



F-35: The Future of Air Power

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Future Air Power for 11 Nations... And Growing



Canada

United States

United Kingdom

Australia

Netherlands

Turkey

Denmark

Italy

Norway

Israel

Japan

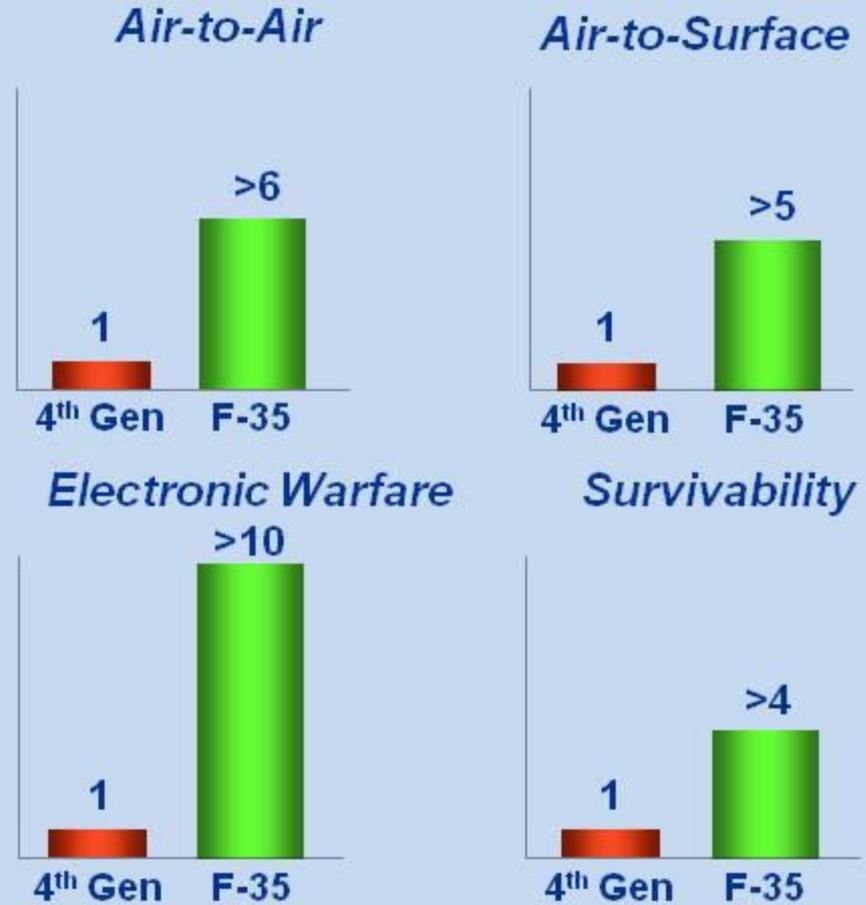
F-35 Multi-Role Effectiveness



Attributes

- *Survivability*
 - *VLO Stealth*
 - *Electronic Attack*
- *Fighter Performance*
- *Range*
- *Payload*
- *Quantities*

Mission Effectiveness*



*USG & Partner Validated and Verified Results

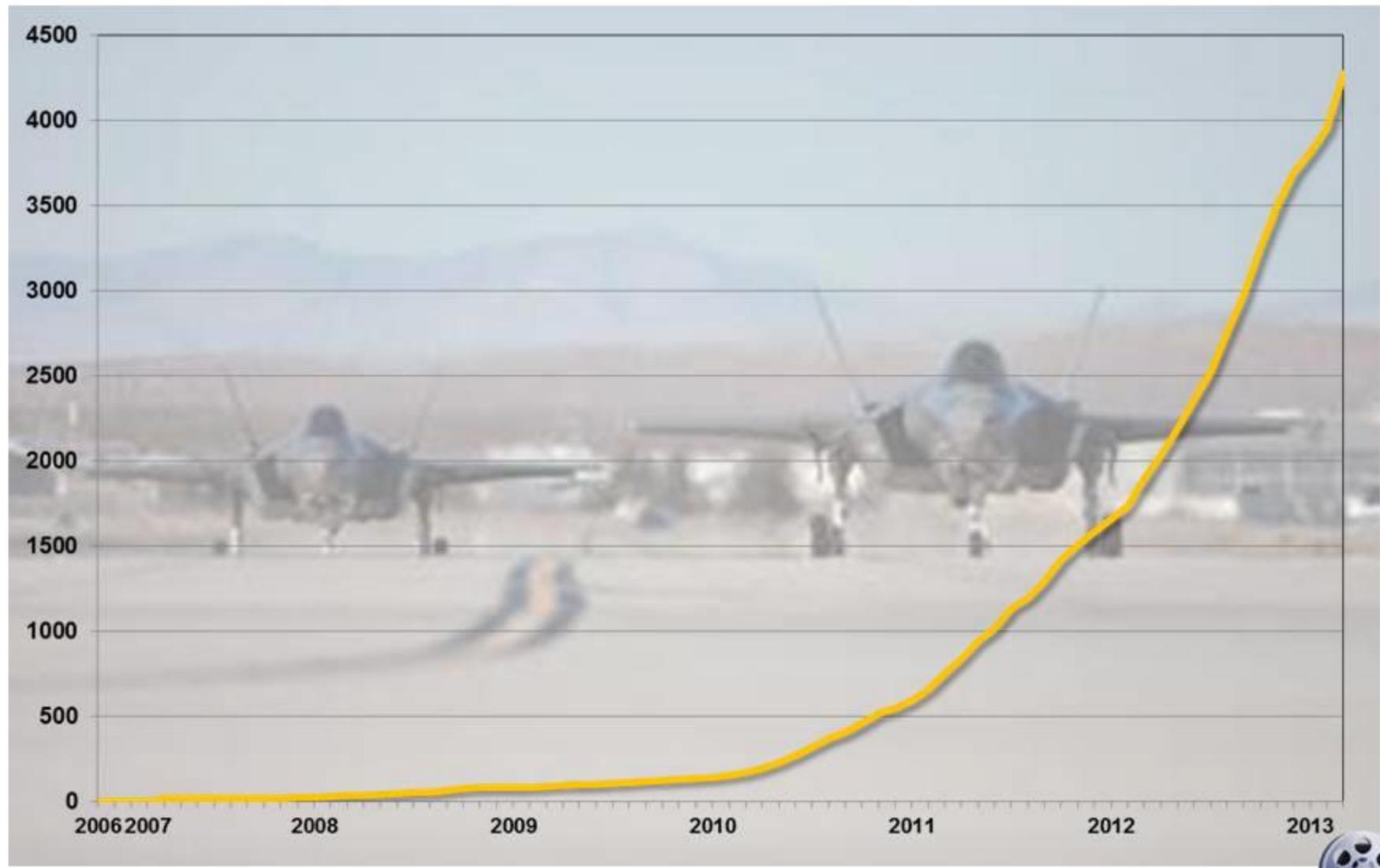
5th Generation Preserves Air Dominance

Technical Focus Areas

- **Helmet**
- **Lightning**
- **Tail Hook**
- **Horizontal Tail Heating**
- **Weight Management**



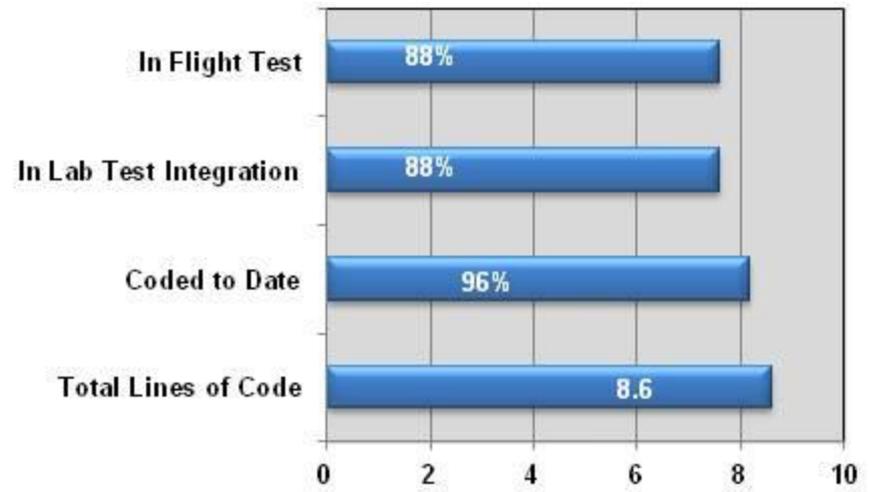
2006-2013 Cumulative Flights



Airborne Software

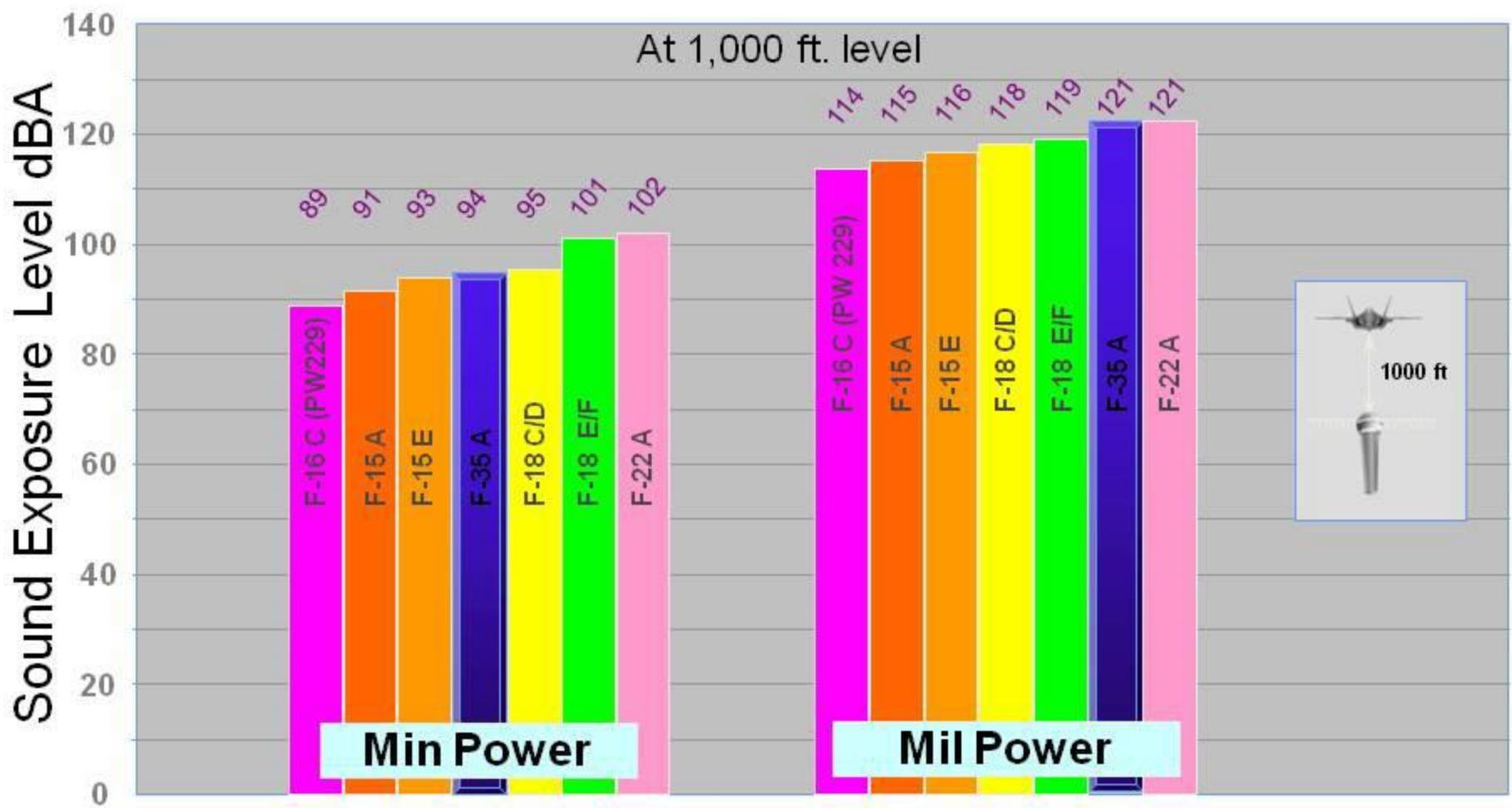
CTOL

STOVI



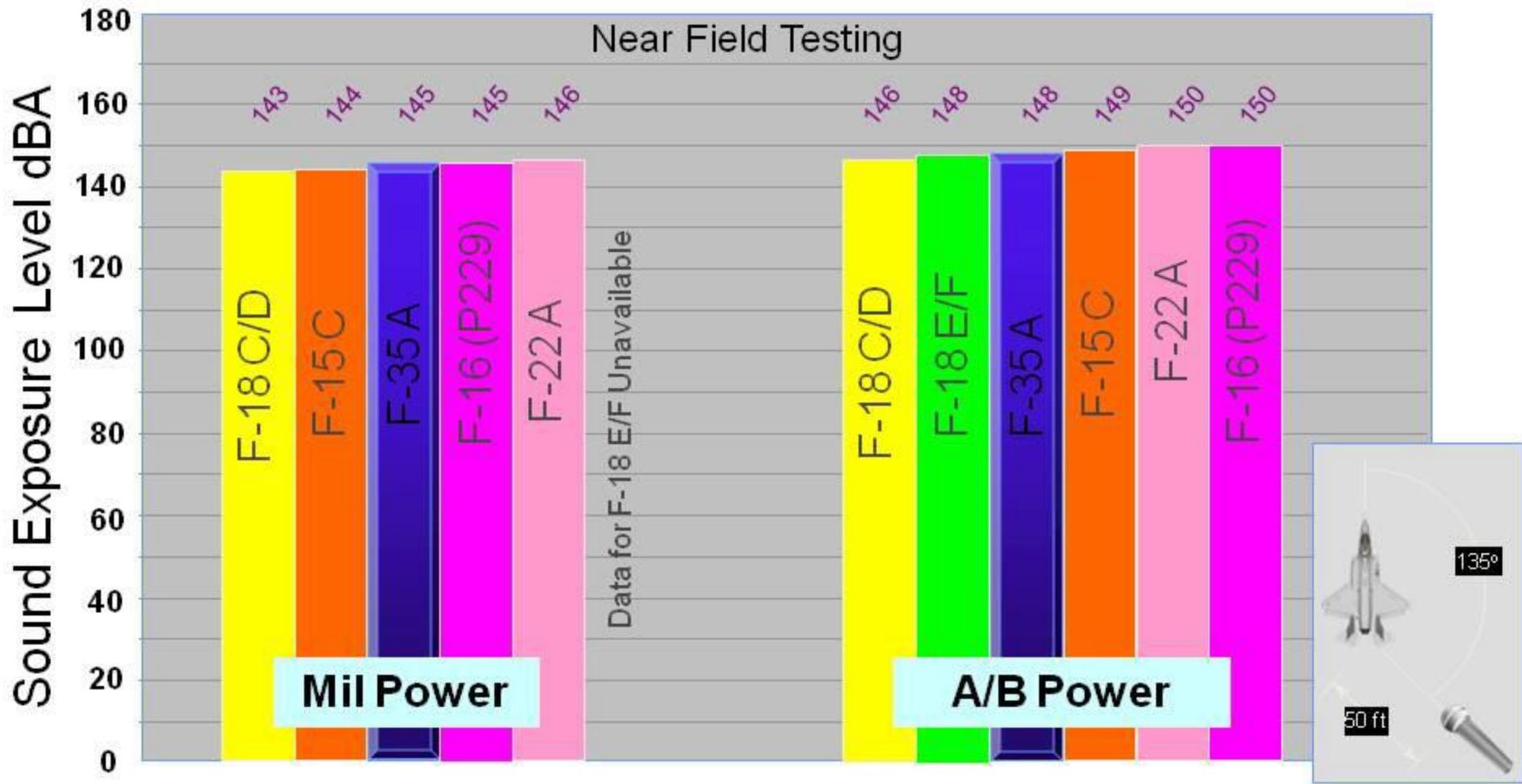
Block 2B Released on Time – Flying on Aircraft Today

Acoustics



F-35 Comparable to Current Fighter Aircraft

Acoustics



F-35 Comparable to Current Fighter Aircraft

F-35 Production Status

- **81 Aircraft Rolled Out**
- **63 Aircraft Flying**

CTOL STOVL CV



235 Aircraft Delivered or On Order

Credit Suisse Conf. – March 12, 2013

CTOL

STOVL

CV

- Mr. Frank Kendall,
Deputy Undersecretary of Defense
 - *“F-35 is DoD’s number one priority”*
 - *“Despite sequestration, we still have a budget that is adequate to support F-35”*



F-35 -- Pro-Active Strategic Deterrence

- **5th Generation Fighter**
- **Advanced Sensors, Fusion & Data Links**
- **True Stealth While Carrying Bunker Busters**
- **External Weapons for Maximum Carriage**
- **Large Internal Fuel for Long Range**



5th Generation Air Power: The Need for F-35





The Strategic Advantage of Air Power



“Not to have an adequate airforce in the present state of the world is to compromise the foundations of national freedom and independence.”

Winston Churchill, 1933



Desert Storm



Bosnia



Afghanistan



Iraqi Freedom



Libya

Iraqi Army – Without Air Power

- *Enemy Fighters Neutralized*
- *Coalition Power Projection Achieved*



Coalition Forces – With Air Power

- *Freedom to Maneuver*
- *Freedom from Attack*
- *Freedom to Attack*



Air Power Is an Essential Core Competency



Threat Environment

We Are Going From This...



... To This



Low-Tech Insurgent Warfare to Sophisticated Conventional Capabilities



Production Comparison

Aircraft Entering Operational Status – U.S. vs. PRC



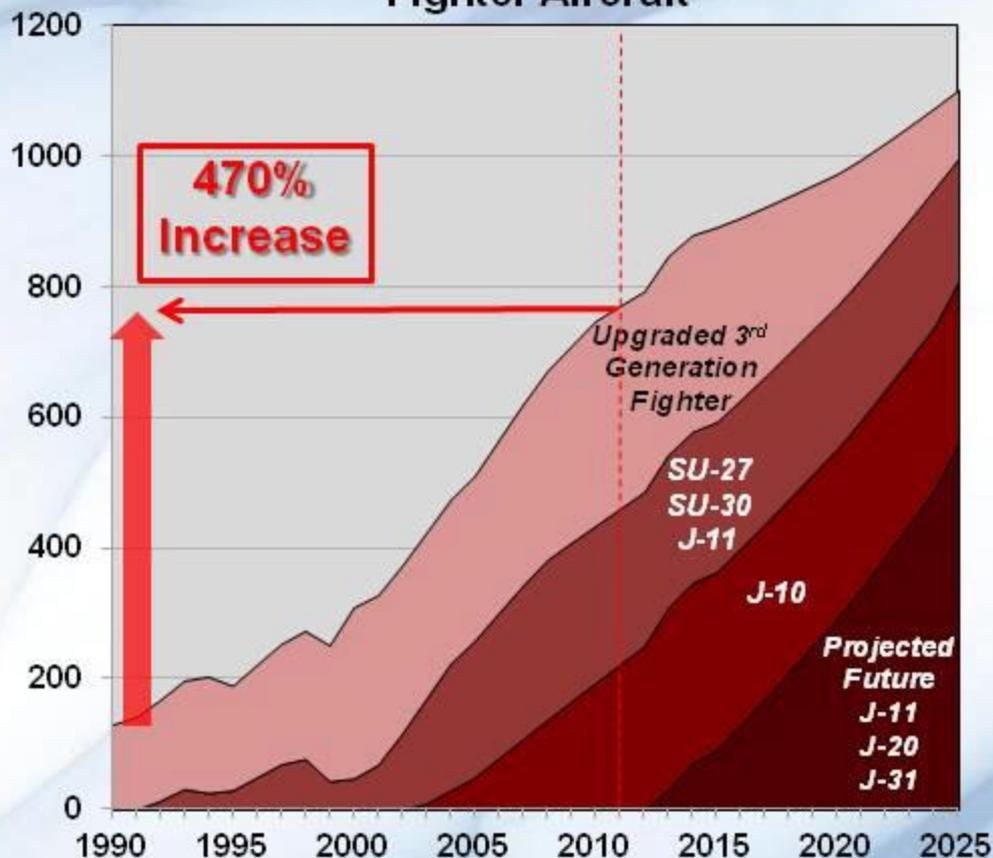
Quantities of Sufficient Quality Need To Be Produced



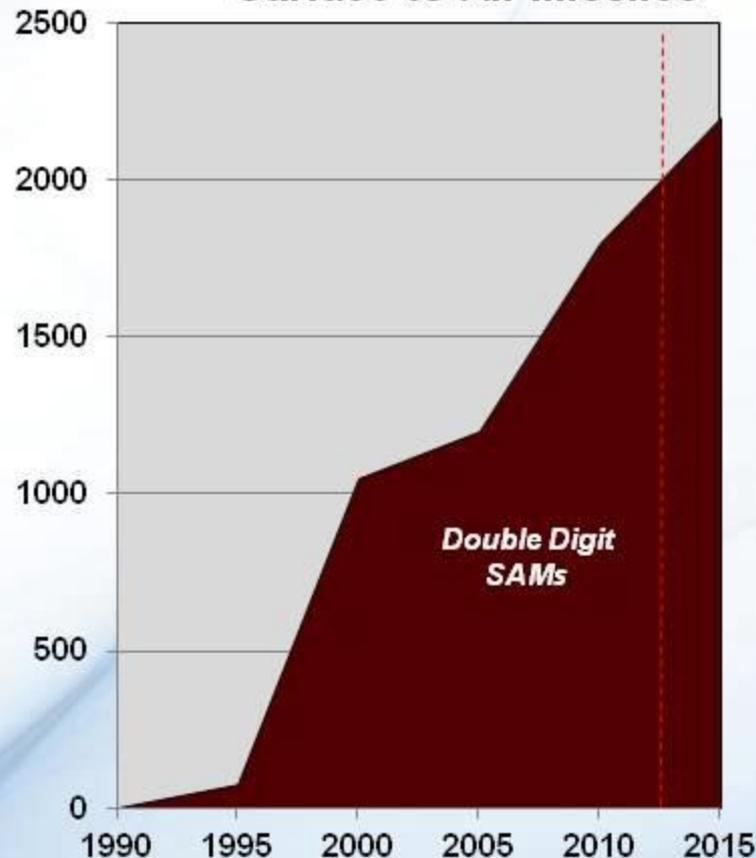
PRC IADS Inventories

PRC Inventories Over Time

Fighter Aircraft



Surface-to-Air Missiles



Threat Inventories Are Steadily Increasing



The Value of Stealth

Lessons Learned From Desert Storm



AIRCRAFT
AIRCRAFT LOST
MISSION SUCCESS



AIRCRAFT
AIRCRAFT LOST
MISSION SUCCESS

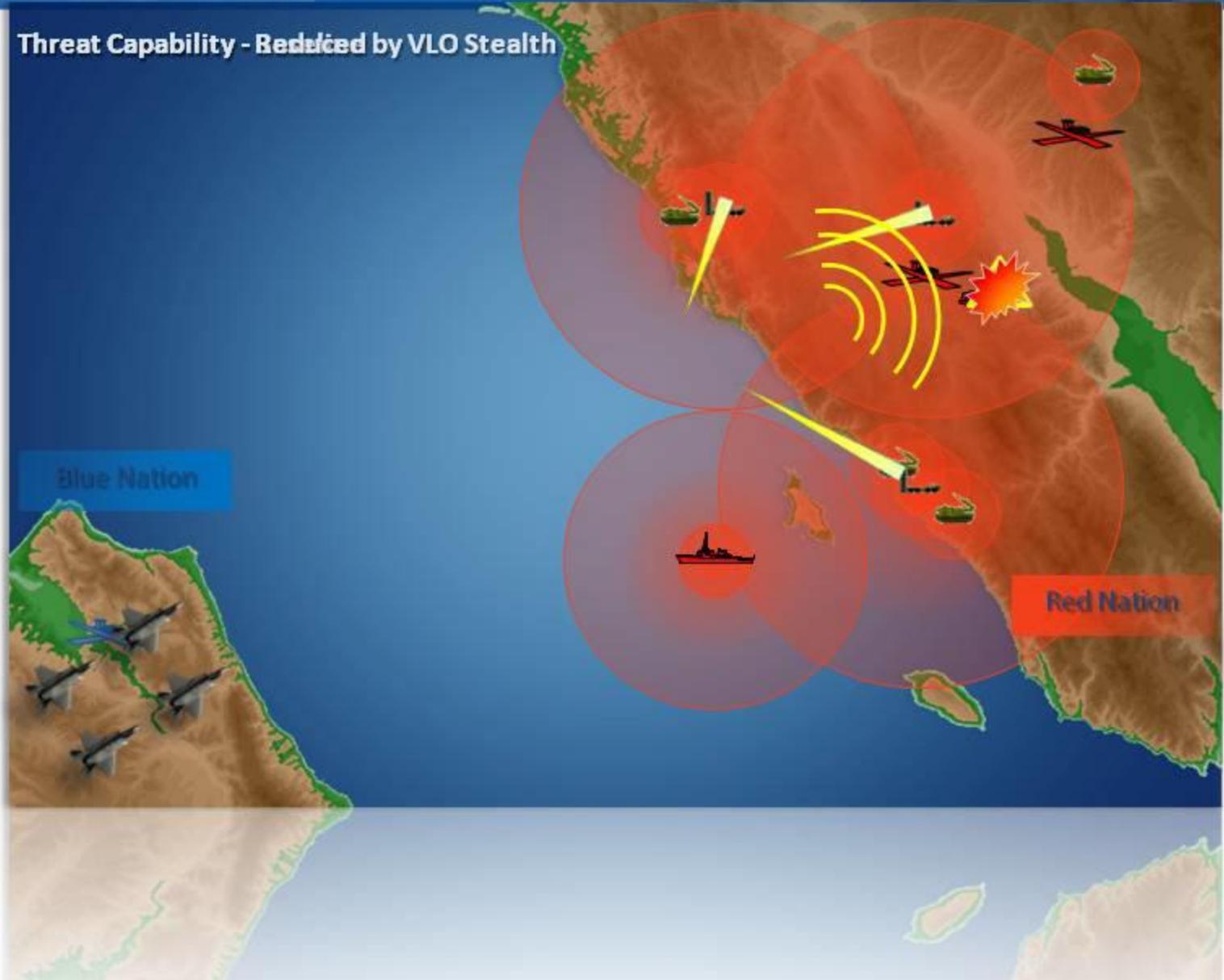
4th Gen is Expensive, Ineffective and Vulnerable

CTOL

STOVL

Countering Advanced Threat Systems

Threat Capability - Reduced by VLO Stealth

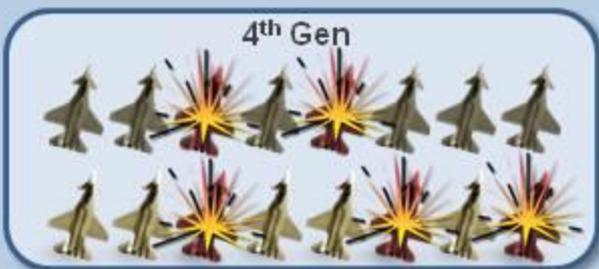




4th Gen Aircraft Are at Risk

Relative Force Package Size Required to Execute Mission

Anti-Air Warfare



vs.



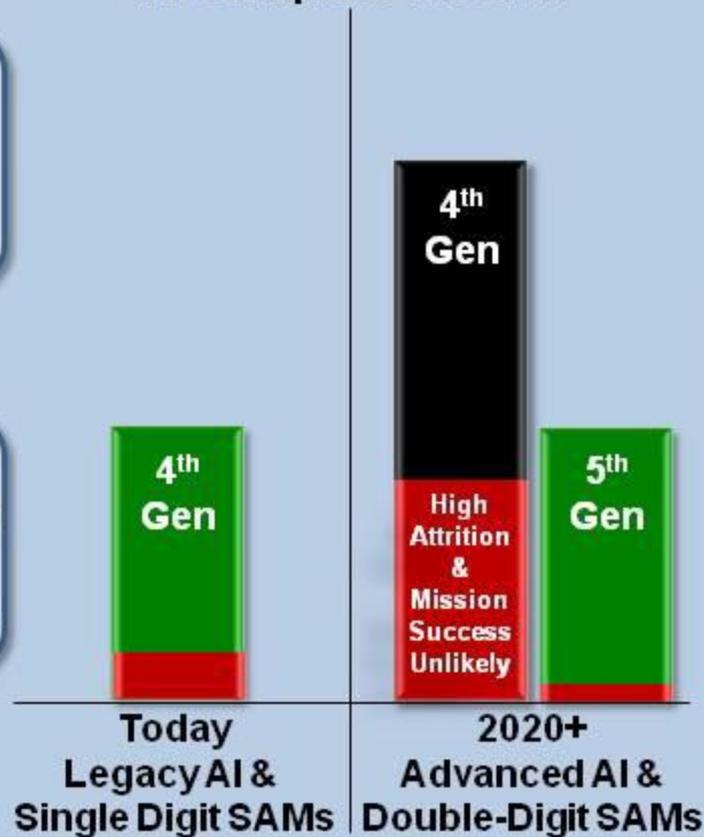
Anti-Surface Warfare



vs.



Force Structure Required To Complete Mission



5th Gen Counters Tomorrow's Threats With Today's Force Size



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5th Generation Preserves Air Dominance

Full Spectrum Capability

F-35 is Relevant Across the Full Range of Operations



