SUBJECTS OF THE THREE RAND STUDIES ON INDUSTRY INITIATIVE DESIGNED TO REDUCE THE COST OF PRODUCING MILITARY AIRCRAFT


Automated fiber placement

Computer-aided design/computer-aided manufacturing (CAD/CAM)

Electron beam (E-beam) curing

Filament winding

Infrared thermography

High-speed machining

High-performance machining

Hot isostatic press (HIP) investment casting

Laser forming of titanium

Laser ply alignment

Laser shearography

Laser ultrasonics
Optical laser ply alignment
Out-of-autoclave curing
Pultrusion
Resin film infusion
Resin transfer molding
Statistical process control
Stereolithography
Stitched resin film infusion
Superplastic forming/diffusion bonding
Unitization of aircraft structure
Ultrasonic inspection
Vacuum-assisted resin transfer molding


Civil-military integration
Commercial-like programs
Commercial insertion
Commercial off-the-shelf (COTS) technology
Contractor configuration control
Cost as an independent variable (CAIV)
Defense acquisition pilot programs (DAPPs)
Federal Acquisition Reform Act (FARA)
Federal Acquisition Streamlining Act (FASA)
Integrated product teams
Subjects of the Three RAND Studies on Industry Initiative Designed to Reduce the Cost of Producing Military Aircraft

Military specification (mil spec) reform
“Must-cost” targets
Multiyear procurement
Other transaction authority (OTA)
Procurement price commitment curve
Regulatory and oversight burden reductions
Single-process initiative (SPI)

MR-1325-AF, Military Airframe Acquisition Costs: The Effects of Lean Manufacturing, by Cynthia R. Cook and John C. Graser (2001)

Cellular manufacturing
Computer-aided design/computer-aided manufacturing (CAD/CAM)
Continuous flow production
Design for manufacturing and assembly (DFMA)
Electronic data interchange (EDI)
Electronic work instructions (EWI)
Enterprise resource planning (ERP)
First-time quality
Flexible tooling
Integrated product teams
Just-in-time (JIT) delivery
Kaizen events
Kitting of parts or tools
Lean Aerospace Initiative (LAI)
Lean enablers

Lean human resource management (HRM)
Lean pilot projects
Operator self-inspection
Production cost reduction plans (PCRP s)
Purchasing and supplier management (PSM)
Pull production
Single-piece flow production
Six-sigma quality
Six “S’s” of housekeeping
Statistical process control (SPC)
Strategic sourcing agreements
Takt time
Target costing
Three-dimensional (3D) design systems
Total Productive Maintenance (TPM)
Unitization/part count reduction
Visual manufacturing controls (Kanban)
Value (cost) stream analysis