

Axient Customer Highlight: Missile Defense Agency (MDA)

Accelerating Possible

Experience

Test Support

Provide Systems Engineering and Technical Assistance to support the planning, operations, execution and training for all Flight, Ground, Cyber Tests as well as Wargame and Exercise events. Axient was the incumbent prime contractor on TEAMS-TEW and transitioned to its major subcontractor on the Test Support contract. Our analysts and engineers contributed to successful execution of multiple test and wargame/exercise events involving GMD, THAAD, AEGIS/ SM-3, C2BMC Weapon systems; ICBM-class targets; Radars and Instrumentation systems.

Range Safety Analysis

Axient supports MDA's Range Safety Analysis Support Team, MDA's focal point through all flight test phases. Provide time-sensitive safety and risk analysis for early feasibility assessments and augments test range analysis when required. Integrate and synchronize all range safety analysis, resources, and timelines to ensure seamless range safety planning and operations. Critically important as agency develops and introduces advanced threats, complex scenarios, and an increasing ops tempo.

Ship Surveillance and Clearance Operations

Axient was instrumental in MDA's development and implementation of its ship surveillance and clearance capability. As part of MDA's Range Safety Analysis Support team, we support the government's broad ocean area and coastal ship surveillance and clearance activities to increase safety / mission assurance for MDA and select non-MDA missions. Team proactively collaborates with the US Coast Guard and launch ranges during execution support to identify, track, contact and vector surface vessels out of areas that pose a mission safety hazard.

Logistics

Axient's engineers / analysts prepare and de-conflict test assets and resources for Flight, Ground and Cyber Tests. Our team supports Business Case Analyses and oversight for multiple range and MDA instrumentation projects, to include MDA's airborne instrumentation and ship/sensor replacement programs. Our systems engineering and technical assistance analysts provide integrated logistics analysis, planning, inventory management, and operations staging support of materiel and assets at multiple ranges across the world including PMRF, VAFB, WSMR, RTS, KLC, Wake Island, Guam, and international ranges.

Axient's History with MDA

For 20+ years, Axient has provided engineering services to MDA in multiple locations across numerous contracts. Axient served as prime contractor on the **TEAMS Test, Exercises and Wargames (TEW) contract** through 2021 and is now a major subcontractor on MDA's follow-on TEAMS-Next Test Support and MDS-Engineering contracts. Our team of engineers and analysts have provided expertise to 101 Flight Tests, 58 Ground Tests, 38 Cyber Tests, and 157 Wargames and Exercises events on the TEAMS/TEAMS-Next contracts. Axient's professionals were also instrumental partners on the **BMD SE, WMSE, C3BM Engineering, Specialty Engineering, Predictive Engineering, and Test Provisioning.**

Other MDA work has included Classified Programs support for **MDA/EBB** and operating and maintaining the Enterprise Sensors Lab (ESL) at the Missile Defense Integrated Operations Center (MDIOC). Axient performed as the prime contractor on the TEAMS International Programs Bridge contract, providing critical support to U.S.-Israeli Cooperative Program Engineering for the Arrow-2 and Arrow-3, Iron Dome, and David's Sling weapons systems. Axient also performed as the prime contractor on 11 Missile Defense Agency Engineering Support Services (MiDAESS) Task Orders, providing engineering efforts across the agency.

Prior to MiDAESS, Axient served as the prime contractor for **MDA's Kinetic Energy Interceptor (KEI) Systems Engineering contract.** Axient has also supported **MDA's PEO for Advanced Technology (MDA/DV) through multiple BAA contracts** out of the US Army DEVCOM Aviation and Missile Center (AvMC) Systems Simulation, Software, and Integration (S3I) Directorate and the Technology Test and Evaluation Center (TTEC).

Mission Success

Axient is proud to have supported the March 2023 Flight Test Aegis Weapon System 31 Event 1a with MDA, in cooperation with the US Navy, through the MDS Engineering and Test Support contracts. The test confirmed a ballistic missile defense-configured Aegis ship is capable of detecting, tracking, engaging, and intercepting a medium range ballistic missile (MRBM) target in the terminal phase of flight utilizing the Standard Missile-6 Dual II with Software Upgrade in a single salvo of two interceptors. Axient's provided test design and planning, range safety analysis, hardware integration, mission execution, and missile performance analysis.

Experience (continued)

Missile Defense Systems Engineering

Axient provides engineering and technical expertise for Missile Defense System (MDS) engineering, analyses, studies, and evaluation. Our engineers and analysts serve as SMEs for MDS architecture design, C2, ground-based defense, radar systems, sea-based weapon systems, targets and countermeasures, and terminal defense. Our team delivers missile production and sustainment, booster design and test, flight test requirements development and assessment, software assurance and testing, and risk management.

C3BM Engineering

Axient tests and provides verification, validation, and assessment of C3BM design interoperability using satellite infrared data to validate track accuracy. We formulate operational concepts, design interfaces for the Enhanced C2BMC program, support new capability development for OPIR M&S products (IR scene generation, sensor cueing, detection, tracking, real-time closed-loop simulation, etc.), and provide expertise to develop architectures, digital models, test/analysis, and VV&A plans.

Targets & Countermeasures

Axient conducts MDA target and countermeasure design, development, test, and analysis. Our engineers lead the development of a new booster system providing propulsion and mechanical and systems engineering expertise that has led to multiple successful static fires. We lead technical analysis efforts for target boosters and reentry vehicle systems (ICBM, IRBM, MRBM, SRBM) including IV&V and delivery of target data to the MDS community, as well as requirements development, performance assessments, and RF and optical signatures. Areas of expertise include: missile hardware integration and testing, ordnance, antenna design, telemetry, and characterization.

Cyber Engineering

Axient supports MDS cybersecurity planning, development, integration, and resiliency requirements development. We lead activities to identify and analyze risk at the agency level. We established the Cyber Test Objective Tiger Team and led efforts to identify process and product improvements and standardization for CTO development, allocation, testing, and reporting to meet MDS stakeholder cyber data needs across all phases.

About Axient

With over 2,200 employees, Axient is headquartered in Huntsville, Alabama and has provided premier services and solutions to the Federal Government for more than three decades. Axient's customers include the U.S. Army, U.S. Navy, Missile Defense Agency, U.S. Air Force, U.S. Space Force, and NASA. Axient is certified in the following: ISO 9001:2015, AS9100 Rev D, CMMIDEV Maturity Level 3, and has a DCMA Purchasing System, DCMA Property System, and DCAA Accounting System.

We Always Deliver

101

Flight Tests

58

Ground Tests

38

Cyber Tests

157

Wargames & Exercises