Why did Future Imagery Architecture (FIA) fail? **Mayank Kumar (EE 598 E)**

Following are the reasons which I believe were responsible for the failure of the project:

1. Troubled partnership between government of the USA and the contractor Boeing. On the one side govt. wanted to develop a superior intelligence technology but has very constrained budget. On the other side, Contractor was making promises which they could keep.
2. Govt. ability to manage complex projects:
    a. Even though it was highlighted during internal assessment that it will be very tough to deliver the project in such a short time and a tight budget. Government had decided to move forward with the project.
    b. Boeing didn't had experience with such kind of project. Government's decision to give higher weightage to cost led to business offer to Boeing who didn't any clue about what they are getting into.
    c. May be govt. down-pitched their requirements or were not able to make contractor understand their demands.
3. Govt. planned a budget which was non-elastic. They completely ignored budget overruns, program delays and complexities.
4. Usually, experienced suppliers offer most realistic targets and proposal. But, govt. could resist new bidders in expectation of new ideas and lower cost of completion.
5. Boeing's inexperience with such project was amplified by budget cuts and lack of seasoned employees. Because of lack of experienced employees on the team, they were not able to make apt judgment on technical topics. Even with such issues, this was deliberate attempt from Boeing to diversify as it faced threat to its commercial plane business from Airbus.
6. Govt. gave the full responsibility of monitoring the project to Boeing. Boeing was already struggling with manpower and budget issues, in such a case giving full responsibility to contractor was counter productive approach.
7. Boeing misreported the problems and challenges faces during the project. They always gave positive feedbacks which was misleading to the approvers (NASA).
8. Boeing misjudged the capability of their supplier. Situation at their supplier's end was similar to Boeing. During the same time dot com crash led to curtailed production and firing of employees.
9. Technological faults were not identified at initial stage. Also, Lead of the project at boeing was insufficiently demanding. This claim was accepted by the lead. These lead to complete failure in delivery like:
    a. Gyroscopes were flawed. The supplier had changed the production process. This flaw was identified after 3 years from start of the project.
    b. Wirings were, in some cases, contaminated with dust.
    c. Tin was used as material. Tin develops tin whisker in outer space which can lead to failure of component or can lead to short circuits as well. This fault was identified much later in the project.
    d. Total breakdown of system engineering at Boeing. For example, initial design for optical system was so elaborate that it was not possible to build.

10. No Backup plan: Boeing didn't have backup plan for part failures. So, if any of the parts failed or were rejected during the development or testing, they had to start from ground-up. This part of the story was also not reported to NASA.

The project in the beginning was highly underestimated which eventually added to the problems during design or the later stage. Underestimation happened at both side of process, supplier (Boeing) and OEM(NASA)