

Innovation & Business Environment Working Group

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Innovation & Business Environment Overview

- Define incentives needed for both small/entrepreneurial and large companies
- Recommend the innovation environment required, potentially spanning research, engineering, and testing and connecting innovators, entrepreneurs, venture capital, academia, and federal labs.
- Examine all elements of the UMS supply chain (e.g.; manufacturing, software, cyber, data services, component technologies, testing, education) to estimate relative value for Virginia and relative importance of targeting marketing and investments/incentives.
- Define the Virginia focal point for UMS marketing, economic/business development, integration of resources. Subset: Define role of CIT and VEDP in this, as they are or with proposed changes. Define role of MAAP in UMS marketing and BD vis-à-vis other assets.
- Examine role of test ranges in the current industry environment (for air/land/sea), and potential alternate models or structures for the MAAP.
- Examine potential in increased collaboration with DoD and NATO ACT.
- Define the hub of UMS industry in Virginia (region)

Focus on high payoff tasks

Define incentives needed for small/entrepreneurial and large companies

- Vision: Create an Unmanned Vehicle ecosystem in Virginia that drives long-term small business and workforce creation.
- Current Status:
 - Initial approach was to define incentives for large and small companies independently.
- Next Step - New focused approach on how to simultaneously incentivize large and smalls together. Determine what issues we are going to tackle:
 - Funding sources 50% - matching funding from the entities from capital, equity capital, IRAD, SBIRs, federal research grants, BAAs, etc.
 - Research Grants, Capital Investment Incentives, State, Federal, Industry Collaboration Agreements, Targeted Work Force Development Incentives, Potential Land Grants for Infrastructure and Facilities Investments
 - Contract Vehicles
 - Key aspect for any business entity
 - Mechanism for providing jobs and revenue
 - If implemented correctly, will motivate businesses to establish a presence in Virginia
 - Tax incentives for research development (make it easy to qualify/attain)
 - Expansion of the Research and Development Tax Credit for large, innovative companies – Virginia's current R&D tax credit supports small, start-up companies who require and value a cash refund in the amount of \$35,100. Virginia should create a new, separate R&D credit that brings and supports larger companies to the Commonwealth and helps the state's biggest employers grow.
 - Establish opportunities that reward teaming arrangements of qualified small businesses with Large Businesses and Virginia Universities
 - Create an environment/venue for Venture Capital organizations to be exposed to new and innovative technology and provide a forum for active investment
 - Given that the Unmanned Vehicle markets for air, land and sea are typically all capital intensive, high technology markets requiring a unique combination of collaboration and competition across the market space, it seems that the following subset of incentives at the disposal of the state would be the most relevant.

Define the Virginia focal point for UMS marketing, economic/business development, integration of resources. Subset: Define role of CIT and VEDP in this, as they are or with proposed changes. Define role of MAAP in UMS market and BD vis-à-vis other assets.

Vision: Build an entity to grow Virginia into an Unmanned Vehicle Business world leader

Next Step – Working Group to meet today to review, discuss and make recommendations on:

- Mission
- Goals
- Functions
- Structure
- Metrics
- Funding

Examine role of test ranges in the current industry environment (for air/land/sea), and potential alternate models or structures for the MAAP.

- Vision: Make Virginia the Test Hub of choice in North America
- Current Status: Virginia already has a wide range of existing military and commercial test ranges in existence for all three aspects of the Unmanned market (air, land and maritime)
 - Close to and/or home to a number of military headquarters, proximity to vast bodies of water and significant amounts of open land, and diverse manufacturing capabilities
- Next Step – Determine focus areas from Initial Study recommendations:
 - Alternative business models must be simple, no cost for airspace access
 - Simple file/fly process - don't need to reinvent the wheel here, look at Canada, Australia, others
 - Develop differentiators that make VA test sites stand out from others
 - Current value propositions from the 6 test sites are meek and undifferentiated – IMHO
 - Design VA test sites to be more attractive
 - Focus on night ops (operating unmanned systems at night calls for special infrastructure, certifications, know-how, etc.)
 - BLOS (take advantage of VA's coasts, over water ops is ideal for flight testing BLOS capabilities while maintaining safety)
 - One vs Many ops (one Ground Control station operates several UAV's, this is a key force multiplier for UAS particularly applicable to commercial as it further enhances its ROI figures of merit.)

Additional Observation

- Virginia needs an Unmanned System market survey to determine low hanging fruit for rapid expansion
- The market survey serves as launching point for all other actions

Backup

Draft Unmanned Vehicle Growth Entity Attributes (1 of 3)

- **Mission Statement:** *Advancing the New Virginia Economy through growth in all facets of the unmanned systems industry through advocacy and leadership, industry and public outreach, education, promoting our unique assets and geographical advantages, and aiding strategic partnerships between the Commonwealth, localities, industry, educational institutions, and investors.*

- **Strategic Goals:**
 - *An appropriate economic development growth strategy is maintained as the industry matures.*
 - *Virginia's capabilities and accomplishments are known in the industry and Virginia institutions are aware of evolving industry needs and barriers to success. Marketing is proactive and effective.*
 - *Success and growth of individual firms are fostered by direct assistance in the form of connecting them with resources, incentive, workforce, and removing barriers to success.*
 - *Education and connections are made through advocacy, workshops, forums, STEM events, and web based services and directories.*

Draft Unmanned Vehicle Growth Entity Attributes (2 of 3)

▪ Functions:

- *Gathering market intelligence and awareness of activities, particularly in the Commonwealth, but also outside the state. Reaching out to industry to listen to their needs.*
- *Marketing, media outreach.*
- *Fostering opportunities and removing barriers for the firms that are here.*
- *Recruiting and aiding firms who are not already in Virginia.*
- *Developing and adjusting global business and marketing strategies as the industry matures and changes.*
- *Coordinating across all Commonwealth assets to assist unmanned systems firms, including leveraging the capabilities of existing organizations.*
- *Identifying legislative barriers and advocating for an appropriate legislative environment.*
- *Championing workshops, forums, Science, Technology, Engineering and Math (STEM) events, and summits to foster the industry and the innovation ecosystem.*
- *Providing a clearing house for investors; aid in matching investors to capital needs.*
- *Bringing together the multiple voices and interests of regions, cities, firms to look for common ground and strive for mutually beneficial actions.*

Draft Unmanned Vehicle Growth Entity Attributes (3 of 3)

- **Metrics of success:**

- Increase in the # of companies coming to the Commonwealth.
- Dollar figure in capital investment.
- Number of jobs.
- UMS revenue into the Commonwealth.
- A metric to compare with other states, e.g. in top 5 states?