

SeeMe Industry Day

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Tactical Technology Office

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Who is DARPA?

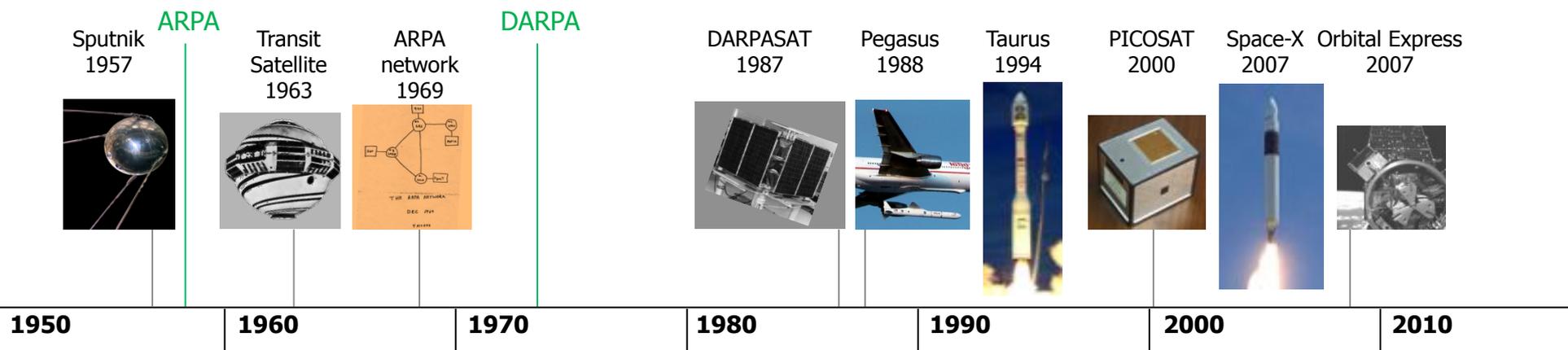
In 1958, Advanced Research Projects Agency was created to pursue high-risk, high pay-off advanced technology.

In 1972, ARPA was renamed the Defense Advanced Research Projects Agency.

DARPA breaks the gridlock of military competition for resources and recognition that hindered early U.S. space technology development.

DARPA's progressive, risk-tolerant leadership fostered:

- **Cooperation** among government agencies.
- Healthy **competition** in the marketplace.





Unintended success of high pay-off investment



1955

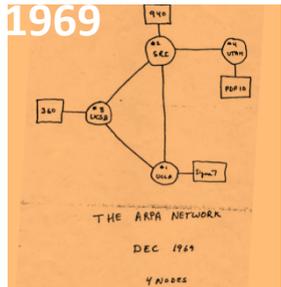
Original F1 engine too complicated for early launch requirements



Four years later developed for heavy-lift manned missions



1967

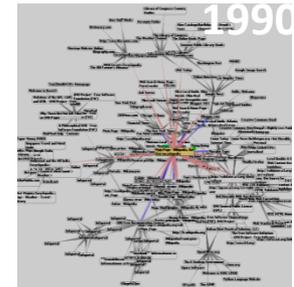


1969

Original ARPAnet for sharing large volumes of lab data



Unplanned innovation turned it into the world wide web



1990



1963

Transit 2A satellite pioneered doppler navigation for specific military missions



Became global precision navigation technology for military and civilian use



1999

Navstar Global Positioning System (GPS) satellite Image: USAF Research Laboratory



Organization

AEO Adaptive Execution Office

- Agile Programs with Frequent Development Cycles
- Conduct Systematic Rigorous Assessments
- Explore New Contracting Approaches
- Develop Strong Relationships

DSO Defense Sciences Office

- Physical Sciences
- Materials
- Mathematics
- Training & Human Effectiveness
- Biological Warfare Defense
- Biology

I2O Information Innovation Office

- Global ISR
- Cyber
- Social Networks
- Computational Social Science
- Language Transparency
- Edge Finding
- Training/ Education

MTO Microsystems Technology Office

- Basic Science Core
- Devices
- Integration
- Power
- Architectures
- Application

STO Strategic Technology Office

- Comms & Networks
- Global Tactical ISR
- Energy
- Hybrid Warfare
- Extreme Environments

TTO Tactical Technology Office

- Advanced Weapon Systems
- Advanced Platforms
- Advanced Space Systems



Tactical Technology Office

Objective

To transform the future of warfighting through high risk, high payoff development of rapid, mobile, and responsive combat performance for advanced weapons, platforms, and space systems.

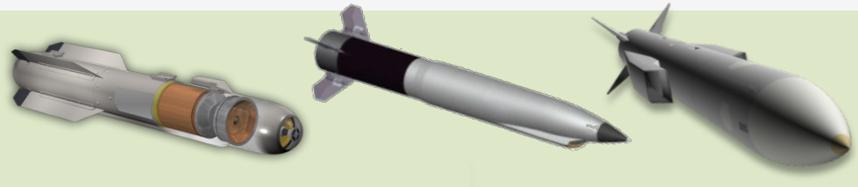
Goals

- Create highly capable systems that enable "order of magnitude" improvement in military capabilities in a rapidly changing technological landscape.
- Avoid technological surprise in areas of TTO emphasis.
- Develop tactical technologies and systems that enable "game changing" tactics, techniques, and procedures that address the entire spectrum of armed conflict.

Focus areas

Advanced Weapon Systems

- Precision Strike
- Kinetic / Non-Kinetic Effects
- Responsive Engagement



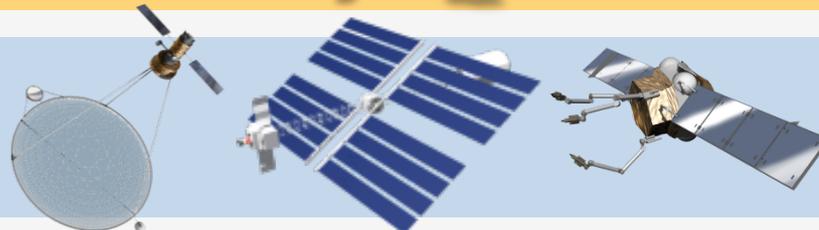
Advanced Platforms

- Unmanned Systems
- X-Planes
- Manned Systems



Advanced Space Systems

- Resilience in Space Operations
- Assured Space Access
- Stability





www.darpa.mil