

To: Review Committee
From: Jackie Meyle
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RE: Death of a Spy Satellite

In 1998, the National Reconnaissance Office, a satellite agency, put the Future Imagery Architecture (F.I.A) project contract out for bid. The first concerns for the F.I.A. project came from the satellite agency itself. They questioned the feasibility of the new approach given the expected \$5 billion budget cap for the first five years, with spending limited to \$1 billion a year. There were many issues that arose during the F.I.A project. The first issue was selecting a company, Boeing, which had no experience building imagery spy satellites. The second issue was not evaluating the budget plans for each bid efficiently. The last issue that arose was transferring control of big military projects to contractors. These issues ultimately contributed to the failure of the F.I.A. project.

The first issue contributing to the failure of the F.I.A. project was selecting Boeing, a company that had no experience building imagery spy satellites. The contractors were given greater responsibility for monitoring their own work. Boeing was not able to exercise judgment in certain areas because it was not within their own experiences. The company was famous for making airplanes, but had never built an electro-optical or radar-imaging spy satellite. The company did not have backup approaches in case a component failed. This led to Boeing returning to square one, forcing new delays. Boeing also kept sending positive reports to the government instead of telling them that the project was in trouble. The company should have kept the government informed on their issues instead of sending reports stating that the project was running smoothly. Boeing should not have won the bid for the F.I.A. project to begin with because they had no experience working with satellites. The other company bidding for the F.I.A. contract was Lockheed Corporation. This company had experience with satellites and due to this, should have been offered the bid. For a project with a limited budget, a more experienced company should have won the bid. Boeing was not able to stay complete the task appointed to them.

The second issue was not evaluating the budget plans for each bid efficiently. Boeing had stated that their plan would fall within the budget constraint, although some within the company knew that it would cost \$4 billion more than what the government plan and what they proposed. Keith R. Hall, the satellite agency's director, stated that Lockheed and Boeing claimed to fall within the spending cap. An agency evaluation team had calculated that only Boeing's plan actually would, and that it was more technologically innovative. A second evaluation of the plans that was done within a few months of announcing Boeing won the bid, determined that the Boeing plan would actually go over the budget cap. Multiple reviews of the plans budget should have been done. It would have been clear that Boeing's proposal would have gone over the budget cap.

Peter B. Teets, the head of the nation's spy satellite agency, appointed a panel to examine the F.I.A. project and find out what was happening. The panel found that the F.I.A. project was far behind schedule and would most likely cost \$2 billion to \$3 billion more than planned. By the time the project was terminated in 2005, the cost ran as high as \$18 million. The government

also ordered two major and several minor design changes that added \$1 billion to cost projections and an additional \$3.6 billion was approved for the project. Once the cost started going over budget, the project should have been shut down immediately. Another panel that was led by A. Thomas Young, a former aerospace executive, was formed in 2003 to look at the project. The panel said the program could be salvaged with even more financing and changes in the program and schedule. Several members said the group should have called for ending the program. If the panel had recommended terminating the project, billions of dollars could have been saved.

The last issue that arose was transferring control of big military projects to contractors, on the theory that they could best manage engineering work and control costs. This lowered the morale of officers who worked on Air Force satellite projects, many of whom had been recruited to be midlevel managers at the National Reconnaissance Office. Many of these officers felt as though there was nothing for them to do and left. This caused a void in capability. Many military experts believe that the F.I.A. project sunk under an excessive amount of data demands and technological risks. If the officers who were hired to be midlevel managers were able to be involved in the management process, there could have been more experienced workers helping with the F.I.A. project.

Overall, these three factors contributed to the termination of the Future Imagery Architecture project. If the satellite agency had chosen an experienced company, such as Lockheed, they might not have gone over the budget by almost \$13 billion. Multiple budget review boards should have been established to ensure that the satellite agency was choosing the plan that stayed within the budget constraints. The morale of officers who worked on Air Force satellite projects was crushed after transferring management authority to military contractors. Many of them decided to work on other projects because there was nothing for them to do on the F.I.A. project.

In order to avoid another expensive failure like this in the future, competitive bidding for space programs should be initiated only among companies deemed qualified. This would ensure that only experienced companies are working on expensive projects and sending accurate progress reports. Another recommendation would be to set up a cost-estimating group to review project proposals and set budgets. This group would determine whether or not the cost projections in the proposals are accurate and would also set definite budgets. The last recommendation would be to have experienced officers manage satellite projects. This would ensure that those working on expensive projects have a background and knowledge in satellites. These recommendations could help avoid another expensive failure such as the Future Imagery Architecture project.