

# Axient Customer Highlight: Missile Defense Agency (MDA)

Accelerating Possible

## Experience

### Test, Exercises and Wargames (TEW)

System and Component (Element) Test support planning, operations, execution and training for Flight and Ground Tests, Exercises and Wargames. \$260 million prime contract managed by Axient, which contributed to successful execution of test programs involving GMD, THAAD, AEGIS/ SM-3, and C2BMC weapon systems, ICBM-class targets, radars and instrumentation systems.

### Weapons and Missiles Systems Engineering

Missile system / booster / target / kill vehicle design support for AB, GM, TC, and C2BMC programs, including multiple TC booster stacks and full-scale re-entry vehicle designs (ICBM, IRBM, MRBM, MBRV). Perform IR Hardbody and Plume modeling for BMDS exo-atmospheric intercepts.

### International Programs Engineering

Flight/Ground Test support, planning, performance analysis, Joint Analysis Team (JAT) support, and failure review support to U.S.-Israeli Cooperative Programs such as Arrow II/III, David's Sling, and Iron Dome. Prime contracts managed by Axient under both TEAMS and MiDAESS.

### BMDS Systems Engineering

Assessments and analyses to support mission planning, threat engineering, and system performance trade studies. Provided trusted analysis and strategic planning insight.

### C3BM Engineering

Test, verification, and validation and assessment of C3BM design interoperability using satellite infrared data to validate track accuracy. Formulated operational concepts and designed efficient and effective interfaces for the Enhanced C2BMC program.

### Threat Engineering

Develop threat mapping for Parametric Threat Space and countermeasure suites with IR and RF signatures, perform high fidelity, physics based RCS and Trajectory modeling, and delivered Integrated Threat Data packages on more than 30 threat systems.

## Axient's History with MDA

For more than 17 years, Axient has provided engineering support to MDA in multiple locations across numerous contracts. Most recently, Axient served as Prime Contractor on the **TEAMS Test, Exercises and Wargames (TEW) contract**, providing exceptional support to 64 Flight Tests, 33 Ground Tests, 118 Wargames and Exercises events. Additionally, Axient served as a subcontractor on multiple TEAMS contracts, including **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 also performed as the prime contractor on the **TEAMS International Programs Bridge contract**, continuing work begun under **11 Missile Defense Agency Engineering Support Services (MiDAESS) Task Orders**, providing critical support to IE in areas of U.S.-Israeli Cooperative Program Engineering for the Arrow-2 and Arrow-3, Iron Dome, and David's Sling weapons systems.

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).



## WE ALWAYS DELIVER.

Axient applies Artificial Intelligence (AI)/ Machine Learning (ML) expertise to the Missile Defense System (MDS). We support MDA in the development, application, and testing of models, algorithms, and techniques to explore what aspects of missile defense may be improved or automated through AI/ML and utilize simulated and flight test data, including time-series and imagery from MDA assets to train, test, and validate ML models. We leverage the latest cutting-edge commercially-available AI-based Computer Vision (CV) databases and models to evaluate autonomous object detection and recognition concepts in imaging IR sensor and seeker systems.

## Experience (continued)

### Risk & Lethality

Assessed lethality requirements, performed phenomenology studies, and supported test planning, risk management and risk mitigation. Performed hit-to-kill lethality assessments using PEELS and PEGEM tools for GMD and THAAD.

### Test Provisioning

Prepared and de-conflicted test assets and resources for Flight/Ground tests, coordinated Link Margin Analyses, and supported Business Case Analysis for Meck Island infrastructure.

### Specialty Engineering

Managed baseline of C2BMC Training System products, and led Concurrent Test, Training, and Operations (CTTO) activities. Developed, implemented and executed the Distributed Training System Simulation Stimulation (DTS S/S) system. Represent MDA/ BCDC in demonstration/ discussion of capabilities with stakeholders from NORTHCOM, STRATCOM, and JFCC-IMD.

### Cyber Engineering

Support development / maintenance of the DT-Cyber Master test and synchronization matrix, RMF compliance, vulnerability assessments, and computer network defense.

### Logistics

Provided integrated logistics analysis, planning, inventory management, and operations staging of materiel and assets at multiple ranges including PMRF, VAFB, WSMR, RTS, KLC, Wake Island, Guam, and foreign ranges.

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## 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.

## TEAMS Test, Exercises & Wargames (TEW) Contract

124

Wargames  
and  
Exercises

74

Flight  
Tests

46

Ground  
Tests