Vision

Continue to provide worlds best multi-mission coastal and sea response air assets while minimizing overall costs to the United States taxpayer.

Current State

- Coast Guard owns/operates 40 HU-25 Falcons for medium range response mission.
- Old airframes - total maintenance costs are high - $4M/yr but comparable with existing aircraft.
- Old engines - engine maintenance costs are high - $2M/yr – much higher than costs for other engines available.

Goal

- Determine best plan to maintain current mission response while minimizing total costs.
- Analyze new airframe and new engine technologies.

Possible Plans

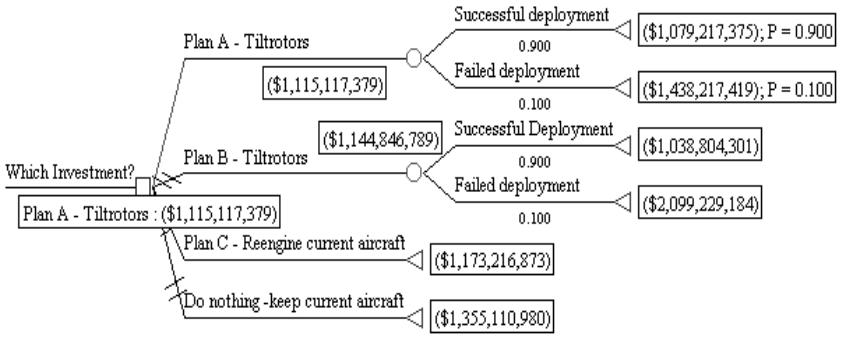
- Purchase Bell 609 Tiltrotors – 10/yr for 4 years.
- Purchase Bell 609 Tiltrotors – 20/yr for 2 years.
- Reengine 40 existing aircraft (80 engines).
- Do nothing - keep existing aircraft.
- Optionally, build a prototype Tiltrotor to "prove" aircraft can meet the Coast Guard's multi-missions.
  - Cost for prototype – $15M
- Assess costs over 20 year period.
- Assume Discount Rate = 12%

Recommendations

- Build a prototype Tiltrotor to “test” new technologies applicability to Coast Guard missions.
- If prototype succeeds, invest in 20 Tiltrotors per year for 4 years.
- If prototype fails, invest in reengining existing aircraft.

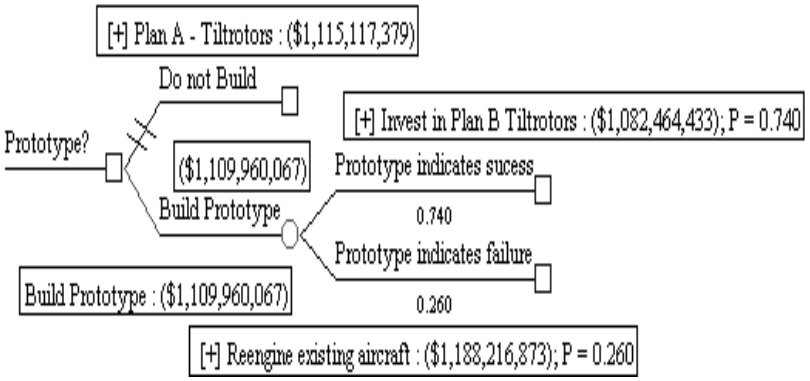
NPV Analysis

- If no prototype is built, NPV analysis supports Investment in Plan A – 10 Tiltrotors/yr for 4 years.



NPV with Option

With option to build prototype, analysis supports Plan B (successful prototype) or reengine (unsuccessful prototype).

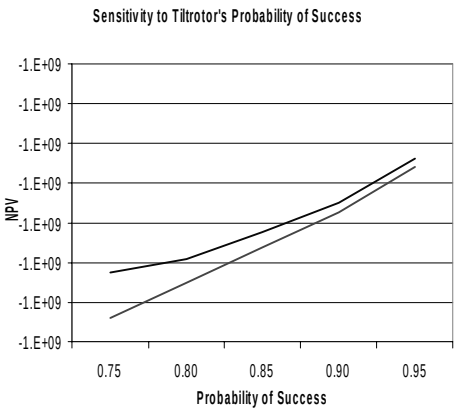


Sensitivity to Discount Rate

Discount Rate	Prototype?	If Success	If Fails
6%	Yes	Plan B	Plan A
8%	Yes	Plan B	Plan A
10%	Yes	Plan B	Reengine
12%	Yes	Plan B	Reengine
14%	Yes	Plan B	Reengine
16%	Yes	Plan B	Reengine
18%	Yes	Plan B	Reengine
20%	Yes	Plan B	Reengine
22%	No		
24%	No		

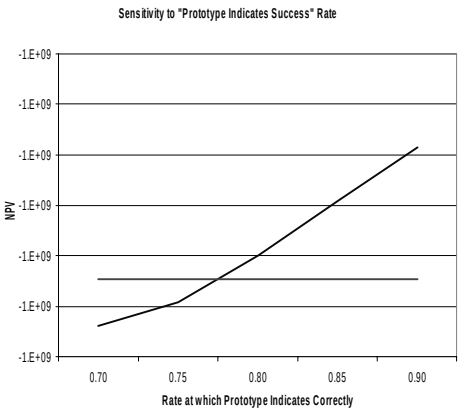
Sensitivity to Tiltrotor Success

P(S)	Result
0.95	Build
0.90	Build
0.85	Build
0.80	Build
0.75	Build



Sensitivity to Prototype Forecast

P(test)	Result
0.70	Don't Build
0.75	Don't Build
0.80	Build
0.85	Build
0.90	Build



Conclusions/Next Steps

- Recommend Building a Prototype Tiltrotor.
  - If Prototype Succeeds – build 20 per year/2 yrs.
  - If Prototype Fails – reengine current aircraft.
- Sensitivity analysis supports prototype.
- Direction of Future Analysis
  - Analyze utility of high costs vs. low costs.
  - Analyze utility of extra mission capability of engines and/or Tiltrotors.