



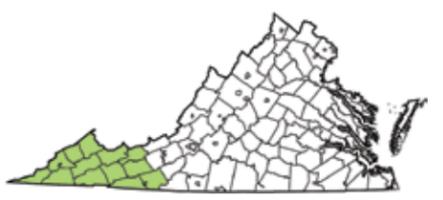
Analysis of Modeling & Simulation

SOUTHWESTERN VIRGINIA REGION

REPORT SUMMARY
The ASTA Group, LLC • November 2014

This study was prepared under contract with the Commonwealth of Virginia, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the Commonwealth of Virginia and does not necessarily reflect the views of the Office of Economic Adjustment or the Department of Defense.

Southwestern Virginia Regional Overview



The Southwestern Virginia region uses M&S primarily in healthcare and emergency medical response training. The regional nursing training is characterized as robust, with much success attributed to its new mobile training center. Stakeholders see the need to initiate networking and collaboration in M&S and want to educate the public about the potential for M&S applications.

Asset Summary

Four M&S assets were identified in the region, mostly university-based healthcare organizations.

Industry Sector	Total Employment	M&S Specific Employment
Total Southwestern Virginia Region Employment	177,268.39	
Total Southwestern Virginia Region Employment, M&S Related Sectors Only	8,109.42	81.09
Pharmaceutical Preparation Manufacturing	50.28	0.50
Other Commercial & Service Industry Machinery Manufacturing	0.00	0.00
Ship Building & Repairing	0.00	0.00
Software Publishers	3.27	0.03
Telecommunications	1,070.53	10.71
Other Information Services	3.15	0.03
Architectural, Engineering & Related Services	1,117.18	11.17
Custom Computer Programming Services	371.91	3.72
Computer Systems Design Services	242.34	2.42
Other Computer Related Services, Including Facilities Management	78.12	0.78
Management, Scientific & Technical Consulting Services	247.65	2.47
Scientific Research & Development Services	151.60	1.52
All Other Miscellaneous Professional, Scientific & Technical Services	173.60	1.74
Other Private Educational Services	268.02	2.68
Private Hospitals	4,331.77	43.32

Bold text indicates core sectors of the M&S industry.

Regional Employment in M&S

This table includes estimates for total employment in the region, for employment in M&S related sectors, and estimates for employment in each individual industry sector analyzed in this study.

As shown in the table, the sectors of *Telecommunications* and *Architectural, Engineering & Related Services* have the highest employment among the M&S industry sectors in the Southwestern Virginia region.

Also shown in the table, about 4.6% (8,109.42) of the region's total employment (177,268.39) is comprised of employment in the M&S related sectors. Approximately 0.05% of the total jobs in the related sectors are specific to M&S.

Economic Impact

The M&S contribution to the regional GRP is estimated at \$211-\$233 million. The total economic impact of M&S on the regional economy is estimated at \$398-\$436 million.

Growth projections for M&S industry sectors within the Southwestern Virginia region range from 15% to 20% through 2020. Analyses project that M&S will contribute \$1.9-\$2.1 billion to the regional GRP, from 2011-2020.

Market

Obstacles in the marketplace include a lack of knowledge about M&S applications, a lack of widespread advertising of the potential applications for simulation training, and insufficient funding for expansion of current healthcare programs.

Clean energy technology is seen as a potential avenue for M&S industry expansion in this region, but there are concerns about the lack of grant money available to promote this.

M&S Workforce

This region wants help to identify coal mining alternatives for its workforce and economy. Stakeholders see that leveraging relevant high school curriculum and higher education center training will provide opportunities to refocus and retrain the local workforce.

M&S Networking and Collaboration

This region lacks any M&S community or networking. There is no flagship university or other organization that could serve as a network hub.

Solutions

Stakeholders see a need for open discussion between the co-located National Center for Manufacturing Sciences (NCMS), George Mason University and Grid Cell, to begin to energize the workforce and local industry. NCMS' second Grid Cell has been established in partnership with George Mason University in Fairfax. Stakeholders want help to offset the costs of training current employees and leveraging student workers into M&S areas, and to grant funding opportunities for expansion of simulation offerings.



Office of the Secretary of Technology
Office of the Secretary of Veterans and Defense Affairs
Commonwealth of Virginia
P.O. Box 1475
Richmond, VA 23218
804-786-2211



223 West Gregory Street
Pensacola, FL 32502
1-850-912-6793
theastagroup.com



1040 University Boulevard
Suite 100
Portsmouth, VA 23703
757-391-9200
mymic.net



2214 Rock Hill Road
Herndon, Virginia 20170
703-689-3000



Report Description

This report provides regional highlights of a 2013 study undertaken to assess the state of Modeling and Simulation (M&S) within Virginia, analyze its economic impact, and identify projected growth areas. The study produced an inventory of Commonwealth M&S assets, a survey of M&S business regionally, economic analyses of the M&S sector and workforce, and a meta-analysis of previous studies. Focus group interviews were held in each Commonwealth region to provide insight and information about M&S. Participating stakeholders represented academia, government and industry. Impact Analysis for Planning (IMPLAN®) and United States Bureau of Labor Statistics data were used for the economic and workforce analyses. The full report can be found online at the following websites:

ModSim Connected: modsimconnected.com

Secretary of Technology: technology.virginia.gov

