

1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	21 st Century
Controlled Flight	Create the Military Airplane	Respond to the Challenges of Engineering Air Power	Development of High Speed Flight		Reshape Weapon System Engineering		Exploit New Technology for Stealth and Precision		Stealth and Precision Proven in Combat	Transformation for Better Support
<p>1127 W. Third St. Dayton, Ohio Wright Flyer built</p>  <p>Wright Flyer I achieves flight Dec 17, 1903</p>  <p>Wright Flyer II achieves controlled flight Sept 20, 1904</p>  <p>DH-4 with Liberty Engine</p>	<p>Army Bureau of Aircraft Production established, consolidated near Dayton, Ohio</p>  <p>Wright 1909 Military Flyer Wright Company delivers first military aircraft Aug 2, 1909</p>	<p>U.S. Army Air Corps forms Materiel Division</p> <p>Aerodynamics are improved with wind tunnel testing</p> <p>Military aircraft production wanes after WWI</p> <p>Improved propulsion with development of 100 octane fuel</p> <p>Improved metal fabrication leads to all metal aircraft</p> <p>Fly-before-buy concept introduced</p>  <p>B-10</p>	<p>Testing of experimental aircraft continues, to retain residual capacity for military aircraft production</p>  <p>X-1</p> <p>Turbo/super charger and pressurized fuselage allows for high altitude flight</p>  <p>B-29</p>  <p>XC-35</p>	<p>WWII brings massive increase in military aircraft production, enabled by flexible contracting, incentives to manufacturers</p>  <p>P-51A</p>  <p>B-52H</p>  <p>B-36</p>	<p>1947 - USAF created as separate service - creation of Air Research and Development Command</p> <p>Weapon system program management concept introduced - integrating development and procurement of airplanes and subsystems and integrating project management, systems engineering and operational research</p> <p>Jet age J-57 turbo jet engines reach 10,000 lbs of thrust</p>  <p>F-86</p>	<p>Cold War pushes U.S. into production of increasingly complex weapon systems - from bombers in 50s/60s to fighters in 70s/80s</p> <p>Total package procurement (best example - C-5), and design to cost introduced</p> <p>Fly by wire introduced as new flight control system</p> <p>Digital computers replace analog programs for advanced flight controls</p>  <p>F-104</p>  <p>F-15</p>  <p>A-10</p>	<p>- Matrixed management brought functional experts into Weapon System Program Offices - Increasing emphasis on reliability, supportability</p> <p>Life cycle cost methodology (to plan for cost of developing and operating weapon systems through 20-30 + year life cycles)</p> <p>Advances in computer technology enabled faster and more accurate mathematical algorithm calculations to predict aircraft radar echo</p> <p>Fly-before-buy with competitive prototypes and demonstration/ validation projects (example - YF-16/ YF-17)</p> <p>Systems of Systems Architecture (Link 16)</p> <p>Cost as an independent variable introduced</p> <p>Integrated architecture</p>  <p>F-16</p>  <p>B-1</p>  <p>F-22</p>  <p>C-17</p>	<p>Computers become mainstay of acquisition tools/ processes - allowing ASC to accomplish same level of support with one-third smaller workforce</p> <p>Life cycle cost methodology (to plan for cost of developing and operating weapon systems through 20-30 + year life cycles)</p> <p>Advances in computer technology enabled faster and more accurate mathematical algorithm calculations to predict aircraft radar echo</p> <p>Systems of Systems Architecture (Link 16)</p> <p>Cost as an independent variable introduced</p> <p>Integrated architecture</p> <p>ASC introduces integrated product teams, adopted by AFMC later as part of IWSM concept</p> <p>July 1992 - merger of Air Force Systems Command and Air Force Logistics Command helped reduce overhead acquisition/ sustainment costs; led to reduction/deletion of many MILSPECS, use of more commercial purchasing practices, shared components among the military services</p>  <p>Global Hawk</p> <p>Air Force aircraft flew over 24,000 sorties during the six weeks of major combat operations in Operation Iraqi Freedom</p>  <p>Predator</p>	<p>Transformation to better support warfighter requirements, national priorities</p> <p>Spiral development</p> <p>"Virtual SPO" made possible by computer technology - relying on highly integrated data bases such as Enterprise Knowledge Management</p> <p>Enterprise Leadership enables ASC and other AFMC Centers to dialogue horizontally across the command, knifing through roadblocks/ red tape and speeding support to warfighter</p> <p>After 9/11, still in its developmental phase, Global Hawk supported Operation Enduring Freedom in Afghanistan, flying more than 1,000 hours and taking more than 15,000 high-resolution images</p> <p>Airborne Laser</p> <p>Expanded Enhanced Guided Bomb Unit "Smart Bomb" was made operational for use on a B-1B Lancer in Operation Iraqi Freedom just two weeks after a request from Air Combat Command</p>	

Since the days of the Wright Brothers, Aeronautical Systems Center and its predecessors at Wright-Patterson AFB have made numerous contributions to the development of military aviation and national security. Acquisition experts in these organizations have developed and acquired every U.S. Air Force aircraft in the operational inventory -- the same aircraft used to win WWII, handle the Korean conflict, Vietnam conflict, Operations Desert Storm in Kuwait and Iraq and Allied Force in Kosovo, and the current Operation, Enduring Freedom, in Afghanistan and elsewhere.

Over the decades, these experts have pioneered the use of new technologies to make weapon systems more effective in combat, and management tools to make the acquisition process more responsive to warfighter needs.

Today, ASC continues this legacy with innovative new concepts giving U.S. and coalition warfighters the capabilities they need to prevail even in new types of combat.