

The A-12 Stealth Bomber: Escalating Commitment to a Failing Project

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INTRODUCTION

On January 7, 1991, Defense Secretary Richard Cheney announced that the Navy's A-12 stealth bomber project was terminated, citing severe schedule, cost, and performance problems as the reasons. It was the largest weapons system contract cancellation in the history of the Pentagon. In cancelling the program, a result of an investigative report conducted by Navy Principal Deputy General Counsel Chester Beach, Cheney claimed that no one could tell him how much the program was going to cost. In reality, there were many estimates of the final cost; some were more accurate than others. In an effort to save the program, the information forwarded to top military and civilian leadership was unreasonably optimistic.

For more information, read Brian Montgomery's article "How the A-12 Went Down," in the April 1991 edition of Air Force Magazine.

BACKGROUND

The A-12 was needed to replace the aging A-6E aircraft. The A-6A aircraft was first introduced in 1963 as the Navy's only day/night, all weather, medium-attack aircraft. A later version of the A-6, the A-6E, was also used to refuel other carrier-based aircraft. In the early 1980s the mission of the A-6E was greatly reduced due to wing cracks discovered in many of the aircraft. Defense Secretary Richard Cheney had recently grounded the A-6E due to cracks in its wings. Replacing the A-6E with the A-12 was the Navy's top aviation priority.¹

According to the Government Accountability Office (GAO), on January 13, 1988, "the Navy awarded General Dynamics and McDonnell Douglas Aerospace corporations a \$4.8 billion fixed-price incentive contract for the full-scale development of the A-12. The Navy expected that the A-12 will be significantly more capable and survivable against increasingly sophisticated air defense systems being deployed by the Soviets and third-world countries."²

Navy Captain Larry Elberfeld was designated as the program manager (PM). He was responsible for managing the A-12 program, including reporting on the program's cost, schedule, and technical progress in *Defense Acquisition Executive Summary* (DAES) reports. Elberfeld was required to complete a quarterly DAES report and provide it to the Navy Secretary of Defense, the Under Secretary of Defense for Acquisition, and the Assistant Secretary of Defense. In addition to periodically summarizing the cost, schedule, and technical status of a major defense acquisition program, its purpose was to provide early-warning information about actual and potential problems and corrective action plans. Chester Beach, Navy Principal Deputy General Counsel, conducted an investigation into the A-12 program and provided a description of Elberfeld's qualifications:

"The PM (Elberfeld) is an Aviation Engineering Duty Officer, with three advanced degrees and a career path which would be a model in any of the new Service Acquisition Corps. He has been on-station for more than four years and was assigned

with the understanding that he would remain through first flight. In short, the PM (Elberfeld) in this case is the archetype of the well-trained, highly motivated professional, fully empowered to fulfill his responsibility and be accountable for cost, schedule, and performance of his program that we are seeking to develop under the acquisition corps plans and matrix management approach reflected in the Defense Management Report.”³

Elberfeld had a civilian employee—Debbie D’Angelo—who had graduated with a Bachelor’s degree in business from the University of Arizona. In August 1988 she was cleared into the A-12 program and assigned as its lead cost analyst. She received the monthly *Cost Performance Reports* (CPRs) from the contractors. The CPRs were prepared by the contractors and showed actual cost incurred, the schedule status of the project, and estimates of final cost. The Navy needed this information to assess the cost and schedule status of the project. D’Angelo’s job was to analyze the CPRs and provide findings, conclusions, and recommendations to Elberfeld and others higher in the chain of command. She had quarterly meetings with Elberfeld, where she provided A-12 program cost estimates developed from her examination of the monthly CPRs.

Initially the contractors estimated the total cost to complete the program would be \$3.981 billion. This amount was well below the Navy’s ceiling price of \$4.8 billion, the maximum amount that may be paid by the Navy to the contractors. Using this information in November 1988, the A-12 Program Office released DAES report No. 1, consistent with the contractors’ estimates. By the next month, however, the estimated final cost began to rise. D’Angelo regularly informed Elberfeld of the ever-increasing cost estimates. Per office policy, her official reports were to contain the required lowest estimate she could provide, but she also provided a range of other estimates she thought were more accurate.

Department of Defense experience in more than 400 programs since 1977 indicated that a range of estimated final costs can be computed using cost and schedule performance indices derived from the monthly CPR. The minimum value in this range was computed using a cumulative cost performance index. Larger and more accurate estimates of final cost are usually derived from indices of shorter periods, especially when performance on a program is deteriorating.

A Beach investigation review of D’Angelo’s cost reports to Elberfeld showed that they

“contained a single point estimate based upon the cumulative cost performance index (CPI), rather than the Cost Analyst’s best professional judgment.

This comported with the standard practice of her office, but facilitated reliance by the Program Manager upon the single written cumulative CPI-based estimate as her best estimate. Her supervisor stated that the practice of providing the cumulative CPI-based estimate as the written estimate, rather than the Cost Analyst’s best estimate, was intended to afford the Program Manager maximum flexibility in representing his program.”⁴

In early 1989, D’Angelo provided Elberfeld with a report estimating the final cost at \$4.575 billion. She warned that if performance continued to decline, cost would go through the ceiling. In the worst-case scenario she estimated the final cost would be around \$5 billion. Furthermore, she indicated that the first flight of the A-12 would be delayed by at least three months.

In February 1989, Elberfeld released DAES Report No. 2 with an estimated final cost at \$4.12 billion, well below D’Angelo’s more realistic estimates. Concerned that Elberfeld was ignoring her estimates, D’Angelo began complaining to her immediate supervisor, Robert Patterson. As far as she could tell, no action was taken on her several complaints. In spite of her warnings that cost would exceed ceiling by \$200 million, Elberfeld released DAES report No. 3 in May 1989, using the much lower estimate of \$4.415 billion.

In July 1989, D’Angelo again provided a report to Elberfeld that indicated cost would exceed ceiling by over \$200 million, placing the total cost over \$5 billion. Throughout the summer she continued reporting that costs were escalating, the weight of the aircraft was exceeding specifications by more than 3,800 pounds, and that no further weight savings were possible without altering other aircraft specifications.

In August 1989, Elberfeld produced DAES Report No. 4 by using the same low-ball numbers used in the prior report. Elberfeld chose to use the lowest estimate provided to him irrespective of higher estimates available and contrary to D’Angelo’s professional judgment. According to the Beach investigation report, “his justification for this action was based upon other information which he believed would result in an improvement in the contractor team’s cumulative cost performance.”

Meanwhile, in August 1989, Tom Hafer, a senior budget analyst on Navy programs at the Department of Defense Comptroller’s Office, visited McDonnell Douglas to review the status of the A-12 for budget planning purposes. He was in for a shock. Not only was there no production taking place, but the contractor hadn’t even completed half the tooling to start production.

During his plant tour he received word that, upon returning to the Pentagon, Vice Admiral Richard Dunleavy wanted to see him. In his meeting with Dunleavy, Hafer revealed that he was going to recommend adjusting the military services budget upward to reflect cost and production schedule problems in a formal document known as a *Program Budget Decision* (PBD). This information would jeopardize the continuation of the A-12 project.

As part of the process of preparing the A-12 PBD, Hafer sent approximately six pages of questions to the A-12 Program Office. The office refused to send him written responses using the justification that this was a “special access” project. In order to obtain responses to his questions he was required to visit the office and review the written responses on location. He was not allowed to remove the written responses or take any notes. During his office visits he met with D’Angelo, who presented him with cost data but was under strict orders not to discuss the information with him.

Even with this limited access Hafer determined that the program was at least two years behind schedule and cost would exceed ceiling by at least \$500 million. Being under hush orders, D’Angelo was unable to verbally acknowledge his concerns and understanding of the numbers. She did give a slight nod of her head, however, which he took as an indication of her agreement with him. Hafer’s draft PBD was later withdrawn by Comptroller Sean O’Keefe due to heavy opposition from Elberfeld and others in higher authority in the Department of Defense.

According to a 1990 GAO report, in December 1989 Cheney ordered a review of four major aircraft programs in development: the B-2 bomber, F-22 fighter, C-17 cargo plane, and the A-12. This study, known as the Major Aircraft Review (MAR), was to validate the necessity for these programs in light of changing world threats, including the diminishing Soviet threat.⁵

The Office of the Secretary of Defense (OSD) Cost Analysis Improvement Group (CAIG) was charged with the duty of completing the MAR. Among other duties, the CAIG helps ensure that the costs of Department of Defense programs are presented accurately and completely. Jo Ann Vines, a cost analyst with the CAIG, was assigned to collect performance data on the A-12 program. D’Angelo was instructed to provide Vines with only the official program costs and exclude all other estimates. The official estimates showed the lowest possible final cost. D’Angelo provided Elberfeld with a range of higher estimates, however, that predicted severe cost overruns and schedule delays. At the official briefing, Vines asked D’Angelo if there were other cost estimates available other than the official CPRs.

D’Angelo responded in the positive, however, she did not offer to provide Vines with them, nor did Vines request to see them.

In March 1990, the OSD authorized an independent analysis of the cost and schedule status of the A-12, which was to be conducted by OSD Cost Analyst Gary Christle. Christle’s analysis indicated that the program’s estimated final cost would be \$1 billion over ceiling and at least one year behind schedule. By this time the contractors’ cost reports to D’Angelo showed growing cost overruns, and her analysis was consistent with Christle’s.

On March 28, 1990, Christle briefed the A-12 Program Office on his analysis. He requested that D’Angelo be present in the briefing, which included Elberfeld, and D’Angelo’s immediate supervisor, Patterson. Yet D’Angelo was purposefully excluded from the meeting—she believed it was at the request of Elberfeld, which he later denied. Shortly thereafter, on two occasions, Christle’s report was briefed to the Under Secretary of Defense for Acquisition, John A. Betti. Yet, the Under Secretary did not consider the analyst’s projections to be credible and did not pass the estimates on to the Secretary of Defense. According to a 1995 *Washington Post* article, on April 26, 1990, Cheney advised the House Armed Services Committee: “We think we ought to go forward with the A-12, that it’s a good system, and that the program appears to be reasonably well-handled at this point.”⁶

It wasn’t until June 1, 1990, that the contractors publicly acknowledged that the scheduled first-flight would be significantly delayed, the contract cost would significantly exceed the contract ceiling (and could not be absorbed by the contractors), and the aircraft would not meet certain critical performance requirements (e.g., weight) specified in the contract. Cheney was outraged by this news and later testified to Congress that he had “gone forward to the Congress in good faith and presented the best information that was available to us then and then subsequently found that the information we’d been presented was not accurate.”⁷

In July 1990, Navy Secretary Lawrence Garrett ordered an inquiry to investigate how and why the adverse information about the cost, schedule, and technical status of the A-12 failed to be reported to him and others. The Beach investigation resulted and determined that the earlier estimates supported by the contractors and the Navy were unrealistic and suggested that adverse information about the A-12 project may have been suppressed from Congress. The Beach investigation lasted three months. His team collected about 9,000 documents and interviewed 60 government and contractor employees. In his report, Beach concluded that,

“The PM (Elberfeld) erred in judgment by failing to anticipate substantial additional cost increases. His projections of completion at or within ceiling were unreasonably optimistic and not supported by the facts available to him. The PM (Elberfeld) also erred by failing to anticipate greater risk to schedule than was briefed at the Major Aircraft Review.”⁸

In December of 1990, Secretary Cheney ordered the Navy to justify the A-12 program. He was unconvinced by their arguments, and on January 7, 1991, he cancelled the program. He later commented on his decision to cancel the program, saying:

“The A-12 I did terminate. It was not an easy decision to make because it’s an important requirement that we’re trying to fulfill. But no one could tell me how much the program was going to cost, even just through the full-scale development phase, or when it would be available. And data that had been presented at one point a few months ago turned out to be invalid and inaccurate.”⁹

In the end, Elberfeld was denied a promotion to rear admiral. His promotion had been approved by the Senate on October 27, 1990. After the Beach report, Navy Secretary Garrett had second thoughts, denied the promotion, and assigned Elberfeld to other duties. Two admirals above Elberfeld—Vice Admiral Richard Gentz and Rear Admiral John Calvert—received letters of reprimand, and Under Secretary of Defense Betti resigned. According to Congressional investigators, cost analysts Hafer and D’Angelo did not escape unscathed. Each received downgraded performance ratings. Hafer was reassigned to missile programs, and D’Angelo left the Department of Defense for public health service. Christle left OSD a few years later. He was awarded the Defense Distinguished Service Medal, in part for his analysis of the A-12’s cost difficulties. Additionally, the Navy sought to recover approximately \$2 billion in payments to the contractors, which the contractors disputed in federal court.

REQUIREMENTS

Write an essay (three pages, double-spaced, one-inch margins) that analyzes the ethical issue that Debbie D’Angelo faced.

Include a brief description and explanation of the (1) ethical issue, (2) stakeholders, (3) alternatives with related consequences, and (4) an appropriate course of action for D’Angelo. Make specific references to relevant principles (values), standards, and actions recommended in the *IMA*[®] *Statement of Ethical Professional Practice* and excerpts from the Department of Defense’s *Joint Ethics Regulation* (see appendices for statements).

Consider the following questions and be prepared to discuss your answers in class:

1. Did Debbie D’Angelo have an ethical duty to ensure that her cost estimate was not suppressed?
 - i. Assuming D’Angelo was a CMA[®] (Certified Management Accountant), which overarching ethical principles (values) in the *IMA Statement* clarify her duty?
 - ii. Assuming D’Angelo was a CMA, which responsibilities in the Standards section of the *IMA Statement* clarify her duty?
 - iii. Which additional values listed in *Joint Ethics Regulation* are relevant to her situation?
2. How should D’Angelo have made her concerns known about the program manager’s decision to suppress her cost estimate? How can the *IMA Statement’s* Resolving Ethical Issues section be applied to this case? Does it have any shortcomings?
3. In general, does a supervisor’s escalating commitment to a failing project create a moral issue for the management accountant? Why or why not?

APPENDIX A: IMA STATEMENTS ON ETHICS

IMA STATEMENT OF ETHICAL PROFESSIONAL PRACTICE

Members of IMA shall behave ethically. A commitment to ethical professional practice includes overarching principles that express our values, and standards that guide our conduct.

Principles

IMA's overarching ethical principles include Honesty, Fairness, Objectivity, and Responsibility. Members shall act in accordance with these principles and shall encourage others within their organizations to adhere to them.

Standards

IMA members have a responsibility to comply with and uphold the standards of Competence, Confidentiality, Integrity, and Credibility. Failure to comply with the following standards may result in disciplinary action.

Section I. Competence

Each member has a responsibility to:

1. Maintain an appropriate level of professional expertise by continually developing knowledge and skills.
2. Perform professional duties in accordance with relevant laws, regulations, and technical standards.
3. Provide decision support information and recommendations that are accurate, clear, concise, and timely.

Section II. Confidentiality

Each member has a responsibility to:

1. Keep information confidential except when disclosure is authorized or legally required.
2. Inform all relevant parties regarding appropriate use of confidential information. Monitor subordinates' activities to ensure compliance.
3. Refrain from using confidential information for unethical or illegal advantage.

Section III. Integrity

Each member has a responsibility to:

1. Mitigate actual conflicts of interest. Regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts of interest.
2. Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
3. Abstain from engaging in or supporting any activity that might discredit the profession.
4. Contribute to a positive ethical culture and place integrity of the profession above personal interests.

Section IV. Credibility

Each member has a responsibility to:

1. Communicate information fairly and objectively.
2. Provide all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, analyses, or recommendations.
3. Report any delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.
4. Communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.

Resolving Ethical Issues

In applying the Standards of Ethical Professional Practice, the member may encounter unethical issues or behavior. In these situations, the member should not ignore them, but rather should actively seek resolution of the issue. In determining which steps to follow, the member should consider all risks involved and whether protections exist against retaliation.

When faced with unethical issues, the member should follow the established policies of his or her organization, including use of an anonymous reporting system if available. If the organization does not have established policies, the member should consider the following courses of action:

1. The resolution process could include a discussion with the member's immediate supervisor. If the supervisor appears to be involved, the issue could be presented to the next level of management.
2. IMA offers an anonymous helpline that the member may call to request how key elements of the IMA Statement of Ethical Professional Practice could be applied to the ethical issue.
3. The member should consider consulting his or her own attorney to learn of any legal obligations, rights, and risks concerning the issue.

If resolution efforts are not successful, the member may wish to consider disassociating from the organization. .

APPENDIX B: DEPARTMENT OF DEFENSE'S STATEMENT ON ETHICS

EXCERPT FROM THE DEPARTMENT OF DEFENSE'S JOINT ETHICS REGULATION

SECTION 4. ETHICAL VALUES

12-400. General. Ethics are standards by which one should act based on values. Values are core beliefs such as duty, honor, and integrity that motivate attitudes and actions. Not all values are ethical values (integrity is; happiness is not). Ethical values relate to what is right and wrong and thus take precedence over non-ethical values when making ethical decisions. DOD employees should carefully consider ethical values when making decisions as part of official duties.

12-401. Primary Ethical Values

- a. Honesty.** Being truthful, straightforward and candid are aspects of honesty.
1. Truthfulness is required. Deceptions are easily uncovered and usually are. Lies erode credibility and undermine public confidence. Untruths told for seemingly altruistic reasons (to prevent hurt feelings, to promote good will, etc.) are nonetheless resented by the recipients.
 2. Straightforwardness adds frankness to truthfulness and is usually necessary to promote public confidence and to ensure effective, efficient conduct of Federal Government operations. Truths that are presented in such a way as to lead recipients to confusion, misinterpretation, or inaccurate conclusions are not productive. Such indirect deceptions can promote ill-will and erode openness, especially when there is an expectation of frankness.
 3. Candor is the forthright offering of unrequested information. It is necessary in accordance with the gravity of the situation and the nature of the relationships. Candor is required when a reasonable person would feel betrayed if the information were withheld. In some circumstances, silence is dishonest, yet in other circumstances, disclosing information would be wrong and perhaps unlawful.
- b. Integrity.** Being faithful to one's convictions is part of integrity. Following principles, acting with honor, maintaining independent judgment and performing duties with impartiality help to maintain integrity and avoid conflicts of interest and hypocrisy.
- c. Loyalty.** There are many synonyms for loyalty: fidelity, faithfulness, allegiance, devotion and fealty. Loyalty

is the bond that holds the nation and the Federal Government together and the balm against dissension and conflict. It is not blind obedience or unquestioning acceptance of the status quo. Loyalty requires careful balancing among various interests, values and institutions in the interest of harmony and cohesion.

- d. Accountability.** DOD employees are required to accept responsibility for their decisions and the resulting consequences. This includes avoiding even the appearance of impropriety because appearances affect public confidence. Accountability promotes careful, well thought-out decision-making and limits thoughtless action.
- e. Fairness.** Open-mindedness and impartiality are important aspects of fairness. DOD employees must be committed to justice in the performance of their official duties. Decisions must not be arbitrary, capricious or biased. Individuals must be treated equally and with tolerance.
- f. Caring.** Compassion is an essential element of good government. Courtesy and kindness, both to those we serve and to those we work with, help to ensure that individuals are not treated solely as a means to an end. Caring for others is the counterbalance against the temptation to pursue the mission at any cost.
- g. Respect.** To treat people with dignity, to honor privacy and to allow self-determination are critical in a government of diverse people. Lack of respect leads to a breakdown of loyalty and honesty within a government and brings chaos to the international community.
- h. Promise Keeping.** No government can function for long if its commitments are not kept. DOD employees are obligated to keep their promises in order to promote trust and cooperation. Because of the importance of promise keeping, it is critical that DOD employees only make commitments that are within their authority.
- i. Responsible Citizenship.** It is the civic duty of every citizen, and especially DOD employees, to exercise discretion. Public servants are expected to engage personal judgment in the performance of official duties within the limits of their authority so that the will of the people is respected in accordance with democratic principles. Justice must be pursued and injustice must be challenged through accepted means.

Pursuit of Excellence. In public service, competence is only the starting point. DOD employees are expected to set an example of superior diligence and commitment. They are

expected to be all they can be and to strive beyond mediocrity.

ENDNOTES

¹U.S. Government Accountability Office, “Navy A-12: Cost and Requirements,” December 31, 1990.

²*Ibid.*

³Chester P. Beach, *A-12 Administrative Inquiry: Memorandum to the Secretary of the Navy*, Washington, D.C., Department of the Navy, November 28, 1990.

⁴*Ibid.*

⁵U.S. GAO, 1990.

⁶George C. Wilson and Peter Carlson, “Stealth Albatross,” *The Washington Post*, October 29, 1995.

⁷*Ibid.*

⁸Beach, 1990.

⁹James Perry Stevenson, *The \$5 Billion Misunderstanding: The Collapse of the Navy’s A-12 Stealth Bomber Program*, U.S. Naval Institute Press, Annapolis, Md., 2000.

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Note: This case has been updated to incorporate the revised *IMA Statement of Ethical Professional Practice* effective as of July 1, 2017.