

Aerospace & Defense Overview

A&D Overview

- A&D is one of the few sectors of the US economy with a positive trade balance (exports>imports)
- While the sector continues to grow, employment has not kept pace
- Military and Commercial portions of the market have different drivers and characteristics

A & D

Size and Scope

- Workforce: over 1.6M
 - Commercial: 547K
 - Defense/National Security: 519K
 - Services: 596K
- Sales: over \$600B
 - Commercial: \$276B
 - Defense/National Security: \$204B
 - Services: \$124B
- Net Trade Balance: over \$81B

Key Drivers

Civil (or Commercial) Market

- Cost efficiency
 - Ability to contribute to cash flow/profits
 - Systems generally have a planned/limited life span

Military Market

- Mission effectiveness
 - Operational capability
 - Life span may be extended

Civil Aerospace

- Aircraft
 - LCA—Large Commercial Aircraft (Boeing/Airbus)
 - RJ— Regional Jets (Bombardier/Embraer)
 - Business Aircraft (Cessna/Gulfstream)
 - General Aviation (Cirrus/Moody/Cubcrafters)
- Space systems
 - Launch systems (Orbital ATK/Ariane/LM)
 - Satellites
 - Imaging (GeoEye/DigitalGlobe)
 - Communications (Iridium/Intelsat)

Military Market Characteristics

- DoD is a relatively small customer in a very large commercial marketplace
- DoD has cyclical needs for non-commercial, defense-unique capabilities (Boom or Bust)
 - Examples: TACAIR propulsion systems, Munitions
- Weapon systems may have a service life measured in decades
 - Examples: B-52, KC-135, CVN, SSBN, MA-1A

F-35 Program Impact

16 States where economic impact > \$100M

Texas	Michigan
California	Washington
Florida	Georgia
New Hampshire	Arizona
Maryland	Indiana
New York	Iowa
Connecticut	Utah
Illinois	Ohio

Shaping the DIB

- Congressionally Mandated
 - Berry Amendment
 - Specialty Steel
 - Set Asides
- Less than Full and Open Competition
 - 7 authorities
- Defense Production Act
 - Title I, Defense Priorities
 - Title III, Industrial investment