# Strategic Plan to Build an Innovation Driven Economy

# for

St. Mary's County, Maryland

**Economic Development Commission Department of Economic Development** 

**January 10, 2017** 

### Strategic Plan to Build an Innovation Driven Economy

Recommendations contained in this report were developed by the St. Mary's County Economic Development Commission in conjunction with staff of the St. Mary's County Department of Economic Development. Research underpinning these observations and recommendations was provided by consultants from the University of Maryland, College Park; Towson University, Regional Economic Development Studies Institute and the Jones, Lang, LaSalle Hotels and Hospitality Group. Funding for this initiative was provided by the U. S. Department of Commerce, Economic Development Administration, the Maryland Department of Commerce, and the Commissioners of St. Mary's County.

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The Strategic Plan to Build an Innovation Driven Economy is the product of the St. Mary's County Economic Development Commission's work to identify the consultants' best recommendations and key research findings and distill that information into a workable plan of action for St. Mary's County. The following also includes recommendations developed separate from the consultants' and, for that, appreciation goes to the leadership of the St. Mary's County Farm Bureau and the St. Mary's County Agriculture, Seafood and Forestry Board. The Tourism and Hospitality Master Planning Committee and the South County Action Plan Focus Group are to be thanked for the important role they played in developing people- and placed-based strategies focused on attracting and retaining millennials and attracting more visitors to St. Mary's County.

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#### **Consultants**

The consultants supporting the Economic Development Commission in the preparation of the Strategic Plan include the University of Maryland, College Park; the Regional Economic Development Institute of Towson University, and Jones, Lang, LaSalle Hotel and Hospitality Group. Each produced baseline data on the economy and existing industry sectors and original research, studied St. Mary's County's prevailing economic trends, identified opportunities to broaden and diversify the local economy. Their studies, research reports and recommendations are available through the County's website at: <a href="http://www.stmarysmd.com/ded/">http://www.stmarysmd.com/ded/</a>.

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## Strategic Plan to Build an Innovation Driven Economy

#### Overview

Wealth creation is the objective of any economy. Historically, St. Mary's County's economy was derived from the land and water. In 1941, a new economic era began when the U. S. Navy established a base, at what was then known as Cedar Point, which began to fuel the local economy and create new revenue sources. As the base grew, so did the population, the economy and an ever-increasing reliance on the federal dollar. Today, St. Mary's is recognized as a wealthy community; however, the community's economic fortunes are so closely aligned with the base that is it estimated that 75% to 80% of the economy is directly tied to the Naval Air Station Patuxent River (Pax River). This places St. Mary's in a vulnerable position where even a slight reduction in military spending results in harsh economic waves throughout the community.

A strong and resilient economy is one that is both balanced and well positioned for the future. Stronger economies are those that capitalize on new and emerging trends and capture growth industries, although, doing so is a challenging undertaking.

The findings of this report describe strategies to better position St. Mary's County for long-term economic strength and resiliency and will be used to guide the St. Mary's County Department of Economic Development's (DED) staff and services.

**Key Research Findings -** To diversify the local economy, St. Mary County must employ people- and place-based strategies much differently than has been done in the past; include industry cluster and innovation driven strategies in its approach to economic development and incorporate the role of tourism and hospitality in the diversification of the economy. While striving to diversify the economy, St. Mary's County must continue to protect and grow the Navy's mission at the Naval Air Station Patuxent River.

The Commissioners of St. Mary's County's goal is to reduce the community's dependence on defense spending by diversifying the local economy. To develop a robust, non-defense economic base, St. Mary's must employ: 1) an approach to people- and placed-based strategies focused on attracting and retaining young professionals and growing the middle class; 2) a traded industry cluster strategy focused on emerging opportunities and existing industries that have great potential for expansion, and 3) an innovation-based strategy geared toward supporting start-ups and early-stage technology companies. Furthermore, St. Mary's must continue in its efforts to protect and grow the Navy's mission at Pax River with new and existing initiatives. Executed properly, the implementation of each strategy will compliment and reinforce the other new strategies.

# 1. People- and placed-based strategies focused on attracting young professionals is essential to St. Mary's effort to diversify the local economy.

A traditional approach to people- and place-based strategies is to ensure that the community has a good quality-of-life. A high quality-of-life is generally measured by the presence of good K-12 schools and opportunities for higher education, enhanced recreational and cultural assets, an efficient transportation system, quality healthcare, safe neighborhoods, a strong job market, natural amenities, and a diverse housing stock to accommodate a range of incomes. St. Mary's County's Comprehensive Plan addresses these critically important quality-of-life features and St. Mary's ranks well in these aspects.

To diversify the local economy, however, St. Mary's County must engage in a far more targeted approach to peopleand placed-based strategies. Specifically, St. Mary's County must focus on attracting young professionals and retaining those who currently work here. Young professionals, or Millennials, are those in the 18 to 34 age group whose numbers will surpass Baby Boomers as the largest living generation and are also the most educated segment of the nation's current population.

Working to attract and retain this workforce is crucial to the long-term success of the local economy. Identifying how young professionals view St. Mary's County's quality-of-life will be an important step to retaining these individuals and also attracting this demographic segment to our region.

**Conclusion -** To attract and retain young professionals, the strategy is to: 1) identify the area's assets that appeal to this cohort, 2) develop a branding campaign to bring awareness of these assets, and 3) continue to build upon or address deficiencies in St. Mary's County's inventory of quality-of-life aspects.

# 2. To create a more resilient and diverse local economy requires added focus on traded industry clusters that have commercial potential.

St. Mary's County's traded clusters are dominated by defense. However, agriculture and aquaculture, advanced manufacturing, rapid aircraft modification, and unmanned and autonomous systems are traded industries with growing commercial potential.

Traded clusters are groups of industries based in a specific region that sell their products and services beyond the local trade area. Traded clusters are important because, unlike local clusters, goods and services sold outside of Southern Maryland bring new dollars into the community. These industries command higher average wages and yield higher productivity than local industries and will play a critical role in diversifying the economy.

The University of Maryland's research identified the following traded clusters that are either growing or emerging largely as a result of advantages found in St. Mary's County. Each industry listed below has an important role in the effort to build a diverse economy. Determining which industries hold the most promise for commercial sales allows St. Mary's to deploy its limited retention, expansion and, eventually, attraction efforts toward the non-defense potential of these traded industry clusters.

<u>Unmanned and Autonomous Systems (UAS)</u> – The UAS industry is one of St. Mary's County's emerging traded clusters. Business growth in this sector is spurred by the increased use of unmanned systems for defense purposes and corporate America's demand for drone use in the national air space to achieve transportation efficiencies. St. Mary's County has many assets to support local UAS industry growth including numerous businesses with UAS competency serving both defense and non-defense customers, the University of Maryland UAS FAA Test Site, a

skilled civilian and civil service workforce familiar with UAS technology, federal demand for UAS development and testing, and the anticipated UMD's facility for UAS research to be constructed on the campus of the Southern Maryland Higher Education Center.

<u>Advanced Manufacturing</u> - Advanced manufacturing is the use of innovative technology to improve products or processes. Manufacturing is a small but growing component of St. Mary's County's economy and exists primarily as in-house support for defense contractors needing fabrication or rapid prototyping capabilities. St. Mary's County is fortunate to have so many workers experienced in development of innovative technologies. These skills can be used to improve processes in both defense and commercial fields.

Rapid Aircraft Modification – The Navy is determined to reduce costs by sustaining existing platforms and contracting with smaller firms. This is an emerging trend as federal contracting is moving away from the original equipment manufacturers whose work is far costlier to the government. This creates a distinct advantage for the growing number of manufacturing companies located in St. Mary's County.

<u>Agriculture and Aquaculture</u> – Although no longer dominant, agriculture and seafood remain important industry sectors in St. Mary's County. These industries play a central role in helping to retain St. Mary's County's rural character. Over the last seven to ten years, St. Mary's County's agriculture and seafood products have achieved increased market shares triggered largely by the success of agritourism initiatives and the "farm-to-table" food movement. Oyster aquaculture techniques have invigorated the local seafood industry with four profitable and growing oyster farms now located in St. Mary's County.

<u>Tourism</u> – The importance of the tourism and hospitality industry to diversifying the local economy is far more important than previously understood. Strategies that attract overnight visitors will also enhance the quality-of-life features needed to grow and retain a highly educated and skilled workforce. Enhancing St. Mary's tourism and hospitality assets will pay significant dividends to the community's long-term economic fortunes.

Visitors and young professionals alike seek communities that provide interesting participatory experiences. A millennial's desire to experience the culture and richness of a place is likewise a demand of overnight visitors nationwide. Implementing the recommendations revealed through the Tourism and Hospitality Master Plan will demonstrate how the people- and place-based strategies identified in the *Strategic Plan to Build an Innovation Driven Economy* are closely aligned. The growth of tourism provides an additional way to broaden our economy away from defense related industries.

St. Mary's County's agriculture and water heritage presents tremendous opportunities to develop experiences celebrating these traditional industry sectors by connecting visitors with what is authentic and unique to the community. The burgeoning Farm-to-Table food movement is motivated by the desire for participatory experiences in agri-tourism and also creates new market opportunities for local growers. The growth of local breweries, distilleries and wineries not only supports new, value-added agriculture enterprises but creates unique and popular gathering places for socializing. Finally, enhanced infrastructure for sports, recreation and cultural experiences and improved access to areas for hiking, biking, boating or just enjoying natural beauty are as important to attracting overnight visitors as they are to retaining young professionals and fostering new business growth in St. Mary's County.

<u>Growing the Middle Class</u> - An additional benefit of pursuing these cluster industries is the opportunity to growing the middle class in St. Mary's County. Research shows that manufacturing jobs pay the third highest wages in St. Mary's County. While manufacturing currently represents only a small segment of the local economy, given the Navy's emphasis on sustaining existing platforms which rely on manufacturing and rapid prototyping processes, growing this

sector creates the best near-term opportunity to expand the middle class. In addition, jobs in agriculture, aquaculture, and tourism also provide job opportunities for those without college degrees or advanced training.

**Conclusion** – Adopting a traded industry cluster strategy will provide a more focused approach toward growing and diversifying St. Mary's County's economy. Research has identified the following industries for targeting: unmanned and autonomous systems, advanced manufacturing, rapid aircraft modification, agriculture and aquaculture, and tourism.

 To grow non-defense technology businesses requires the implementation of strategies based on innovation and entrepreneurship. Successful pursuit of these strategies requires the development of an ecosystem to support exploration, testing, collaboration, and early-stage fabrication and prototyping.

According to the Kauffman Foundation, "... new and young companies and the entrepreneurs that create them are the engines of job creation...the overwhelming source of new jobs is new firms... without startups, net job creation for the American economy would be negative in all but a handful of years...begin by paying more attention to removing roadblocks to entrepreneurs who will lead us out of our pessimism about jobs and sustain economic expansion over the longer run."

Creating an environment to foster entrepreneurship is crucial to St. Mary's County's efforts to diversify the economy. As part of the University of Maryland research effort, consultants mapped the St. Mary's County innovation network. An innovation network reveals the interrelationship between people engaged in the process of translating knowledge and skills into new products through research, invention, development and entrepreneurship; along with companies, institutions, agencies, intermediaries and places that support and facilitate the activities involved in that process. The mapping exercise allows St. Mary's County to more clearly see the nexus between patent generation and licensing activity that is entirely defense dependent with activity related to the same patents but directed elsewhere for market opportunities. Supporting the activity directed to markets beyond the Navy and identifying more options to commercialize defense technologies creates distinct opportunities for diversifying the local economy.

Establishing a start-up culture in support of entrepreneurs and early-stage companies is essential as this is where most new, high-wage technology jobs will be generated. Local efforts to develop such an ecosystem are well established but must be developed further by capitalizing on the following initiatives:

St. Mary's County Business Incubator - The Commissioners partnered with the Navy's Technology Transfer Office and Maryland Technology Economic Development Corporation (TEDCO) to establish a technology business incubator. The 6,000 sq. ft. facility will house between 6 to 12 start-ups or early stage companies and assist these aspiring entrepreneurs to the point where they can successfully launch their companies and, thereby, expand the local economic base. The incubator will have two primary purposes: 1) transferring technology developed at Pax River and the Naval Surface Warfare Center, Indian Head Division to commercial markets, and 2) advancing UAS non-defense research and technology development. The incubator will also welcome other technology-related businesses.

Southern Maryland Innovation and Technology Initiative (SMIT) – SMIT was launched in 2013 to test and validate approaches to support technology start-up companies through regular MeetUps, TED-like talks, pitch contests and mentoring. SMIT fuels technology entrepreneurship by fostering an inclusive and collaborative ecosystem throughout

Southern Maryland. The initiative is funded through a partnership between St. Mary's County Government, the Navy's Technology Transfer Office, TEDCO, and TechFire, a regional incubator located in Charles County.

Southern Maryland Technology Commercialization Pilot Project – A Maryland Department of Commerce grant from the federal Office of Economic Adjustment is funding a pilot project to commercialize defense patents generated from the naval bases in and surrounding Southern Maryland. While the research is still being compiled, patents with commercial potential have been identified along with local companies interested in developing strategies to capitalize on these opportunities.

<u>College of Southern Maryland Entrepreneur and Innovation Institute</u> – The College of Southern Maryland recently launched the Entrepreneur and Innovation Institute with the goal of facilitating all forms of entrepreneurship and innovation in Southern Maryland. The services offered through the Institute include education and training, small business entrepreneurship certificates and Letters of Recognition, mentoring, competition and awards, and a Young Entrepreneur Academy.

**Conclusion -** Innovation-based strategies will nurture entrepreneurship, identify and remove roadblocks that impede the development of new companies, and allocate resources to assist targeted business growth in St. Mary's County.

4. Of the 58,533 jobs¹ in St. Mary's, over 39,000² are direct, indirect or induced³ by Navy related spending. Recognizing this, St. Mary's County must continue to focus resources on protecting and growing the mission of the Naval Air Station Patuxent River.

Pax River is home to the Naval Air Warfare Center Aircraft Division, the Naval Air Systems Command and 50 other tenant commands. The base is not only St. Mary's County's largest employer; it is a primary source of technology innovation fueling the local economy. Strategies to protect and grow the Navy's mission will mitigate residential and commercial encroachment, improve infrastructure and position Pax River favorably in future Base Realignment and Closures (BRAC) processes. Protecting the community's largest employer is paramount to St. Mary's County's continued economic growth. Ongoing efforts to protect the base include:

<u>AICUZ</u> – St. Mary's County was the first community in the nation to adopt an Air Installation Compatibility Use Zone (AICUZ) to protect the mission at Pax River from residential and commercial encroachment.

<u>Southern Maryland Navy Alliance (SMNA)</u> – St. Mary's County directly funds and actively supports the SMNA, a private organization whose mission it is to promote the intellectual capital, unique assets and programs tied to Pax River and Webster Field as critical national defense resources.

<sup>&</sup>lt;sup>1</sup> Bureau of Economic Analysis, Total Full-Time and Part-Time Jobs by NAICS Industry, 2012

<sup>&</sup>lt;sup>2</sup> Towson University, Regional Economic Studies Institute, IMPLAN, *Maryland Economic Impact Study of Military Facilities*, 2012

<sup>&</sup>lt;sup>3</sup> Direct employment refers to civil servants and military located at NAS Patuxent River. Indirect employment includes the embedded contractors locate at Pax River and employees of off-base firms who provide goods and services to the base and its tenant commands. Induced employment results from the spending of the families of civil servants and military at local businesses in and surrounding St. Mary's County. *Maryland Economic Impact Study of Military Facilities*, 2012

<u>Bi-annual Meetings between County and Base Leadership</u> – The Commissioners of St. Mary's County meet twice yearly with the base command staff to discuss issues and joint initiatives with the goal of protecting the Navy's mission.

<u>Joint Land Use Study (JLUS)</u> – The JLUS was published in 2015 and contains recommendations to prevent or mitigate encroachment in areas surrounding the Patuxent River complex. St. Mary's County and the Navy regularly review progress on implementation of the JLUS recommendations.

<u>Land Preservation</u> – St. Mary's County works closely with the Navy and other partners to place perpetual easements on agricultural, forest, and other open space lands to eliminate or greatly reduce future development. These efforts not only protect the military installations from encroachment, but also preserve the County's beautiful rural landscape.

<u>Infrastructure</u> – St. Mary's County Government directly funds infrastructure improvements, such as roads and schools, that will better position Pax River in future rounds of BRAC scoring. Furthermore, St. Mary's County works closely with the State officials to fund improvements to State owned infrastructure such as Route 235 and the Thomas Johnson Bridge, which lead to Pax River.

<u>AeroMaryland</u> - The Southern Maryland Navy Alliance is currently working with St. Mary's County Government, defense contractors and State officials to launch AeroMaryland, a new initiative designed to increase the amount of naval aviation and aerospace work coming to Pax River and to local firms.

#### Summary

The strategies and actions described more thoroughly in the balance of this document are intended to establish priorities for the work of the Department of Economic Development. The strategies and action plans also identify the many stakeholders who will help St. Mary's County achieve a stronger and more resilient economy. St. Mary's County must focus its efforts on:

- Attracting and retaining young professionals by improving quality of life assets that are attractive to this highly sought after workforce;
- Focusing business retention and expansion strategies on emerging industry clusters that provide high-wage jobs, and industry clusters based on the County's assets;
- > Developing a culture of innovation and an ecosystem to help new technology companies form; and
- Enhancing efforts to protect and grow the mission of Pax River.

#### INTRODUCTION

St. Mary's County has a tremendous opportunity to grow its already strong economy. The County is poised to leap forward and begin an expansion of its future economy. A positive outlook stems from the following facts:

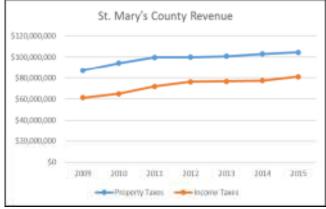
- **St. Mary's County is starting with a strong economic base** Economic data confirms the strong, growing economy that provides the foundation for future growth and expansion.
- St. Mary's County has identified the components that need to be in place to grow the economy Included are an experienced, educated, and well-trained technical workforce, a good location with a high quality of life, an entrepreneurial spirit, a collaborative relationship between private and public entities, and clusters of businesses in fields that have a promising future.
- **St. Mary's County has a desire to grow its economy** Business leaders and elected officials have a shared desire to grow and diversify the economy.
- **St. Mary's County now knows what to do to grow its economy** This report outlines a strategy to grow the economy.
- St. Mary's County has an action plan to get started on build the future economy Included in this report is an action plan that outlines steps to move the economy forward.

#### **BACKGROUND**

The defense industry dominates St. Mary's County's economy with over 39,000<sup>4</sup> jobs out of 58,533<sup>5</sup> jobs in the County tied to Navy-related spending (direct, indirect, and induced jobs). The economy is vulnerable to changes in national policy decisions, national budgetary pressures, and operational decisions by Department of Defense leaders.

St. Mary's County experienced first-hand how decisions and issues at the national level affect our local economy when Sequestration legislation started in 2013 and triggered a 20% reduction in spending across all federal departments, with the exception of foreign military operations.

The impact of reduced federal spending on St. Mary's County's economy was immediate and dramatic. Government travel was restricted, civil servants furloughed, and Pax River temporarily closed. Hotels, reliant on



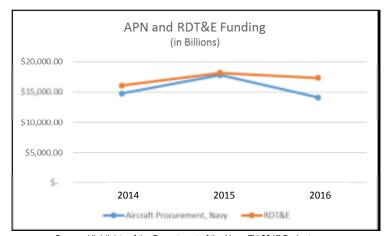
Source: St. Mary's County

<sup>&</sup>lt;sup>4</sup> Towson University, Regional Economic Studies Institute, IMPLAN, *Maryland Economic Impact Study of Military Facilities*, 2012

<sup>&</sup>lt;sup>5</sup> Bureau of Economic Analysis, Total Full- and Part-Time Employment by NAICS Industry including federal civilian, military, state and local government employment

government business, saw revenue losses of 25% to 30%. Government contracts were cut short or simply not renewed. Trip wires, a not-to-exceed hourly rate for private contractors, and Navy contracts based on the Lowest Priced Technically Acceptable Source were established. Layoffs and pay cuts became the norm within the defense industry. Thus, St. Mary's County's tax revenues flattened and elected officials began to discuss the need for St. Mary's County to diversify its economy.

Over the past few decades St. Mary's County has experienced steady population and job growth. Projections for Pax River, however, anticipate that funding for aircraft procurement, research and development, and testing and evaluation is unlikely to increase much beyond current levels, as shown on the following chart:



Source: Highlights of the Department of the Navy FY 2017 Budget

The ongoing reductions in defense spending are slated to continue into the foreseeable future, however, the federal administration taking office in January 2017 could alter these trends with new policy direction. While expanding the local economy is a challenging and long-term undertaking, now is the time to set a new direction for the Department of Economic Development's work with the expectation that the economy can be broadened over the next 10 to 15 years.

To address St. Mary's County's dependence on defense spending, the Commissioners of St. Mary's County committed to developing a plan to broaden the future economy. Federal and state funding to support this effort was sought and in 2014, St. Mary's County was awarded a planning grant from the U. S. Department of Commerce, Economic Development Administration and a grant from the Maryland Department of Commerce (DOC) to develop a strategy to reduce the community's dependence on defense spending by diversifying the economy.

The Commissioners established the St. Mary's County Economic Development Commission (EDC) and appointed 13 individuals to work with the Department of Economic Development to develop the strategy. Consultants completed background and comparative studies on St. Mary's County's traditional industry sectors including defense, agriculture, and tourism and hospitality. Focus groups provided input on various subjects including retail and service businesses, manufacturing, and retaining young professionals. Additionally, reports were published and St. Mary's County's innovation networked mapped. The resulting *Strategic Plan to Build an Innovation Driven Economy* is the

product of the Department of Economic Development's and EDC's work to identify the consultants' best recommendations and key research findings and distill that information into a plan of action for St. Mary's County.

The EDC learned through this effort that the Department of Economic Development's past economic development strategies will mostly reinforce the community's dependence on defense spending. To broaden the economy requires greater focus on commercial opportunities for unmanned and autonomous systems; growing market opportunities for production and niche agriculture and aquaculture operations; increasing rapid prototyping, fabrication and assembly-type manufacturing; attracting and retaining a young and talented workforce; expanding hospitality and tourism efforts, and developing a clear identity for the community based on the County's unique assets.

To achieve these objectives, the County must focus its limited economic development resources as follows:

To diversify the local economy, St. Mary's County must expand its strategies to include industry cluster based strategies and innovation based strategies, while maintaining and expanding the current strategies focused on people and places and protecting and growing Naval Air Station Patuxent River.

The balance of this report explains the recommended approach in detail and concludes with specific actions to implement each strategy. Background studies and other documents related to the Strategic Plan are contained in the Appendix.

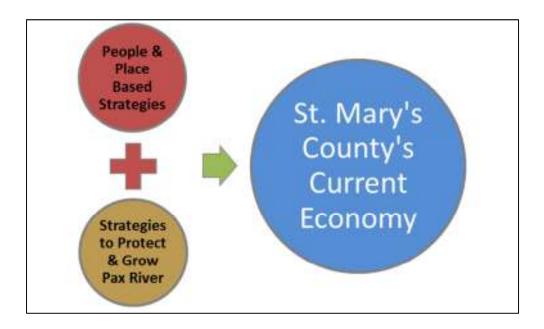
The EDC recommends the County adopt the following strategies to help St. Mary's County achieve a stronger and more resilient economy. To be successful, however, the County cannot work in isolation but must partner with community stakeholders in pursuing these strategies.

#### The Strategic Plan to Build an Innovation Driven Economy is comprised of four components:

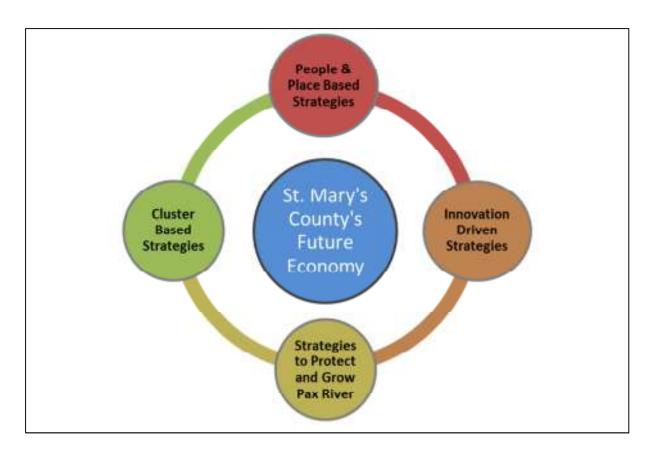
- 1. People and Place-Based Economic Development Strategies
- 2. Strategies to Protect and Grow NAS Patuxent River
- 3. Innovation-Based Economic Development Strategies
- 4. Cluster-Based Economic Development Strategies

#### **Traditional vs. Strategic Economic Development**

The following two graphics show the current and recommended approaches to economic development for St. Mary's County. Traditionally, economic development agencies focus on: 1) people and placed based strategies, and 2) strategies to protect their largest employers. People and placed based strategies aim to attract and retain a skilled workforce and enhance quality of life assets such as schools, roads, parks, healthcare and housing. In St. Mary's County, the strategies to protect large employers focus on Pax River.



While the County will continue to support the betterment of local schools, roads, parks, healthcare and housing, will continue to focus on attracting and retaining a talented workforce, and will work to protect and grow the Navy's mission; the EDC concluded that an expanded approach with additional strategies is necessary to truly make an impact in the economy. The recommended model keeps the 1) People and Placed Based Strategies and the 2) Strategies to Protect and Grow Pax River, and adds two additional strategic areas: 3) Cluster Based Strategies, and 4) Innovation Driven Strategies:



The four strategy areas are inter-related. For example, improving our tourism assets will help attract a young and talented workforce that will help build an innovation ecosystem. A young and talented workforce will be important in the UAS industry and rapid prototyping and advanced manufacturing industries. Agriculture and aquaculture industries create agri-tourism opportunities that not only expand our tourism industry but also help to attract a young and talented workforce. Identifying these relationships can help bring together the many stakeholders that are important to achieve a more robust economy.

<u>Cluster Based Strategies</u> are focused on those industries that are emerging and are projected for a robust future and those industries where the County has an opportunity to greatly increase business due to the area's assets. Four cluster industries are targeted:

- Unmanned and Autonomous Systems (UAS) (emerging industry)
- Rapid Prototyping and other Advanced Manufacturing businesses (emerging industry)
- Agriculture and Aquaculture (asset-based industry)
- Tourism and Hospitality (asset-based industry)

<u>Innovation Driven Strategies</u> focus on building a robust ecosystem to attract and support start-up and early-stage technology and technology-enabled companies with emphasis on businesses that produce commercial products that can be made locally and sold nationally and internationally.

The four strategic focus areas, 1) People and Placed Based Strategies and the 2) Strategies to Protect and Grow Pax River, 3) Cluster Based Strategies, and 4) Innovation Driven Strategies, are discussed in more detail below.

#### 1. PEOPLE AND PLACE BASED ECONOMIC DEVELOPMENT STRATEGIES

People and Place Based Strategies relate to both quality of life aspects of a community and the workforce needed to perform jobs in targeted industries. These are interrelated, as attracting a talented workforce is partially dependent upon the quality of life offered by a community. St. Mary's County generally has a high quality of life, with good schools, safe neighborhoods, well maintained roads, beautiful parks, preserved open space, and a captivating natural setting. Although St. Mary's County has worked hard to maintain a high quality of life, it must add strategies aimed at attracting a young and talented workforce. Strategies focused on attracting and retaining young professionals are essential to St. Mary's County's efforts to diversify the local economy.

Millennials, defined as those individuals born between 1980 and 2000 who comprise what Neil Howe and William Strauss, call the "next greatest generation" will play a critical role in the County's efforts to broaden the economy.

"Millennials are unlike any other youth generation in living memory. They are more numerous, more affluent, better educated, and more ethnically diverse. More important, they are beginning to manifest a wide array of positive social habits that older Americans no longer associated with youth, including a new focus on teamwork, achievement, modesty, and good conduct..."

The U. S. Bureau of Labor Statistics predicts that millennials will make up approximately 75% of the workforce by 2030. Attracting and retaining these young professionals is the goal of communities seeking to strengthen and expand a technology workforce as St. Mary's County does, to meet the current demand for such positions, and, more importantly, to spur technology businesses growth well into the future.

Millennials excel in technologies that didn't exist 10 years ago, and their ability to quickly adapt to new technologies is one of their greatest strengths for employers. Furthermore, they are 1.76 times more likely to study entrepreneurship in college and are more highly educated than previous generations.<sup>6</sup> These attributes make millennials uniquely compatible with and critically important to St. Mary's County's goal of building an innovation-driven economy.



Statistics from the Maryland Department of Labor, Licensing and Regulation show that the fastest growing occupation in Southern Maryland is in systems software development. This type of job can be found throughout St. Mary's County's defense contractor community and in the ranks of the Navy's Civil Service. Closely following is the demand for logisticians. Between 2010 and 2020, electronic engineering jobs are expected to increase by 302 positions in addition to 379 replacement openings. Openings for logisticians during this same time period are expected to increase by 398 positions with an additional 212 replacement openings.

The concentration of highly-skilled workers in St. Mary's County is a distinct benefit to growing companies not wholly dependent on defense spending. Sustaining a continuous supply of technology workers, however, is the challenge.

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<sup>&</sup>lt;sup>6</sup> Neil Howe and William Strauss, *Millennials Rising: The Next Great Generation*, 2000

Millennials differ from previous generations of workers in that they are more choosey about where they will live. This raises the importance of the quality of life for a community, and particularly, those quality of life aspects that are of interest to millennials.

To attract and retain millennials, the strategy is to: 1) clearly identify the community assets that appeal to young professionals, 2) develop a branding campaign targeting young professionals to bring awareness of these assets, and 3) continue to work to improve these assets and address deficiencies in the inventory of local quality-of-life aspects. Underlying these strategies is the belief that a sufficient number of desirable jobs are available in St. Mary's County for millennials. These strategies are described in more detail below.

#### Identifying Assets Desired by Millennials

St. Mary's County has assets that are appealing to millennials. Identifying exactly what those assets are is the first step to attracting this important workforce. Much research exists that describes what millennials seek in a location. While previous generations felt compelled to move to wherever the jobs were, millennials are more likely to first choose a location of their liking and then determine how to make a living in that location.

Based on input garnered in the last year from young professionals living and working in St. Mary's County, lifestyle features typical of more urbanized areas continue to be more attractive to millennials than those of rural regions. However, job selection outside of urban areas is determined with an eye to communities that provide highly "participatory experiences." Specifically, the research shows that young professionals seek:

- ✓ Gathering places, lounges, breweries, restaurants for opportunities to socialize;
- ✓ Amenity infrastructure for sports and recreation and cultural experiences;
- ✓ Authentic places and a downtown, and;
- ✓ Easy access to areas for hiking, biking, boating and just enjoying natural beauty.



High wage technology jobs found within a setting which allows for easy access to active, outdoor experiences (i.e., biking, hiking and fishing) can distinguish St. Mary's County in the race to attract millennials. Furthermore, as millennials marry and have children, the urban lifestyle falls short when compared to the family-friendly assets of St.

Mary's County – quality public schools, homes with ample yards for children and pets, nearby public parks and organized athletic opportunities.

#### **Develop Branding Campaign**

Once those assets are identified, a branding campaign should be developed to bring awareness to the lifestyle millennials can have in St. Mary's County. Millennials receive information from a variety of non-traditional sources such as social media. Using millennials who are current residents to share their positive experiences will increase the perceived validity of messages that tout the attractiveness of the region to the millennial generation.

#### Improve Assets and Offerings Attractive to Millennials

Although St. Mary's County possesses numerous assets that millennials seek, there are many assets that simply do not exist in the County and many others that can be further improved and developed. In order to attract and retain millennials, the County must identify what is missing and determine if those attributes can be established or improved in St. Mary's County. Then, a concerted effort to establish or improve those assets should begin.

Several recommendations contained in the Tourism and Hospitality Master Plan relate to these same assets. For example, active recreation experiences such as cycling and kayaking are highly desired by millennials and both are available in St. Mary's County. In fact, cycling and kayaking in St. Mary's County takes participants through some of the most beautiful landscape in the country. Both activities, however, would benefit from focused attention aimed at improving the sports. More designated bike routes and additional water access points for kayakers are two examples of opportunities for improved experiences. St. Mary's County can become known for features that young professionals seek but this will require focused attention and dedicated resources to enhance the County's tourism and hospitality assets and other quality of life aspects.

Although People and Placed Based Strategies have been employed in the past, concentrating on attracting millennials will be a new focus for the County. Attracting more millennials is essential to supplying the workforce of tomorrow in St. Mary's County and fueling the innovation ecosystem that is needed to diversify the economy.

#### 2. STRATEGIES TO PROTECT AND GROW THE NAVY'S MISSION AT NAS PATUXENT RIVER

The future of Pax River is largely out of the control of St. Mary's County. As a national defense asset and resource, decisions affecting missions and therefore workload are made at the national level by policy makers and Defense of Department officials. This does not mean, however, that the St. Mary's County community cannot engage in efforts to maintain and grow Pax River. In fact, taking a pro-active approach can do much to influence decision makers. The County will continue to pursue existing strategies while also supporting new initiatives aimed at securing the region's largest employer.

The **NAS Pax River Joint Land Use Study (JLUS)** was published in January 2015 and was a collaborative planning effort that involved many partners and stakeholders. The three main objectives of the study were to:

- Increase communication between the military, local jurisdictions, and other stakeholders to promote understanding of the strong economic and physical relationship between NAS Pax River and their neighbors;
- Promote collaborative planning to ensure a consistent approach in addressing compatibility issues;
- Develop and implement strategies for reducing the impacts of incompatible activities on the community and military operations.

The JLUS is a comprehensive document that includes an Implementation Plan with specific recommendations and steps to accomplish the objectives listed above. Some of the items listed in the Implementation Plan are the responsibility of the base, some the responsibility of the County or other external partners, and some are a joint responsibility of both the base and the County or other external agencies.

The Commissioners meet bi-annually with base command leadership, with a review of the JLUS Implementation Plan to ensure progress is being made on the most important items. Pursuing recommendations in the JLUS helps build the partnership between Pax River and the community, which in turn provides assurance that the base is a welcomed and vital part of St. Mary's County.

Some of the items listed in the JLUS relate to **public infrastructure** changes or improvements that are desired to meet the needs of the County's largest employment center while also addressing issues experienced by community residents as a result of the base's location in a highly populated and dense part of the County. Some of these issues are transportation related and are the responsibility of the State Highway Administration (SHA). County officials communicate regularly with SHA to facilitate infrastructure improvements desired by the base. Working closely with the base on infrastructure needs and improvements is a responsibility embraced by County officials to ensure that the needs of the base are met while also ensuring that residents are not unnecessarily impacted by base operations.

The **Southern Maryland Navy Alliance** is a membership advocacy organization that works directly with base leadership and Department of Defense officials to maintain and grow missions at Pax River. Members are primarily private sector defense companies that have a presence in the County, but membership also includes other businesses that understand the economic benefit that Pax River provides to the region. The Navy Alliance meets frequently and employs a lobbying firm to advocate for Pax River. The County is both a member of the Navy Alliance, with Economic Development staff participating in both Membership and Executive Board meetings, and a funder through the County's Non-Profit Agency program. The Commissioners allocate funds to several County departments to award to non-profit agencies that further the goals of those departments. Non-Profit Agency Program dollars awarded to the Navy Alliance flow through the Department of Economic Development. Working closely with the Navy Alliance and providing County funds for the Alliance's operation is a proven strategy to strengthen the relationship between the base and the community while also strengthening the base itself.

The Department of Economic Development, through its Agriculture and Seafood Division, is responsible for the County's **Land Preservation Program**. The Land Preservation Program involves many partners and funding sources, but the primary objective of this program is to take agriculture, forest, and other open space lands out of future development and preserve them as low density natural or farm lands. Much of this work has the added benefit and goal of also reducing development encroachment near Pax River and the Annex at Webster Field. The Department of Defense's Readiness and Environmental Protection Integration (REPI) Program provides funds to the Navy to participate in the placement of perpetual easements on properties to greatly limit or eliminate future

development This important program not only helps protect the missions at Pax River, but also preserves the beautiful rural landscapes in St. Mary's County.

A new initiative developed and promoted by private sector defense firms in conjunction with public agencies is called **AeroMaryland**. AeroMaryland seeks to broaden the defense industry in Southern Maryland to capture more of the defense dollars that flow through Pax River. The initiative involves several strategies, including performing more advanced manufacturing here, increasing foreign military sales for firms located here, and streamlining procurement procedures to increase contracting with local firms. AeroMaryland supporters believe that if the proposed strategies of the initiative are successful, and additional \$1 billion of federal funding can fall to St. Mary's County businesses. This projection comes from three sources: 1) capturing 1% more of the work that NAVAIR contracts with private industry, 2) capturing 10% more of the work that NAWC-AD contracts with firms outside of Maryland, and 3) capturing 30% of the foreign military sales that is currently being turned away. This will also increase the non-defense segment of the local economy as this new work increases development of new technologies that can have commercial application.

Although the AeroMaryland effort is originating in St. Mary's County, supporters believe the strategies can benefit all of Maryland. Once the effort experiences success locally, the goal is to make AeroMaryland a state-wide initiative with support from the Maryland Department of Commerce.

The first steps to establish AeroMaryland are taking place now, with the Southern Maryland Navy Alliance agreeing to take a leadership role by acting as the umbrella organization for the creation of this new non-profit entity. Initial steps include establishing and advisory board, developing incorporation documents, raising seed funding, and hiring an executive director.

Increased business between the base and firms operating in St. Mary's County will not only help local private sector firms, it will help maintain and grown Pax River. An increase in work flowing to local firms will demonstrate the close bond between the base and local businesses and these relationships will make it more difficult for Department of Defense officials to move missions out of Pax River. Following is a graphic produced by AeroMaryland supporters to show the benefits of this initiative.



## AeroMaryland Benefits



- · Brings work close to "home"
- · Fast, agile industry partners
- · Leverage NAWC resources
- · Access to capable third-party vendors
- · Facilitates Navy as Lead Systems Integrator
- · Rapid contracting fuels efficiency

Increase speed, reduce cost, fuel innovation

#### Academia

- Access to Fleet and NAVAIR expertise
- Interaction with user community
- Expanded Southern Maryland Higher Ed Research Center
- · UAS Research Incubator

#### Industry

- · Access to markets
- Ease of access to government resources
- · Tech savvy workforce
- State Support for corporate relocation
- Regulatory assistance and relief
- SMMEDCO support to grow business

#### State

- Job creation
- Tax revenue
- · Expanding economy
- · BRAC mitigation
- · Human capital retention

#### SBA

SBA

- · Connect with innovators
- Leverage small and mid tier businesses
- Build entrepreneurial small business base

#### 3. INDUSTRY CLUSTER BASED ECONOMIC DEVELOPMENT STRATEGIES

To broaden the local economy, St. Mary's County should focus on expanding two traded clusters in emerging industries: 1) unmanned and autonomous systems, and 2) rapid prototyping and other advanced manufacturing businesses, and two traded clusters that are based on significant assets present in the County: 3) agriculture and aquaculture, and 4) tourism and hospitality.

#### **Emerging Clusters:**

- Unmanned and Autonomous Systems (UAS)
- Rapid Prototyping and other Advanced Manufacturing businesses

#### Asset Based Clusters:

- Agriculture and Aquaculture
- Tourism and Hospitality

The Emerging Industry Clusters are present in St. Mary's County today and many firms in these industries produce products and services that have commercial appeal, drawing non-defense dollars into the economy. The Asset Based Industry Clusters present in St. Mary's County derive from the area's historical and natural assets, but can be greatly expanded with focused attention.

#### Clusters and Traded Clusters Defined

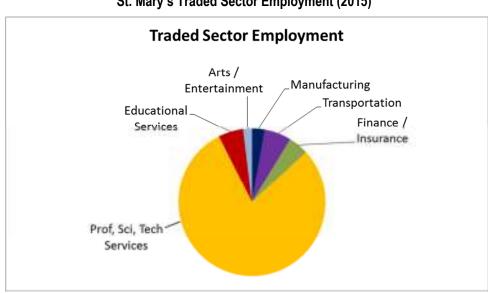
Harvard's Michael Porter popularized the cluster approach for economic development and defines clusters as. "geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in a particular field that compete but also cooperate." Companies in clusters gain access to specialized regional suppliers, service providers, and institutions, and can also benefit from deep pools of skilled employees and shared infrastructure dedicated to their needs.

The traditional approach to cluster development directs a county or region to identify what clusters are present, and then, identify the specialized workforce or supply chain assets related to the individual clusters. Once the cluster is mapped, economic development professionals should grow those clusters by recruiting new firms associated with the clusters to the region, helping existing firms in the cluster expand, and helping new firms in that field get established.

Clusters are categorized as either local or traded. Traded clusters are groups of industries based in a specific region that sell their products and services to other regions. Conversely, local clusters, such as hair salons, hospitals, and food establishments, primarily serve local markets only. Firms in traded clusters bring new dollars into the region when they export their products or services outside the region, thereby expanding the local economy. Firms in local clusters simply circulate local dollars. In addition, while total employment nationally in traded industry cluster averages about 31%, these industries are responsible for almost 97% of all innovation, according to the Harvard Cluster Portfolio. Therefore, regions typically concentrate their efforts on traded clusters.

#### Traded Clusters in St. Mary's County

Unlike most counties in Maryland, St. Mary's County's has a high percentage of traded clusters compared to all clusters in the County. Forty-two percent (42%) of all clusters in St. Mary's County are traded clusters, which is second only to Howard County. Two traded clusters within St. Mary's County that have shown growth are management and technical consulting services, and scientific research and development. These traded clusters have grown primarily due to the work at Pax River. Following is the current profile of employment by St. Mary's County's traded sectors/clusters as identified by Axcel Innovation, Inc. through Bureau of Labor Statistics.



St. Mary's Traded Sector Employment (2015)

#### Emerging Traded Clusters in St. Mary's County

St. Mary's County has a deep concentration of talent and capacity related to the development of unmanned and autonomous systems (UAS). This stems mostly from defense industry work, with commercial application of UAS work still in its infancy. In addition, research has identified additive manufacturing and rapid prototyping as an emerging industry cluster where St. Mary's County possesses local competitive advantages. Both of these emerging clusters are crucial to the future diversification of the local economy.

#### Asset Based Industry Clusters in St. Mary's County

St. Mary's County has a long agricultural history. This traded cluster has shifted from tobacco and now looks to expand opportunities that are beginning to emerge. The inventory of productive farmland and the knowledge base from the agriculture workforce are important assets that can continue to fuel a successful agricultural industry in St. Mary's County. In addition, the small but growing aquaculture field is also ripe for growth. Several entrepreneurs have identified our region as a premier location for aquaculture, such as oyster farming. The entrepreneurs working to expand this industry, coupled with the waters that surround the County, provide the natural assets needed for significant growth in aquaculture.

Tourism represents a traded cluster that also has an opportunity for significant growth. The Tourism and Hospitality Master Plan describes the tremendous potential to attract more overnight visitors with a concentrated effort aimed at focusing on local historic, cultural, recreation, and natural assets and attractions.

Following is an overview of the research pertaining to the four priority industries to be targeted: 1) unmanned and autonomous systems, and 2) rapid prototyping and other advanced manufacturing businesses, 3) agriculture and aquaculture, and 4) tourism and hospitality. In addition, research was performed on the Cybersecurity and Irregular Warfare industry sectors in St. Mary's County. Those studies can be found in the Appendix,

#### Priority Cluster 1 - Unmanned and Autonomous Systems

Unmanned and autonomous systems (UAS) are emerging industries nationally with tremendous growth potential. Fortunately, St. Mary's County has a growing UAS cluster.

According to Randy Rhodes, author of *Drones Launch New Opportunities for Energy, Utility and Oil and Gas*, "This current stage of UAV evolution might be compared with the earliest emergence of mobile phones....UAVs are essentially aerial robots that will become increasingly autonomous and collaborative. They will enable field workers to safely accomplish more than ever before, and they will carry sophisticated sensor payloads. As such, they will expand the Internet of Things."

St. Mary's County is one of the few locations in the nation that can support testing of unmanned and autonomous vehicles in both restricted and unrestricted air space, on the ground and underwater in the deepest depths of the Chesapeake Bay and in the turbid conditions of the Potomac and Patuxent Rivers. In 2015, the Maryland Department of Commerce published a report entitled, *UAS and Maryland: Opportunity and Accountability* that states that the "market size projections for small UAS which would include consumer and commercial applications [will be approximately] \$80B by 2025..." This same report contained the names of 10 companies leading Maryland's UAS

industry. Four of those companies have a presence in St. Mary's County and each is locally owned. Those firms are: Ausley Associates, ASEC, Neany, and AVIAN, LLC.

Researchers from Towson University's Regional Economic Studies Institute (RESI) looked at the UAS industry in SMC in an attempt to determine the growth and economic impact of this industry. NAICS codes (North American Industry Classification System), a classification system used to classify business establishments according to type of economic activity, typically used for such research, do not break out the UAS industry separately, however. Therefore, researchers looked at industries that include UAS work. These industries include:

- Computer and electronic product manufacturing,
- Aerospace product and parts manufacturing,
- Engineering services, computer systems design and related services,
- Management and technical consulting services, and
- Scientific research and development services.

According to RESI's research, these industries have grown dramatically in SMC in the past decade:

✓ Since 2005, St. Mary's County has seen a 40 percent increase in these industries that include UAS work, a 27 percent increase in the number of employees, and a 38 percent increase in average weekly wages.

These industries also have a huge economic impact in the County:

- ✓ In 2015, industries that include UAS work in St. Mary's County generated an estimated \$2.4 billion in output, and nearly \$1.0 billion in wages.
- ✓ The total fiscal impact associated industries that include UAS work in St. Mary's County amounted to \$45.9 million in state and local tax revenues annually.



Although this data does not speak solely to the UAS industry in St. Mary's County, the remarkable growth in these related industries adds credibility to the claim that St. Mary's County is in a strong position to grow its UAS economy.

While much of the UAS work in St. Mary's County is focused on defense, commercial application of UAS technologies continues to grow. UAS applications to law enforcement, agriculture and news and entertainment are already being explored in St. Mary's County. Following is a short list of commercial and civil applications for UAS technologies:

UAS Civil and Commercial Applications				
Law Enforcement Disaster Recovery				
Insurance	Utilities			
News and Entertainment	Agriculture			
Oil and Gas	Construction			

#### **UAS Assets in St. Mary's County**

A significant asset in the attraction of UAS work to St. Mary's County is the location of one of the FAA's six UAS Test Sites for the study of unmanned vehicles navigating in commercial air space. The Test Site was established by the University of Maryland at the St. Mary's County Regional Airport in 2014. Recently the Test Site cut the ribbon on a new facility that incudes office and conference space and two hangers.

In 2015 the FAA awarded the UAS Center of Excellence (COE) to a Mississippi State-led team made up of twenty-two of the world's leading research institutions and more than a hundred leading industry/government partners, named the ASSURE



team (Alliance for System Safety of UAS through Research Excellence). The Center of Excellence will be the conduit through which the majority of FAA-funded and guided research will be awarded. The UMD UAS Test Site is one of the test site partners for the UAS Center of Excellence.

In addition to the UMD UAS FAA Test Site, the University of Maryland will construct an 80,000 square foot facility on the campus of the Southern Maryland Higher Education Center to include a focus on unmanned and autonomous systems research. Ground breaking for this facility is expected in 2018.

In 2017, St. Mary's County will open a 6,000-square foot technology incubator at the St. Mary's County Regional Airport, adjacent to the UMD UAS FAA Test Site. The incubator will focus on both start-up and early-stage businesses in the UAS field, and other technology businesses stemming from work at Pax River. The incubator will support upwards of 12 businesses.

With proper marketing, St. Mary's County's locational advantages for UAS testing and the investment in research facilities at the Regional Airport and Higher Education Center will allow St. Mary's County to attract unmanned and autonomous systems work and spur the creation of commercial technology businesses. With the multitude of assets, St. Mary's County is well positioned to be the State's leader in the projected economic explosion of the UAS industry nationwide.

#### Priority Cluster 2 - Advanced Manufacturing - Rapid Prototyping, Fabrication and Assembly

Advanced manufacturing is a small but growing component of St. Mary's economy. Locally, manufacturing work exists primarily as in-house support for defense contractors that need fabrication capabilities. According to StatsAmerica, in 2012 St. Mary's County had 10 manufacturing establishments with 249 workers. By 2015, that number had grown to 35 establishments with 459 workers. (Towson University, RESI) While this increase in impressive, it accounts for only 0.8 percent of all establishments.

The advantages St. Mary's County can realize in the pursuit of business and job growth in advanced manufacturing include the following:

- ✓ Manufacturing currently produces the third highest wages for jobs in St. Mary's County. Annual manufacturing wages average \$64,456 per job. (Towson University, RESI)
- ✓ Unlike heavy manufacturing plants that involve smoke-stack production methods, advanced manufacturing is a relatively clean industry that will help to maintain the County's rural character through protection of the environment.
- ✓ Selling locally-made products to both defense and commercial markets nationally and internationally will increase middle-income and family-supporting jobs for County residents.

Furthermore, Pax River's Naval Air Warfare Center Aircraft Division (NAWC-AD) is the lead systems integrator to sustain existing naval aviation platforms. As a result, there will be increased opportunities for aircraft modification work that will leverage smaller, more nimble companies that can respond to shorter turn-a-round times, can quickly supply prototyped solutions, and can more rapidly adapt existing platforms for new technologies. This positions St. Mary's County well for business growth focused on rapid prototyping and aircraft modification in both defense and non-defense arenas.

Advanced manufacturing companies are well represented in St. Mary's County's high percentage of traded clusters.



These are scalable businesses, meaning that the companies are capable of handling a growing amount of work given the initial investment in equipment and machinery.

Several of St. Mary's County's advanced manufacturing and rapid prototyping and fabrication companies are already exporting products internationally, exhibiting in trade shows and participating in state-sponsored trade missions, all good signs suggesting that local industry leaders see favorable market opportunities beyond naval aviation. To that end, the Department of Economic Development worked with the federal and state Departments of Commerce, International Trade Divisions to

sponsor export training for local companies. Nine firms participated in a three-day, executive-level training program that resulted in the development of an export and marketing plan for each company. More general information export training seminars to assist local companies explore foreign markets are in the planning stages.

Two specific industries within the cluster were identified through research as having good growth potential in St. Mary's County: 1) chemical product and preparation manufacturing, and 2) search, detection and navigation instruments manufacturing. With concentrated effort, these manufacturing industry segments could create new opportunities for St. Mary's County to grow its technology based businesses.

An added benefit to prioritizing the advanced manufacturing industry is that these businesses create middle income, family supporting jobs for St. Mary's County residents. The barrier to entry for workers in manufacturing firms is much lower than for workers in other fields as most companies provide on-the-job-training and do not require college degrees. For many local companies, a high school graduate can qualify for positions within the firm.

#### Priority Cluster 3 - Agriculture and Aquaculture

According to the U. S. Food and Agriculture Organization, the world population will be approximately 9.6 billion people by 2050. To meet this demand, food production must increase 70% in spite of limited availability of arable lands and increased need for fresh water.

St. Mary's County can implement strategies which will help keep local farmers profitable so that they may contribute to meeting this future demand, preserve the agriculture heritage of St. Mary's County, and educate and improve the health of families.

In 2009, according to the Bureau of Economic Analysis at the University of Maryland, agriculture and aquaculture contributed only 0.43% to St. Mary's County's gross domestic product. Despite this,

the preservation of the farming and seafood industries remains a top local economic development priority. The importance of farming and fishing evolves from the County's natural assets and heritage. Preservation of the County's rural character and stewardship of the land and environment undergird the County's development strategy. This importance was underscored in the County's 2010 Comprehensive plan. Rural Preservation Districts, consisting of 182,558 acres, were set up to preserve farms, forests, rural subdivisions, farmstead lots, and vacant lands. Land preservation efforts through the Maryland Rural Legacy program, Maryland Agricultural Land Preservation Foundation, and other environmental trust and conservation easements have preserved 49,400 acres of farm and open space land, according to 2011 data compiled by the Maryland Food Systems Map Project at the Johns Hopkins Center for a Livable Future.

While farm income has dwindled over the decades, the total value of St. Mary's agriculture products sold still exceeds that of surrounding counties:

Market Value of Agriculture			
Products Sold			
Anne Arundel	\$19,670,000		
Calvert	\$11,141,000		
Charles	\$11,946,000		
Prince Georges	\$18,000,000		
St. Mary's	\$21,800,000		

Source: USDA 2012 Census of Agriculture

Farming and seafood, and their supporting activities, offer a foundation for economic diversity and expansion, through such activities as production agriculture, horticulture, wineries, agro-tourism and expanding markets for local commodities. Alternative forms of agriculture including agri-tourism, direct-sale farm markets, farm-to-table restaurants, organic produce, oyster aquaculture, wineries, and breweries are growing businesses that are helping local famers stay profitable.

Approximately 99% of the 632 farms in St. Mary's County are family-owned and many are multigenerational farms constituting the real capital of their owners. According to the 2012 Census of Agriculture, the average per farm estimated market value of land and buildings is \$700,920 and the estimated market value of all machinery and equipment on these farms is \$51 million. While agriculture's contribution to the County's GDP is negligible, all segments of agriculture and seafood provide an income for persons employed in those industries.

Farm commodity crop production (corn, soybeans, and small grains) has continued over time to be the leading income source for farmers. Many full-time farmers used tobacco buy-out money to mechanize their operations to facilitate increased commodity production. It is noteworthy that there has been a recent increase in income for the sale of vegetables. Increased vegetable sales are attributed in part to concentrated sales at county farmer's markets and the Loveville Produce Auction. This sector has been helped by consumer desire for a fresh, local product. The trending increase in the value of agricultural products sold directly to individuals for human consumption is also notable. This data point represents the value of agricultural products produced and sold directly to individuals for human consumption from roadside stands, farmer's markets, pick-your-own sites, etc. It excludes non-edible products such as nursery crops, cut flowers, and wool, but does include livestock sales.

The following table reflects select data on St. Mary's County farm production over the preceding 20 years, underscores the continuing contribution of agriculture to the local economy, and validates supporting alternative forms of agriculture.

#### Census of Agriculture, 1992-2012, St. Mary's County, MD

#### Source: USDA, National Agricultural Statistical Service

	1992	1997	2007	2012
Number of farms reporting sales	673	621		632
Farms reporting sales under \$50,000	581	566		571
Market value of Ag products sold	\$16,349,000	\$21,056,000		\$21,800,000
Farms by industry classification:				
Oilseed and grain	173	150		248
Vegetable and melon	16	31		95
Cattle, swine, sheep, goat	n/a	73		206
Tobacco	296	268		30
Sales by commodity group:				
Grains, oilseeds	\$4,330,000	\$6,254,000		\$12,782,000
Vegetables and melons	\$580,000	\$654,000		\$2,805,000
Cattle, swine, sheep, lambs	\$3,775,000	\$2,813,000		\$1,492,000
Value of Ag products sold				
directly to individuals for				
human consumption	n/a	\$417,000	\$711,000	\$1,346,000
No of farms in category	n/a	91	86	84

#### Aquaculture

St. Mary's County is a peninsula located between the Chesapeake Bay, Potomac River, and Patuxent River. The County has slightly over 500-miles of shoreline and controls 308,500 acres of marine area. The history of seafood in the County is as old as the county itself. Commercial fishing and seafood operations include, but are not limited to, charter boat fishing, marine and freshwater aquaculture, seafood processing, and restaurants promoting a seafood-theme venue. The County's tourism website lists 18 seafood-themed restaurants. Seafood is also sold at various outlets throughout the County. Maryland's Department of Natural Resources lists four oyster production and growth operations in St. Mary's, but there are many more such operations being developed. Maryland strongly supports oyster aquaculture through favorable legislation, marketing efforts, and financial support through the Maryland Agricultural and Resource-Based Industry Development Corporation, or MARBIDCO. The St. Mary's County Right-To-Farm Ordinance is being updated to recognize commercial seafood and fishing operations as being protected under the ordinance. St. Mary's government has little involvement in regulating aquaculture. Aquaculture is regulated by Maryland's Department of Natural Resources and state Health Department.

The Economic Development Department will help promote all segments of aquaculture and assist in creating domestic and international marking opportunities for aquaculture producers as well as producers of food, fiber, and specialty crops.

#### Priority Cluster 4 - Tourism

Tourism makes up a small portion of the economy of St. Mary's County, but our natural assets, our historic and cultural assets, and our attractions provide a tremendous opportunity to greatly expand this industry within the County. As the Tourism and Hospitality Master Plan proclaims, this industry can grow with focused attention and additional resources.

Growing the tourism industry will help diversify our economy. Although many of the jobs in the tourism and hospitality industry are lower paid jobs, the industry is a traded cluster that brings new dollars into the community from outside the region, which grows our economy. Because this industry employs residents with a wide variety of skills and education levels, it helps to address a broader spectrum of employment needs in the County.

The Tourism and Hospitality Master Plan identifies overnight visitors as the primary target market for focused efforts. The distinction between day and overnight visitors is dramatic – the average overnight visitor to Maryland spends \$630 per trip compared to \$87 spent by day trippers, according to the 2013 Visitor Impact Study published by the Maryland Office of Tourism. This translated to over \$10 billion additional direct spending dollars to the State's economy than generated by day visitors during 2013.

By themselves, local historic and cultural sites, annual events such as the Oyster Festival, and attractions like the Maryland International Raceway, do little to generate overnight visitors. The challenge is to enhance these offerings and package sites and attractions together to entice visitors to enjoy a longer stay in the County. A more focused approach that helps sites and attractions to provide more hands-on, experiential exhibits, while also increasing the number of "only in St. Mary's County" experiences, is recommended to raise the bar for tourists.

In addition to a new organizational model to support the Tourism and Hospitality Industry in St. Mary's County, tasks critical to enhancing this business sector include the following:

- ✓ Hospitality training for the tourism workforce
- ✓ Economic development efforts to establish and expand tourism sites
- ✓ Comprehensive and cross government agency approaches to environmental regulations that thwart new development and redevelopment of tourism opportunity sites throughout St. Mary's and particularly in South County

Raising the bar for tourists has the added benefit of both enriching the lives of residents while also helping to attract millennials who seek participatory experiences, authentic and unique destinations, and historical and cultural opportunities. As millennials comprise the largest emerging visitor market, catering to their interests is critical to not only attracting young professionals as visitors, but attracting and retaining them in the workforce.

#### 4. INNOVATION DRIVEN ECONOMIC DEVELOPMENT STRATEGIES

Innovation driven strategies focus on building a robust ecosystem to attract and support start-up and early stage technology and technology-enabled companies with emphasis on businesses that produce locally made commercial products will help to diversify the economy.

According to Andrew Tisch, co-chairman of Lowes and a co-founder of the political reform group No Labels, "Entrepreneurship is the key to creating jobs, increasing the pay of working people, resurrecting struggling communities and spurring growth and innovation." Assets like the County's new incubator will help launch the positive future Tisch describes.

Consultants from the University of Maryland mapped St. Mary's County's Innovation Network. An Innovation Network shows the number of people engaged in the process of translating knowledge and skill into new products in the marketplace through research, invention, development and entrepreneurship; along with the companies, institutions, agencies, intermediaries and places that support and facilitate the activities involved in that process. Innovation Networks are characterized by a set of actors and relationships that presents each person or organization with different constraints and opportunities. The research shows that individual actors – people and organizations – will adapt to the constraints and opportunities presented in order to advance their idea or product to the next stage in the process.

Not surprisingly, St. Mary's County's Innovation Network is concentrated on business relationships tied to the Navy. However, there are people and companies engaged in new product and service development and sales that are not solely dependent on the Navy. Supporting these businesses creates opportunities to broaden the local economy. By convening and working with the individuals and companies identified through this mapping exercise, the Department of Economic Development will be better able to identify key factors that encourage and/or inhibit technology business growth in St. Mary's County.

#### **Existing Innovation Initiatives**

Jumpstarting the work to diversify the economy, the Department of Economic Development helped launch the Southern Maryland Innovation and Technology (SMIT) initiative in 2013 to host "MeetUps," pitch contests, and related activities to encourage entrepreneurship and to bring positive exposure to Southern Maryland's growing technology and advanced manufacturing community. SMIT is a collaborative effort to create an innovation ecosystem in St. Mary's County. Collaborators include: the NAWC-AD Technology Transfer Office, the UMD UAS Test Site, the Maryland Technology Economic Development Corporation (TEDCO), TechFire, the region's first incubator headquartered in Charles County, and several technology businesses.

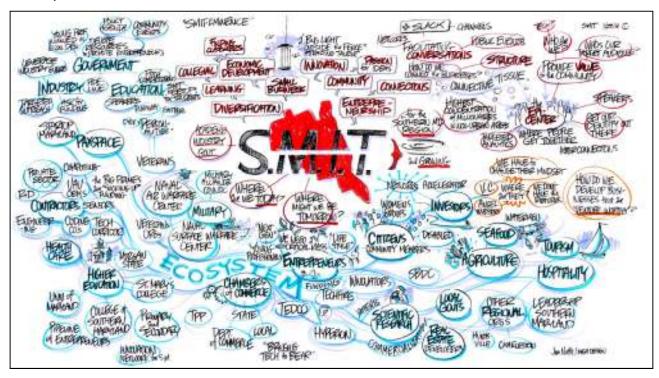


Now in its third year, SMIT has a base membership of 356 individuals, hosts regular MeetUps, and has an established presence in TEDCO's Entrepreneur Expo, Tech Connect's National Innovation Summit and Start-Up Maryland's Pitch Across Maryland contest. SMIT co-sponsors "CrabPot," a Southern

Maryland pitch contest with PaxSpace, the County's first maker space. Furthermore, the Technology Transfer Office at NSWC, Indian Head Division, has come onboard to support the expansion of SMIT into Charles County creating

the opportunity to grow the initiative throughout the region. Finally, SMIT is working with College of Southern Maryland (CSM) to stand up the region's first innovation business plan award. It is hoped that this award will become a signature event and coveted prize of CSM's newly established Entrepreneur and Innovation Institute.

In addition, SMIT members analyzed the local and regional ecosystem support for technology business development. The following graphic represents a product of a recent exercise to identify current assets that support innovative start-up companies. While the image suggests a rather messy process, the results are noteworthy as they show the extent of institutional and non-institutional support that is already in place to fuel entrepreneurship in St. Mary's County:



The following chart reveals, in a more orderly fashion, the depth and breadth of organizations, facilities and amenities that exist (or will soon exist) to support St. Mary's County's efforts to build an innovation-driven economy. St. Mary's County is one of only five locations in the State with an advanced ecosystem to support technology start-ups and business expansion, according to StartUp Maryland.

#### ST. MARY'S COUNTY'S INNOVATION CULTIVATORS

#### **Organizations**

Southern Maryland Innovation and Tech, The Patuxent Partnership, Energetics Technology Center, Southern Maryland Navy Alliance, RoboBees, AUVSI Seafarer's Chapter, Southern Maryland Agriculture Development Commission, St. Mary's County Chamber of Commerce

#### **Maker Spaces and Co-Working Sites**

PaxSpace, UMD Test Site, NAWC-AD/NAS Patuxent River

#### **Secondary & Higher Education**

SMC Public Schools, St. Mary's College of Maryland, College of Southern Maryland's Entrepreneur and Innovation Institute, Southern Maryland Higher Education Center, University of Maryland UAS Research Center

#### **Incubators & Accelerators**

St. Mary's County Business Incubator (soon to be established), NAWC-AD Tech Transfer Office, Southern Maryland Small Business Development Center, TechFire, TEDCO, Southern Maryland Agriculture Development Commission, CSM's

Entrepreneur and Innovation Institute

#### **Research Facilities**

NAWC-AD, UMD UAS Test Site, UMD Research Center, Chesapeake Bay Biological Lab, St. Mary's College of Maryland

#### **Job Training**

America's Job Centers, College of Southern Maryland, MD Division of Rehabilitation Services, Dr. James A. Forrest
Career and Technology Center

In 2015, the Maryland Department of Commerce was awarded a multi-million-dollar federal Office of Economic Adjustment (OEA) grant to analyze how the State can reduce its dependency on federal spending. According to the Department of Commerce, Maryland ranks fourth in the nation in receipt of federal spending, and, in Maryland, St. Mary's County is the most dependent of all Maryland counties on defense spending.

Part of the OEA grant provides funding for a pilot project focused on commercializing defense patents generated from the naval bases in and surrounding Southern Maryland including NSWC-Dahlgren (located in King George County, Virginia), NSWC-Indian Head Division, NAWCAD-Patuxent River and the Naval Research Center headquartered in Washington, D.C. While the consultants are still completing the research, they have identified patents with commercial potential and some local companies with interest in developing strategies to capitalize on these commercial opportunities. The research revealed that local companies are largely unaware of the availability of intellectual property patented by the Navy and of those who are aware; they are not well versed in how to work with the Navy's technology transfer offices. Following are recommendations stemming from the Pilot Project.

**Actively promote defense intellectual property** – The region's naval installations including the Naval Resource Laboratory produce 10-12 new patents monthly. Coordinating a regular review of newly generated patents as they become available would help to build networks between the scientists and engineers in the research labs and companies, educate the ecosystem about emerging technologies and help to promote the regional technology capability on a wider basis.

**Prepare potential licensees to engage with the Navy's Technology Transfer Offices (TTOs)** – Educate potential licensees to ensure that they have appropriate expectations regarding probable terms and understand the duration of the process as a whole.

**Grow SMIT's capacity to serve the Southern Maryland Region** – At present, SMIT exists to promote and support entrepreneurship, however, SMIT dose not reach the entire region. A strong entrepreneurial culture will benefit both aspiring entrepreneurs and existing companies. Enhancing the capacity of the Southern Maryland Innovation and Technology initiative to serve the region will directly support the growth of Southern Maryland's technology community.

**Evaluate the market potential of inventions** – TTOs have limited staffing. Given appropriate confidentiality agreements, a third party could assist with the process of evaluating the market potential of inventions as part of the patenting process that the TTOs undertake.

Increase access to commercialization process mentors – While generic business advice is of value, many technology-focused markets require specific skill sets. At presence the region's ecosystem to support technology commercialization is in its infancy. Establishing a robust network of mentors with expertise in the commercialization process will enhance opportunities for individuals and companies to accelerate the probability of technology commercialization success.

**Create a regional web presence for technology transfer and commercialization** – At present, the level of awareness outside of the region of capabilities related to research is not well established. The creation of a web platform to provide access to information and connectivity between people engaged in research commercialization would be a valuable component to strengthening the foundations of the ecosystem.

**Enhance resources focused on technology commercialization** – While there are resources that exist or are under development to support technology start-ups including the incubator in St. Mary's, PaxSpace, SMIT and TechFire, new players such as CSM's Entrepreneur and Innovation Institute should be encouraged and supported where possible to strengthen the ecosystem as a whole.

As described above, the AeroMaryland initiative will help keep more of the dollars flowing through Pax River in the local economy. To be successful in this endeavor will require innovative approaches to expanding the defense industry base currently in the County while also attracting companies that can perform this additional work.

Also, as described above, St. Mary's County will soon open a business incubator for entrepreneurs who are focused on the commercialization of technology from Pax River, and entrepreneurs who work on UAS research and development. The incubator is another example of an important component in building an innovation ecosystem to fuel the economy in St. Mary's County for years to come.

Kevin Plank, CEO and founder of Under Armour stated, "Show me a place with lots of entrepreneurs and an ecosystem that supports them and I'll show you a place on the rise." St. Mary's County is moving in that direction in the pursuit of a stronger and more diversified economy.

#### **CONCLUSION**

St. Mary's County's economy can become stronger and more resilient through diversification. Growing NAS Pax River and the jobs associated with the base will always be a primary goal, but growing jobs that are not linked to NAS is now a strategic focus for the County. The question is how do we grow those companies in order to create those jobs? By taking a strategic approach, limited resources may be allocated to the highest priorities. The strategy laid out in this document focuses on:

- ✓ Workforce attracting millennials though various means, including establishing and improving tourism events and attractions and improving certain community quality-of-life assets
- ✓ Business Growth in Identified and Emerging Industries UAS, advanced manufacturing, rapid prototyping, agriculture and aquaculture, and tourism
- Environment of Innovation and Entrepreneurship building an ecosystem that facilitates technology company growth

These focus areas are not distinct and separate, but are linked. For example, attracting a young and talented workforce is linked to growing the tourism industry, improving certain community assets, and creating an innovative environment. Improving community assets helps the tourism industry and helps attracts new businesses. Attracting more millennials helps supply workers in identified growth industries. Creating an innovative environment both attracts millennials and is bolstered by having more millennials living in the County. All identified growth industries benefit from not only having more millennials in the workforce, but having an environment of innovation that can foster the technology innovation needed for these industries to prosper. These linkages mean that making progress in one area will not only benefit that area, but will benefit other focus areas as well.

The Action Plan that follows provides tasks and initiatives that will guide the Department of Economic Development and various stakeholders in making progress in this strategy. The order of topics in the Action Plan follows the order of the topics discussed in this document. In addition, following the Action Plan is the "Strategic Focus for the Department of Economic Development" that includes all of the Action Plan items categorized by eight focus areas of the Department. The Strategic Focus section includes additional projects/initiatives that come from sources outside this document.

# **Action Plan**

# **Building an Innovation Driven Economy**

# **People- and Place-Based Economic Development Strategies**

#### Attract and Retain Young Professionals

Enhance the quality-of-life aspects that are attractive to young professionals

- Collaborate with Leonardtown to further develop the downtown as a place known for urban character, historical sites, unique restaurants and bars, interesting retail, waterfront access, and a vibrant arts and music scene.
- Work to create additional access to beaches, piers and the waterfront along the Patuxent and Potomac Rivers and the Chesapeake Bay
- Create a branding campaign targeting young professionals that highlights County assets attractive to young professionals
- Target the development of businesses that create a night life
- Support enhanced cell phone coverage and internet access in South County and in other County "dead zones"
- Work to create attractive and safe public indoor and outdoor gathering spaces
- Encourage the development of pedestrian and bicycle infrastructure improvements throughout St. Mary's County
- Work to expand affordable housing choices, including exploring public and private funding to reduce closing costs through programs intended to support "Live Where You Work" housing opportunities
- Create a voice for young professionals throughout County Government (e.g., appoint a young professional to the Economic Development Commission)
- Work to expand access to areas for hiking, biking, boating, and enjoying natural areas
- Establish an incubator for start-up technology businesses

# Build and Sustain a Skilled and Semi-Skilled Workforce

- Define and address the workforce skill gaps in manufacturing, rapid prototyping and other technology-based businesses
- Assess Navy's skill demands for sustaining existing platforms
- Identify and promote funding for incumbent and emerging worker training
- Develop business incentives to support continuous workforce learning
- Coordinate strategic planning amongst the County's institutions of higher learning to facilitate and enhance workforce training opportunities
- Focus the County's annual contribution to the CSM Foundation on scholarships for AA degrees and certifications closely aligned with existing and projected workforce skill needs
- Continue to promote STEM education opportunities in course offerings from kindergarten through college
- Support skilled trades training to increase the number of "artisans" who live and work in St. Mary's

#### Foster the Growth of the "Creative Class"

- o Advance the further development of Leonardtown's Arts and Entertainment District
- Increase the availability of performing arts in Leonardtown and Lexington Park
- Support the construction of performing arts venues in both St. Mary's City and Leonardtown

- Support existing entertainment venues such as the Three Notch community black box theater
- Increase access and amenities available for tinkers, inventors, engineers and designers through PaxSpace and other maker spaces
- Establish resources designed to facilitate the protection of intellectual property
- Facilitate industry-specific MeetUps for manufacturing, unmanned systems, the arts and other growing industry sectors
- Support the development of businesses and facilities that provide "co-working" space

# Grow and Enhance St. Mary's Tourism and Hospitality Assets

- Establish a Tourism Commission representing all aspects of the industry to pursue implementation of the recommendations of the Tourism and Hospitality Master Plan
- Explore the establishment of a privately-lead visitor and conference bureau to pursue group sales, provide training for the hospitality workforce, fund county-wide marketing initiatives, and advocate for development of existing and promising tourism sites.
- o Pursue target and emerging markets including weddings, small meetings and youth and adult sports
- Establish a Tourism Ambassadors Certification program to enhance the professional capabilities of the hospitality workforce
- Target and attract overnight visitors to grow the County's tourism and hospitality industry
- Pursue the development of a variety of lodging choices from full-service to resort-type hotels and B&Bs in St. Mary's to meet the needs and expectations of various market segments
- Recruit and support restauranteurs committed to providing chef-driven, locally sourced culinary experiences
   Develop a county-wide, farm-to-table program linking area farmers, watermen and aquaculture business
   owners with local and regional restaurants
- Improve and increase opportunities for water access and develop water-based experiences to appeal to a broad range of visitors
- o Improve assets and marketing for outdoor activities such as swimming, boating, hiking, cycling, mountain biking, running, birding, hunting and fishing
- Invest in visitor programs and capital projects and create connectivity between museums and historic sites to enrich and extend the visitor experience
- Support events that target and attract overnight visitors
- Promote the development of a signature, multi-day event that serves to enhance the County's "brand"
- Create experiences tied to the County's land and water heritage connecting visitors to what is authentic and unique to St. Mary's
- Develop cycling opportunities linking trails within the County and across the region to attract greater numbers of cycling enthusiasts
- Examine and address legislation or regulations that prohibit or unduly constrain the growth of the County's tourism and hospitality industry
- Develop South County's tourism and hospitality priority sites including the former Schieble's restaurant,
   Point Lookout and Buzz's Marina, the St. Inigoes General Store and a former restaurant and lodging site in Ridge
- Work with St. Mary's College of Maryland to explore the potential for boutique hotel development on the campus
- Enhance experiential programs at Sotterley, Historic St. Mary's City and the Patuxent River Naval Air Museum to demonstrate the opportunity to attract overnight visitors
- Encourage the development of Leonardtown as a vibrant tourism hub for St. Mary's County
- Support and promote Leonardtown's Arts and Entertainment District
- Support the development of a significant performing arts venue in Leonardtown
- Support the further development of the Leonardtown wharf

# **Protect and Grow NAS Patuxent River**

Continue pursuing current strategies while also supporting new initiatives

- Continue to monitor and take steps to move JLUS recommendations forward
- o Communicate regularly with base officials regarding public infrastructure needs and shared services
- Work with other stakeholders to explore shared service possibilities such as sewer and water
- o Continue to be active with the Navy Alliance in their efforts to strengthen the base
- Work with Navy officials and other land preservation entities to identify and preserve land that is of concern to base officials due to future development possibilities
- Actively participate in the establishment of AeroMaryland in conjunction with the Navy Alliance and other stakeholders

# **Traded Cluster-Based Economic Development Strategies**

Unmanned and Autonomous Systems and Advanced Manufacturing

- Work with others to brand NAWC-AD as a Center of Excellence for autonomous systems work both nationally and internationally
- Support NAWC-AD's efforts to promote RDT&E capability at NAS Pax River
- Collaborate with the Southern Maryland Navy Alliance, the Patuxent Partnership, the SMC Chamber of Commerce, the Southern Maryland Innovation and Technology Initiative, and the Southern Maryland Economic Development Association to develop a coherent brand identity
- Advocate to advance State construction funding for the UMD's Autonomous Research Institute (3<sup>rd</sup> building) at the Southern Maryland Higher Education Center
- Develop strategic alliance between St. Mary's College of Maryland's, Southern Maryland College's and Southern Maryland Higher Education Center's research and training capabilities to support commercial autonomous systems commercial work
- Develop marketing messages and collateral materials to promote these higher education resources as regional assets for defense and private industry workforce and business development
- Support the creation and growth of innovative aeronautical companies
- Advance aeronautical talent generation and workforce development
- Create a public directory of all UAS related businesses, training programs and facilities
- Enhance UAV prototyping and manufacturing capacity
- Support the development of commercial and agricultural UAV technologies

# Grow manufacturing as a segment of the local economy

- o Survey existing manufacturers about industry's needs and appetite for:
  - Commercial business development
  - National and international exporting
  - Workforce retention and development
  - Apprenticeship/internship programs
  - Equipment financing and job creation tax credits
- Use survey results to develop action items

- Build 3D printing/additive manufacturing capacity in support of targeted industries and clusters
- Consider establishing a SMC Manufacturing Advisory Board that would work with educational institutions to establish needed training and certification programs
- Establish membership in Maryland Manufacturing Extension Partnership (MEP) and the Regional Additive Manufacturing Partnership (RAMP)
- Establish biannual or quarterly manufacturing MeetUps to promote business networking
- Work with the MD Department of Commerce to attract and expand manufacturing businesses in SMC
- Work with TEDCO to establish technology-enabled manufacturing business in SMC
- Establish a business incubator at the SMC Regional Airport for start-up and early-staged UAS firms and firms utilizing Navy technology and patents

#### Agriculture and Aquaculture

- Help create domestic and international market opportunities for St. Mary's producers of food, fiber and specialty crops
- Add resources to DED's Agriculture and Seafood Division to support marketing of agriculture and aquaculture products
- Research infrastructure needed to support distribution of agriculture commodities by barge/ship, including the following as potential sites: the Paul Hall Center for Maritime Training and Education in Piney Point, NuStar, Inc. plant in Piney Point, Arundel Corp./Vulcan Materials in Leonardtown, and the Wicomico Grain Elevator in Charlotte Hall
- Enhance the webpage for DED's Agriculture and Seafood Division
- Explore the concept of establishing a business incubator focused on agriculture/aquaculture and technology

#### Support the growth of the oyster aquaculture industry in St. Mary's County

- Support the establishment of an oyster seed hatchery in Southern Maryland
- Track legislation that may undermine aquaculture industry in St. Mary's County
- Work to strengthen the relationship between traditional Watermen and aquaculture businesses
- Attempt to mitigate the areas of dispute between aquaculture facilities and private property and/or historic sites
- Convene aquaculture business owners to discuss the further development of the industry
- Develop and fund a marketing campaign that brands oysters from Southern Maryland

# Establish a meat processing facility in Southern Maryland

- Support the Southern Maryland Agriculture Development Commission's efforts to site and fund a meat processing facility in the region
- Secure funding to establish a meat processing facility and sustain operations in the ramp-up phase
- Investigate and address any County's zoning constraints on meat processing
- Identify properly zoned possible locations for a meat processing facility

# Seek legislation to address regulations that undermine or constrain profitable agriculture and aquaculture in St. Mary's County

- Examine storm water management regulations that make it difficult to establish a pond on agriculturally zoned land
- Limit prohibitions on clearing forests to expand agricultural land

 Research the justification for a higher cost of licensing for agriculture operations in comparison to with licenses for retail and restaurant establishments to determine if equitable

Research the establishment of a commercial kitchen in Southern Maryland to support the production of value-added agriculture products

- Value-added food production
  - Dairy products
  - Meats
  - Seafood
- Organic products

Involve St. Mary's technology community in the research and development of water purification systems to address the increasing need for fresh water to sustain local agriculture operations

# **Innovation-Based Economic Development Strategies**

Grow SMIT membership and Encourage Other Networking Opportunities

- Monthly MeetUps
- Crab Pot Pitch Contest
- Pitch Across Maryland Contest
- National Innovation Summit
- o Entrepreneur Expo

#### Establish a Business Incubator

- Continue to make progress on the construction of the County's first business incubator at the St. Mary's County Regional Airport with funding from the Technology Transfer Office of NAWC-AD
- Work with TEDCO and NAWC-AD to prepare and issue a request for proposals to run the incubator
- Participate in the Maryland and National Business Incubation Association to identify opportunities and support continuous learning
- Encourage early-stage and start-up businesses to participate in SBDC's Entrepreneur Accelerator

#### Establish Angel and Venture Capital Investor Funds

- Contract with TEDCO to facilitate the creation of a southern Maryland Angel Investor Fund
- Access TEDCO and the Maryland Department of Commerce Venture Funds

#### Pursue Commercialization of Defense Technologies

 Implement the findings and recommendations of the federal Office of Economic Adjustment funded Southern Maryland Technology Commercialization Pilot Project

#### Learn from Local Inventors and Investors

- Identify inventors and patent holders through the Innovation Network Analysis
- Consider establishing an Innovation Advisory Board
- Consider establishing a quarterly Inventors MeetUps

# Continue to Support STEM Educational Opportunities and Experiences

- o RoboBees, public high school club focused on technology and robotics
- o PaxSpace, a makerspace open to all
- Programming from The Patuxent Partnership

Collaborate with the College of Southern Maryland to grow the Entrepreneur and Innovation Institute

- o Participate as a member of the Institute's Advisory Council
- Underwrite the Annual Innovation Business Award
- o Include Executive Director on SMIT Organizing Team

# Promote Southern Maryland's Technology Industry

- Create a strong and positive brand identity for Southern Maryland's technology community
- Market the high-quality of life along with the historic and rural character of the region in close proximity to the Baltimore-Washington Metropolitan Area

Create Economic Development Incentives Aimed at Start-ups/New Business Owners in Targeted Industries

# Strategic Focus for Department of Economic Development Action Plan/Projects

To achieve success, the Department of Economic Development will focus on the following eight strategic focus areas:

- 1. Sites and infrastructure development
- 2. Business friendly climate including an expedited permitting process
- 3. Branding/messaging
- 4. Workforce/labor pool
- 5. Cost advantages including financial incentives
- 6. Environment for innovation and start-ups
- 7. Quality of life
- 8. Industry specific initiatives

Current and proposed projects and initiatives are listed for each of the eight strategic focus areas. Proposed projects listed come from the "Strategic Plan to Build an Innovation Driven Economy" as well from the staff of the Department of Economic Development. Some projects/initiatives are repeated under more than one focus area because the focus areas overlap with the overall goal being to strengthen the economy.

#### 1. Sites and Infrastructure

#### From the Strategic Plan to Build an Innovation Driven Economy:

- Support enhanced cell phone coverage and internet access in South County and in other County "dead zones"
- Research infrastructure needed to support distribution of agriculture commodities by barge/ship, including
  the following as potential sites: the Paul Hall Center for Maritime Training and Education in Piney Point,
  NuStar, Inc. plant in Piney Point, Arundel Corp./Vulcan Materials in Leonardtown, and the Wicomico Grain
  Elevator in Charlotte Hall

#### Other projects/initiatives from the Department of Economic Development:

- > Improve St. Mary's County airport infrastructure, including runway expansions and site development
- Develop database of potential development sites
- > Establish incentives and promotional materials for prime sites
- ➤ Work to bring sewer/water to targeted future development sites

#### 2. Business Friendly Climate

# From the Strategic Plan to Build an Innovation Driven Economy:

Investigate and address any County's zoning constraints on meat processing

# Other projects/initiatives from the Department of Economic Development:

- ➤ Compile list and market St. Mary's County business-friendly services and practices
- > Continue to work on mitigating regulatory issues that impede desirable development
- Work with consultant on streamlining the development approval process
- Establish/resurrect County internal process to "fast track" high profile development projects
- > Establish DED Action Team to shepherd significant projects through County processes
- Work with Small Business Development Center to formalize roles related to small business assistance

#### 3. Branding/Messaging

# From the Strategic Plan to Build an Innovation Driven Economy:

- Collaborate with Leonardtown to further develop the downtown as a place known for urban character, historical sites, unique restaurants and bars, interesting retail, waterfront access, and a vibrant arts and music scene.
- Create a branding campaign targeting young professionals that highlights County assets attractive to young professionals
- Work with others to brand NAWC-AD as a Center of Excellence for autonomous systems for industry both nationally and internationally
- Collaborate with the Southern Maryland Navy Alliance, the Patuxent Partnership, the SMC Chamber of Commerce, the Southern Maryland Innovation and Technology Initiative, and the Southern Maryland Economic Development Association to develop a coherent brand identity
- Develop marketing messages and collateral materials to promote these higher education resources as regional assets for defense and private industry workforce and business development
- Add resources for marketing of agriculture and aquaculture products to the Ag and Seafood Division
- Enhance the webpage for DED's Agriculture and Seafood Division
- Develop and fund a marketing campaign that brands oysters from Southern Maryland

#### Promote Southern Maryland's Technology Industry

- Create a strong and positive brand identity for Southern Maryland's technology community
- Market the County's high quality of life
- Create a public directory of all UAS related businesses, training programs and facilities

# Other projects/initiatives from the Department of Economic Development:

- > Perform analysis to identify assets and craft branding message based on those findings
- Craft message regarding why economic development is important for all County residents
- Craft message for retention and expansion of current businesses
- Craft message for recruitment of new firms
- Craft message for millennials regarding assets in the County
- Work with interested stakeholders on activity/event calendar for millennials
- Market messages to various audiences/constituencies

Revamp/update Department of Economic Development website

#### 4. Workforce/Labor Pool

#### From the Strategic Plan to Build an Innovation Driven Economy:

Attract and retain young professionals:

- Collaborate with Leonardtown to further develop the downtown as a place known for urban character, historical sites, unique restaurants and bars, interesting retail, waterfront access, and a vibrant arts and music scene.
- Work to create additional access to beaches, piers and the waterfront along the Patuxent and Potomac Rivers and the Chesapeake Bay
- Create a branding campaign targeting young professionals that highlights County assets attractive to young professionals
- Target the development of businesses that create a "night life"
- Support enhanced cell phone coverage and internet access in South County and in other County "dead zones"
- Work to create attractive and safe public indoor and outdoor gathering spaces
- Encourage the development of pedestrian and bicycle infrastructure improvements throughout St. Mary's County
- Work to expand affordable housing choices, including exploring public and private funding to reduce closing costs through programs intended to support "Live Where You Work" housing opportunities
- Create a voice for young professionals throughout County Government (e.g., appoint a young professional to the Economic Development Commission)
- Work to expand access to areas for hiking, biking, boating, and enjoying natural areas
- Establish an incubator for start-up technology businesses

#### Build and sustain a skilled and semi-skilled workforce:

- Define and address the workforce skill gaps in manufacturing, rapid prototyping and other technology-based businesses
- Assess Navy's skill demands for sustaining existing platforms
- Identify and promote funding for incumbent and emerging worker training
- Develop business incentives to support continuous workforce learning
- Coordinate strategic planning amongst the County's institutions of higher learning to facilitate and enhance workforce training opportunities
- Focus the County's annual contribution to the CSM Foundation on scholarships for AA degrees and certifications closely aligned with existing and projected workforce skill needs
- Continue to promote STEM education opportunities in course offerings from kindergarten through college
- Support skilled trades training to increase the number of "artisans" who live and work in St. Mary's

#### Foster the growth of the "creative class":

- Advance the further development of Leonardtown's Arts and Entertainment District
- o Increase the availability of performing arts in Leonardtown and Lexington Park
- Support the construction of performing arts venues in both St. Mary's City and Leonardtown
- Support existing entertainment venues such as the Three Notch community black box theater

- Increase access and amenities available for tinkers, inventors, engineers and designers through PaxSpace and other maker spaces
- Establish resources designed to facilitate the protection of intellectual property
- Facilitate industry-specific MeetUps for manufacturing, unmanned systems, the arts and other growing industry sectors
- Support the development of businesses and facilities that provide "co-working" space

#### UAS and advanced manufacturing:

- Advocate to advance State construction funding for the UMD's Autonomous Research Institute (3<sup>rd</sup> building) at the Southern Maryland Higher Education Center
- Develop strategic alliance between St. Mary's College of Maryland's, Southern Maryland College's and Southern Maryland Higher Education Center's research and training capabilities to support autonomous systems commercial work
- Develop marketing messages and collateral materials to promote these higher education resources as regional assets for defense and private industry workforce and business development
- Advance aeronautical talent generation and workforce development

#### Continue to Support STEM Educational Opportunities and Experiences

- o RoboBees, public high school club focused on technology and robotics
- o PaxSpace, makerspace open to all
- Programming from The Patuxent Partnership

#### Other projects/initiatives from the Department of Economic Development:

- Perform workforce study to identify labor pool characteristics in detail (or hire consultant)
- > Create marketing campaign to attract millennials
- Work on creating internship program that better links college graduates to local firms

#### 5. Cost advantages including financial incentives

#### From the Strategic Plan to Build an Innovation Driven Economy:

Create economic development incentives aimed at start-ups/new business owners in targeted industries

#### Other projects/initiatives from the Department of Economic Development:

- Finalize property tax credit incentive for new job creation and market this incentive
- > Explore creation of geographically based incentives
- > Explore creation of incentive for hiring interns
- Explore creation of incentive for start-up technology firms

#### 6. Environment for innovation and start-ups

#### From the Strategic Plan to Build an Innovation Driven Economy:

- Create a voice for young professionals throughout County Government (e.g., appoint a young professional to the Economic Development Commission)
- Increase access and amenities available for tinkers, inventors, engineers and designers through PaxSpace and other maker spaces
- Establish resources designed to facilitate the protection of intellectual property
- Support the development of businesses and facilities that provide "co-working" space
- Advocate to advance State construction funding for the UMD's Autonomous Research Institute (3<sup>rd</sup> building) at the Southern Maryland Higher Education Center
- Support creation and growth of innovative aeronautical companies
- Enhance UAV prototyping and manufacturing capacity
- Support the development of commercial and agricultural UAV technologies
- Build 3D printing/additive manufacturing capacity in support of targeted industries and clusters
- Establish a business incubator at the SMC Regional Airport for start-up and early-staged UAS firms and firms utilizing Navy technology and patents

#### Grow SMIT membership and Encourage Other Networking Opportunities

- Monthly MeetUps
- Crab Pot Pitch Contest
- Pitch Across Maryland Contest
- National Innovation Summit
- Entrepreneur Expo

#### Establish a Business Incubator

- Continue to make progress on the construction of the County's first business incubator at the St. Mary's County Regional Airport with funding from the Technology Transfer Office of NAWC-AD
- Work with TEDCO and NAWC-AD to prepare and issue a request for proposals to run the incubator
- Participate in the Maryland and National Business Incubation Association to identify opportunities and support continuous learning
- Encourage early-stage and start-up businesses to participate in SBDC's Entrepreneur Accelerator

#### Establish Angel and Venture Capital Investor Funds

- Contract with TEDCO to facilitate the creation of a southern Maryland Angel Investor Fund
- Access TEDCO and the Maryland Department of Commerce Venture Funds

# Pursue Commercialization of Defense Technologies

Implement the findings and recommendations of the federal Office of Economic
 Adjustment funded southern Maryland Technology Commercialization Pilot Project

#### Learn from Local Inventors and Investors

- o Identify inventors and patent holders through the Innovation Network Analysis
- Consider establishing an Innovation Advisory Board

Consider establishing a quarterly Inventors MeetUps

Continue to Support STEM Educational Opportunities and Experiences

- RoboBees, public high school club focused on technology and robotics
- PaxSpace, makerspace open to all
- Programming from The Patuxent Partnership

Collaborate with the College of Southern Maryland to grow their Entrepreneur and Innovation Institute

- Participate as a member of the Institute's Advisory Council
- Underwrite the Annual Innovation Business Award
- Include the Institute's Executive Director on SMIT Organizing Team

Promote Southern Maryland's Technology Industry

- Create a strong and positive brand identity for Southern Maryland's technology community
- Market the high-quality of life along with the historic and rural character of the region in close proximity to the Baltimore-Washington Metropolitan Area

#### Other projects/initiatives from the Department of Economic Development:

> Explore the concept of establishing a business incubator focused on agriculture/aquaculture and technology

# 7. Quality of life

# From the Strategic Plan to Build an Innovation Driven Economy:

- Collaborate with Leonardtown to further develop the downtown as a place known for urban character, historical sites, unique restaurants and bars, interesting retail, waterfront access, and a vibrant arts and music scene.
- Work to create additional access to beaches, piers and the waterfront along the Patuxent and Potomac Rivers and the Chesapeake Bay
- o Target the development of businesses that create a "night life"
- Work to create attractive and safe public indoor and outdoor gathering spaces
- Encourage the development of pedestrian and bicycle infrastructure improvements throughout St. Mary's County
- Work to expand affordable housing choices, including exploring public and private funding to reduce closing costs through programs intended to support "Live Where You Work" housing opportunities
- Work to expand access to areas for hiking, biking, boating, and enjoying natural areas
- Advance the further development of Leonardtown's Arts and Entertainment District
- Increase the availability of performing arts in Leonardtown and Lexington Park
- o Support the construction of performing arts venues in both St. Mary's City and Leonardtown
- Support existing entertainment venues such as the Three Notch community black box theater

#### Other projects/initiatives from the Department of Economic Development:

- Work with State Highway Administration and the Department of Public Works and Transportation and stakeholders to designate additional bike routes
- ➤ Identify community aspects attractive to millennials
- > Grade the County's quality of life, identify low scoring components, work to improve, if possible
- Market the high quality of life assets of the County

#### 8. Industry specific initiatives

#### From the Strategic Plan to Build an Innovation Driven Economy:

Protect and grow NAS Patuxent River:

- Continue to monitor and take steps to move JLUS recommendations forward
- Communicate regularly with base officials regarding public infrastructure needs and shared services
- Work with other stakeholders to explore shared service possibilities such as water and sewer
- o Continue to be active with the Navy Alliance in their efforts to strengthen the base
- Work with Navy officials and other land preservation entities to identify and preserve land that is of concern to base officials due to future development possibilities
- Actively participate in the establishment of AeroMaryland in conjunction with the Navy Alliance and other stakeholders
- Support NAWC-AD's efforts to promote RDT&E capability at NAS Pax River

#### UAS and advanced manufacturing:

- Support the development of commercial and agricultural UAV technologies
- Survey existing manufacturers about industry's needs and appetite for:
  - Commercial business development
  - National and international exporting
  - Workforce retention and development
  - Apprenticeship/internship programs
  - Equipment financing and job creation tax credits
- Use survey results to develop action items
- Consider establishing a SMC Manufacturing Advisory Board that would work with educational institutions to establish needed training and certification programs
- Establish membership in Maryland Manufacturing Extension Partnership (MEP) and the Regional Additive Manufacturing Partnership (RAMP)
- Establish biannual or quarterly manufacturing MeetUps to promote business networking
- Work with the MD Department of Commerce to attract and expand manufacturing businesses in SMC
- Work with TEDCO to establish technology-enabled manufacturing business in SMC

Agriculture and aquaculture:

- Help create domestic and international market opportunities for St. Mary's producers of food, fiber and specialty crops
- Add resources for marketing of agriculture and aquaculture products to the Ag and Seafood Division
- Research the development of a grain marketing facility in St. Mary's or in Southern Maryland to address transportation of farm commodities
- Research infrastructure needed to support distribution of agriculture commodities by barge/ship, including
  the following as potential sites: the Paul Hall Center for Maritime Training and Education in Piney Point,
  NuStar, Inc. plant in Piney Point, Arundel Corp./Vulcan Materials in Leonardtown, and the Wicomico Grain
  Elevator in Charlotte Hall
- Develop a new webpage for DED's Agriculture and Seafood Division
- Explore the concept of establishing a business incubator focused on agriculture/aquaculture and technology
- Support the establishment of an oyster seed hatchery in Southern Maryland
- Track legislation that may undermine aquaculture industry in St. Mary's County
- o Work to strengthen the relationship between traditional Watermen and aquaculture businesses
- Attempt to mitigate the areas of dispute between aquaculture facilities and private property and/or historic sites
- Convene aquaculture business owners to discuss the further development of the industry
- Develop and fund a marketing campaign that brands oysters from Southern Maryland
- Support the Southern Maryland Agriculture Development
- o Commission's efforts to site and fund a meat processing facility in the region
- Secure funding to start up a meat processing facility and sustain operations in the
- o ramp-up phase
- Investigate and address any County's zoning constraints on meat processing
- Identify properly zoned possible locations for a meat processing facility
- Seek legislation to address regulations that undermine or constrain profitable agriculture and aquaculture in St. Mary's County
  - Storm water management regulations that make it difficult to establish a pond on agriculturally zoned land
  - Limit prohibitions on clearing forests to expand agricultural land
  - Research the justification for a higher cost of licensing for agriculture operations in comparison to with licenses for retail and restaurant establishments to determine if equitable
- Research the establishment of a commercial kitchen in Southern Maryland to support the production of value-added agriculture products
  - Value-added food production
    - Dairy products
    - Meats
    - Seafood
  - Organic products
- o Involve St. Mary's technology community in the research and development of water purification systems to address the increasing need for fresh water to sustain local agriculture operations

Grow and Enhance St. Mary's Tourism and Hospitality Assets:

- Establish a Tourism Commission representing all aspects of the industry to pursue implementation of the recommendations of the Tourism and Hospitality Master Plan
- Explore the establishment of a privately-lead visitor and conference bureau to pursue group sales, provide training for the hospitality workforce, fund county-wide marketing initiatives, and advocate for development of existing and promising tourism sites.
- o Pursue target and emerging markets including weddings, small meetings and youth and adult sports
- Establish a Tourism Ambassadors Certification program to enhance the professional capabilities of the hospitality workforce
- Target and attract overnight visitors to grow the County's tourism and hospitality industry
- Pursue the development of a variety of lodging choices from full-service to resort-type hotels and B&Bs in St. Mary's to meet the needs and expectations of various market segments
- Recruit and support restauranteurs committed to providing chef-driven, locally sourced culinary experiences
   Develop a county-wide, farm-to-table program linking area farmers, watermen and aquaculture business
   owners with local and regional restaurants
- Improve and increase opportunities for water access and develop water-based experiences to appeal to a broad range of visitors
- Improve assets and marketing for outdoor activities such as swimming, boating, hiking, cycling, mountain biking, running, birding, hunting and fishing
- Invest in visitor programs and capital projects and create connectivity between museums and historic sites to enrich and extend the visitor experience
- Support events that target and attract overnight visitors
- Promote the development of a signature, multi-day event that serves to enhance the County's "brand"
- Create experiences tied to the County's land and water heritage connecting visitors to what is authentic and unique to St. Mary's
- Develop cycling opportunities linking trails within the County and across the region to attract greater numbers of cycling enthusiasts
- Examine and address legislation or regulations that prohibit or unduly constrain the growth of the County's tourism and hospitality industry
- Develop South County's tourism and hospitality priority sites including the former Schieble's restaurant,
   Point Lookout and Buzz's Marina, the St. Inigoes General Store and a former restaurant and lodging site in Ridge
- Work with St. Mary's College of Maryland to explore the potential for boutique hotel development on the campus
- Enhance experiential programs at Sotterley, Historic St. Mary's City and the Patuxent River Naval Air Museum to demonstrate the opportunity to attract overnight visitors
- Encourage the development of Leonardtown as a vibrant tourism hub for St. Mary's County
- Support and promote Leonardtown's Arts and Entertainment District
- Support the development of a significant performing arts venue in Leonardtown
- Support the further development of the Leonardtown wharf

#### Other projects/initiatives from the Department of Economic Development:

No additional projects