

SYSTEMS AND TECHNOLOGY GROUP

Modeling and Simulation (Software)



Bowhead is a proven provider of industry best software development, crash simulation, and modeling simulation support to Department of Defense and Federal Government through various projects.

Bowhead is a Small Business Administration-certified 8(a) Alaska Native Corporation (ANC). As a small disadvantaged business (SDB) and 8(a), Bowhead is eligible for Direct Award Contracts (DAC). Bowhead can provide a DCAA/DCMA audited accounting system.

Bowhead's Modeling and Simulation division's mission is to provide services and design products that balance or optimize the physical, cognitive, sociological and psychological impacts of an engineered system on the people who use or interface with the system. Our business philosophy is based on integrity and delivery of the highest quality services and products that add value to our customers' organizations.

Modeling and Simulation (Software)

Bowhead's Modeling and Simulation engineers look at systems where humans use hardware and software and ask, "How can we help people work more efficiently?"

Bowhead is dedicated to:

- Advancing the use of modeling and simulation to solve real-world problems
- The advancement of simulation and allied computer arts in all fields
- Facilitating communication among professionals in the field of simulation

For the Department of Transportation, National Highway Traffic Safety Administration Vehicle Safety Research Division, Bowhead performs modeling and simulation to analyze crashworthiness and biomechanics data.

Capabilities

- Computer Modeling
- Crash Engineering
- Biomechanical Testing
- Data Management
- Computer Simulation
- Finite Element Analysis
- Motor Vehicle Crash Analysis
- Analytical Support
- Crash Simulation
- Finite and Lumped Modeling
- Statistical Analysis
- Motion Analysis and Measuring

Certifications

- CMMI Level III Appraised (Services and Software Development)
- ISO 9001:2015 Registered
- ISO 20000.1:2011 Certification
- Certified Business Continuity Vendor and ITAR — International Traffic in Arms Regulation Export License



CMMISVC / 3SM
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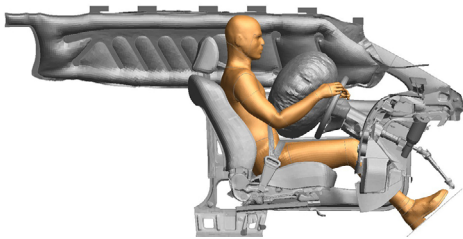


Agile Methodologies

We follow agile software development methodologies at Bowhead. These modern development methodologies and DevOps are the perfect team for developing your projects for the future. Agile development methodologies enable short development cycles and delivery of working software in the early stages of software projects, as early as one month after beginning work.

Mobile Application Development (Mobile Solutions)

Bowhead's mobile app developers are experts in the latest technologies displayed in iPhone, Android, iPad Phone application development. Bowhead is a mobile application development company with developers who combine top-flight programming and inventive skills with creativity and a true commitment to our customers and their requirements.



Experience

- U.S. Department of Transportation
- Office of the Secretary of Transportation (OST)
- Federal Aviation Administration (FAA)
- Maritime Administration (MARAD)
- National Highway Traffic Safety Administration (NHTSA)

Contacts

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Modeling and Simulation (Software) Support Services

- Develop and Review Engineering Analysis Reports
- Conduct Statistical Analyses
- Provide Analytical Support for Customer Rulemakings
- Perform Data Management Using Government-Approached Procedures
- Collaborate with Government Research Staff to Develop Research Suitable for Publication
- Develop Vehicle Crash Modeling Tools and Methods; Advanced Signal Processing and Data Assessment Preprocessing Tools; and Advanced Algorithms and Software Applications
- Collaborate with Government Staff to Develop Engineering Application User Manuals
- Conduct Motion Analysis and Measurements Using High-Speed Video
- Utilize Computer Models and Mathematical Analysis Software to Simulate Crashes, Evaluate Automobile Designs, and Predict How Design Improvements Could Mitigate Crash Injuries
- Refine Engineering Mathematical Analysis Techniques and Their Applications to Crash Data
- Employ Finite Element Analysis Software to Solve Non-Linear, Large Strain Simulations Problems
- Leverage Design of Optimization (DOE) and Optimization Methods to Conduct Parameters Studies Using Finite and Lumped Parameter Models
- Analyze Biomechanical Tests, Motor Vehicle Crash Tests, and Accident Data