Lean Effects on Aerospace Programs
F-16 Case Study
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Program Highlights

- Over 4000 aircraft delivered to 21 countries
  - Over 100 different versions

- Nearly constant price since 1990 (constant year dollars)
- Decreasing production rates (180/yr - 24/yr)
- Significant improvement in system capability
- Poor quality and cost performance issues
- 1992
  - New VPs of Operations and Engineering
  - Emphasis on customer
  - New policies to improve quality
- Focus on core competencies
- 1996
  - Internal restructuring - Separation of programs and core functional groups
  - Formal IPT implementation on programs
- 1998
  - Formalization of Lean group
- Pilot projects in lean production
- Improvement of interface between engineering and production
- 2000
  - Corporate focus on lean showing top-down commitment
- Focus on supplier networks and enterprise issues
Continuous Improvement

Each success leverages off the previous one.
Enablers

- New leadership - shift in attitude
- Metrics including goals
- Core competencies
- IPT structure
- Pilot project successes
  - Customer participation
- Advances in IT tools
- Senior corporate leadership commitment
Future Opportunities

- Extending pilot projects throughout entire program
- Incentives for supplier network integration
  - 60% of cost of aircraft is procured
- Interaction with other programs
  - Learning and sharing