

**YF-23 Advanced Tactical Fighter Prototype
A Revolution in Air Superiority**





***In Our Fast Changing World,
the ATF Requirement Is Mission,
Strategy, and Threat Driven***

“To project power into an area, air superiority is required to prevent attacks on airlift and naval battle groups en route . . . and ground units already there. It also enables us to protect these forces throughout a conflict.

“Air superiority over the battle area allows the ground or maritime commander freedom



to operate and deal with opposing surface forces without being impeded by enemy air.

“An air superiority aircraft must find, engage, and defeat enemy aircraft before they reach our friendly ground, amphibious, or maritime forces. This requires going out to meet enemy attackers who will be protected by modern fighters and surface-to-air missiles.”

*— Secretary of Defense Richard B. Cheney to
the House Armed Services Committee
26 April 1990*

National Strategy Requires Quick, Flexible, Continent-Spanning, Lethal Force Projection

"...rogue states and ethnic tensions remind us war has not gone away Sheer numbers highlight how second and third world states can pose first world threats. Iraq has 400 combat aircraft and 40 army divisions"

— Secretary of the Air Force
Donald B. Rice
14 May 1990

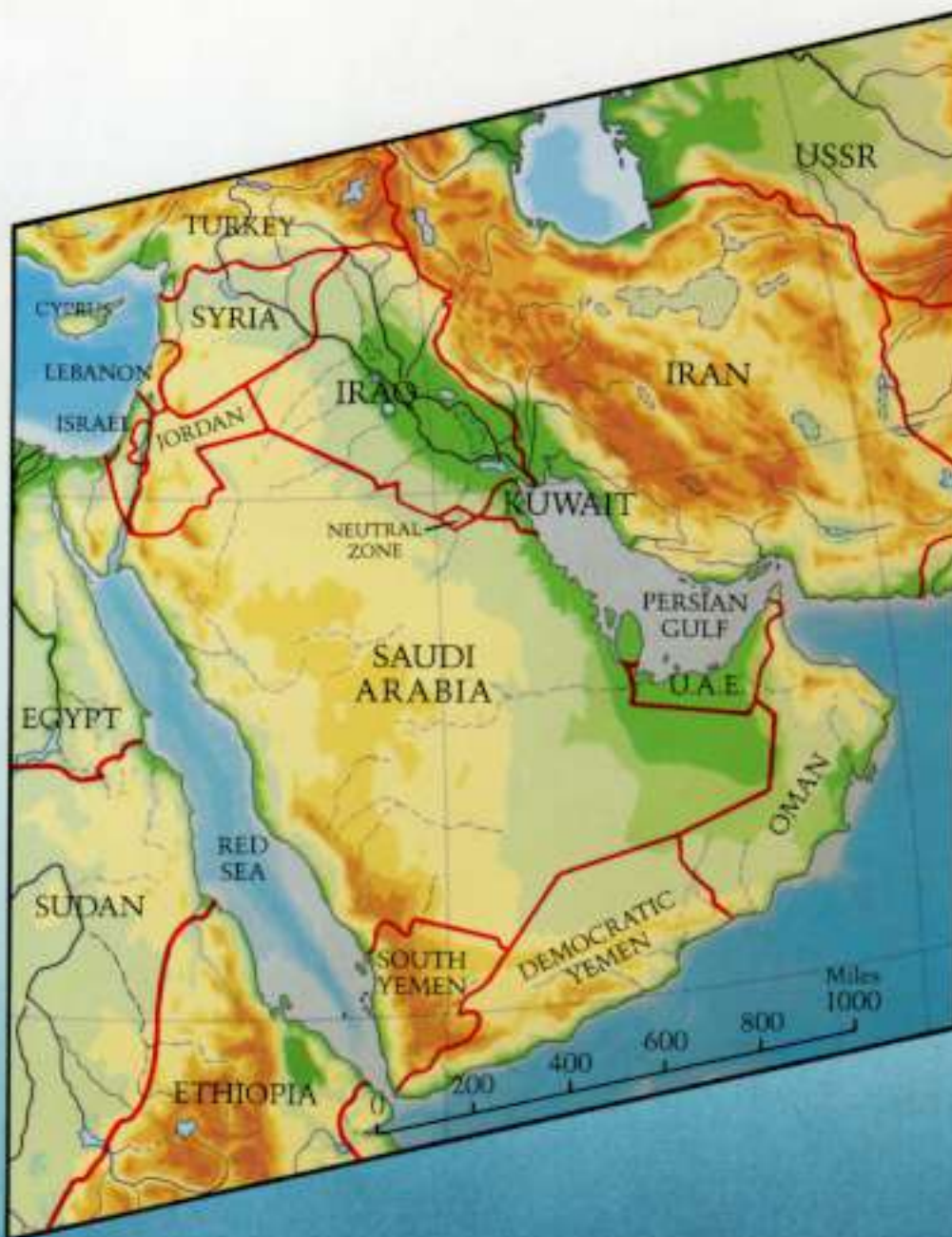


GLOBAL

Air Superiority Provides Control of the Skies Above the Battle

"In the new world order the premium's on getting to a hot spot fast. That's what air power does, and once there, can deter, deliver a tailored response, punch hard. In the process, air power exposes relatively few people to enemy forces . . . a small force of advanced aircraft can deliver a thunderstorm of conventional firepower, fitting America's expectation for sharp, overwhelming, low-casualty engagements."

— Secretary of the Air Force
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GLOBAL POWER

Air power projection capability deters major conflict.

The Modern High-Technology Threat Is Spreading Worldwide

Soviet fighters with performance and lethality comparable to F-15s, F-16s, and F/A-18s and Soviet-developed surface-to-air missiles (SAMs) are being deployed worldwide in over a dozen countries on five continents.

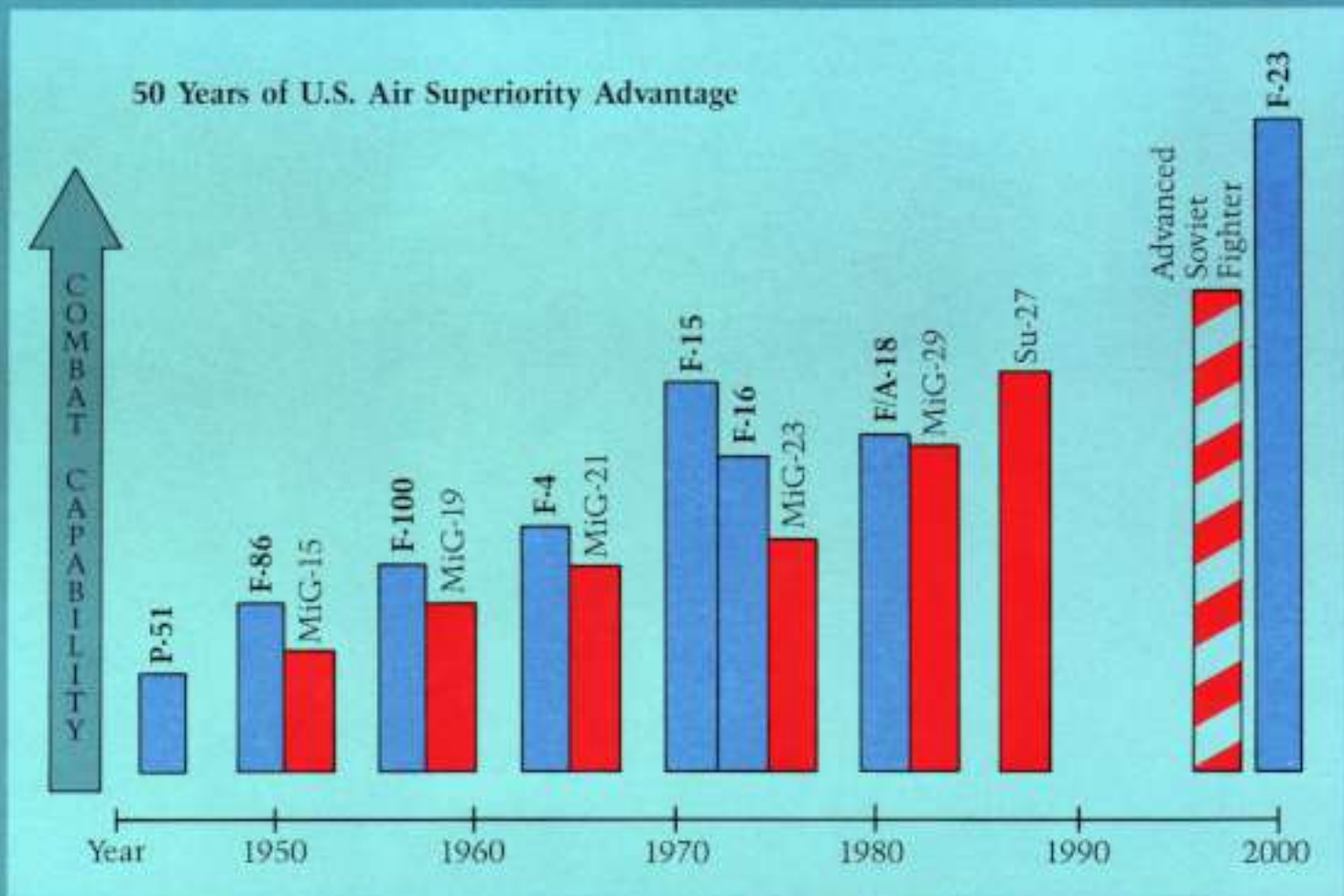


The ATF is needed to counter quantities of high-technology weapons that are under development or in production by many nations and for sale to any buyer.

The ATF Is Essential To Dominate All Current and Projected Threats

Key F-23 Attributes

- Stealth
- Supercruise/Large Payload
- Maneuver Agility
- Situation Awareness Advantage
- Survivability/Lethality
- Supportability and Affordability



F-23 capabilities are achieved through a revolutionary balanced design.

Survivability

Through Stealth and Speed

SAM Engagement Envelope Cones

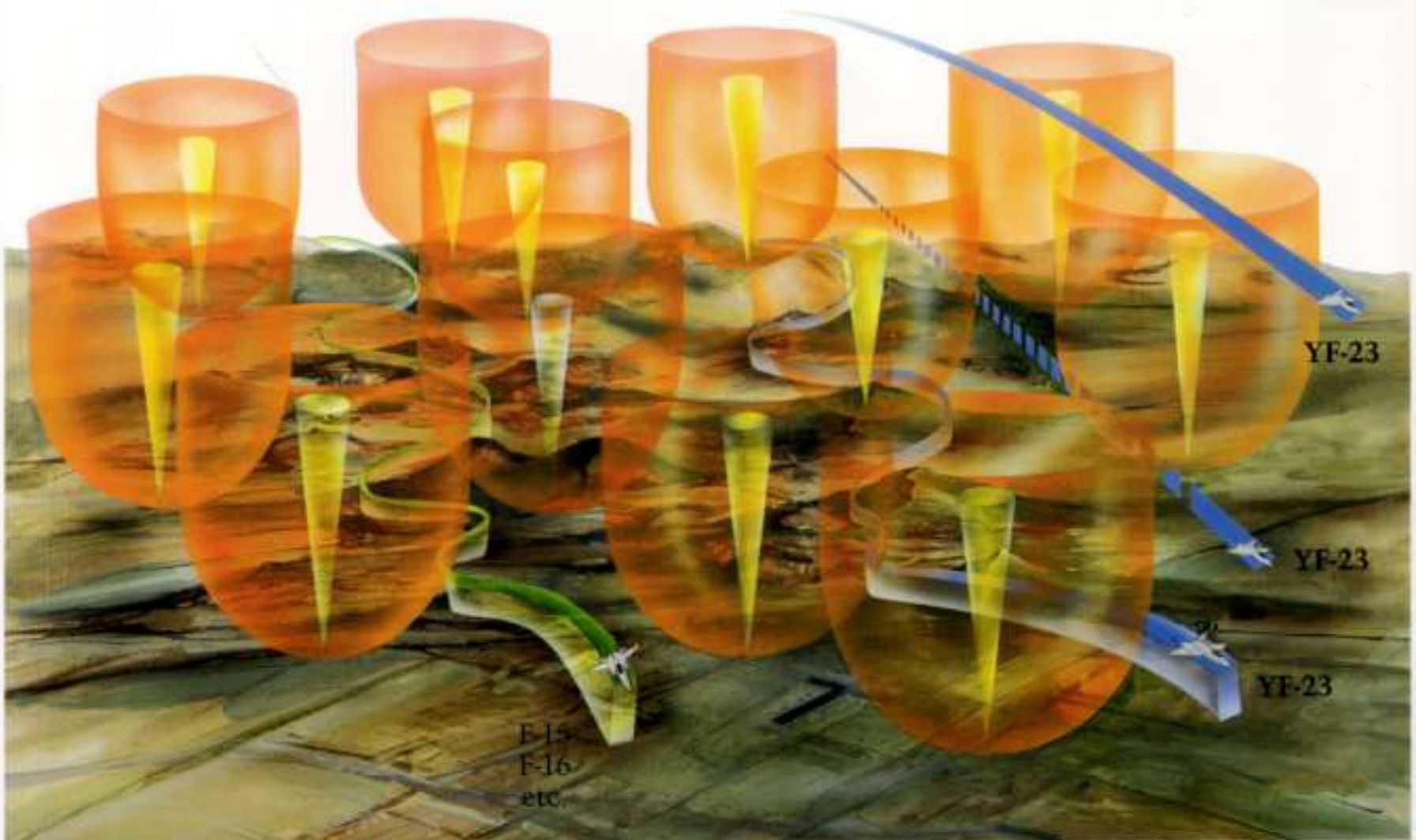
... Versus Conventional

... Versus Supercruise

... Versus Supercruise and Stealth



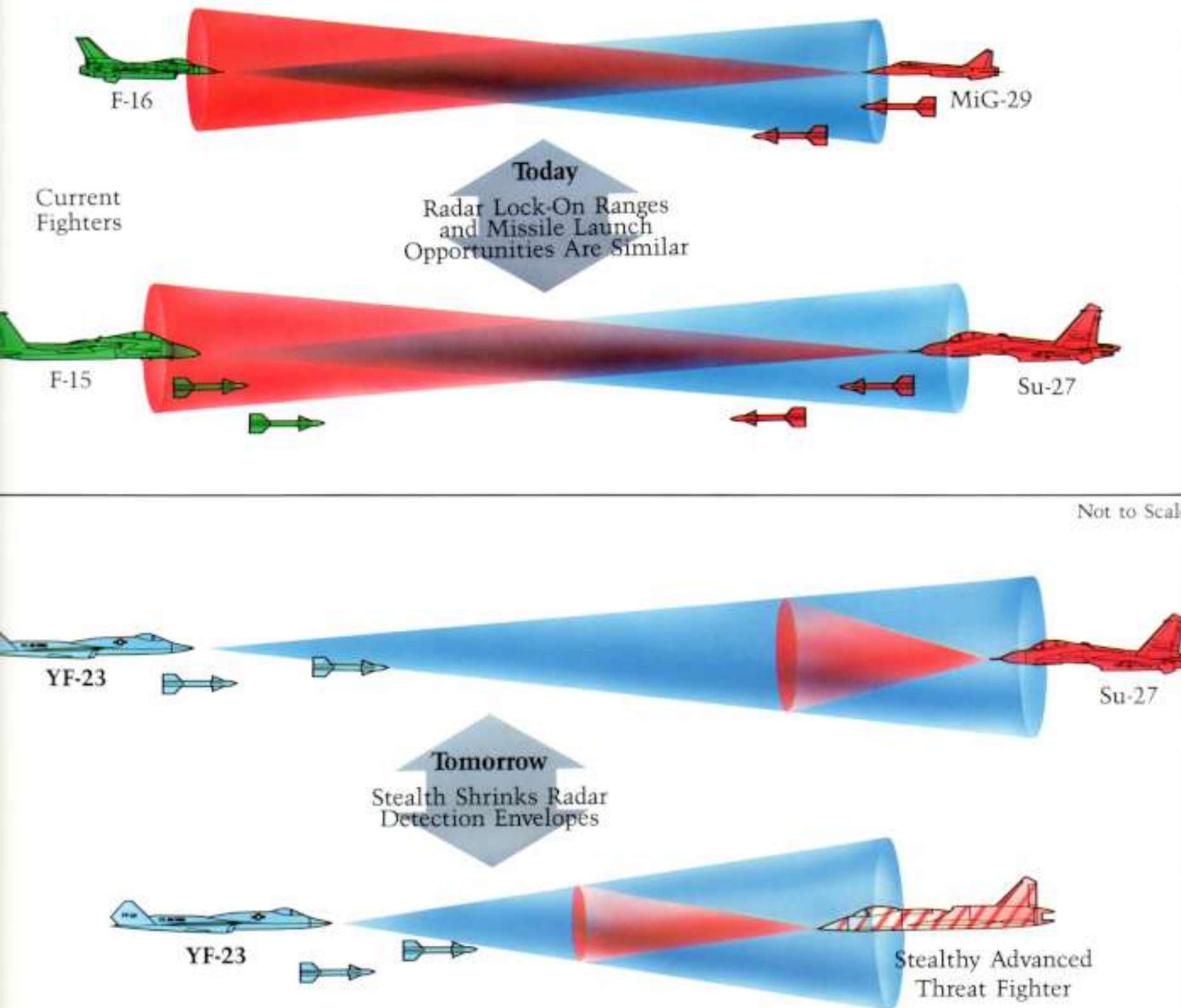
Not to Scale



Stealth and speed shrink SAM engagement envelope.

Lethality

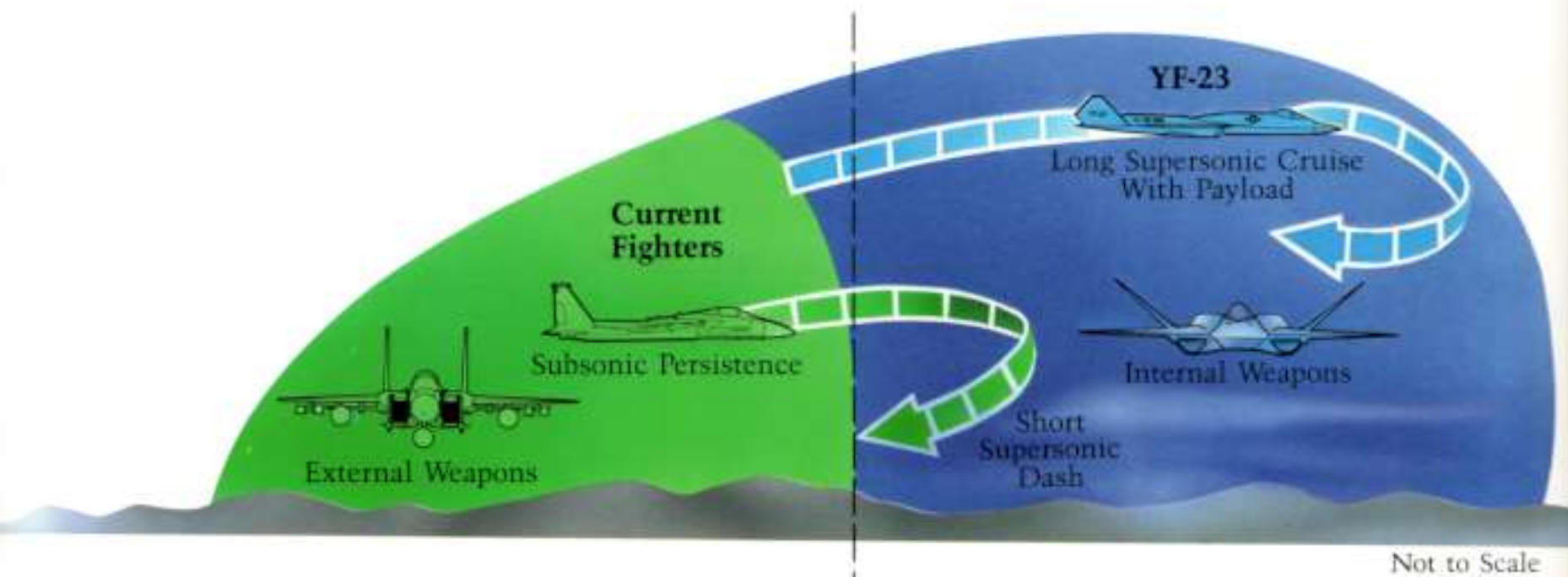
Through Stealth, Speed, Maneuver, and Firepower



Stealth allows surprise attack with first shot, first kill.

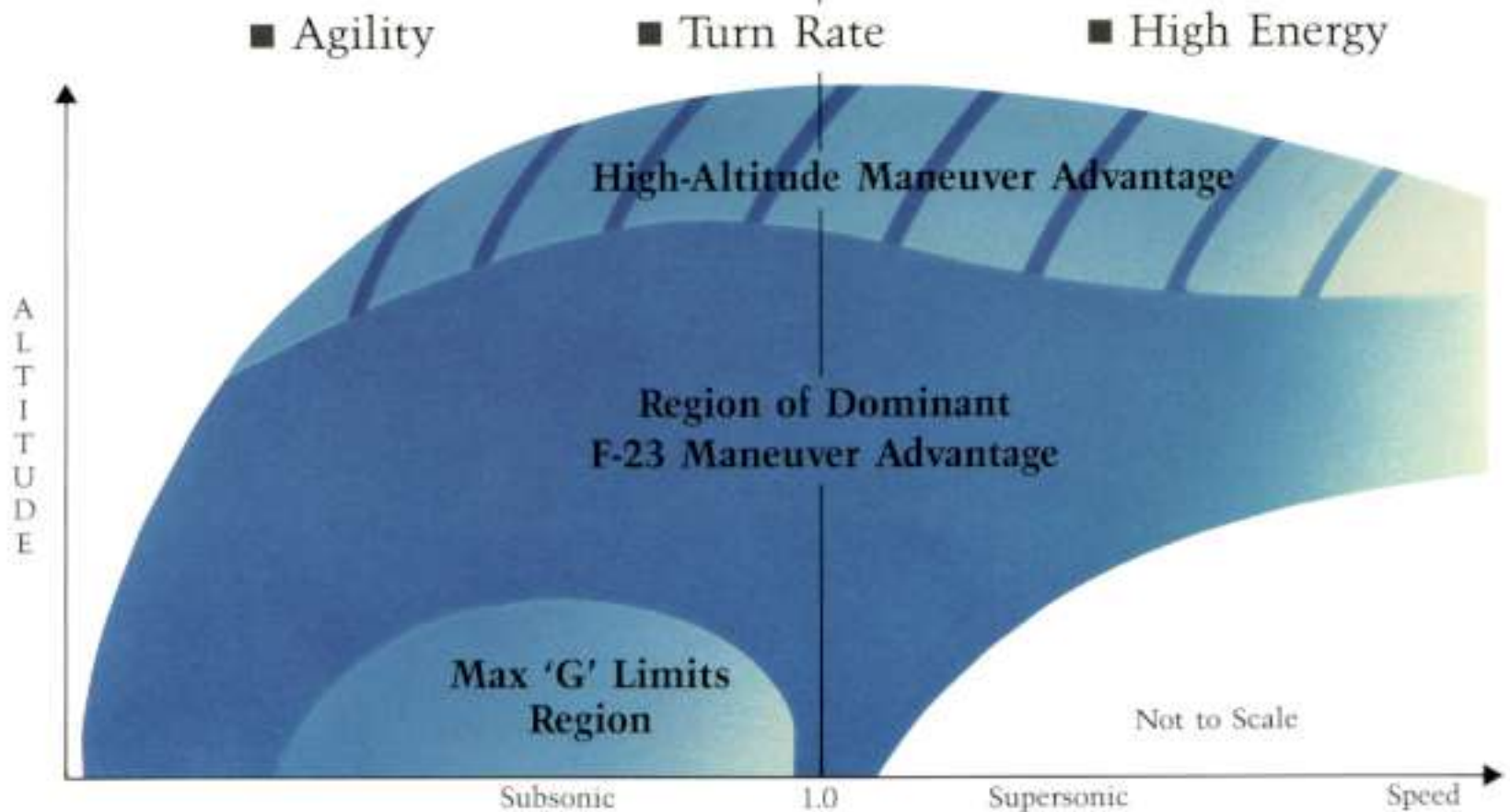
Supercruise/Persistence

With Range, Payload, and . . .



Current fighters offer payload, speed, **or** persistence. The F-23 provides payload, speed, **and** persistence.

. . . Maneuver Advantages



Excellent flying qualities with maneuverability 20% better than current fighters.

Situation Awareness Advantage

Very low observables combined with reliable new common avionics and modern cockpit designs let our pilots exploit technological advantages.



Intuitive displays provide information to pilots for quick, accurate decision

Supportability

F-23 squadrons deploy with . . .



Current

F-23

Current

F-23

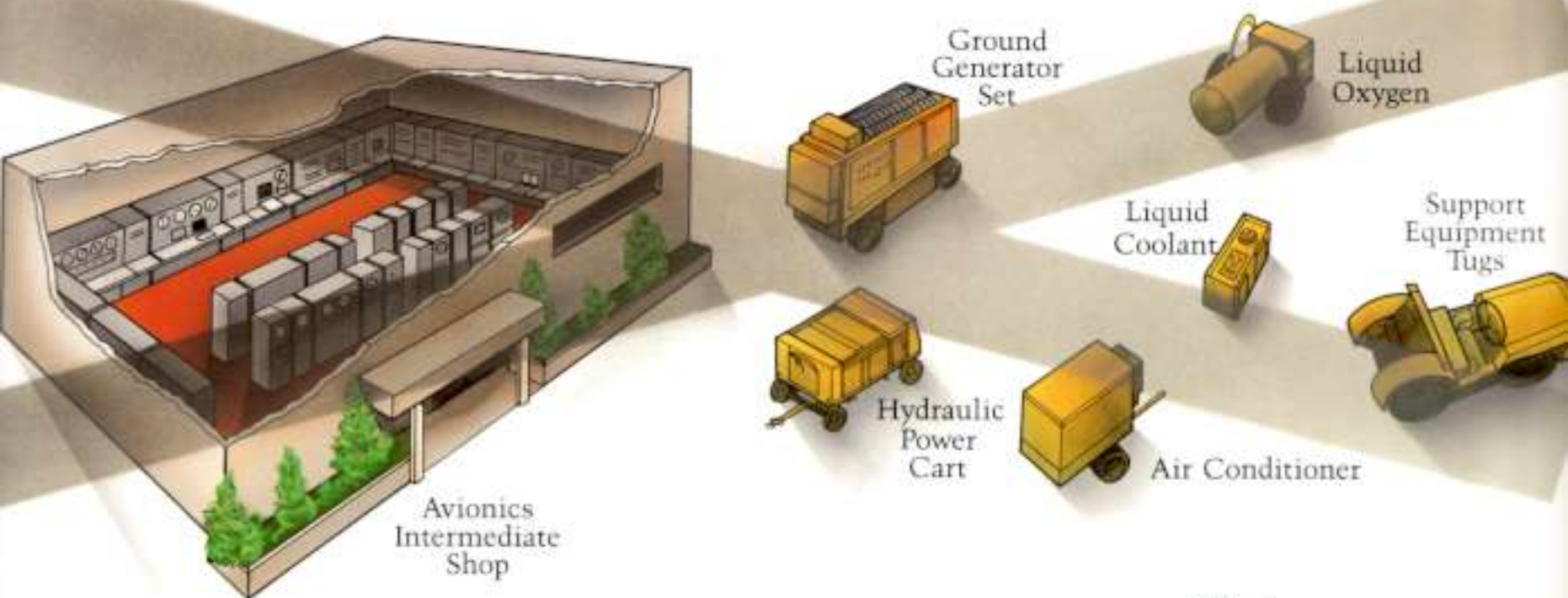
. . . 50% less airlift

. . . twice the availability

and

. . . 40% less manpower.

Many Support Equipment Items Eliminated



Avionics
Intermediate
Shop

Ground
Generator
Set

Liquid
Oxygen

Liquid
Coolant

Support
Equipment
Tugs

Hydraulic
Power
Cart

Air Conditioner

Twice Current Reliability + Self-Sufficiency =

Higher
Operational Readiness

Lower
Life Cycle Cost

Affordability

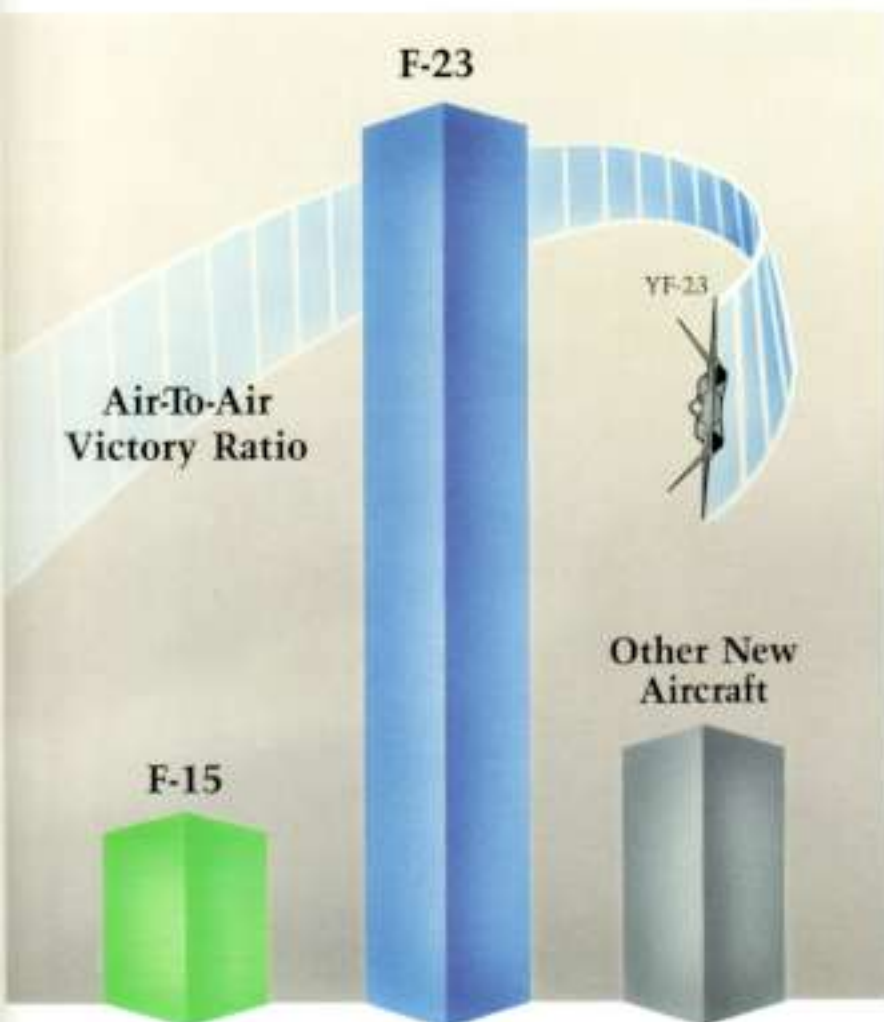
The F-23 provides revolutionary capabilities at lower cost than other aircraft currently under development and balanced design features that cannot be evolved into current fighters via upgrades.

Balanced F-23 Design Features

- Stealth
- Supercruise/Maneuver
- Combat Persistence and Payload
- Integrated Common Avionics
- High Reliability/Low Maintainability
- Lower Life Cycle Cost



COMBAT EFFECTIVENESS



UNIT COST ESTIMATE



* Average unit flyaway cost in 1990 dollars for F-14D, Rafale, F-15J and F-117A. — Forecast International

The ATF is the most cost-effective combat solution.

Northrop/McAir F-23 Team Builds on Years of Success

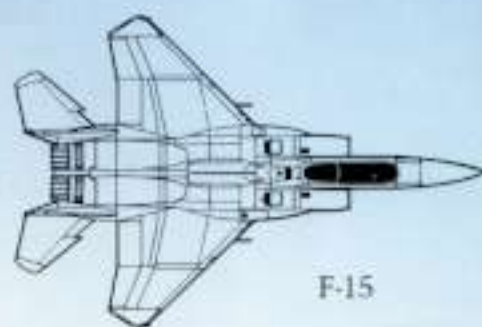
F-23 Program Based on

- 16 years of team experience producing and supporting F/A-18 aircraft
- Over 10,000 jet fighters produced and fielded

Capitalizing on Proven Team Strengths

- Northrop
 - Innovative design
 - Low observables
- McAir
 - Weapon systems integration
 - USAF/USN supportability experience

Agile High-Performance Fighters



F-15



F/A-18

Proven Low Life Cycle Cost

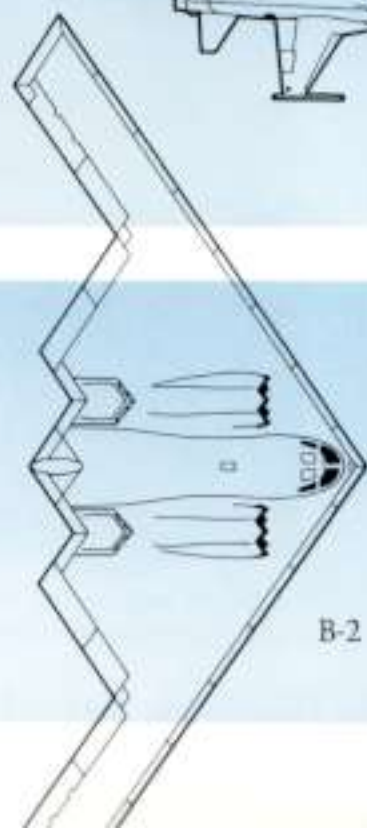


F-5

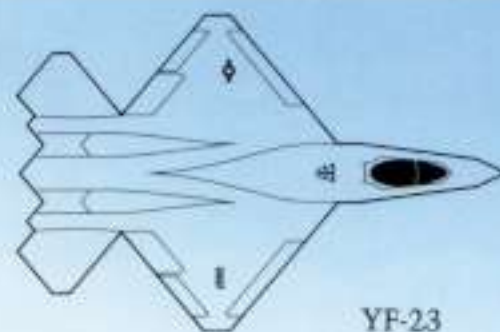


F/A-18

Stealth



B-2



YF-23





NBF 90-59
Revised
October 1990