

# Hampton Roads Partnership

## Board Brief: *Vision Hampton Roads, JFCOM and M&S*

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**Mission:** Provide leadership to focus on the strategic issues that will improve Hampton Roads' competitive position in the global economy.

### Follow-up to Executive Committee Meeting of August 20, 2010

#### REVIEW AND RECOMMENDATION:

On 8-9-10, U.S. Defense Secretary Robert Gates recommended closure of Joint Forces Command (JFCOM), headquartered in Hampton Roads. JFCOM, one of ten combatant commands in the Department of Defense (DoD), is the only one focused on the transformation of U.S. military capabilities, specifically in force jointness, concept and capabilities development, experimentation, training and provision of joint forces.

Today's JFCOM, which traces its origins back to 1947, formed in 1999 from the Atlantic Command and plays a critical role in work with NATO forces. JFCOM develops and employs joint modeling and simulation tools, the centerpiece of joint training, that replicate the operational environment to provide a foundation for current and future conflicts preparing for the world of tomorrow.

Modeling and Simulation (M&S) refers to the process of developing a mathematical model of a real world process, such as the flow of containers through a port facility, and solving the model under different conditions. The information extracted from the model can be used to enhance the effectiveness of the real world process and increase efficiency and profitability. M&S is not a military-only tool.

**Regardless of the outcome of Sec. Gates' recommendation, the region-wide comprehensive economic development strategy, *Vision Hampton Roads*, with its structure already in place, should be utilized to coordinate existing and future efforts to grow the M&S community in Hampton Roads.**

#### ANALYSIS:

Hampton Roads is one of the country's three leading regions in M&S along with Orlando, FL and Huntsville, AL. The unique strength in the Hampton Roads region is in three areas:

1. **M&S education from high school through PhD.** The Hampton Roads region is the only place you will find that continuum of M&S education.
2. **Training.** Significant expertise exists in how to employ M&S to perform all types of training from the military to medical and healthcare.
3. **Decision support command and control.** The Hampton Roads region is set apart by its expertise in employing M&S to analyze complex problems and to help individuals or groups make better decisions because of the insight they gain from the models.

The Virginia Modeling Analysis and Simulation Center (VMASC) at Old Dominion University is a key contributor to this sector of the economy with the past help of JFCOM.

**The Hampton Roads Partnership (HRP) champions and supports the following M&S diversification efforts in the region:**

- **MODSIM World Conference & Expo**, now in its fourth year and franchised in Canada, has seen a 25% annual growth and focuses on promoting M&S activity outside of DoD, encouraging the transfer of technology and information across domains. HRP provides the corporate vehicle, which owns the conference, the Board's Secretary/Treasurer and the Deputy Conference Chair for Logistics.

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- **Senator Mark Warner's M&S Taskforce**, of which HRP is an active participant, has put a special focus on medical M&S for 2011 at the Partnership's urging.
- **Hampton Roads M&S Strategy 2020**, an effort led by HRP, pays special attention to entrepreneurship, commercialization, research and development, expanding into new markets, educational linkages and leveraging unique assets. The Strategy is designed to capitalize on, not rely on, existing DoD M&S work to expand and grow the industry base in Hampton Roads.
- **Hampton Roads M&S Leadership Council** was developed to coordinate the implementation of the M&S Strategy 2020. Membership includes Dr. John Sokolowski (VMASC), Dana Dickens (HRP), John Dannon (VMASC Board of Advisors), Jack McGinn (Warner's M&S Taskforce), Dwight Farmer (Hampton Roads Planning District Commission - HRPDC), Darryl Gosnell (Hampton Roads Economic Development Alliance - HREDA), Josh Jackson (Technology Hampton Roads Board member), Brian Callahan (WHRO Public Broadcasting), John Cosgrove (Virginia General Assembly) and Frank Roberts (Hampton Roads Military and Federal Facilities Alliance - HRMFFA) along with staff participation from Senator Warner, Congressman Randy, Forbes, and Congressman Glenn Nye. The Council has taken active steps to operate in-line with *Vision Hampton Roads* as a sub-group of the Innovation Taskforce.
- **Vision Hampton Roads** specifically includes M&S as a cluster which deserves attention and support to continue its growth in the region as it presents tremendous opportunity to diversify the economy while providing clean, high-paying jobs:
  - **Performance Measures & Hampton Roads Performs** – M&S is one of the top ten measures to monitor in *Vision* and currently includes 2007 metrics of annual percent change in output, GRP, employment and average annual salary;
  - **Industry cluster of focus with HRP and Hampton Roads Research Partnership** – M&S, with the potential to improve performance of other clusters such as bioscience and sensors, was an area of concentration in HRP's 2007 strategic plan and continues to be with *Innovate!HamptonRoads* and *IdeaWorksHamptonRoads*;
  - **SWOT Analysis** – M&S was one of eight identified opportunities along with Tech Transfer, i.e., leverages science into commercially applied technology;
  - **Sector Analysis** – A 2007 ANGLE Technology survey identified over 2,000 direct M&S jobs paying an average of \$82,733 per year (more than double the region's average salary) spread throughout the region, with nearly 60% on the Peninsula and 40% on the Southside; although strongly supported by the military, jobs have expanded to transportation, port operations, education and the medical world; the sector continues to grow in importance within the regional economy as measured by a 42.1% increase in its contribution to the Gross Regional Product and a 25.4% increase in total employment between 2004 and 2007;
  - **Research Strengths** – The ANGLE survey noted many in the region: ODU, Eastern VA Medical School (EVMS), Hampton University (HU), National Institute of Aeronautics (NIA), NASA Langley Research Center (LARC), Jefferson Lab (JLab), Norfolk State University (NSU) and Christopher Newport University (CNU);

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- **Vision Opportunities Objective** – Hampton Roads will be recognized internationally as a region for centers of excellence fueled by a culture of innovation and economic opportunities. A specific action identified is to continue to grow the technology cluster of M&S and to utilize the strengths of the region's industry to develop tools to support regional leaders in developing climate change and sea level rise adaptation strategies;
- **Vision's Prioritization of Projects** – Several communities in the region seek to leverage existing assets in support of economic development which focus on high tech modeling and simulation;
- **Innovate!HamptonRoads** – HRRP, morphing into an organization to drive the Innovation portion of the *Vision* strategy as a component of HRP, will serve as the central agent for stimulating technology innovation by building on the technological strengths, including the M&S cluster, and the natural resources of Hampton Roads;
- **Virginia's Economic Development Partnership (VEDP)** – Per VEDP, Virginia's M&S industry employs 11,500 people in the private sector while government and military is estimated at another 2,900 people. The top two regions by employment are Northern Virginia (5,900) and Hampton Roads (5,200) and account for 97% of all M&S employment in Virginia.

### NEXT STEPS:

1. Focus M&S efforts with the region's existing leadership and the region-wide strategic plan **already in place** led by the *Vision Hampton Roads* Innovation Task Force (Dr. Joe Bouchard, Lead) and the Hampton Roads M&S Leadership Council (Dr. John Sokolowski, Chair) which aligns with designated community leaders in specific areas of interest (ex: higher education, healthcare) for implementation of *Vision's* strategic actions.
2. Distribute and emphasize the following existing pertinent documentation:
  - Hampton Roads Planning District Commission Special Reports, JFCOM's Economic Impact, 23Aug10 [http://hrpdca.gov/Documents/Economics/2010/JFCOM\\_Economic\\_Impact\\_Brief\\_No\\_2.pdf](http://hrpdca.gov/Documents/Economics/2010/JFCOM_Economic_Impact_Brief_No_2.pdf)  
19Aug10 [http://hrpdca.gov/Documents/Economics/2010/JFCOM\\_Economic\\_Impact\\_Brief.pdf](http://hrpdca.gov/Documents/Economics/2010/JFCOM_Economic_Impact_Brief.pdf)
  - Hampton Roads Modeling & Simulation Strategy 2020, Dec09 (12 pages, 4.7MB)  
<http://hrp.org/Site/docs/ResourceLibrary/MS2010.pdf>
  - ANGLE Technology Report on the Economic Impact of Modeling, Simulation and Visualization in Hampton Roads, Virginia, Dec07 <http://bit.ly/MS2007>
3. Push-out strategic information updates, as available.
4. Direct engagement with the M&S community via support and/or attendance with MODSIM World Conference and Expo, October 13-15, 2010, <http://ModSimWorldConference.com>.
5. Coordinate marketing outreach strategy with the Hampton Roads Economic Development Alliance and assist the Alliance in obtaining infrastructure and other data important to recruiting efforts, as HREDA takes the lead in externally marketing the region's strengths in M&S.