

# **NAVAL CENTER FOR COST ANALYSIS**

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## **STRATEGIC BUSINESS PLAN**

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## Statement of Purpose

The Naval Center for Cost Analysis (NCCA) Policy Manual (Feb '01) outlined the functions, policies and overall goal of the Cost Center. The “overarching” goal of the Center, as stated in the Manual, is the conduct of quality and responsive costing in a rewarding, harassment-free environment. The purpose of this Strategic Business Plan is to provide the essential underpinnings and internal processes necessary to ensure that this broader goal is attained/sustained.

## Mission

NCCA was established October 1, 1985 by direction of the Secretary of the Navy. Its mission remains "to guide, direct and strengthen cost analysis within the Department of the Navy; to ensure the preparation of credible cost estimates of the resources required to develop, procure and operate military systems and forces in support of planning, programming, budgeting and acquisition management; and to perform such other functions and tasks as may be directed by higher authority."

Among the specific functions performed by NCCA are:

- Advising the Secretary of the Navy (SECNAV) and Chief of Naval Operations (CNO) on matters relating to weapon system cost estimates and analysis for planning, financial management, and negotiation of major limited competition contracts.
- Leading the Department of the Navy (DoN) cost community in issues of cost policy and policy implementation.
- Preparing Independent Cost Estimates (ICEs) for Acquisition Category (ACAT) IC/IA programs.
- Conducting economic analyses of weapon system, equipment, and Automated Information Systems (AIS) acquisition, to include analysis and forecasting of labor, industrial, and technical trends as they impact the overall process.
- Managing the Navy’s implementation of the Department of Defense (DoD) Visibility and Management of Operating and Support Costs (VAMOSC) Program.

A comprehensive list of the functions performed by NCCA appears in the NCCA Policy Manual. Copies of this manual are available by contacting the Director or Deputy Director of the Cost Center.



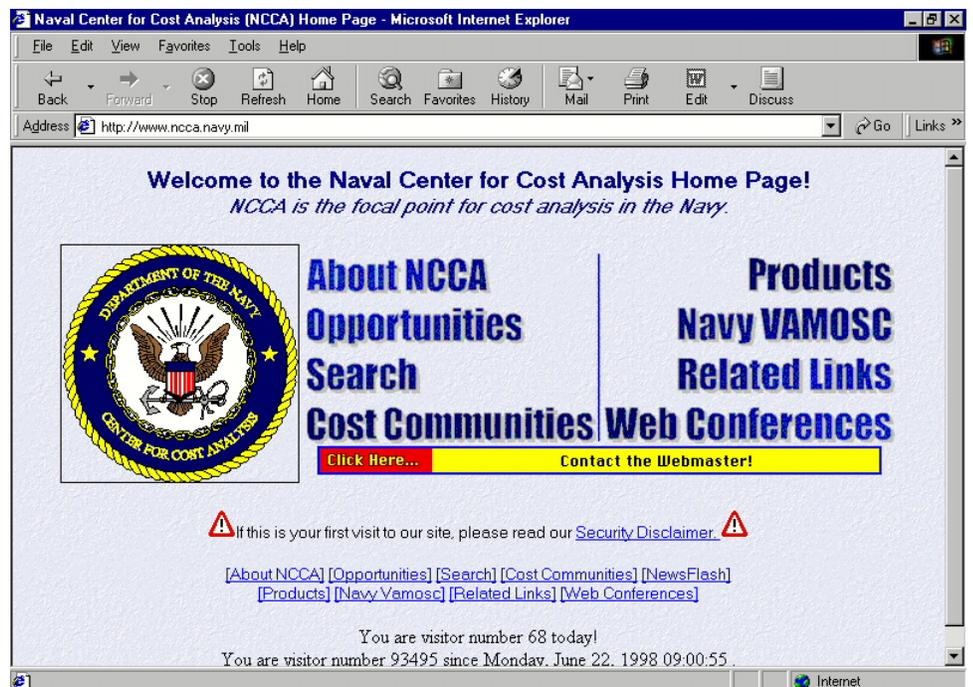
NCCA is located at the Navy's Nebraska Avenue Complex in Northwest Washington, DC. Its workforce consists of about 50 analysts, both military and civilian. Specific demographics of the NCCA are detailed in the Appendix.

## Products and Services

NCCA provides a variety of products and services to its chain of command and outside organizations. These include but are not limited to:

- ICEs for ACAT IC/IA programs
- Cost support to the Cost Analysis Improvement Group (CAIG) for ACAT ID programs
- Support to Integrated Warfare Architectures (IWARS)
- Databases, cost models, and cost estimating tools, such as the Visibility and Management of Operating and Support Costs (VAMOSC), the Cost of Manpower Estimating Tool (COMET), the Operating and Support Cost Analysis Model (OSCAM), and the Navy Obligations Data Extraction System (NODES)
- Cost support to the Assistant Secretaries of the Navy (ASNs)/Operational Navy (OPNAV)/United States Marine Corps (USMC) in the form of studies, memorandums, reports, and briefings
- Participating in Integrated Product Teams (IPTs), Analysis of Alternatives (AoAs), and Acquisition Coordination Teams (ACTs) as requested
- Inflation indices
- Cost research
- Special studies on topics such as overhead analysis, multiyear procurements, competitive acquisitions, budget issues, and medical healthcare

In addition to the products and services described above, NCCA operates and maintains a website. Through this website, employees and customers can access information about the Cost Center, learn about career opportunities and upcoming conferences and events, access NCCA products and services, search the site, and link to related sites. Information provided about NCCA on this website includes our



mission, location, director's biography, and a telephone and e-mail directory. Products and services available through the website include inflation indices, the COMET model, and links to the OSCAM and VAMOSC websites. Additionally, users can query publication information from the NCCA cost estimating and document library, a library of over 1500 volumes from various sources, both internal and external. These documents are currently available only in print, but we plan to convert many of them to an electronic form that would be accessible via the web. On average, our website has about 200 visitors per day.

## Organization

NCCA falls under the authority of the Secretary of the Navy; more specifically, NCCA reports directly to the Assistant Secretary of the Navy, Financial Management and Comptroller (ASN(FM&C)). Figure 1 depicts NCCA's role within the Department of the Navy. The arrows show the organizations for which we provide cost support.

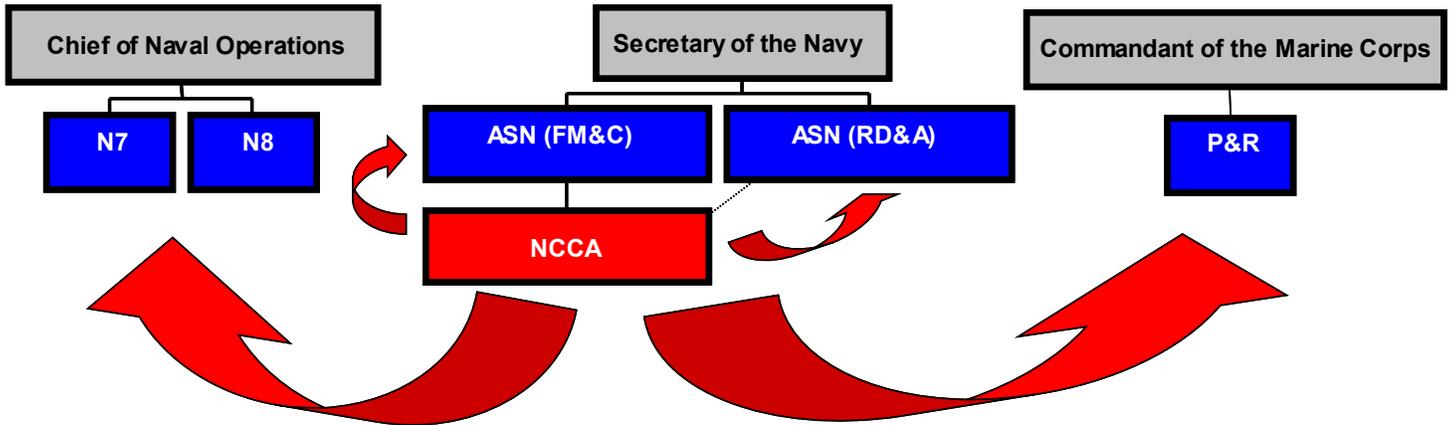


Figure 1. NCCA's role within the Department of the Navy

Figure 2 illustrates NCCA's role in the acquisition community, showing those organizations with whom NCCA typically interacts.

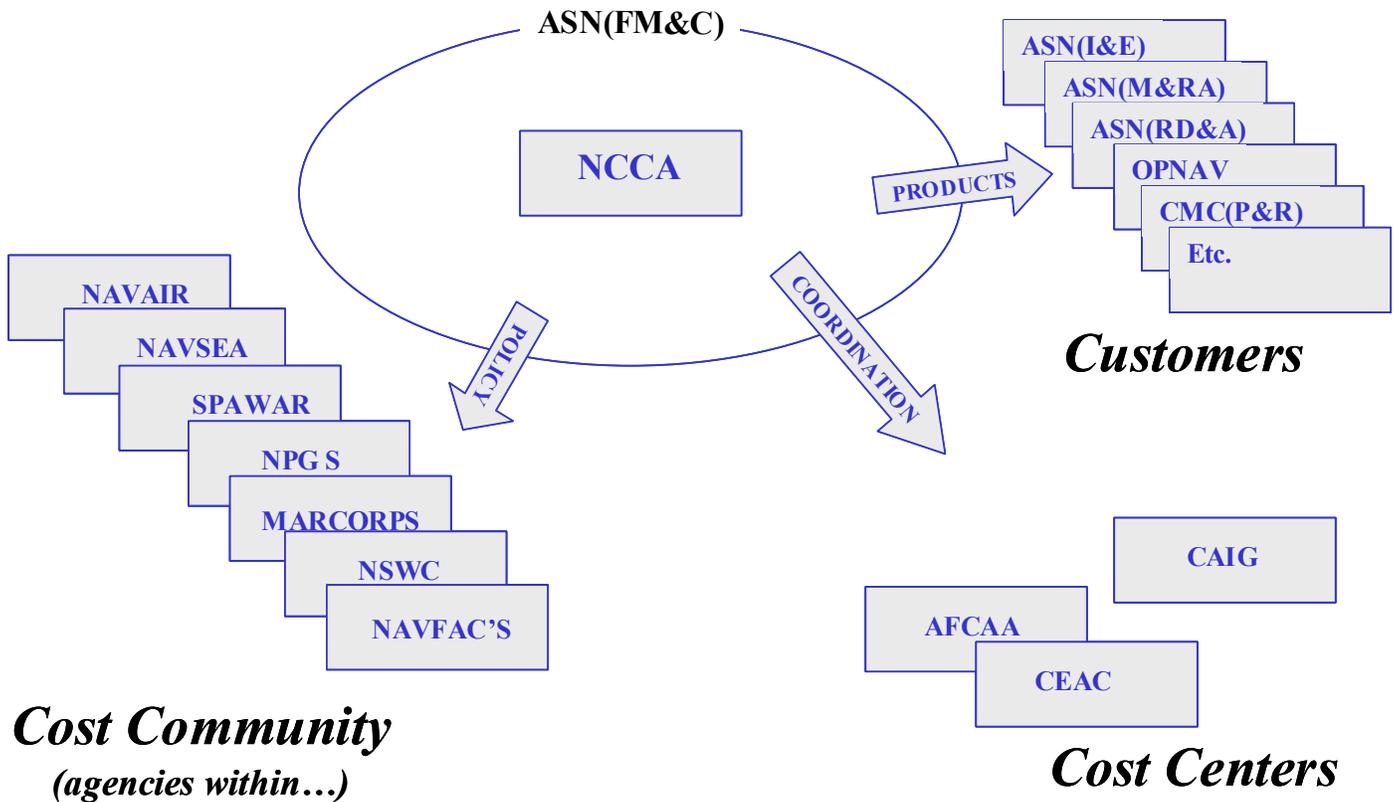


Figure 2. NCCA's role within the acquisition community

NCCA is functionally organized into five divisions:

- Cost Research and Business Operations
- Economic Studies
- Platform Program Support
- Cost Analysis Tools
- Automated Information Systems and Command, Control, Communications, Computers/Intelligence, Surveillance and Reconnaissance (C4ISR)

Top-level management consists of a Director and a Deputy Director. Operating under the general supervision of the Deputy Director, senior management includes a Special Assistant for Acquisition/Special Projects, and Division Heads for each of the five divisions. The NCCA organization chart appears in Figure 3. Refer to the NCCA Policy Manual for a complete description of each division's roles and responsibilities.

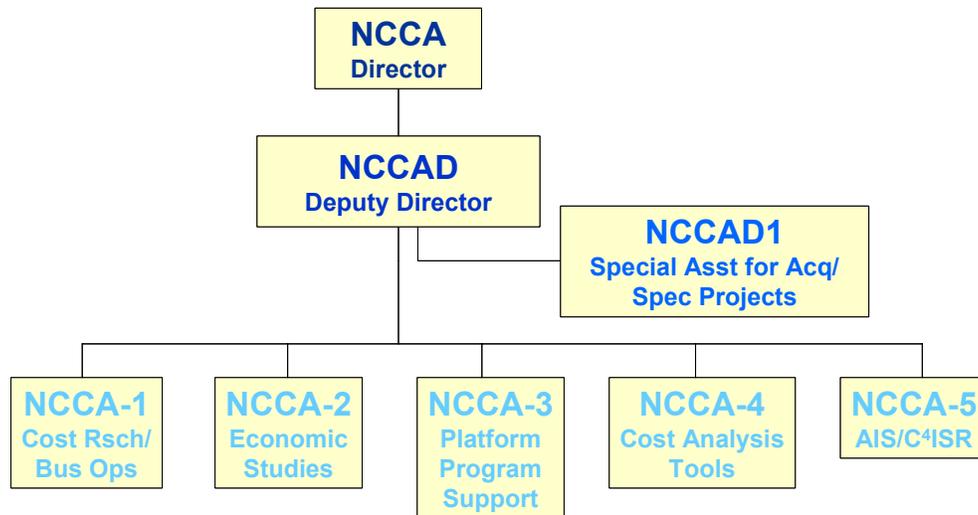


Figure 3. NCCA organization

## Goals

The purpose of this Strategic Business Plan is to lay the underpinnings for successful achievement (and sustainment) of NCCA's major business goals. These goals are as follows:

- **Quality Work:** To perform quality cost estimating services for the Secretary of the Navy. To explore new approaches for assessing evolving manufacturing methods, new technologies, and creative acquisition and procurement strategies. To develop and refine means for accurate assessment of information technologies and automated information systems. To assist Navy Leadership in decision making by providing increased cost fidelity to major programs and ventures. *To shed light.*
- **Job Satisfaction:** To provide a working environment that values an individual's opportunity to excel, and recognition for quality work performed. To provide fulfilling work. To the maximum extent possible, instill job satisfaction and a realistic expectation of the opportunity for upward career mobility among all NCCA staff, regardless of skill code or assignment. To establish and maintain an environment in which employees look forward to working.
- **Equal Opportunity:** To ensure a workplace that is fair, free of harassment (perceived or otherwise), and that promotes both professional and personal growth.

## Strategies for Attaining/Sustaining the Goals

**Quality Work.** Providing quality cost estimating services to the Secretary of the Navy by:

- Remaining engaged at the senior leadership level with other senior Navy and Service managers to ensure the work that is performed is (1) of value and (2) responsive to the emergent needs of the Department
- Maintaining detailed documentation of cost estimates created by the Cost Center and building a web-enabled library of cost documents drawn from both the Center and the Cost Community
- Creating and maintaining detailed cost databases for both software and weapons system costing
- Continuing the use of Technical Review Boards (collective gatherings of all NCCA analysts in open reviews of cost products prior to delivery/submission to the cost customer)
- Continuing to recruit experienced and motivated professionals with technical backgrounds (preferably with statistical or mathematical education)
- Promoting continuing education, earning of advanced degrees and professional development coursework. Establishing an Individual Development Plan (IDP) at check-in that entails a required path for full Defense Acquisition Workforce Improvement Act (DAWIA) certification in the Cost Estimating field
- Adhering to written instructions and guidelines for performing cost estimates

In addition, NCCA remains engaged with evolving manufacturing methods, new technologies, and creative acquisition and procurement strategies by:

- Associating closely with Service cost agencies and Federally Funded Research and Development Centers (FFRDCs) in regard to state-of-the-art cost estimating techniques
- Continuing to support joint forums and providing sponsorship/submissions to professional organizations and societies involved in cost estimating, such as the Society of Cost Estimating and Analysis (SCEA) and the Military Operations Research Society (MORS)
- Maintaining an open two-way dialog with the platform, weapons system, computer and information technology (IT) industries, as well as with Secretariat and Department Staff responsible for IT and weapons systems development
- Following emerging advances and developments in shipbuilding, aircraft fabrication and Automated Information System fields
- Tailoring training of AIS/C4ISR personnel through computer/IT courses, and including these courses in the individual's IDP

**Job Satisfaction.** Developing a working environment that values an individual's opportunity to excel and provides recognition for outstanding work by:

- Continuing to acknowledge meaningful contributions made by all Center analysts involved in projects; by encouraging independent thinking and perspectives on issues; and by encouraging the use of "perspective" thinking across programs and timelines in order to gain "the bigger picture"
- Encouraging individuals to request specific job assignments commensurate with their skills
- Developing an IDP which rotates the analyst among NCCA Divisions, thus exposing the individual to various aspects of costing while refreshing the Division's talent pool
- Providing the individual the opportunity to work on high-visibility, rewarding programs, and to brief the results to senior leadership
- Recognizing outstanding performance through spot and bonus awards, and a variety of acknowledgment programs
- Promoting IWARS rotations for NCCA personnel, thus exposing them directly to the weapons system prioritization and funding process, and to the highest levels of OPNAV decision-making
- Encouraging interns to rotate to outside agencies
- Providing morale incentives, such as a dress-down policy, compressed work schedule, telecommuting opportunities, summer picnics, and winter holiday celebrations

**Equal Opportunity.** Creating a work environment that is fair, free of harassment (perceived or otherwise), and that promotes both professional and personal growth by:

- Prohibiting any racial, ethnic, or sexual remarks that may be construed as discriminatory
- Supporting (and encouraging attendance at) National Capitol Region events which celebrate cultural and ethnic heritages
- Promoting annual equal employment opportunity training
- Promoting an atmosphere of sensitivity and tolerance
- Establishing the NCCA Mentor Program, which provides an alternate avenue to the "chain-of-command" for personal development, issue sponsorship and communication
- Maintaining an "Open Door" Policy whereby all staff are free to discuss individual personal concerns with senior NCCA leadership without fear of retribution

## **The Road Ahead**

- The Cost Research and Business Operations Division will continue to improve efforts in the training, recruiting, and retention of personnel. The division also spearheads quality of life initiatives, such as the compressed work schedule,

dress-down policy, and telecommuting program, and will continue to implement these and other initiatives well into the future. Future cost research initiatives center around maintaining a stable cost research budget and developing answers to difficult and high-profile cost problems.

- The Economic Studies Division is preparing for the future by continually updating its tools and techniques to deal with future challenges. The division has several initiatives in progress and others in the planning stage. For example, we are in the process of developing a comprehensive database of overhead cost information for the major private manufacturers from which DoN buys its ships, aircraft, and missiles. Overhead costs, while a major portion of a weapon's acquisition costs, are frequently "passed through" and escape the scrutiny of the cost community. With a credible database of historical overhead costs, the cost analyst will be better equipped to assess the validity and impact of contractor overhead costs.

We plan to remain in the vanguard as the Navy's primary source of inflation indices. We are working on system enhancements that will expand and expedite the flow of inflation indices to the cost community. Specifically, we are expanding our web-based indices to 125 years from the current 75 and developing a more user-friendly environment for accessing the indices.

Finally, we will continue to provide economic, statistical, and cost estimating skills to special studies and projects. The division will continue to be the DoN's "source-of-choice" for analytic support in these areas.

- The Platform Program Support Division will continue to develop independent cost estimates for ACAT IC programs. Over the course of the next several years, two ACAT IC Navy helicopters will be seeking approval for full rate production decisions, the SH-60R and the MH-60S. The Tactical Tomahawk will also be seeking approval for limited rate production. From a ship perspective, DD-21 and CVN(X) will require a plethora of analyses to assist senior Department personnel in making critical decisions. As the Department re-prioritizes programs to meet changing requirements in concert with a new vision for the future, we will be challenged to develop innovative cost estimating techniques to reflect changing technologies and industrial bases.

In addition to the programs above, emergent requirements to support new initiatives, like the multi-mission aircraft and unmanned air vehicles, will also arise. In order to meet these challenges, the Platform Program Support Division will work in harmony with the other divisions within NCCA. By harnessing their knowledge of databases, inflation, software, economic analysis, and cost estimating tools, we will be able to develop estimates of the highest fidelity that can withstand the scrutiny of outside agencies. We look forward to these new estimating challenges and are preparing to meet them by not only looking within the Cost Center, but also by reaching out to outside

agencies in the Army, Air Force, the Office of the Secretary of Defense, Federally Funded Research and Development Centers, and commercial contractors to acquire new tools and techniques for estimating weapons platforms.

- The Cost Analysis Tools Division will continue to provide improved and well-used products, and we have plans in place to enhance and improve our cost analysis tools. As the focus on Total Ownership Cost (TOC) and the subsequent reduction of TOC becomes more prominent in the DoD acquisition community, the value of VAMOSOC, and the value of continually improving VAMOSOC, cannot be overstated. VAMOSOC is a crucial tool that is being used by many people to help shape these TOC reduction goals and initiatives, and VAMOSOC needs to continue evolving to adapt to the ever changing needs of its customers. Additionally, we are updating and enhancing COMET, which has not been significantly upgraded since its development in 1997, to include the most recent available pay rates and manning documents and a full recalculation of the variable indirect rates. We also continue to evolve the OSCAM models to meet the users' O&S cost analysis needs with the intent of making OSCAM the O&S cost model of choice.
- The AIS/C4ISR cost estimating community is faced with many challenges in the future. Because of the speed at which the IT industry continues to evolve, the cost community must keep pace with the changes. We take our role as leaders in AIS cost estimating very seriously and will continue to strive to improve the tools and techniques that result in accurate estimates. We are developing a state of the art database of historical AIS system data and will continue our research efforts. The development of cost estimating relationships and standard factors is critical to the craft.

In addition to the research projects, we will continue to support Department decision makers with sound cost analysis on special projects and acquisition program. Six of the nine ACAT IAM programs we support are expected to require milestone decisions within the next two years. Imminent decisions requiring our support include an updated review of the Navy/Marine Corps Intranet (N/MCI) Business Case Analysis after Phase I implementation has been completed, supporting the in-process review for the Defense Integrated Military Human Resources System (DIMHRS) and conducting an independent estimate in support of the MS IIIA decision for the Naval Standard Integrated Personnel System (NSIPS).

Competing demands for scarce resource dollars will continue to provide the stimulus for accurate analysis of business options. The AIS/C4ISR Division will remain the primary source within the Department of Navy for cost support surrounding AIS and C4ISR alternatives.

## **Summary**

A truly unique capability that the Cost Center brings to the table is the ability to identify development, manufacturing, or procurement trends based on cost perspectives observed through sustained program engagement and work on diverse programs. While concurrently performing statutory work on individual programs (ICE's, etc.), this unique perspective allows us to more meaningfully engage cost issues and enables Navy leadership to respond sooner and more effectively to change.

NCCA intends to continue to capitalize on this ability to take the larger perspective rather than to perform rote, legacy cost functions. Through this "broadened engagement," we will remain more responsive to senior leadership and their issues; will achieve and even exceed those goals we have set; and will remain a premier Navy cost organization. We will continue to add value.

## Appendix: NCCA Personnel Complement

The NCCA staff is composed of roughly 50 people, 47 of whom are analysts. Of these 47 analysts, ten are military officers with Masters degrees in operations research or a related field. Most officers obtained their advanced degrees from the Naval Postgraduate School in Monterey, California. The remaining staff members are civilians with career classifications of operations research analysts and engineers.

Figure A.1 summarizes the highest education level of NCCA personnel.

### Highest Education Level

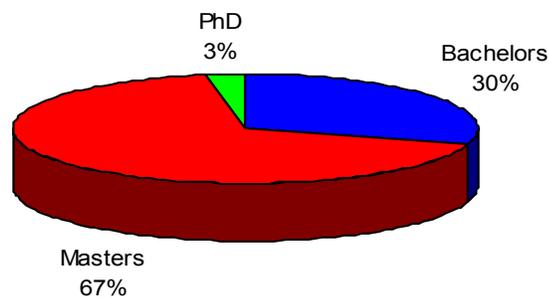


Figure A.1. Educational distribution of NCCA personnel

Figures A.2 and A.3 display the distributions of the major fields of study for undergraduate and graduate degrees held by NCCA personnel, respectively.

### Undergraduate Degrees

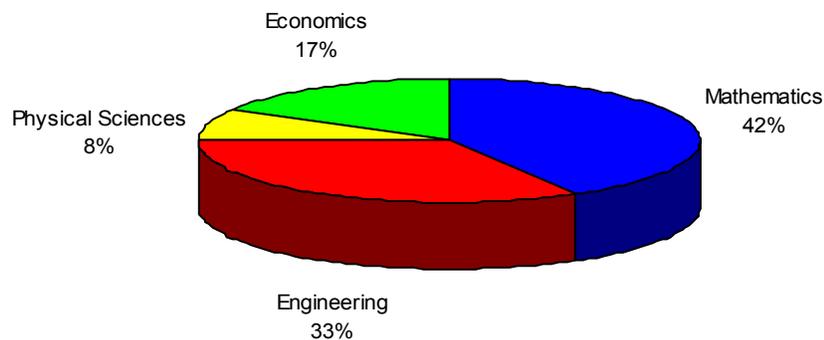
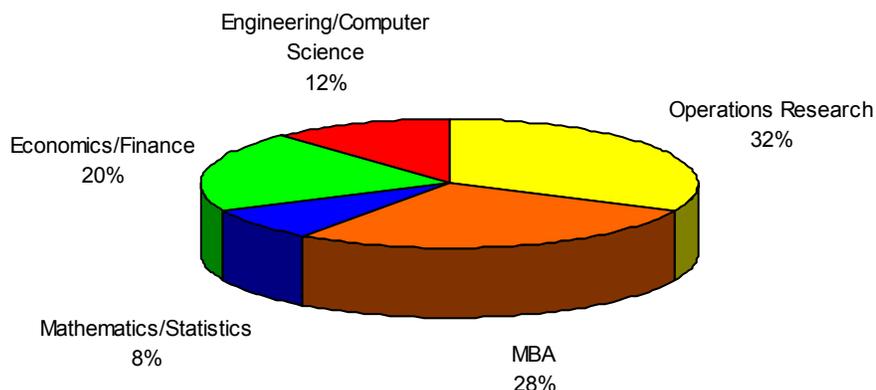


Figure A.2. Distribution of undergraduate majors of NCCA personnel

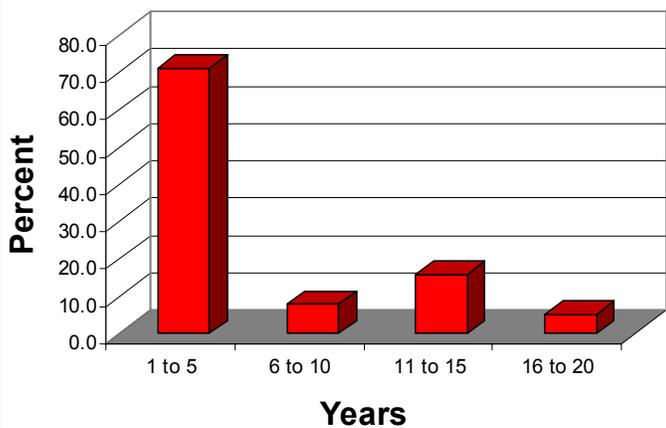
## Graduate Degrees



**Figure A.3.** Distribution of graduate majors of NCCA personnel

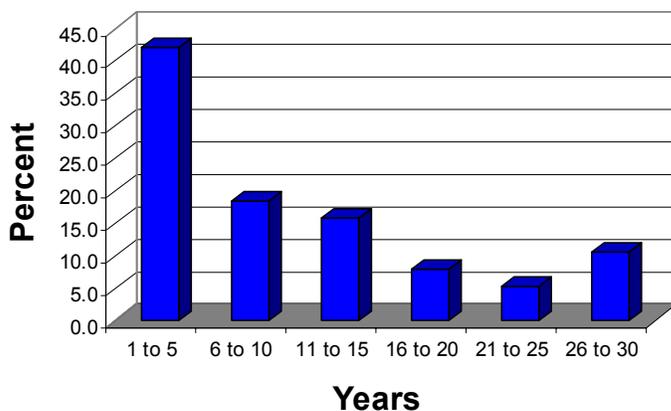
Figures A.4 and A.5 summarize the experience level of NCCA personnel by the number of years at NCCA and the total years of cost analysis experience, respectively. On average, a typical analyst has 10.5 years of cost analysis experience with 5.4 years at NCCA.

### Years at NCCA



**Figure A.4.** Years at NCCA

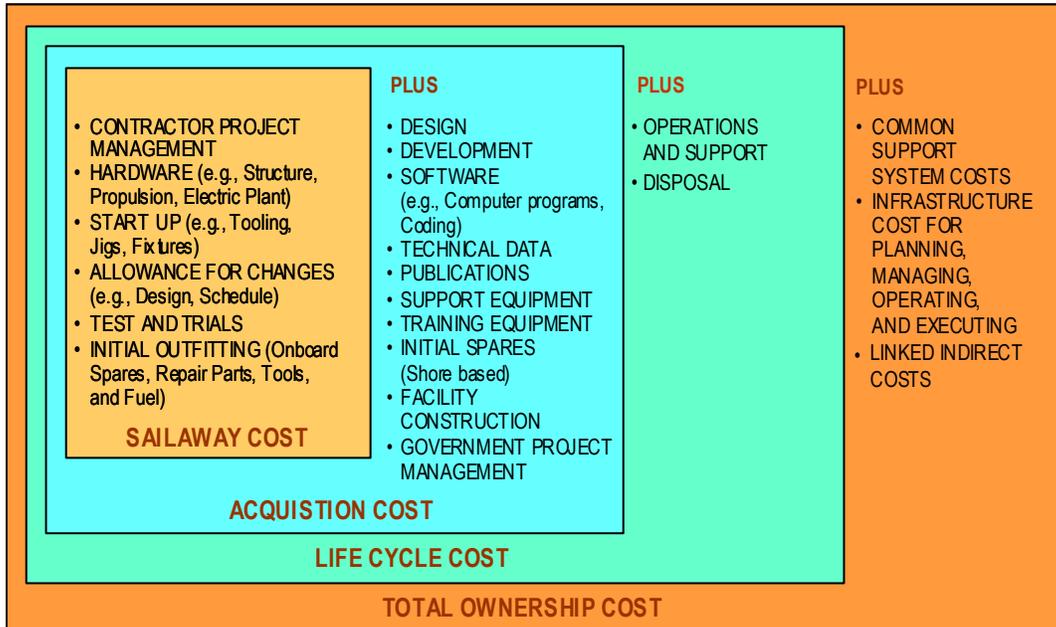
### Years of Cost Analysis Experience



**Figure A.5.** Years of cost analysis experience

NCCA continually works with the DoN intern program administered through the Director, Career Management Site in Mechanicsburg, Pennsylvania to recruit promising college graduates to work at the Cost Center.

## Ship Total Ownership/Life Cycle Cost Composition



## Aircraft Total Ownership/Life Cycle Cost Composition

