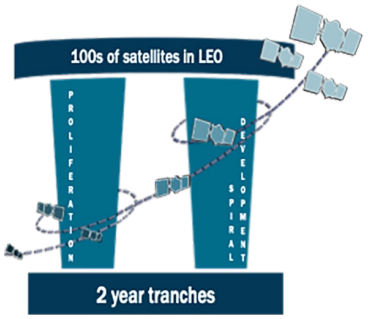
Space Development Agency

Mission

Speed. Delivery. Agility.

As part of the U.S. Space Force, the Space Development Agency (SDA) is a constructive disruptor for space acquisition quickly delivering needed space-based capabilities to the joint warfighter to support terrestrial missions through development, fielding, and operation of the Proliferated Warfighter Space Architecture. SDA capitalizes on a unique business model that values speed and lowers costs by harnessing commercial development to achieve a proliferated architecture and enhance resilience. SDA will deliver a minimum viable product by employing spiral development methods, adding capabilities to future generations as the threat evolves.

Two Pillar Approach



High-Level Schedule

Program / Demo Name	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Tranche 0 – *Warfighter Immersion*					
Space Segment	20* SVs	4 SVs	4 SVs		
Launch	x2	x1			
Ground Segment	←	→			
Architecture Adoption					
Tranche 1 - *Initial Warfighter Capability*					
Space Segment			126 SVs	28 SVs	
Launch			x1	x5	x4
Operations & Integration	←	→			
Tranche 2 - *Full Warfighter Capability*					
Space Segment				190 SVs	54 SVs
Launch				x1	x12 x6
Ground, Management & Integration		←	→		
Tranche 3 - *Sustained Warfighter Capability*					
Space Segment					FY2028 - FY2029
Launch					72 SVs x8
Ground Segment					
Demonstrations & Vendor Growth					
Demos			1 SV (T1DES)		8 SVs (F2)
AFCGI			←	→	

Transport / Tracking / Other — Space Vehicle Launch

Tranche 0 – *Warfighter Immersion*

Periodic Regional Access
- Low Latency Data Connectivity
- Data directly to tactical elements
- HGV Detection & Tracking
- Alternate PNT
- Data disseminated to theater targeting cells
- On-orbit Fusion
- Multi-phenomenology sensor fusion

Demonstration:
- BLOS Targeting
- MW/MT

Tranche 1 - *Initial Warfighter Capability*

Persistent Regional Access
- Tranche 0 listed capabilities
- Link 16 tactical data link
- HGV Detection & Tracking+
- Targeting quality data

Periodic Regional Access:
- Multiple sensing types using mission partner contributions

Demonstration:
- Multi-phenomenology, on-orbit fusion
- Missile defense demo in operational system

Tranche 2 - *Full Warfighter Capability*

Persistent Global Access
- Tranche 1 listed capabilities
- Initial Missile Defense (MD) capability
- UHF & S-band tactical communications

Periodic Global Access:
- Multiple sensing types using mission partner contributions

Demonstration:
- Multi-phenomenology, on-orbit fusion

Tranche 3 - *Sustained Warfighter Capability*

Continuous Global Stereo Coverage MW/MT capability
- Sustainment of Tracking Layer T2 capability

Increased Missile Defense Access

Demonstrations & Vendor Growth
- **T1DES**: Operational feasibility demo of future PWSA capability
- **FOO Fighter (F2):** Fire control demonstration in operational constellation., on-orbit fusion
- **AFC Ground Infrastructure (AFCGI):** Support F2 and follow-on efforts.

AFC: Advanced Fire Control
BLOS: Beyond Line of Sight
HGV: Hypersonic Glide Vehicle
MW/MT: Missile Warning and Missile Tracking
SV: Space Vehicle
FOO Fighter: Fire-control On Orbit-support-to-the-war Fighter`
HBTSS: Hypersonic & Ballistic Tracking Space Sensor
*One T0 Transport SV kept on ground as a testbed
+And other advanced missile threats

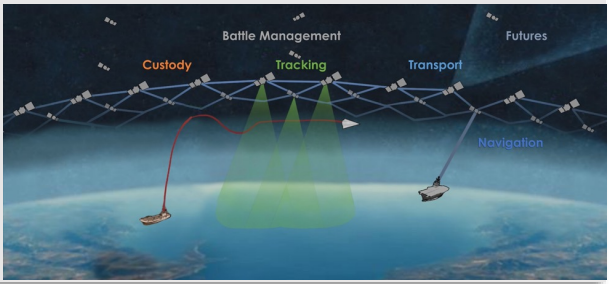
The Space Development Agency's spiral development model now spans the full spectrum: demonstrating Tranche 0, launching Tranche 1, building Tranche 2, and acquiring for Tranche 3

Focus Areas

Mesh network of optically-connected satellites to enable:
- Tracking and targeting for advanced missiles in flight
- Beyond-line-of-sight (BLOS) targeting for time-sensitive targets, or mobile targets

Resilient Layered Architecture Approach

- Threat-driven capabilities informed by warfighter needs
- Assures resilient, low-latency military data and connectivity worldwide to the full range of warfighter platforms
- Integrates with USSF force design and DOD-wide missile defense mission



Space Development Agency

Acquiring Capabilities at Speed and Affordable Cost

SDA is on pace to deliver initial space transport capabilities on the agency's originally advertised schedule at a per satellite price point once deemed unachievable.

$14M Approximate average cost of SDA Transport satellite

30 During FY2025, SDA made 30 awards totaling ~$3.8B

111 Average days between solicitation and contract or award

40 Awarded approximately $300 million to small businesses in FY2025, including 40 new Phase I & Phase II SBIR efforts.

Delivering Capabilities at Speed

The First Seven Years

March 2019
Agency stands up on March 12 with fewer than a handful of detailed employees and no office space.

March 2020
Agency's first request for proposals is published to build a new proliferated architecture in low Earth orbit (known then as the National Defense Space Architecture or NDSA).

August - October 2020
Awarded first Tranche 0 Transport Layer and Tracking Layer contracts for demo space vehicles.

December 2020
Delivered first two experimental satellites to launch provider just nine months after receiving the agency's initial appropriated funds.

Summer 2021
SDA's first launches included four experiments on six satellites.

February 2022
Issued first awards for Tranche 1 Transport Layer space vehicles.

May 2022
Awarded the agency's first Ground Operations & Integration contract for Space Operations Centers at Redstone Arsenal, Ala. and Grand Forks Air Force Base, ND.

September 2022
SDA successfully transfers to become a component of the U.S. Space Force.

January 2023
The agency's architecture is now known as the Proliferated Warfighter Space Architecture or PWSA.

April 2023
Launched first 10 PWSA Tranche 0 satellites to low Earth orbit, approx. 30 months after contract award.

August 2023
Awarded first Tranche 2 space vehicle agreements to build and operate Transport Layer Beta variant satellites, set to begin launching in 2026.

September 2023
SDA delivered 13 additional Tranche 0 satellites on-orbit approx. 33 months from order to launch.

November 2023
SDA received three 2023 Defense Acquisition Workforce Awards in Excellence in Acquisition and Individual achievement.

January 2024
Awards announced for the Tranche 2 Tracking Layer, including missile warning/missile tracking and missile defense space vehicles.

February 2024
Launched the final four Tranche 0 Tracking Layer satellites alongside Missile Defense Agency's HBTSS to demonstrate full-scale missile defense sensing capabilities from low Earth orbit.

July 2025
Confirmed PWSA operations centers' readiness at Redstone Arsenal, AL, and Grand Forks AFB, ND.

August 2025
Successfully demonstrated bi-directional space-to-air optical communication capability with industry partners.

August 2025
Achieved the first multi-vendor, multi-plane collection with the Tracking-Tranche 0 demonstration satellites (SpaceX/Leidos and L3Harris) during a live fire test.

June 2025
Launched T1DES 'Proto' to demonstrate TACSATCOM capability.

September - October 2025
Conducted the first two PWSA TLT1 launches, deploying 42 satellites developed by York Space Systems and Lockheed Martin, for a total of 42 TLT1 satellites on orbit by end of 2025.

For more information about the agency, employment, and competitive opportunities, visit us at SDA.mil, on LinkedIn, or X @SemperCitiusSDA