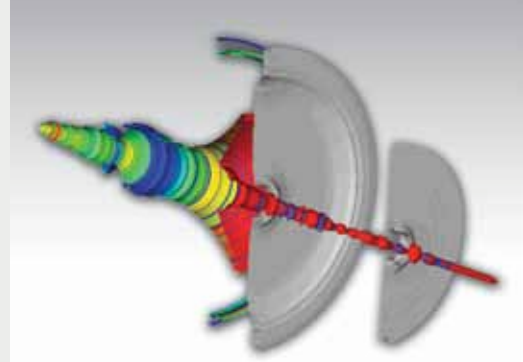


Simulation Services for the Defense Industry

Global Engineering Services



Advanced Simulation Services

MSC Services is your partner in performing cost-effective advanced simulation for your research, system development, and system validation efforts. MSC has a 50-year history of providing consulting services to industry, including aerospace, automotive, biomedical, energy, electronics, machinery, and many others. With more than 400 engineers worldwide, MSC has the skills and capacity to understand and overcome your challenges.

MSC Services has expertise in structures, impact, blast, motion, controls, fluids, thermal, fatigue, and advanced materials. MSC Services is an extension of your engineering team enabling you to obtain the skills you need when you need them.

Our goal is to enable you to maximize the value of your computer-aided design and engineering investments. Whatever your needs, we work with you to identify and implement customized solutions ranging from technical support and enterprise training to engineering services and custom software development.

Methods Development and Application

Simulation can be applied to a wide range of product development, manufacturing challenges, and qualification/certification programs. However, it is not always obvious how to apply simulation through the product lifecycle to achieve the desired efficiency and accuracy required to promote long-term system sustainability. Development of standardized and repeatable methods and practices is necessary. In addition to routine analytical services, we will work with your staff to put in place forward-looking processes to assure that today's simulation data is pertinent and usable decades in the future as system service life is extended for today's complex defense systems.



Automatic Weapon Simulation Model

Focus on:

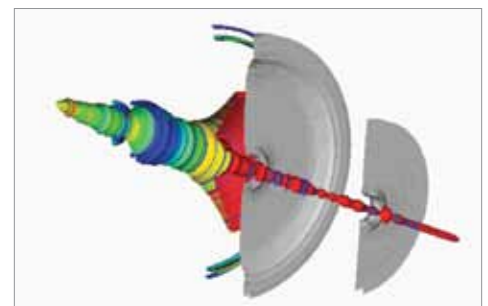
- Reliability
- Maintainability
- Survivability
- Sustainability
- System Level Performance and Optimization
- Multi-Disciplinary Analysis
- Mobility

Broad Defense Expertise:

- Automatic Weapons
- Aircraft and Spacecraft
- Tracked and Wheeled Military Vehicles
- Targeting Systems
- Human Body Modeling
- Mechanical and Thermal for Electronics
- Lethality Studies
- Vulnerability Assessments



Vehicle Mobility Simulation



Explosively Formed Penetrator Simulation

Training and Technology Transfer

MSC Services offers a full range of training courses in locations throughout the world. These courses address the needs of new users of our simulation products and the needs of long time users who want to apply more advanced features. If our public classes do not meet your needs, MSC Services can prepare a custom training curriculum to be delivered at your facility.

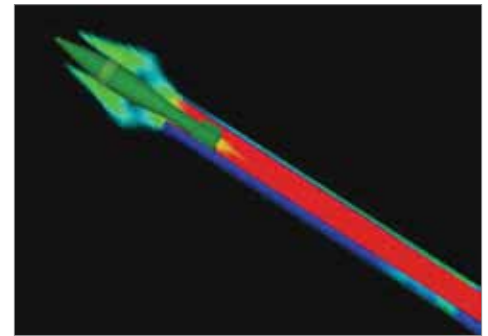
Sometimes a training course is not sufficient to get your staff up and running simulation with the efficiency you need. When that happens, technology transfer through one-on-one time with MSC Services is recommended. MSC Services will provide instruction in the topics you need, using your simulation models and techniques to illustrate how to address your particular needs with maximum efficiency.

This technology transfer can be in-person and on-site, or it can be done remotely through telephone or web conferencing. The content can be what you want: from advanced simulation techniques to more fundamental engineering topics. Our expertise will be transferred to your own organization.

“ MSC has been a key partner on the LSAT program. Their ADAMS software and consulting services reduce development cost and risk by providing an understanding of weapon dynamics early in the design process and in more detail than can be obtained from physical testing. ”
 - Paul Shipley, AAI Textron

Key Benefits:

- Get specialized expertise when you need it
- Rapidly develop new methods for applying simulation to your designs
- Automate your simulation processes to provide consistency and repeatability as well as alignment with contractors
- Reduce the time and expense required to assess and evaluate the performance of new defense systems.



Mortar Round and Tube Simulation

Service Life Engineering

More and more, defense systems are called upon to not only meet a mission requirement today but to expand mission requirements far into the future. MSC Services can provide the skills you need to get these predictions right. Let us set up an analysis process that starts with assuring an accurate load set for the parts of your system based on system level functional analysis. This process can start the path toward accurate stress calculation which leads to fatigue and service life predictions. Presently, systems are often over-designed to obtain long service life. Or they are designed with built-in flaws that may not be recognized until many years down the road. Obtaining accurate loads is vital to predict service life of a complex system without excessive time-consuming and costly testing programs. We can lead you through an integrated system level analysis of your developmental systems today.



MSC Software Engineering Services Solution Framework

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