new concepts in place here that have been used to manage nearly 100,000 line items of material in FY00.

A continuous process improvement technique used by NNSY is problem resolution. The objective of problem resolution is to significantly improve a process, sometimes resulting in a total process redesign. When problem resolution is necessary, the process owners often consult with the KPT in using various techniques to achieve continuous process improvement. Our organization has a sound systematic process for establishing Process Action Teams (PATs), with well-documented instructions that provide a flowcharted approach to problem identification and analysis, and development of process improvement recommendations. (See Material PAT above)

Our Production Department (Code 900) also performs process studies and investigations, and assists shops with designing and implementing process improvements. Code 900 interfaces with Quality Assurance and Engineering for process problems. Once process improvements are implemented, the KPT ensures that the results are integrated into the other processes, including revising the estimating standards for customer work.

***Benchmarking Practices.*** NNSY has a documented approach to using benchmarking to improve our production key processes. This instruction defines four types of benchmarking (internal, competitive, functional/process and generic/strategy), and defines process improvement (PI) and cumbersome work practices (CWPs). NNSY documentation includes a detailed process flow chart and description that considers estimated cost to conduct the benchmark, and guidance on how a benchmark should be conducted. Each NNSY Department has responsibility for benchmarking studies as part of their process improvement efforts.

***Process Improvement Sharing.*** We are systematically capturing lessons learned into an accessible format to facilitate process improvements. Under the direction of the Quality Council, the position of Project Quality Engineer (PQE) has been established and PQEs are being assigned to availability project teams. An instruction has been issued on the responsibilities of PQEs, who have been designated to collect, review, and compile lessons learned as part of their role in facilitating process improvements. In the event that quality problems occur, PQEs capture these lessons learned and disseminate them throughout the Shipyard utilizing the PQE Lessons Learned database. This local database has been designed to be compatible with the Corporate Lessons Learned database which will be implemented in the fall of 2000.

Ship project information is also provided on NNSY's Info Web, listed by Ship Project Sites. Clicking on any ship project provides the following information: CO's comments; NNSY comments; progress; critical path work; status of work; status of testing; and status of key events.

NNSY ensures that knowledge gained from process improvement or process reengineering is shared with appropriate departments and shops through the Code 900P Process Improvement website on NNSY's Info Web. Also, *Service to the Fleet* articles provide information concerning all aspects of the Shipyard, including progress on Shipyard projects and achievements.

## 6.2 Support Processes

Our Key Support Process Team (KST) is the HPLS team responsible for evaluating, and recommending improvements to NNSY's support processes to improve performance levels, and ensure results meet operational and customer requirements.

***NNSY key support processes.*** NNSY support organizations perform activities (daily jobs, tasks) that are not included in our key service process activities as presented in Production and Delivery Processes (**Section 6.1**) or in Supplier and Partnering (**Section 6.3**). Listed below are the key support areas KST is currently evaluating:

<i>Administration</i>	<i>Environmental</i>	<i>Physical Security</i>	<i>Financial Management</i>
<i>Command Evaluation/Leadership</i>	<i>Safety (NAVOSH)</i>	<i>Personnel Security</i>	<i>Information Systems</i>
		<i>Plant Property Management</i>	

***Key Support Process Requirements.*** NNSY support organizations design their processes and activities to meet performance requirements set during strategic planning (**See Sections 2.1 and 2.2**), and to meet NAVSEA Command Performance Inspection (CPI) requirements. We have begun a self-assessment program to identify our customer requirements and develop the measures needed to evaluate our support process performance. Customer input is acquired through customer opinion surveys, which help support process owners target opportunities for improving efficiency and effectiveness. Support process performance contributes to project work accomplishment, productivity, satisfaction, and safety of NNSY employees.

The KST uses the HPLS performance management database to evaluate support activities and processes, to maintain process integrity, and to ensure support processes meet operational and customer requirements.

During the organizational Performance Review (**See Section 1.1b**), these in-process measures are compared to target values. Unsatisfactory variances from target values require corrective action and, where possible, preventive action. These actions are recorded in the HPLS database with each process or activity performance measure. The goal of support management is to ensure that every activity in the organization achieves all activity and process performance targets.

***Improving NNSY's Key Support Processes.*** The KST evaluates and recommends corrective actions to continuously improve NNSY's support processes. Continuous process *evaluation* is accomplished using our HPLS database as described in **Sections 4.2**. Continuous process improvement is accomplished by taking appropriate corrective and preventive actions as necessary to achieve activity target values of performance and then setting these target values higher (setting stretch targets).

When necessary, the KST initiates Process Action Teams (PATs) to reengineer key support processes. PAT reengineering is accomplished to significantly improve a process, sometimes resulting in a total process redesign (**See Section 6.1**). Significant improvements in support processes are shared throughout NNSY via the HPLS Intranet, and with NAVSEA's Business Process Interface Link (BPIL) website. For example, NNSY developed the capability to photograph the required hazardous communication information that must accompany hazardous material (HM) upon issue. This "info-photo" includes an actual photograph of the HM product and warning label from the container being issued. This info-photo also provides NNSY's Authorized Use List (AUL) and Material Safety Data Sheet identification numbers exceeding the pertinent requirements in the OPNAV Instruction. This innovative practice has been designated as a NAVSEA Inspector General "What a Good Idea!" to be shared via the Interface Link (BPIL) website.

### 6.3 Supplier and Partnering Processes

NNSY evaluates and improves its supplier and partnering processes, relationships, and performance through the Supplier Partner Team (SPT), which ensures that supplier performance requirements are met. NNSY supplier and partnering processes are designed to meet overall performance requirements defined during our strategic planning process, as explained in **Section 2.1a**.

**Key Products and Services Purchased from Suppliers and Partners.** Regulations and public policy largely mandate the selection of our suppliers and partners.

Our Suppliers Include:

<i>DLA</i>	<i>Consumables, raw materials, repair parts</i>
<i>NAVICP</i>	<i>Repair parts, management of critical items; SS, LI material, ship components</i>
<i>GSA</i>	<i>Tools, paints, services, office supplies</i>
<i>FISC Norfolk</i>	<i>Logistical Support, Acquisition Policy, Administrative Support</i>
<i>PWC</i>	<i>Facility maintenance, utilities, vehicles</i>
<i>LANTNAVFAC ENG COM</i>	<i>Military construction funding (project design and build)</i>
<i>Other</i>	<i>Miscellaneous materials suppliers and vendors</i>
<i>CNRMA</i>	<i>Port services, resource support, mail handling, MWR, facilities, property</i>

Our Collaborative Partnerships include:

<i>FISC Annex</i>	<i>Logistics services, interface to FISC Norfolk</i>
<i>RSG</i>	<i>SRA/IMA, NRMD</i>
<i>SUPSHIP-Newport News</i>	<i>Oversee and manage contracts for partnered work</i>
<i>SUPSHIP-Portsmouth</i>	<i>Oversee and manage contracts for partnered work</i>
<i>PLANNING YARDS</i>	<i>Engineering direction, technical support</i>
<i>NNS</i>	<i>Exchange of skilled personnel</i>
<i>PUBLIC SHIPYARDS</i>	<i>Exchange of skilled personnel, technical expertise, process knowledge</i>
<i>NSSG</i>	<i>Corporate software configuration, ADP services</i>
<i>PRIME CONTRACTORS</i>	<i>Sole source major components, machinery, services, technical support</i>
<i>NAVSEA PROGRAM MANAGERS</i>	<i>Support, Technical direction</i>

***Incorporating Performance Requirements into Supplier/Partner Process Management.*** Suppliers' performance is evaluated against NNSY's key customer requirements of cost, quality, and on-time delivery of Shipyard services. Performance requirements are reviewed monthly by the SPT, which provides feedback to address corrective actions if key requirement performance is unsatisfactory.

***Ensuring Performance Requirements are met.*** SPT uses the following key measures to evaluate contractor performance:

CPARS data	On time delivery of Material	Milestones Missed - WRT contractor schedule integration	Quality - QDR rate
% Contracts Urgent and Compelling (how much money is saved with competition vice forward pricing)	Value of current NNS contracts	NNS key events/dates missed	Overdue action items from the Resource Sharing Initiatives

For Material, NAVSHIPYDNORINST 4355.6H specifies that when requests for quotes or proposals include specific quality assurance provisions, the Red/Yellow/Green (RYG) program applies. This program provides for maintenance of a vendor database that includes RYG flags that relate to past vendor performance. This program improves NNSY's chances of selecting a good vendor (Green flag) in terms of past performance.

For Contractor Support, SUPSHIP Portsmouth uses a Contractor Performance Assessment Reporting System (CPARS). This program is designed to evaluate contractor performance in four separate categories: technical performance/capability, schedule adherence, management performance, and cost performance. (See Figure 7.4-1)

On a monthly basis, supplier and partner progress is reviewed by the SPT through the Performance Review process (Section 1.1b). The SPT establishes appropriate measures for individual category suppliers and partners, which are maintained in the HPLS performance management database.

***Supplier/Partner Feedback.*** Feedback for suppliers and partners begins with the preparation of corrective action plans if quality, schedule or cost performance measures are unsatisfactory. The SPT assesses the impact of the problem and recommends corrective actions, which are collaboratively developed with our suppliers and partners. Corrective action plans contain narrative explanations of the cause of the unsatisfactory variance, the impact of the variance on quality, schedule and cost targets, and the action plan that reduces or eliminates the unsatisfactory variance.

Data from contractor metrics has indicated a general reduction of Shipyard satisfaction with their work in FY00 as compared to previous years. Major problems include identification of work late, poor integration into existing work and poorly scheduled completion dates. To improve the contracting process, once the issues were identified, the Shipyard incorporated the lessons learned into initiatives for follow-on projects. A team has been established to institutionalize the improvements into standard business practices. These practices include improved planning to identify contract work earlier, improved management and coordination, and better work integra-

tion in the overall project. The improvement has been seen in the most recently completed project which completed with a significantly improved cost and schedule performance.

***Costs/Receipt Inspection/Testing.*** As part of the overall NAVSEA initiative to improve supplier parts, the Controlled Industrial Material (CIM) program was implemented to identify manufacturers and parts that require receipt inspection and testing. This listing is a composite of all shipyards and is based on recent historical data. Potentially, this could be a very expensive process for the user of the controlled materials. NNSY has mitigated some of these expenses requiring a letter of certification from the manufacturer, where the product compliance to the requirements are documented and certified to the user. Additionally, when the product is known to be used in non-critical systems (components, equipment and/or structure not affecting the ship's reliability or safety), the receipt inspection requirements may be waived on a case basis. For SUBSAFE and Level I applications where receipt inspection and testing is mandatory, special controls are invoked to ensure the quality of the product, its application, and the technical requirements.

***Assistance/Incentives to Improve Supplier/Partner Contributions.*** Suppliers receive an incentive to meet or exceed requirements through their performance ranking. A supplier receiving a high percentage of "Green" ratings would move to the Highly-Preferred list, and would be rewarded by receiving more contracts than a lower performing competitor. A key partnering initiative has been the sharing of engineering plans with other government shipyards performing submarine maintenance. Such information exchanges contribute to achieving key NNSY requirements through reducing engineering rework, and lowering cost.

***Supplier/Partner Process Improvement.*** On an annual basis, the SPT conducts the Supplier and Partner Process Evaluation. The purpose of this evaluation is to improve the management of our supplier and partner processes to achieve better performance. The areas covered in the evaluation include selection, measurement, goal, cost of quality, action plans, achievement and supplier relations. Through the SPT's efforts, the supplier contracting process cycle time has been reduced, improving on-time and cost performance in acquiring contracts. To reduce cost, minimize time delays, and improve quality, the SPT team divided suppliers based on key requirements impact. The process reduced a list of 1500 suppliers to 28, improving NNSY's supplier relationships and key requirements performance.

Supplier/Partner management will improve as we strive to improve contracting practices. "Urgent and Compelling" contracts were first used which allowed contractors to arbitrarily set rates. NNSY has since developed "IDIQ" contracting (Indefinite Delivery, Indefinite Quantity) which is more competitive, more responsive, less expensive, and easier to use than the "Urgent and Compelling" process. NNSY has also developed "Best Value" contracts, which requires longer lead-time to execute, but gives the shipyard the best quality, at the best price in many cases.

## 7 Business Results

NNSY uses the HPLS performance database and monthly review process to examine organization performance in key business areas including customer satisfaction, service performance, financial and marketplace performance, human resource results, supplier and partner results, and operational performance. Performance measures (See Table 4-2) are input into the HPLS database and become part of the Organizational Performance Review discussed in Section 1.1b. (Note: Direction of arrows indicates desired trend direction.)

### 7.1a(1) Customer Satisfaction Results

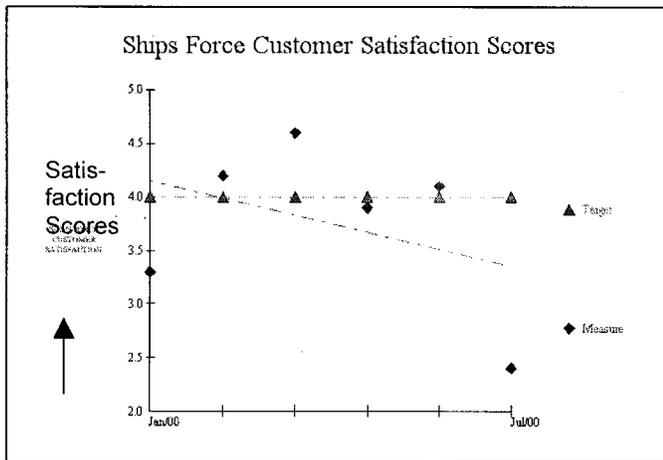


Figure 7.1-1

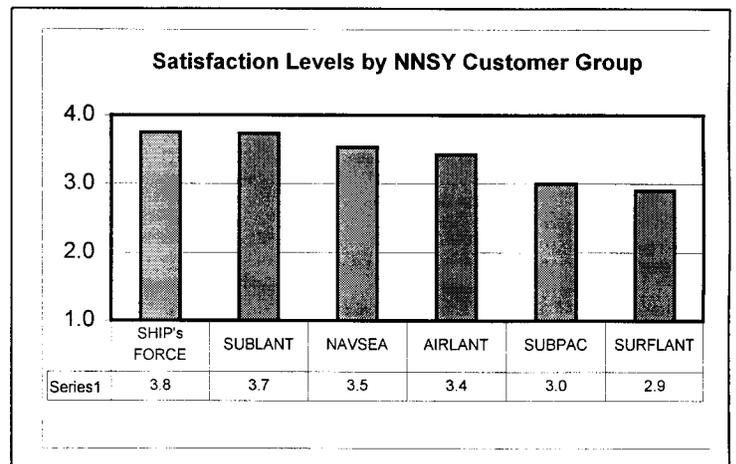


Figure 7.1-2

Our key customer service performance requirements are cost, quality, and on time delivery. These customer requirements are shown in Figures 7.5-1 and 7.5-2, and reflect NNSY's excellent performance as compared to other shipyards. To maintain quality customer relationships, satisfaction issues are captured through customer satisfaction cards and evaluations.

Figure 7.1-1 shows trend data on NNSY's ships force customer satisfaction level, which is below target. Figure 7.1-2 indicates that NNSY's Ship's Force customers are most satisfied, while SURFLANT is the least satisfied. Assessments are developed from these evaluations and provided to appropriate Departments and Projects for development of action plans to correct customer satisfaction and relationship issues. Progress of the action plans and impact on the results areas are tracked and monitored by the CST with results reported at the monthly Performance Review meetings.

7.2a(1) Financial Performance Results

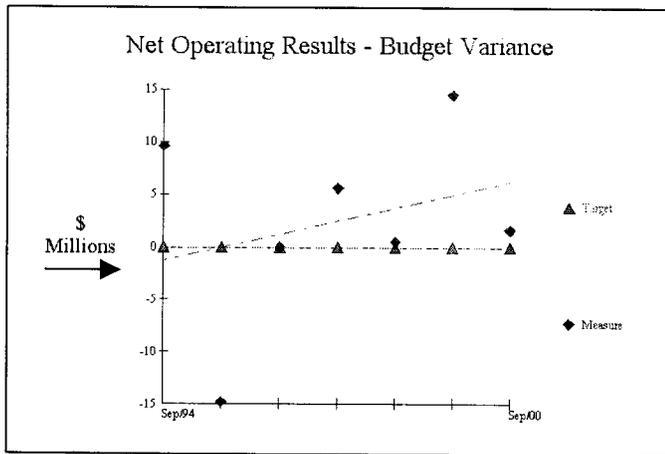


Figure 7.2-1

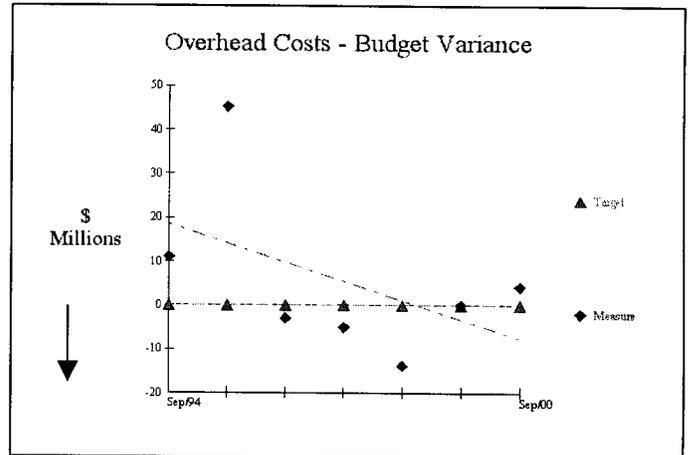


Figure 7.2-2

Financial success is indicated by achieving Net Operating Results (NOR) at (or slightly above) budget. Emergent workload and improved productivity can contribute to financial performance better than budgeted. **Figure 7.2-1** shows that NNSY is tracking close to target in FY00, achieving a NOR \$1.6M better than budgeted. This was due to improved productivity and discipline in overhead execution.

The ability to meet overhead cost projections plays a significant role in meeting the NOR targets and in maintaining competitive manday rates. **Figure 7.2-2** shows continued improvement in our ability to stay within our overhead budget.

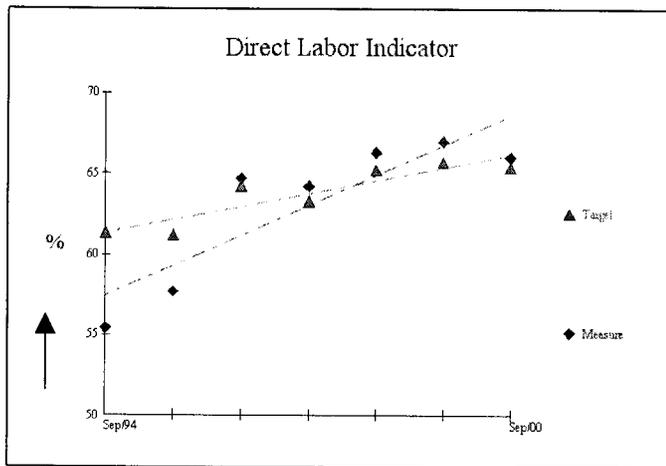


Figure 7.2-3

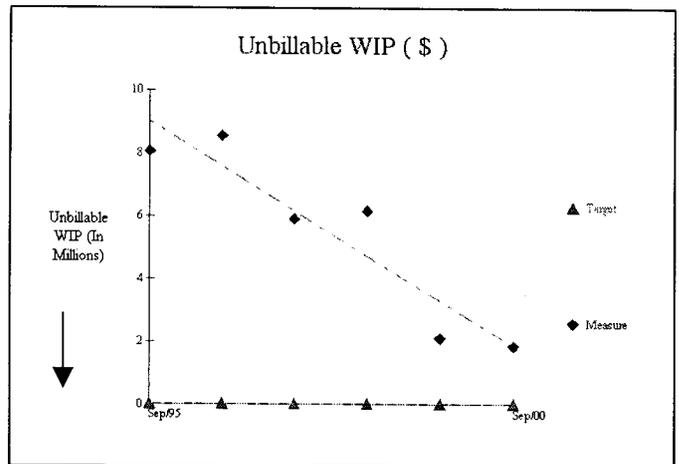


Figure 7.2-4

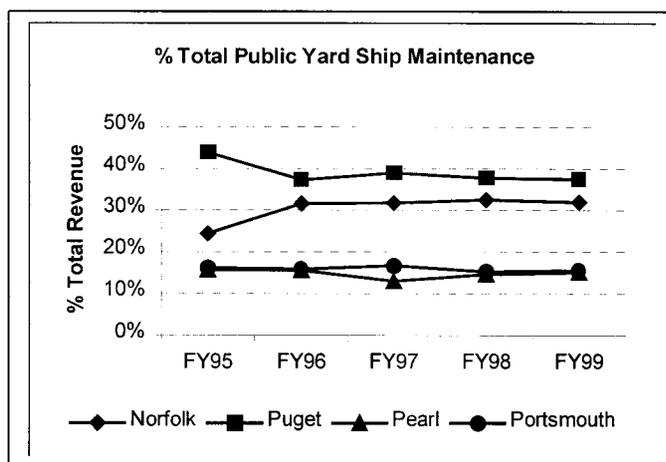
Direct Labor is a ratio of mandays worked on direct work (customer work) to total mandays, which includes direct labor and overhead. **Figure 7.2-3** reflects our improving performance in holding/reducing overhead mandays while increasing direct work.

Our success in managing Direct Labor contributes to our improving trend in Overhead, which is reflected in **Figure 7.2-2**.

**Figure 7.2-4** shows significant improvement in managing Unbillable Work in Progress (WIP), which is unauthorized work accomplished that the customer is unwilling to pay for. Improvement in managing Unbillable WIP reduces manday rates, contributes to NOR performance, and improves shipyard accountability and cost performance.

### 7.2a(2) Market/Mission Performance Results

Mission success is indicated by measures of cost performance, quality, and schedule (on-time delivery) based on the needs of our customers as referenced in Section 7.1a(1).



**Figure 7.2-5**

Norfolk Naval Shipyard is the second largest provider of maintenance services of government Shipyards and has an increasing share of the available public sector maintenance as shown in **Figure 7.2-5**. NNSY manages workload using a Work Allocation Report, which is common for the public shipyards. For FY 99, the total direct labor workload for all public shipyards was 3.6 million mandays.

7.3a(1) Human Resource Results

The results of the 1999 Employee Satisfaction Survey in **Figure 7.3-1** showed a slight improvement over 1998 results. Employee group demographics showed satisfaction levels were fairly consistent across race, gender, and employee grades. The HRT has recommended specific corrective actions be taken to improve scores in the major categories of leadership, communication, performance appraisals, and promotion opportunities. Each of these areas represents the best targets of opportunity to significantly improve employee satisfaction shipyard-wide.

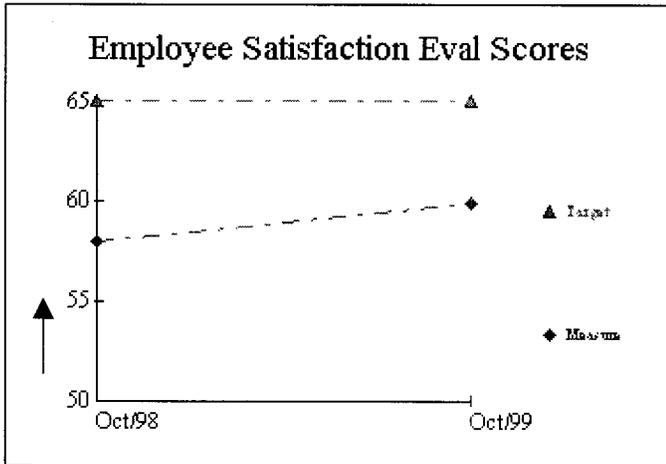


Figure 7.3-1

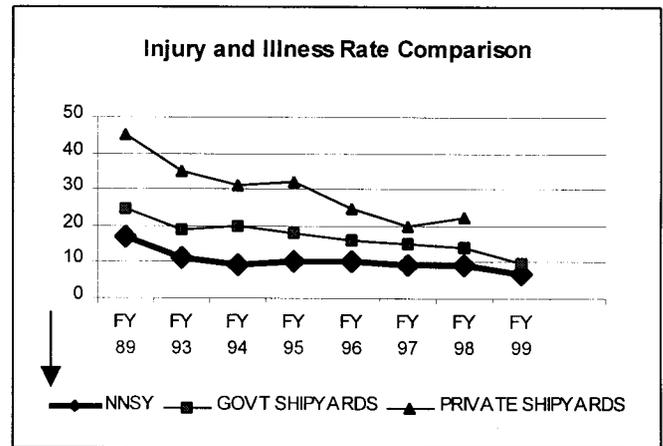


Figure 7.3-2

As a leader in safety performance, NNSY has recently received the Secretary of Navy and Chief of Naval Operations Safety Ashore Awards and the National Safety Council's Injury Rate Performance Award. We are committed to ensuring a safe and healthful work environment for all our employees, and are continuing our efforts to be a safety leader in the shipyard community as shown in **Figure 7.3-2**.

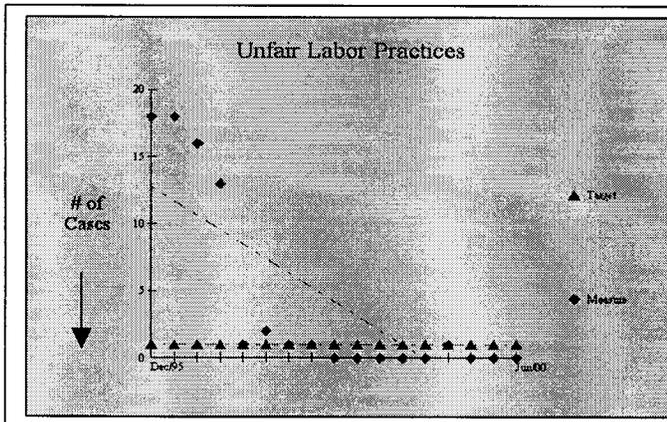


Figure 7.3-3

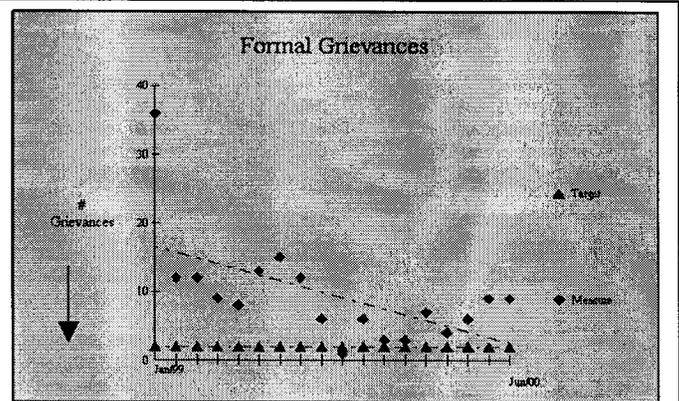


Figure 7.3-4

**Figures 7.3-3 and 7.3-4** show that NNSY has developed an excellent working relationship with its labor partners, as indicated by significant reductions in Unfair Labor Practices and Formal Grievances measures.

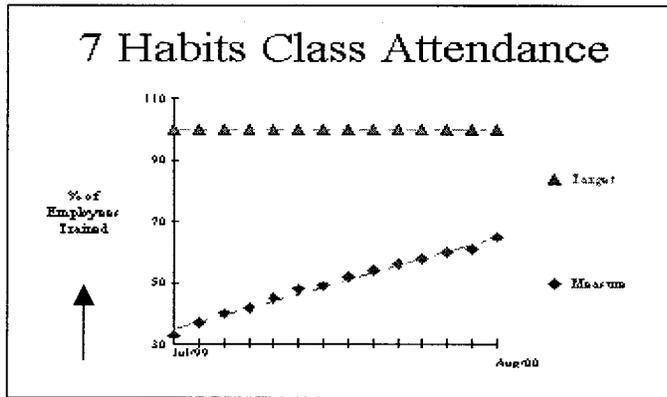


Figure 7.3-5

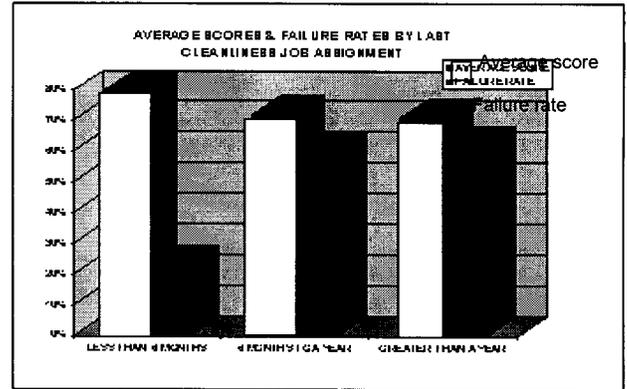


Figure 7.3-6

65% of all employees have received the Franklin Covey training on the 7 Habits of Highly Effective People; this is part of the organization strategy to improve employee performance and communications

One way NNSY evaluates training effectiveness is through testing of trade skill and knowledge retention. **Figure 7.3-6**, indicates the composite scores for craftsmen who have been retested for cleanliness controls retention and the average scores and failure rates for individuals who have performed the work within 6 months, 1 year or over one year of the retest date. Results from retention tests are used to provide requalification of individuals and immediate feedback of weak areas, develop refresher training and training bulletins, and modify existing lesson plans.

**7.4a Supplier and Partner Results**

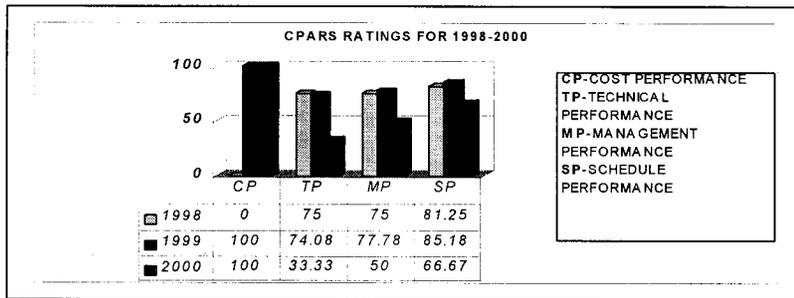


Figure 7.4-1

Supplier metrics has indicated a general reduction of Shipyard satisfaction with contractor work in FY00 as compared to previous years. Major problems include work identified late, poor integration into existing work and poorly scheduled completion dates. Once the issues were identified, the shipyard incorporated the lessons learned into initiatives for follow on projects to improve the contracting process. A team has been established to institutionalize the improvements into standard business practices. These practices include improved planning to identify contract work earlier, improved management and coordination, and better work integration in the overall project. The improvement has been seen in the most recently completed project which completed with a significantly improved cost and schedule performance.

7.5 Organizational Effectiveness Results

7.5a(1) Design, Production and Delivery Process Performance

Key process measures are linked to the shipyard goals of meeting customers needs associated with cost performance, schedule (on time delivery), and quality.

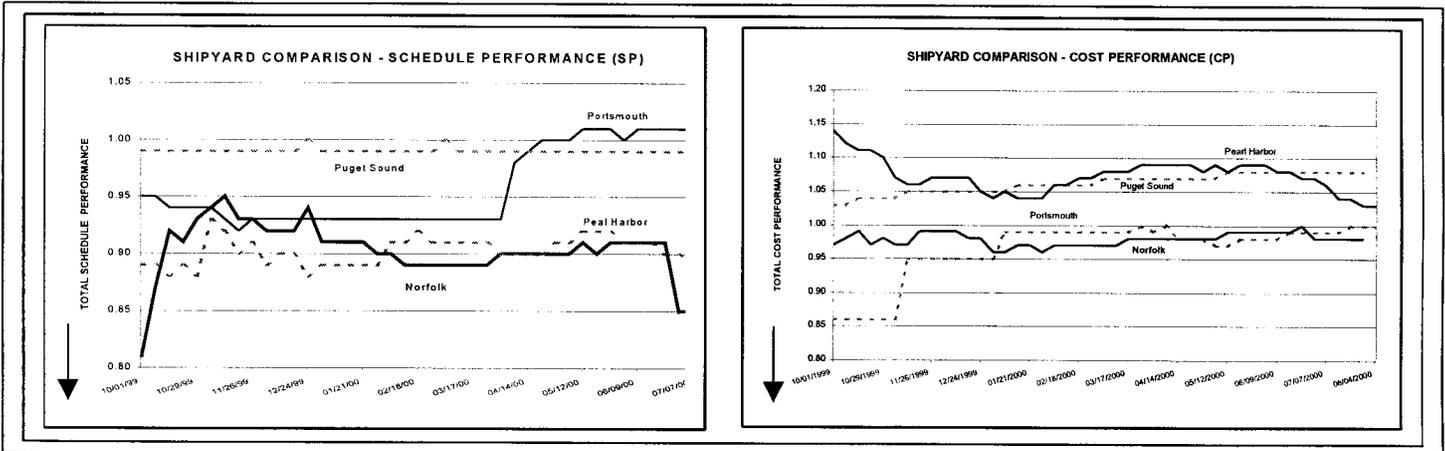


Figure 7.5-1

Figure 7.5-2

Figures 7.5-1 and 7.5-2 show excellent overall performance in cost and schedule compared to other shipyards, as well as an improving trend in schedule performance. Both measures show performance less than the target of 1.0, which is the desired result.

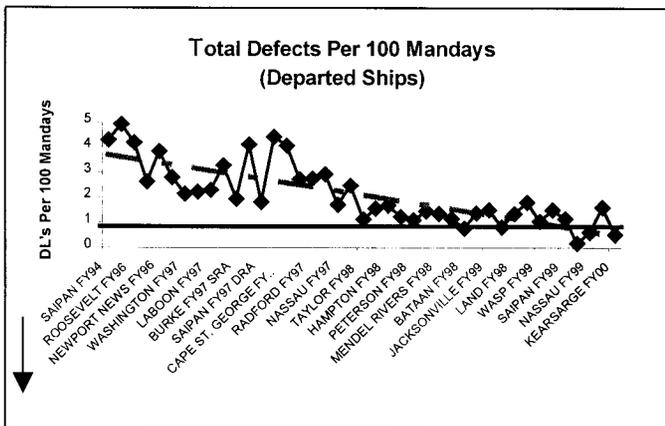


Figure 7.5-3

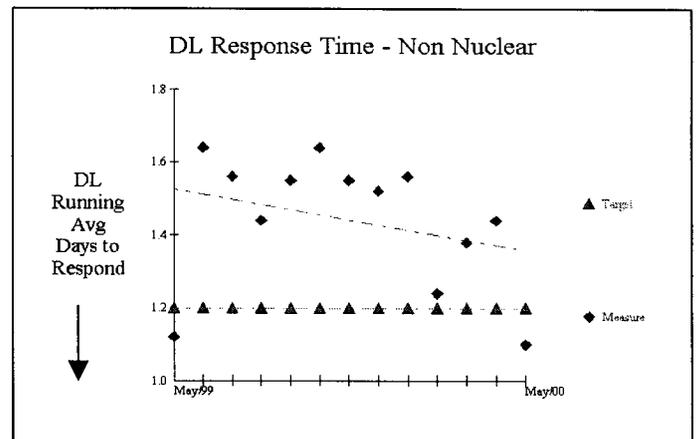


Figure 7.5-4

Figure 7.5-3 shows the shipyards strong level of quality improvement resulting from improved Technical Work Document (TWD) development and other improvements.

Figure 7.5-4 shows a reduction in Discrepancy Log (DL)'s work document cycle time, minimizing response time to reported deficiencies. The steady decline in response time has improved mechanic productivity.

Figures 7.5-5 and 7.5-6 show improved quality of material management in getting the right material to the mechanic, which supports the key requirement of on time delivery (SP - Schedule Performance).

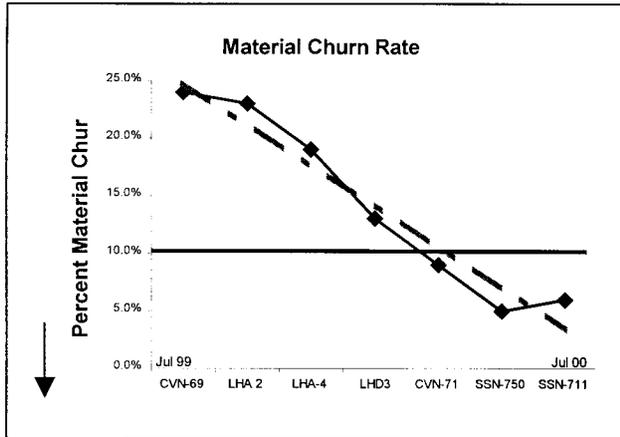


Figure 7.5-5

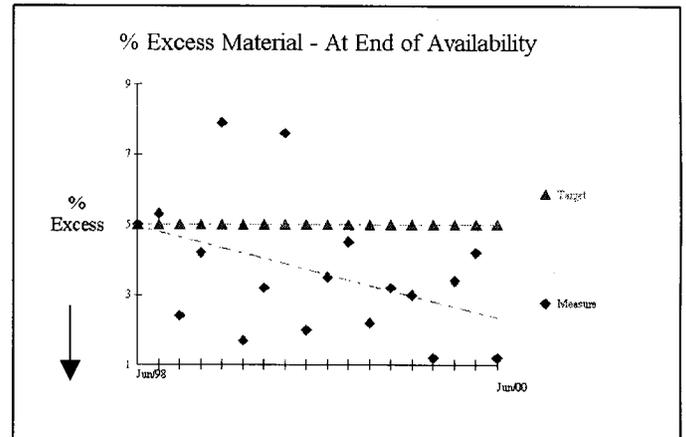


Figure 7.5-6

Figure 7.5-7 shows how we are reducing the excess Work in Progress (WIP) to improve our management of outstanding work on shipyard projects. Reducing excess WIP reduces the amount of work that has been released but not started. Reducing the amount of unstarted work improves management focus on real progress of open work. This improves the focus of resources.

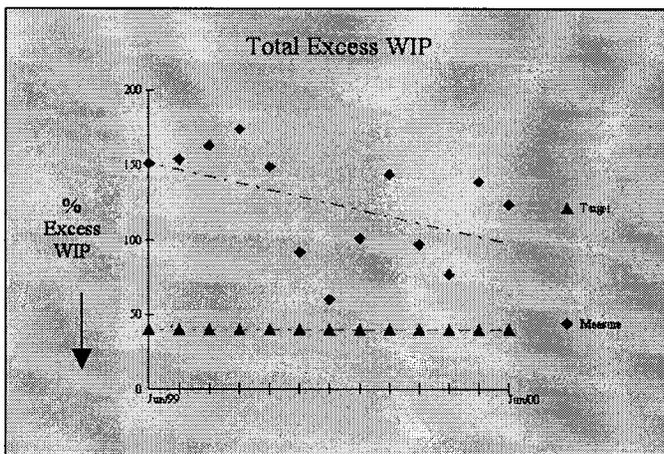


Figure 7.5-7

### 7.5a(1) Support Processes

NNSY is dedicated to improving its internal support processes and tracks our organizational effectiveness in a number of key areas, such as Leadership, facilities management, environmental management.

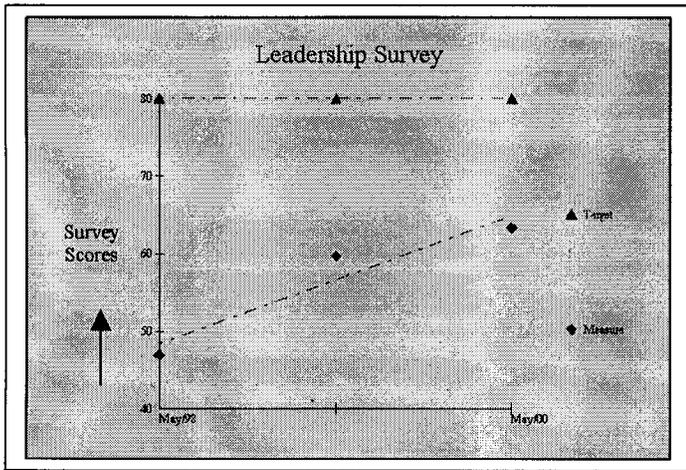


Figure 7.5-8

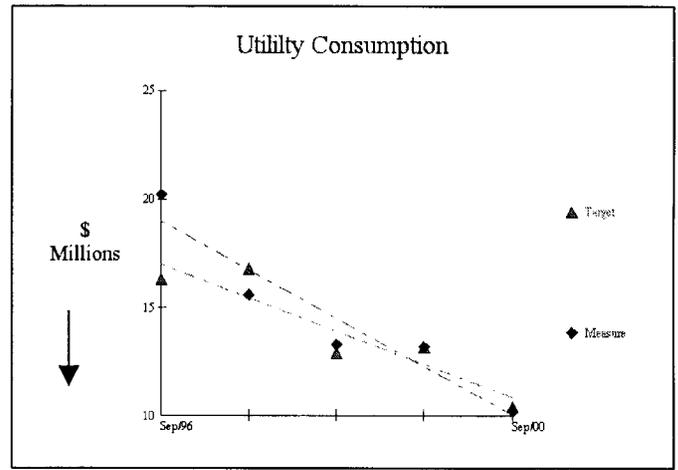


Figure 7.5-9

NNSY tracks its Leadership System effectiveness. **Figure 7.5-8** shows Leadership survey results that show a significant improvement in Shipyard leadership as viewed by union, management, and their direct reports.

Our proactive energy program has resulted in a dramatic reduction in energy costs as shown in **Figure 7.5-9**. This trend has had a significant impact on our improved overhead cost through a reduction of over \$18 million from FY1996.

### 7.5a(2) Regulatory/Legal Compliance and Citizenship

One area that typifies the Shipyard commitment to both the local community and legal/regulatory issues is its attitude towards pollution and recycling. The Shipyard is making consistent efforts to reduce pollution, reaching the President's five-year goal of 50% reduction of emissions in the first year and maintaining emissions below the target level for each subsequent year.

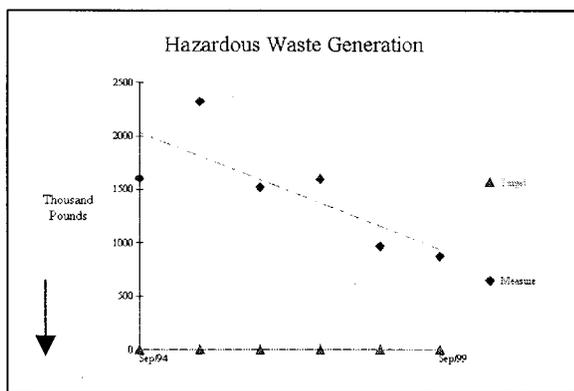


Figure 7.5-10

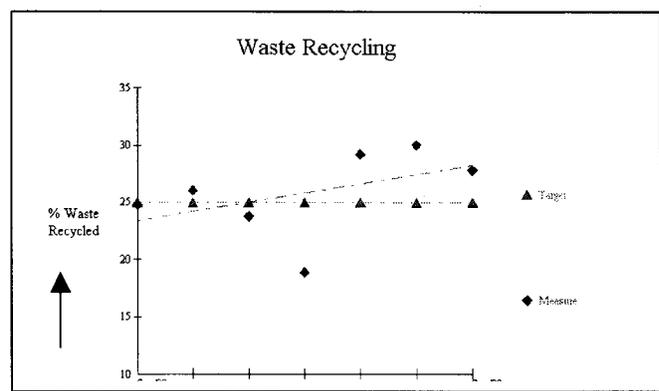
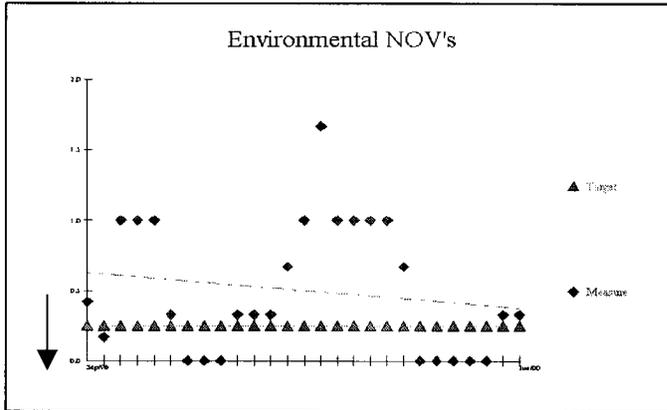


Figure 7.5-11

**Figure 7.5-10** shows that NNSY continues to reduce the amount of hazardous waste generation through our award-winning waste management program. **Figure 7.5-11** shows that NNSY is also minimizing waste stream input through recycling. NNSY is a model environmental program

for the Navy, receiving awards regularly since 1988. In 1998 and 1999, NNSY has achieved: Naval Sea Systems Command Environmental Quality Award, Naval Sea Systems Command Pollution Prevention Award, Hampton Roads Sanitation District Pollution Prevention Award, Chief of Naval Operations Environmental Quality Award, SECNAV Energy Conservation Award in the Industrial Category, NAVSEA Platinum Level Certificate of Merit for Energy Conservation, DOE Federal Energy and Water Management Award.



Notices of Violation document the number of times each year a notice is issued for incidents that violate environmental compliance regulations. In **Figure 7.5-12**, the extremely low level of occurrences reflects the Shipyard's continuing commitment to a safe and clean environment.

Figure 7.5-12

UNITS	# EMPL	% PART	EMP./TOTALGIVING	AVG. GIFT	TOTAL GOAL
Subarea 7 (Shipyard)	7,421	61%	492,493.00	\$108.93	\$468,970

Figure 7.5-13

NNSY leads area military commands in the Combined Federal Campaign (CFC) by contributing over 11% of the entire CFC funds collected in the south Hampton Roads area for 1999. This was achieved through a 60.9% participation of the total NNSY employee population (**See Figure 7.5-13**). This is the highest participation rate of any regional military command where the average is 41.7%. This is unique and represents value to the community, as NNSY is only 6.9 % of the entire regional Military population.

### 7.5a(3) Strategy Accomplishment Results

As previously discussed in Section 2, we revised our strategic planning foundation in 1999, with a systematic review and prioritized selection of five strategic performance goals:

1999 Goals:
Goal 1 On Time Delivery of Materials, Tools, and Services
Goal 2 High Performance Work System
Goal 3 Employee Input and Empowerment
Goal 4 Customer Satisfaction
Goal 5 Highly Skilled Workforce

In June 2000, we reviewed the progress of the 1999 performance goals, and determined that those performance goals did not adequately address the new strategic direction of the Shipyard. We consolidated the 1999 performance goals into two high-level strategic goals that were aligned with the Shipyard's desired direction and the NAVSEA Strategic Plan.

**Strategic Goal 1:**

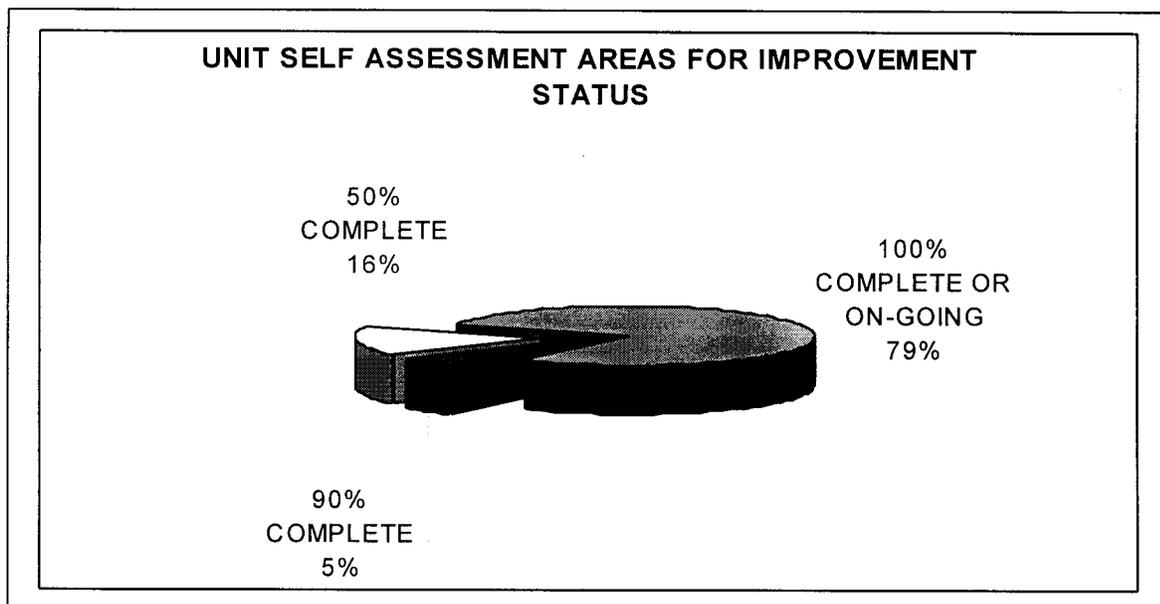
Raise The Bar (Best Ever Public Or Private Shipyard) For Cost, Quality, And Schedule On Every Project, thus demonstrating unquestionable value to the Navy and the Community

**Strategic Goal 2:**

NNSY is a world class organization where employees are proud to work

As an organization dedicated to management by fact, we noted that the feedback from the NAVSEA Inspector General's Office Unit Self Assessment (USA) conducted in October 1997 and the President's Quality Award aligned with the direction we were pursuing in the development of our Strategic Goals. We also noted that the PQA areas for improvement correlated with the USA areas for improvement.

From a review of the assessment, 19 areas for improvement were identified from the seven criteria categories. Based on a follow-up visit report provided to us by the USA assessors in July, 2000, action is ongoing or complete on 79% of the items in the plan (See Figure 7.5-14).



**Figure 7.5-14**