

General Atomics Aeronautical Systems, Inc.

(Looped Video)



General Atomics' Predator



Cliff Stone
VP, Life Cycle Sustainment
General Atomics Aeronautical
UAS Tech Forum
Aug 22, 2019



General Atomics Overview



General Atomics' Predator

The World's Benchmark

>5.8 Million total flight hours
2018 – Over 600,000 flight hours



**Every second of every day, over 69 Predator-series
aircraft are airborne worldwide**

Long Endurance

Mission Flexibility

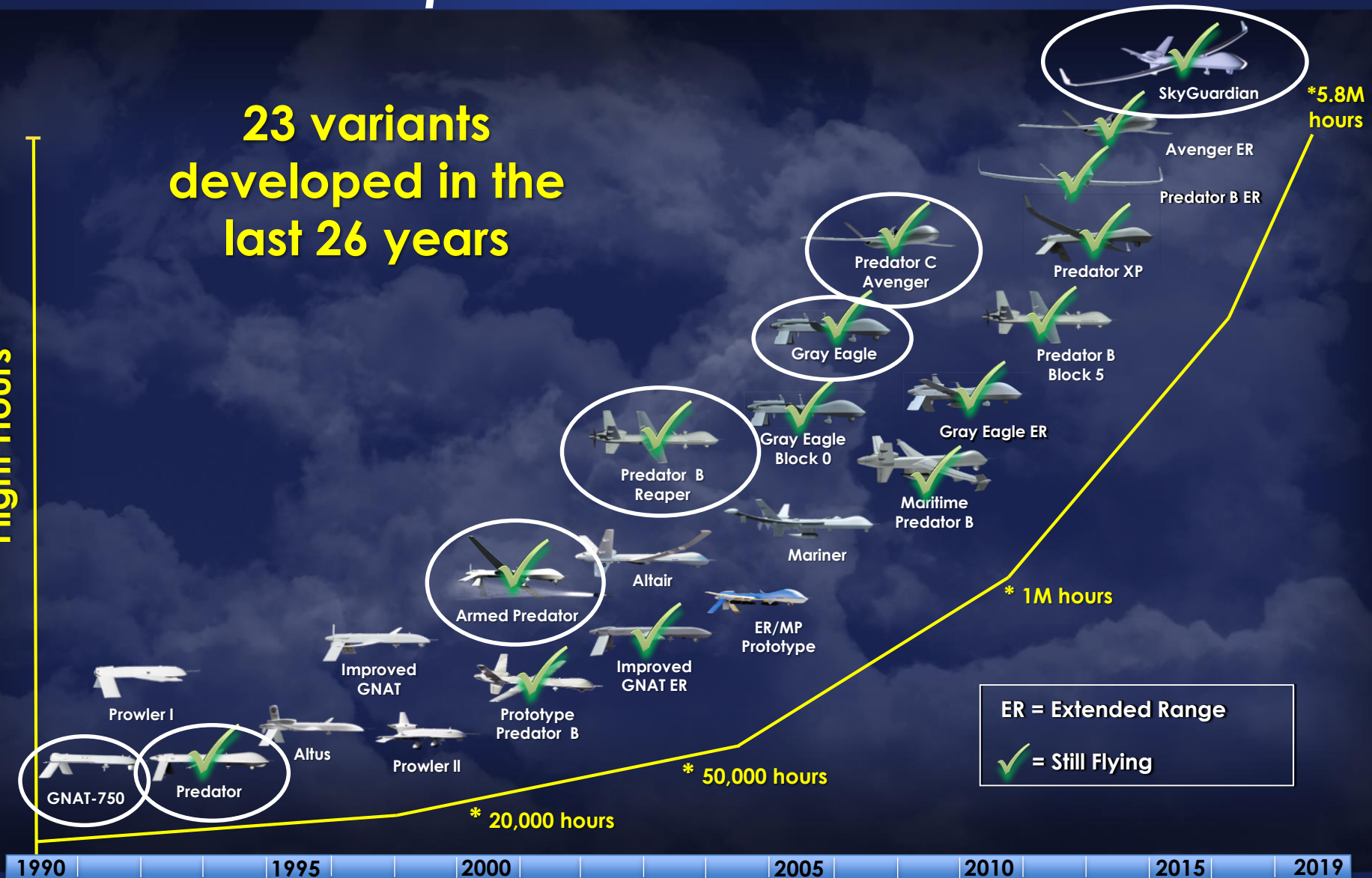
Best Value

General Atomics Aeronautical

Unprecedented Growth

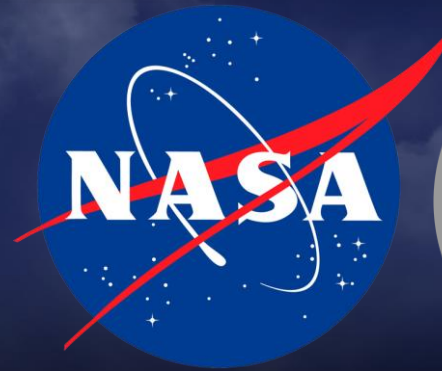
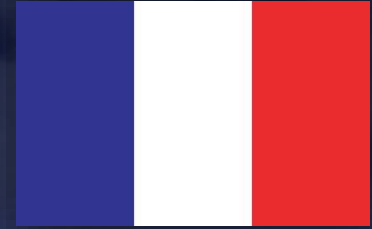
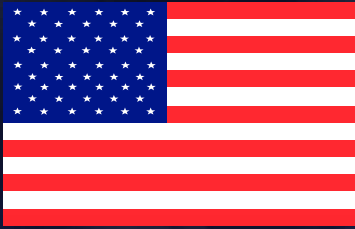
**23 variants
developed in the
last 26 years**

Flight Hours



General Atomics Aeronautical

Customer Base is Expanding



History of General Atomics & Predator



Abraham Karem

The Father of Predator

- 1937, Baghdad → Israel
- Born inventor, trained engineer
- Israeli Air Force → IAI
- Epiphany: armed remote control drone loitering for days
- Emigrates to America
- Leading Systems
- Invents Albatross
- Amber → Predator



Inventing the Predator

Abe Karem

“Rise of the Drones”, 23 January 2013, PBS

<http://www.pbs.org/wgbh/nova/military/rise-of-the-drones.html>



The Blue Brothers

Businessmen, Visionaries

- 1935 & 1936, Denver
- Yale educated
- “Flight of the Bluebird”
- Nicaragua cocoa & banana plantation
- Cordillera Corporation
- Linden: Harvard MBA, Gates Learjet & Beech Aircraft



The Blue Brothers

Businessmen, Visionaries

- 1935 & 1936, Denver
- Yale educated
- “Flight of the Bluebird”
- Nicaragua cocoa & banana plantation
- Cordillera Corporation
- Linden: Harvard MBA, Gates Learjet & Beech Aircraft



The Blue Brothers

Businessmen, Visionaries

- 1935 & 1936, Denver
- Yale educated
- “Flight of the Bluebird”
- Nicaragua cocoa & banana plantation
- Cordillera Corporation
- Linden: Harvard MBA, Gates Learjet & Beech Aircraft



The Blue Brothers

Businessmen, Visionaries

- 1935 & 1936, Denver
- Yale educated
- “Flight of the Bluebird”
- Nicaragua cocoa & banana plantation
- Cordillera Corporation
- Linden: Harvard MBA, Gates Learjet & Beech Aircraft



The Vision

Unmanned Affordable Weaponized Aircraft

- Advent of GPS
- Cordillera strategy shift
- General Atomic Technologies purchase
- Hired Tom Cassidy
- “Build it and they will come”
- Air / Space America ‘88



The Vision

Unmanned Affordable Weaponized Aircraft

- Advent of GPS
- Cordillera strategy shift
- General Atomic Technologies purchase
- Hired Tom Cassidy
- “Build it and they will come”
- Air / Space America ‘88



A Perfect Match

Successful Company, Right Product



Leading Systems, Inc



A Perfect Match

Successful Company, Right Product



Predator

“Aircraft That Changed the World”

AIRCRAFT THAT CHANGED THE WORLD

THE EDITORS FEARLESSLY (OR FOOLISHLY) PICK 10.

10. General Atomics MQ-1 Predator

IN NOVEMBER 2002, A VEHICLE traveling in Yemen and believed to be carrying terrorists was destroyed by a Hellfire missile. What makes the kill historic is that it was executed by a flying robot. The first unmanned aerial vehicle to kill human beings, the MQ-1 Predator has changed the rules of warfare.

Built by General Atomics Aeronautical Systems, the Predator has been operational in Bosnia since 1995 and now is flying missions in Afghanistan and Iraq. The Air Force deployed the latest version, the MQ-9 Reaper, to Afghanistan last October.

The Predator, which has an operational ceiling of 50,000 feet, is flown remotely by a “pilot” and two sensor operators housed in a trailer on the ground. The UAV has a nose camera, variable-aperture TV and infrared cameras, and a synthetic aperture radar to see through smoke, clouds, or haze. The RQ (R for “reconnaissance,” Q for “un-

manned”) model flies long-endurance, medium-altitude surveillance missions, while the MQ (“multi-role”) version can carry up to four Hellfire II anti-armor missiles, two laser-guided bombs, and a 500-pound, GPS-guided Joint Direct Attack Munition precision bomb.

Today, the United States and other countries are increasing their use of UAVs for civilian missions, such as law enforcement, border control, and ocean surveillance. Even Hollywood has discovered their potential, putting them to work as movie camera platforms. Here's an aircraft that has changed not just the real world but the world of fantasy as well.

No pilot, multiple roles: The MQ-1 provides firepower, surveillance, and recon.



STAFF SGT. SUZANNE M. JENKINS/USAF

JUNE/JULY 2008 AIR & SPACE | 29

Predator

"Aircraft That Changed the World"



DoD UAV Program



Predator



Laser
Designator



Armed Predator



Gnat 750



Big Safari



"Tall man in white"



And Then the World Changed



Drones Gain Acceptance *And Proliferate*



“Before the war, the Predator had skeptics because it did not fit the old ways. Now it is clear: The military does not have enough unmanned vehicles.”

-- President George W. Bush at The Citadel, Dec. 11, 2001



Today & Future

Remotely Piloted Aircraft Today

Critical to Success



Domestic Border Protection

Border Security & Counter Drug Operations



2011-ASG-0051

Humanitarian Support Post-Earthquake Recovery



Haiti Earthquake



Disaster Recovery

Hurricanes and Flooding



2011-ASG-0048

Disaster Recovery

Firefighting



Maritime Surveillance *Enhancing Security*



MQ-9B SkyGuardian

Next Generation MALE RPA



Civil Airspace Certifiable
All Weather
Auto Takeoff and Land
42-hr Endurance
>40,000 ft

Wing Span:	79 ft.
Length:	38 ft.
Max Gross Takeoff Weight:	12,500 lb.
Payload Capacity:	4,800 lb., 9 hard points (8 wing, 1 centerline)
Power:	45 kVA
Service Life:	40,000 hrs.

Thank you

