

Yulista Services, LLC

An Alaska Native, 8(a) Certified, Engineering Company

2021



Information In This Presentation

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- YSL Core Capabilities
- YSL Development Tenants
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 - Product Support
 - Systems Integration
 - Engineering Services
 - Manufacturing
- YSL Quality
- Why Choose YSL
- YSL Points of Contact



Overview of YSL

- We Are:
 - A diverse group of talented and committed individuals who make up an exceptional TEAM
 - An engineering company focused on solving our customers toughest problems
 - A certified 8(a) Small Disadvantaged Alaska Native Corporation (ANC)
- Our Mission:
 - Provide our customers with innovative engineering solutions and an unequalled customer service experience and value.
- Our Vision:
 - To bring digital engineering (solutions) to the world.
- Our Core Values:
 - Customer; People; TEAM Work; Integrity; Excellence
- Our Operating Philosophy: TEAM
 - T** - We Trust our people to do the right thing, every time, by, and for, our customers and our shareholders.
 - E** - We Empower our people to solve the most challenging problems in the most effective and efficient ways.
 - A** - We are Accountable to one another for our teams' and our customers' successes and failures.
 - M** - We are Mission Focused and we won't stop until the mission is complete and our customer is 100% satisfied.



Overview of YSL

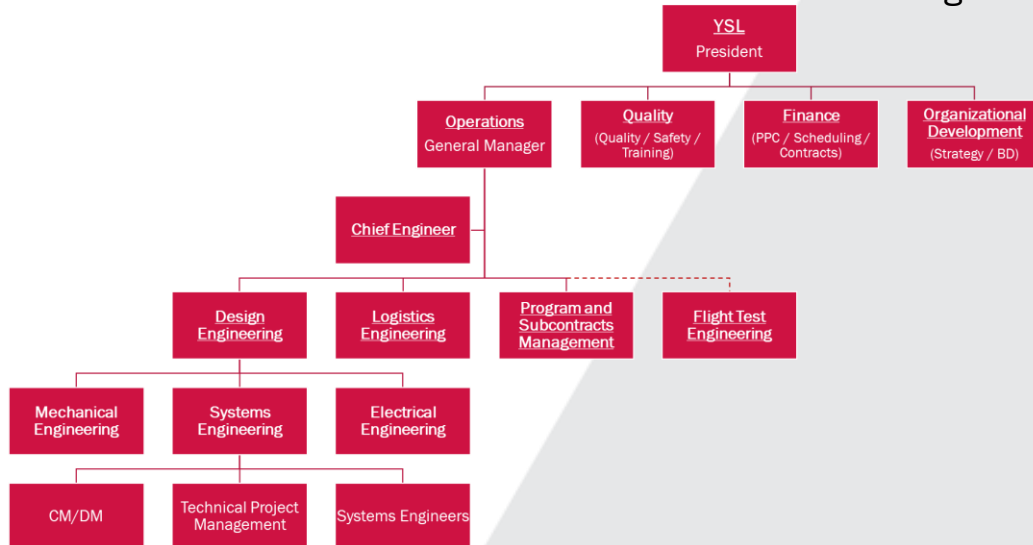
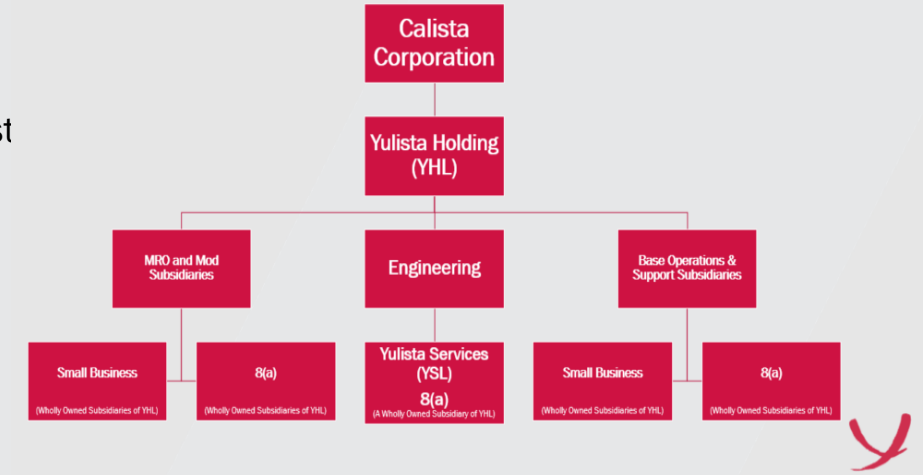
- Calista Corporation

- Parent Company – Alaska Native Corp
 - 4 Holding Companies – including Yulist Holding
 - >30 Subsidiary Companies
- >32,000 Alaska Native shareholders from the Calista Region of Alaska



- Yulista Holdings (YHL)

- Three primary business lines
 - MRO and Mods
 - BOS
 - Engineering



- Yulista Services

- 8(a) Engineering Services Company
- Inter-organizational reach back to:
 - >2000 personnel throughout YHL
 - ~1M sq. ft. of facilities
- Located in:
 - Huntsville, AL (HQ)
 - Warner Robins, GA



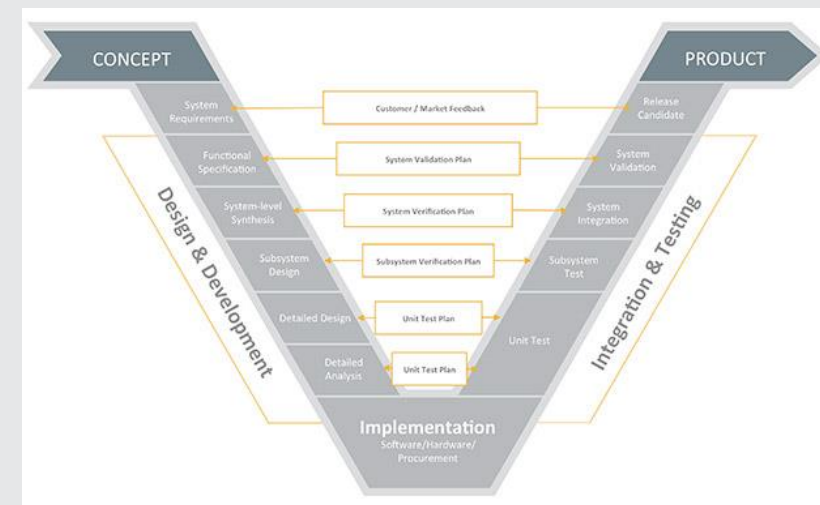
YSL Core Capabilities

- Multidisciplinary Engineering
 - Systems / Mechanical / Electrical / Software
 - Design / Analysis / Simulation / Optimization / Verification / Validation
 - Model Based: Design / Definition / Validation
 - Computer Aided: Engineering (CAE) / Design (CAD) / Manufacturing (CAM)
- Logistics Engineering
 - Integrated Product Support (*all elements*)
 - Analysis
- Obsolescence Engineering
 - P3I Designs (*proactive*)
 - Reverse Engineering / Re-Engineering (*reactive*)
 - DMSMS
- Military Qualification and Civil Certification
- Full Spectrum Project/Program/Subcontractor Management



YSL Execution Tenants

- Customer focused
 - Responsive
 - Flexible
 - Dependable
- Future focused
 - Manufacturability
 - Maintainability
 - Sustainability
- Design focused
 - Model based *(when and where it saves cost and schedule and brings value to the customer)*
 - Single source of truth for the entire project and team
 - Agile *(when it's desired and acceptable to the customer)*
 - Customer integrated and driven / iterative / rapid
 - Systems centric *(always)*
 - Disciplined systems engineering approach



YSL Solutions

- Product Development Solutions
 - Clean Sheet Designs
 - Reverse and Re Engineered Designs
- Product Support Solutions
 - Logistics Engineering Integrated with Systems Engineering
 - Tech Data Development / Digitization / Modernization
- Systems Integration Solutions
 - Design / Install / Qual
- Services
- Manufacturing



Product Development Solutions

- Clean Sheet Designs
 - Designed from your concept(s) / requirement(s) / specification(s)
 - ***EX: Iraqi Armed 407***
- Reverse Engineered Designs
 - Form, fit, function reproduction of your obsolete piece / part / subsystem / system
 - Utilize 3D scanning and/or your TDP
 - ***EX: Navy Bourdon Tube***
- Re-Engineered Designs
 - Improved/increased function
 - Reduced weight/cost/footprint
 - ***EX: WC-130J Aerial Reconnaissance Weather Officer Computer Upgrade***



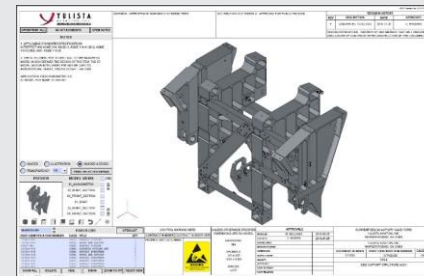
MIL-STD-31000B compliant TDPs provided (with Unlimited Data Rights) on all designs



Product Support Solutions

- Logistics Engineering

- Logistics Support Analysis Record (LSAR) development and reporting
- Repair level and maintenance costing analysis
- Diminishing Manufacturing Sources and Material Shortages (DMSMS) analysis
- Supportability/serviceability analysis
- Provisioning analysis / provisioning master records
- Producibility analysis
- Packaging, Handling, Storage & Transportation (PHS&T)



- Tech Data Development / Digitization / Modernization

- Digital/Electronic Tech Data Packages / Tech Publications / Interactive PDF (iPDF)
- Created From:
 - Clean Sheet Designs
 - Customer source materials (regardless of completeness)
- Any/all “levels”
- Formal / Informal Training Development



Systems Integration Solutions

- Design
 - Simple/single subsystem integration
 - **EX: MAGNA GPS Antenna**
 - Complex system of systems integration
 - **EX: UH-60V Complete Digital Avionics System**
 - New products / new features / customization/optimization
 - **EX: AH-64D Special Tools and Test Equipment**
- Install
 - Our location or your location
 - Our team or your team
 - **EX: UH-60V** (our location, now their location) / (our team, now their team)
- Qualification/Certification
 - Certification planning
 - Execution and substantiation documentation
 - System Safety
 - Support to airworthiness authorities



Services

- Analysis

- Finite Element Analysis (FEA)
- Computational Fluid Dynamics (CFD)
- System Safety Analysis
- Stress and Structural Analysis
- Modal Analysis
- Random Vibration Analysis
- Structural Fatigue Life Analysis
- Shock Analysis / Response Spectrum Analysis
- Weight and Balance Analysis
- Aerodynamic and Drag Analysis
- Electrical Loads Analysis (ELA)
- Failure Mode, Effects & Criticality Analysis (FMECA)
- Corrosion Prevention and Control

- Systems Engineering

- Requirements Definition
- Functional Allocation
- Design Definition
- Verification Procedures
- Traceability
- Configuration Management
- Life Cycle Costing

- General Support

- Supplemental/Surge Engineering
- Engineering Reviews
- Engineering Oversight/Management

- Training

- Operator and Maintainer Training
- New Equipment Training Development
- Training Support



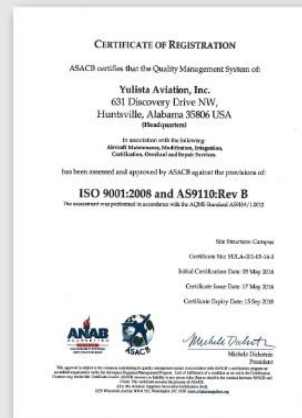
Manufacturing

- Rapid Prototyping
 - Virtual models (from MBD)
 - Physical models
 - Functional (form/fit/function)
 - Non-functional (form/fit) – 3D Printed
 - ***EX: Federated Advanced Navigation System (FANS)***
- Low Rate to Full Rate Production
 - Low volume, initial production runs
 - High volume production runs
 - ***EX: UH-60V (\$1.8M B – Kits)***
- Machines / Capabilities
 - Full Machine Shop (4 axis CNC; waterjet; etc...)
 - Full Electric Shop (Harness builds; CCA repairs; etc...)

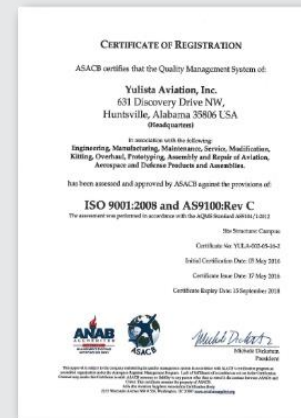


YSL Quality – It's Our Culture

- Approved Quality Management System
 - AS9100D Certified
 - AS9110B Certified
 - ISO 9001:2015 Certified
 - DCMA 8210.1 Approved Procedures
- Workmanship – MIL-HDBK-454
- Wire Harness – IPC-WHMA-620
- Soldering – J-STD-001
- Paint – MIL-DTL-53039
- FAA Part 145 Cert



AS9110B Cert



AS9100B Cert



FAA Part 145 Cert

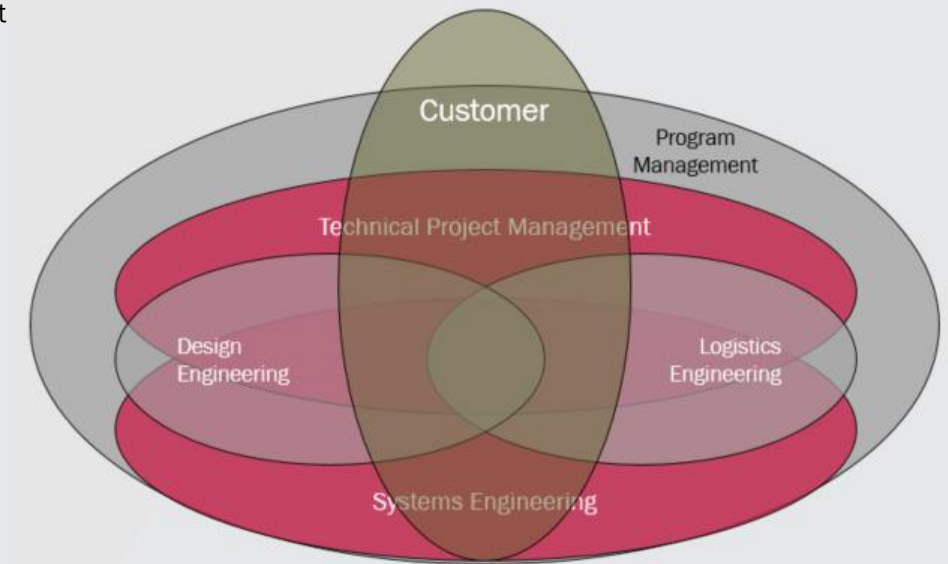


Ground and Flight
Operations Procedures



Why Choose YSL

- Small Business With OEM Capability = One Stop Shop (*Concept to Realization*)
 - Flexibility and agility of a small business
 - Reach back to all Yulista subsidiaries provides near OEM capability
 - Facilities
 - Hangers: > 217K Sq Ft
 - Manufacturing / Integration / Warehousing: > 751K Sq Ft
 - Extensive Experience
 - 18+ years on Prototype Integration Facility
 - Prototypes to Full Rate Production
 - Centralized treasury (*established line of credit*)
- ANC 8(a)
 - Direct Award <= \$100M – No J&A / No Protest
- QMS
 - AS9100 & 9110 / DCMA 8210.1



Innovative Engineering Solutions

Unequalled Customer Service

Responsive, Flexible, Cost Effective



Points of Contact

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TRUSTED
PARTNERS



PRECISION
EXPERTISE



RAPID
RESPONSE





**How Can We
Help You?**



Back-Up Slides

8(a) Direct Award Process

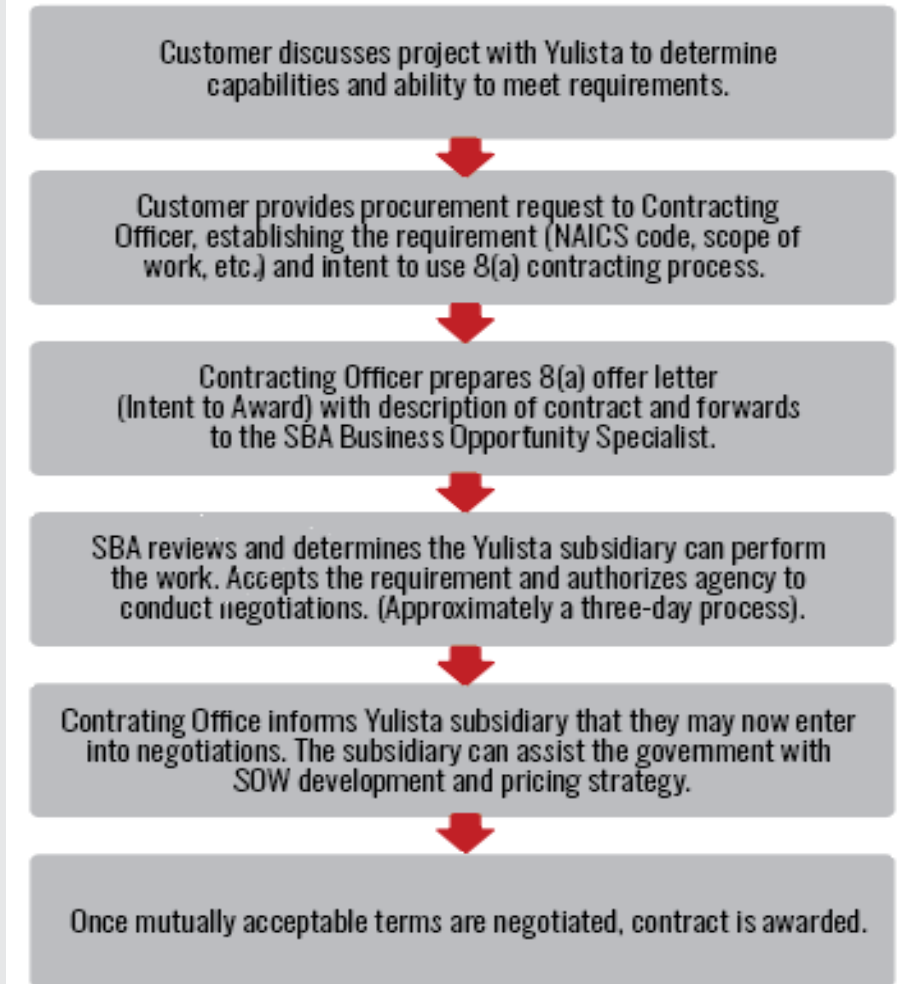
Leverage the Power & Flexibility of 8(a) Contracting

- Sole Sourced Contracts with No J&A (\$100M DOD; \$22M non-DOD)
- Awards Cannot Be Protested
- Streamlined Process: Weeks to Months, Not Years
- Expedited Pricing and Contract Negotiations
- More Control of Scope and Budget
- Eliminates Risk through Alpha Type Negotiations

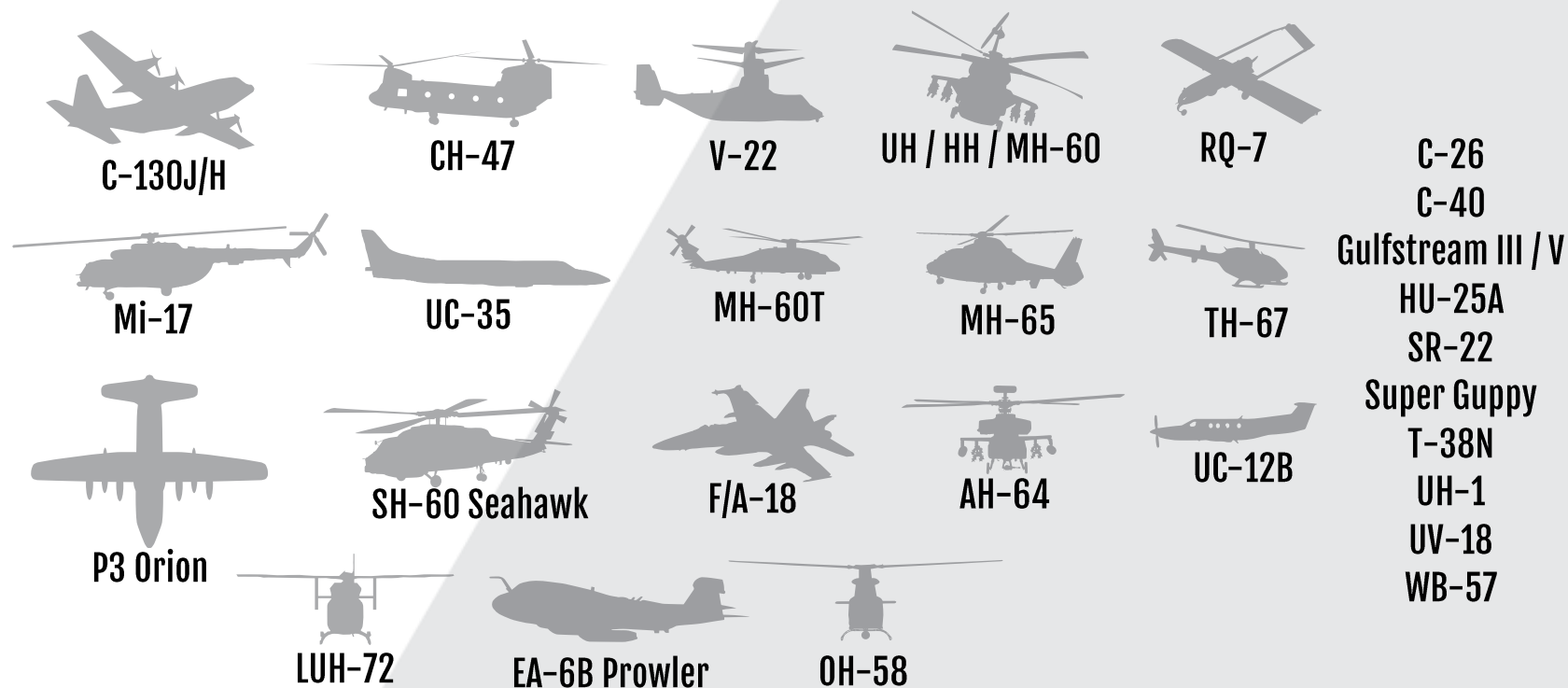
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THE PROCESS



Integration and Modification Experience



>43 Models / >5665 AIRCRAFT



Past Projects – Domestic FW Aviation



A10 HUD

- Re-engineered a form, fit, and function upgrade for the A-10 HUD utilizing sustainable, up-to-date components and state-of-the-art technology.
- Successfully enhanced existing design and developed a fully procurable Technical Data Package, and produced four Low-Rate Initial Production (LRIP) HUDs.



C130 MODIFICATIONS AND UPGRADES

- Provided engineering and manufacturing services on the C-130 Heavy Equipment Airdrop (HEA) Mission Equipment Integration.
- Modified aircraft by installing the Low Power Color Radar, FLIR, and ETCAS systems along with the one-of-a-kind Airborne Seeker Evaluation and Test System (ASETS).



CV-22

- Conducted Mission Equipment Upgrades
- Conducted Phase Maintenance (first non-OEM / non Marine Corps conducted PMIs)



UV-18A MODIFICATIONS AND UPGRADES

- Modified the UV-18A, by upgrading the cockpits with ASPEN 1000. The ASPEN 1000 Pro system upgrades the cockpit to "Glass Status". Two UV-18 aircraft were completed in a period of 90 days.



C-26 NAVY GATM

- Integrated new, customer furnished Digital Cockpit



Past Projects – Domestic RW Aviation



UH-60V (L DIGITAL) DEVELOPMENT PROGRAM

- Upgraded the existing UH-60L analog avionics system to a digital, open architecture system with a similar Pilot-Vehicle Interface (PVI) to the UH-60M.
- Completed the source selection on all components; managed all subcontractors; and completed all engineering tasks required for integration and qualification.
- System selected for the US Army Program of the year in 2019.



UH-60L MODS CUSTOMS & BORDER PROTECTION

- Modified UH-60L aircraft with unique mission equipment for the United States Customs and Border Protection (CBP).



AIRCRAFT DIAGNOSTICS & VIBRATION MANAGEMENT SYSTEM (ADVMS)

- Developed, installed, tested, and conducted limited production of 47 ADVMS kits for the USGC fleet of MH60T aircraft. The system will measure and process parameter information in flight.



UH-60S MARINE CORPS EXECUTIVE DETACHMENT CREW TRAINER

- Designed and integrated the Presidential Helicopter's NSH-60N "Cockpit" into a new MH-60S helicopter. Re-designated the UH-60N cockpit interfaces to mimic the NSH-60N.



Past Projects – Domestic RW Aviation



CH-47 MODIFICATIONS AND UPGRADES

- Integrated armament, ASE, avionics, communications, navigation, sensors, and weapon system upgrades
- Completed airframe upgrades simulation, test sets
- Developed and integrated various CH-47 Modification Work Orders (MWO) to include Tech Pubs development; special tools and test equipment development; and simulator upgrades



LIGHT UTILITY HELICOPTER (LUH-72A)

- Designed and performed engine and door modifications
- Integrated Wide Area Augmentation System (WAAS) and Air Navigation System (received STC)
- Modified the TU360 Ariel Engine
- Conduct scheduled and unscheduled maintenance



APACHE LOGISTICS SUPPORT

- Manufactured & integrated multiple Apache Mission Essential Package (MEP) Modification Kits.
- Installed Aircraft Survivability Product Improvement (ASPI) Kits.



OH-58 A, C, D, F MODIFICATIONS AND UPGRADES

- Designed and integrated an avionics upgrade on the OH-58. Mods included:
 - Upgraded Control Display Units (CDU) and Multi-Functional Displays (MFD) and added a third MFD
 - Added second multiband/SATCOM radio and a new lighter weight common transponder,
 - Upgraded the weapons system
 - Relocated the EOIR system from the mast to the nose.



Past Projects – International RW Aviation



JORDAN AND BAHRAIN UH-60M VIP AIRCRAFT UPGRADES

- Integrated VIP transport systems for ten UH-60M aircraft. Systems included:
 - Entertainment center
 - VIP interior
 - Satellite Communications
 - FLIR and DVR



MEXICAN POLICE UH-60M SURVEILLANCE AIRCRAFT

- Integrated advanced technology systems into 5 UH-60M Blackhawks for the Mexican Police. Systems included:
 - New FLIR, TCAS, GPS, EGPWS
 - SkyTrac, circuit breaker panel
 - Auxiliary fuel tank, egress lighting, a search-light, etc.



TAIWAN AH-1W COBRA UPGRADES

- Integrated updated communications, navigation and electronic warfare suites into 21 AH-1W aircraft.
- Provided contract field teams to supervise and train Taiwan personnel to perform modifications.



IRAQI ARMED RECONNAISSANCE HELICOPTER (BELL 407)

- Integrated an advanced avionics and weapon system for five Bell Model 407 Helicopters. Systems included:
 - Digital Cockpit
 - Nose-Mounted EOIR Sensor
 - Rocket Launcher and 50 Cal Machine Gun



Past Projects – Domestic Ground Vehicles



MINE RESISTANT AMBUSH PROTECTED (MRAP)

- Integrated various survivability upgrades and cab controls. Systems included:
 - Talon Robot Dispenser
 - MRAP IED (Laser) System
 - Common Remotely Operated Weapon Stations (CROWS)
 - Recovery Of Airbase Denied By Ordnance (RADBO)



ENHANCED MOBILE RAPID AEROSTAT INITIAL DEPLOYMENT (EMRAID) VEHICLE

- Integrated multiple Intelligence, Surveillance And Reconnaissance (ISR) capabilities into a single integrated system
- 2008 US Army Top 10 Greatest Inventions Award



HUSKY MARK III

- Developed and integrated system level upgrades to the 2nd Gen Two-seat Vehicle Mine Detection System
- 2010 US Army Top 10 Greatest Inventions Award



RECCE I/II FULLY INTEGRATED SYSTEM WITH TOW MISSILE

- Developed and integrated a state-of-the-art single vehicle system to provide IED detection, interrogation, and neutralization
- System built on the Cougar 6x6 Vehicle



TOW ITAS SYSTEM INTEGRATION FOR MAXXPRO VEHICLE

- Provided engineering support to integrate the TOW ITAS system onto the MaxxPro vehicle



Past Projects – Domestic Missile Systems

PATRIOT PROJECTS



- Developed, manufactured, integrated and/or provided the following systems/solutions for the Patriot Missile System:
 - Logistics support and circuit card obsolescence management
 - Embedded training / Missile Round trainer (MRT) / Empty round trainer (ERT)
 - Satellite Communications & Tactical Command System
 - PATRIOT Fiber Optic Modem (PFOM)
 - PATRIOT Advanced Capability (PAC-3) Missile Segment Enhancement (MSE)
 - Launcher Missile Round Distributor ETHERNET Support, & Depot Support

HIMARS PROJECTS



- Integrated the following systems/solution for the HIMARS System:
 - Embedded system training
 - Fire suppression
 - GPS navigation and upgraded communications, antennas, and cables

MULTI-MISSION LAUNCHER (MML)



- Designed, fabricated, and integrated the following systems/solutions on the MML:
 - Prototype structural hardware: (turret cradle; support cross member; “fishplate”; structural sub-rail channels; platform assembly, mid and rear stabilizers) azimuth motor
 - Azimuth motor; test fixtures: (mass/CG simulator, elevation, tube, blast shield)

M270A1



- Integrated the following systems on the M270
 - Improved cab (armor; human factors)
 - Blue Force Tracker (BFT); display systems; communication security; upgraded navigation
 - Embedded system training
 - Upgraded fire control system
 - Environmental Protection Systems; upgraded power distribution system



Facilities

FACILITY HIGHLIGHT:

HANGAR

217K_{sqft}

MANUFACTURING & WAREHOUSING

751K_{sqft}



NEW – Redstone Gateway Campus



Mfg / Warehousing / Offices



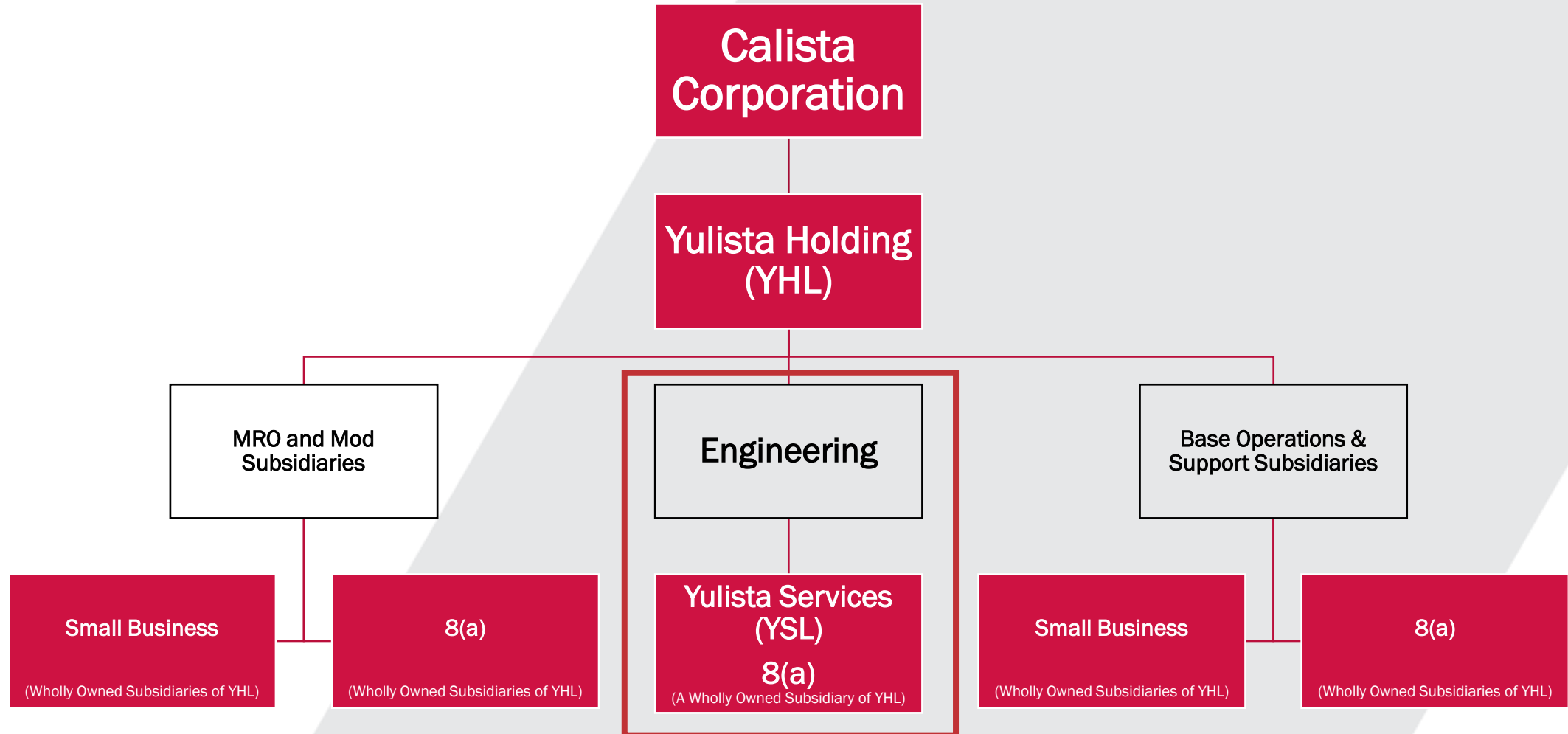
ACE – Aviation Center of Excellence



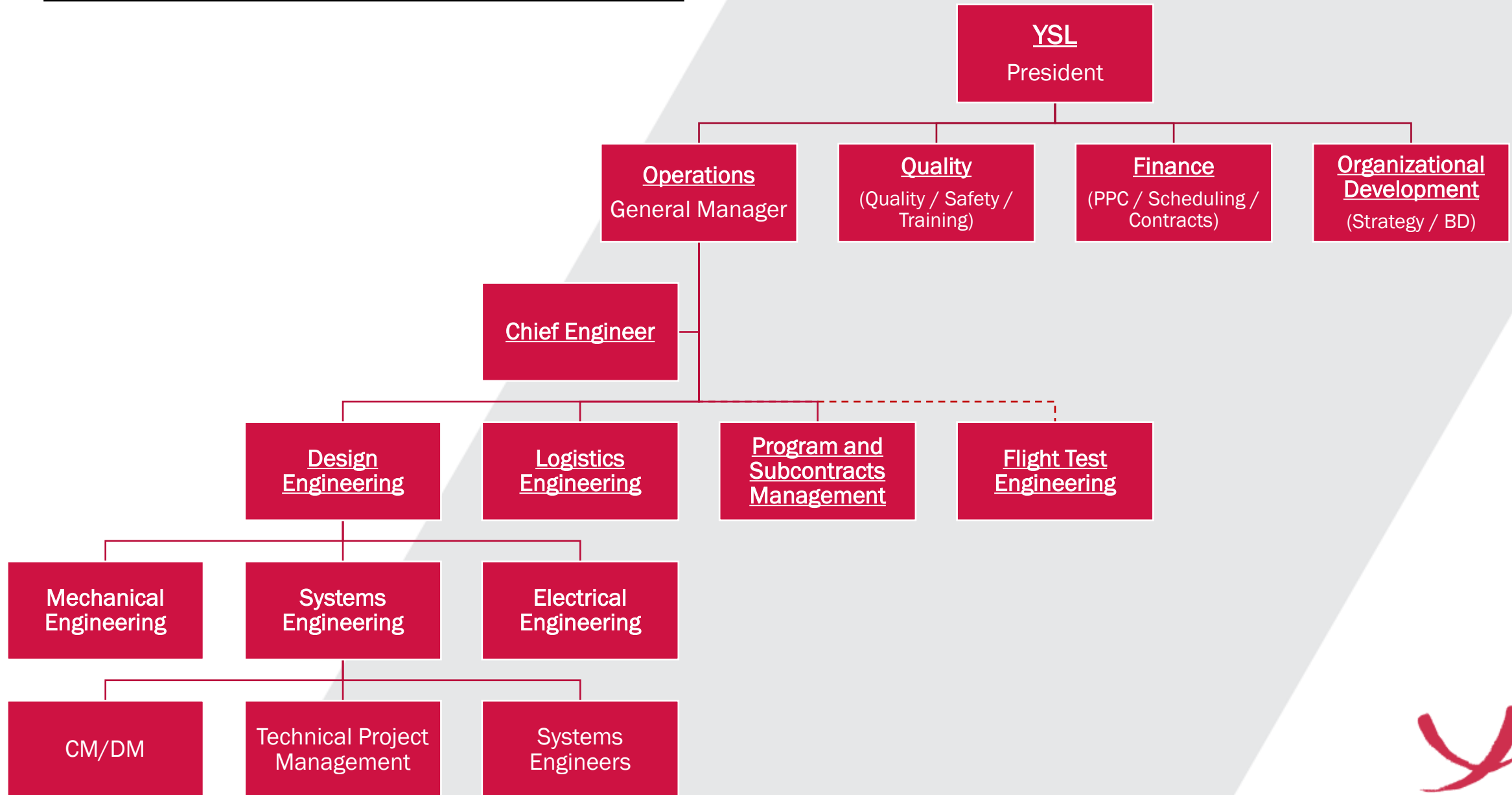
Facilities Tailored to the Needs and Requirements of Our Customers



Organization

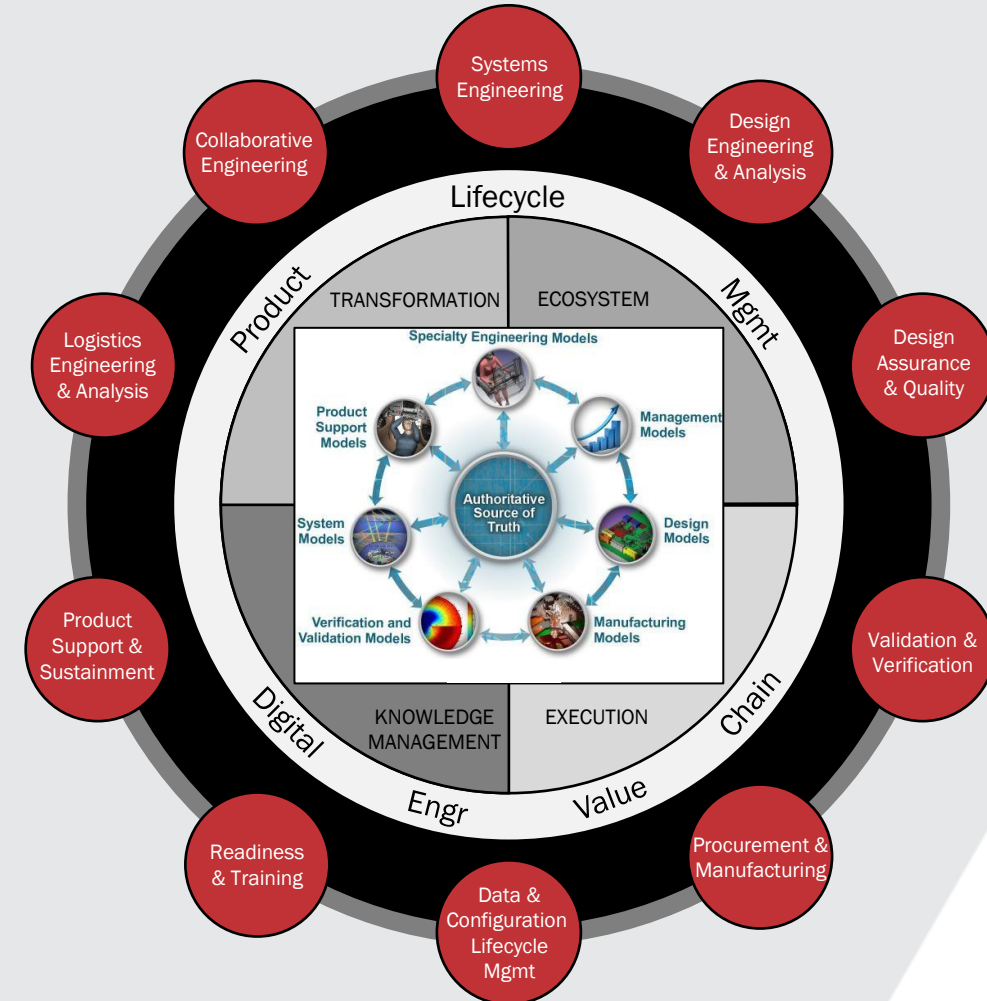


Organization



Digital Engineering

- Definition:
 - An integrated digital approach that uses authoritative sources of system data and models as a continuum across disciplines to support lifecycle activities from concept through disposal.
- Why Digital Engineering?
 - June 2018 DoD Digital Engineering Strategy published
 - “...the Department is transforming its engineering practices to digital engineering”
 - “...shift from the traditional design-build-test methodology to a model-analyze-build methodology



Digital Engineering

A real world example to demonstrate that Digital Engineering is not just about new build platforms and OEMs.

The A-10 aircraft was designed in the 1970s using 2-D drawings. The A-10 Wing Replacement Program (WRP) utilized 3-D model-based design (MBD).



The program developed approximately 10,000 unique models that required new methods to allow for handling and integrating data.

The adoption of 3-D MBD and Product Lifecycle Management (PLM) allowed A-10 to construct the digital thread for the sustainment phase of the product lifecycle and identify the authoritative source of truth for A-10 engineering data.



A-10 also adopted a new technology, NLign, to map repairs onto the 3-D model.

