The Defense Advanced Research Projects Agency (DARPA) was established in 1958 to prevent strategic surprise from negatively affecting U.S. national security and create strategic surprise for U.S. adversaries by maintaining the technological superiority of the U.S. military.

To fulfill its mission, the Agency relies on diverse performers to apply multi-disciplinary approaches to both advance knowledge through basic research and create innovative technologies that address current practical problems through applied research.

As the DoD’s primary innovation engine, DARPA undertakes projects that are finite in duration but that create lasting revolutionary change.
TTO’s History

Ground Systems

- 1967: M16 (Project Agile) Tank Breaker
- 1978: Army Tactical Missile System (Assault Breaker)
- 1982: Talon
- 2002: Boomerang
- 2003: Netfires
- 2010: Iron Curtain
- 2013: Legged Squad Support System (LS3)
- 2013: Persistent Close Air Support (PCAS)

Maritime and Undersea Systems

- 1969: MK 50 Torpedo Propulsion System
- 1984: Sea Shadow
- 1988: Unmanned Undersea Vehicle (UUV)
- 1992: Submarine Technology (SUBTECH)
- 2013: Long Range Anti-Ship Missile (LRASM)
- 2016: ASW Continuous Trail Unmanned Vessel (ACTUV)

Air Systems

- 1977: Have Blue
- 1982: Tacit Blue
- 1990: X-31
- 1998: Global Hawk
- 2002: X-45/46/47
- 2005: A-160
- 2011: Damage Tolerant Controls (DTC)
- 2011: Falcon HTV-2

Space Systems

- 1985: Global Low Orbiting Message Relay (GLOMR)
- 1995: DARPASAT
- 1997: Taurus
- 2003: Falcon Small Launch Vehicle
- 2006: MITEX
- 2007: Orbital Express (OE)
- 2015: Space Surveillance Telescope (SST)
**Ground Systems**
Deployable, mobile capable forces

**Maritime Systems**
Control the sea, influence events on land

**Air Systems**
Extend range and minimize time

**Space Systems**
Resilient and flexible

**Cross-Cutting Themes**
Agile development approach, cooperative autonomy, unmanned systems, power and propulsion
Resilience in Space

Goals:
- Affordable routine access — “time to space”
- Reduce escalating systems cost
- Enhanced survivability, reconstitution and autonomy
- Real-time space domain awareness
- New capabilities

Shaping the Present

- **Experimental Spaceplane (XS-1)**
  Goal: Affordable, routine and reliable access to space

Creating the Future

- **Robotic Servicing of Geosynchronous Satellites (RSGS)**
  Goal: Enabling cooperative satellite operations

- **Hallmark**
  Goal: Real-time space domain awareness, command & control