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FOR ALL

2022 - 2027
COMPREHENSIVE ECONOMIC
DEVELOPMENT STRATEGY
FOR HAMPTON ROADS
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This Comprehensive Economic Development Strategy (CEDS) for Hampton Roads was developed with input and assistance from many individuals and organizations across Hampton Roads. The report was primarily prepared and authored by Greg Grootendorst, Katherine Rainone, and Katie Cullipher of the Hampton Roads Planning District Commission (HRPDC) as well as Dr. Robert McNab and Dr. Timothy Komarek of Old Dominion University’s Dragas Center for Economic Analysis.

Many thanks to the individuals who served on the CEDS Strategy Committee, who offered their time and effort by guiding the process of preparing the region’s CEDS: Jim Spore (ReInvent Hampton Roads), Rick Dywer (HRMFFA), Steve Harrison (Hampton Roads Alliance), Russ Held (Port of Virginia), Mallory Butler (City of Newport News), Kurt Krause (Visit Norfolk), Shawn Avery (HR Workforce Council) and Mary Fugere (City of Hampton).

The governing body responsible for adopting this CEDS is the Hampton Roads Alliance.

The lead organization responsible for the adoption and implementation of this CEDS is the Hampton Roads Planning District Commission.
Throughout America’s history, the harbor, rivers, and shores of Hampton Roads have been recognized as the prime location for commerce, trade, shipbuilding, military installations, and government research. The beaches, parks, and historical sights attract tourists from across the world, and the farms and industrial and manufacturing facilities provide goods for consumers up and down the East Coast and into the heartland.

Home to over 1.7 million people, this remarkable region is located in Southeastern Virginia, includes ten cities and six counties, and covers nearly 3,000 square miles of diverse landscape. It is home to the largest concentration of military bases and federal research facilities of any metropolitan area in the U.S., as well as the deepest water port on the East Coast where the Chesapeake Bay flows into the Atlantic Ocean. Due to these assets, it is well known that in Hampton Roads, the three pillars of the regional economy are the Port, the Military, and Tourism.

This three-legged stool is not immune to disruption. While the region prides itself on advancing and protecting America, we may pay an economic price with our military-dependent economic model when federal budget allocations for the defense industry decline, as we've experienced in the past. As is evident from the unprecedented impacts of the COVID-19 pandemic, economic output from the tourism industry and the Port of Virginia is vulnerable to public health shocks, supply chain disruptions, and changes in consumer behavior. As a region, we are slow to recover from economic shocks – while it took the United States and Virginia more than 70 months to recover all the civilian jobs lost during the Great Recession, it took over 100 months to add back jobs lost in Hampton Roads.

The region must work together to accelerate the economic recovery from COVID-19 in a way that provides greater opportunities for all residents and builds a more resilient economy better prepared to weather future shocks.

A Comprehensive Economic Development Strategy, or a CEDS, is one part of the long-term plan to do just that. A CEDS is a strategy-driven plan for regional economic development, and is usually the result of a regionally-owned planning process designed to build capacity and guide the economic prosperity of the region in establishing and maintaining a robust economic ecosystem by helping to build regional capacity, and to protect and enhance the quality of life of residents. It is a key component in establishing and maintaining a robust economic ecosystem by helping to build regional capacity, and to protect and enhance the quality of life of residents. It is a key component in establishing and maintaining a robust economic ecosystem by helping to build regional capacity, and to protect and enhance the quality of life of residents.
Introduction

This update also represents further opportunity for how to accelerate economic recovery and advance completed over the course of a decade with various documents this CEDS update built on are as follows:

- 757 Recovery & Resilience Action Framework – 2020
- Envision 2020 – Regional Branding Initiative – 2020
- Go Virginia Region 5 Growth and Diversification Plan – 2019
- HREDA 2019 Business Plan – 2019
- Hampton Roads Workforce Council Talent Alignment Strategy – 2019
  - Report 1 – Workforce Analysis
  - Report 2 – Supply Demand Gap Analysis
  - Report 3 – Talent Alignment Strategy
  - Appendix
- ReInvent Hampton Roads Industry Cluster Analysis – 2018
- HREDA’s Business Environment Improvement Strategy – 2018
- Hampton Roads State of the Workforce Gap Analysis – 2017
- The Port of Virginia: Opportunity Analysis – 2017
- Strategic Plan for Economic Development of the Commonwealth – 2017
This report is organized as follows:

**economic background**

A brief background of the economic environment of the region, including population, economic conditions, jobs and employment, human capital development, infrastructure, and industry clusters.

**SWOT analysis**

A summary analysis of regional strengths, weaknesses, opportunities, and threats as they pertain to economic development.

**economic resilience**

A discussion of themes for improving economic resilience in various capacities, list of potential regional disruptions to anticipate, and opportunities for growth in resilience in the region.

**strategic direction/action plan**

The region's economic development strategy with an associated action plan for implementing the strategy. The strategy contains a vision statement, economic development goals and specific action items that support the broader vision for economic development in Hampton Roads. The goals and action items take advantage of the region's strengths and propel its opportunities, while also reflecting on the region's threats and weaknesses.

**performance evaluation framework**

List of economic indicators to serve as a mechanism to gauge progress on the successful implementation of the overall CEDS.

**appendices**

Includes regional history, links to historical economic indicator data, and public participation in past and present regional economic development strategies.
geographical boundaries
The specific geographical area covered by this CEDS includes the counties of Gloucester, Isle of Wight, James City, Southampton, Surry, and York as well as the cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg which are located in southeastern Virginia. Other geographical boundaries that are part of regional research efforts, partner planning organizations, or data analysis areas are defined below.

The Virginia Beach-Norfolk-Newport News MSA and CSA

The Office of Management and Budget (OMB) defines a core-based statistical area (CBSA) as a geographical region anchored by an urban center of at least 10,000 residents plus adjacent counties that have socioeconomically integrated with the urban center through commuting ties. The OMB has two categories of CBSAs: metropolitan statistical areas and micropolitan statistical areas. Metropolitan statistical areas (MSAs) have at least one urbanized area with a population of 50,000 or more residents. Virginia Beach-Norfolk-Newport News is one of 384 MSAs in the continental United States.

In September 2018, the OMB updated the cities and counties that comprise the Virginia Beach-Norfolk-Newport News MSA (also known as the Hampton Roads MSA) to include Camden County in North Carolina, and Southampton County and the city of Franklin in Virginia. The Hampton Roads MSA now consists of the cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach and Williamsburg. The counties in the MSA are Camden, Currituck and Gates in North Carolina, and Gloucester, Isle of Wight, James City, Mathews, Southampton and York.

The Virginia Beach-Norfolk, VA-NC Combined Statistical Area (CSA) adds the Kill Devil Hills, NC Micropolitan Statistical Area and the Elizabeth City, NC Micropolitan Statistical area to the Hampton Roads MSA, adding the North Carolina counties of Dare, Perquimans, and Pasquotank.

In some instances, data restraints require that we use data from the MSA rather than the collection of data from the 6 counties and 10 cities that officially define Hampton Roads, as locality specific data is unavailable.

GO Virginia Region 5

Sixteen independent cities and counties form GO Virginia Region 5. GO Virginia is a statewide effort to encourage collaboration among local government entities and the private sector to promote economic development across the Commonwealth of Virginia. The cities in GO Virginia Region 5 include Chesapeake, Franklin, Newport News, Norfolk, Hampton, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg. The counties include Accomack, Isle of Wight, James City, Northampton, Southampton, and York.

The Hampton Roads Alliance

The Hampton Roads Alliance (The Alliance) works towards the expansion of the regional economy. Investment and relocation assistance for businesses are a few of the services they offer. Their goal is to collaborate with organizations to shape Hampton Roads into a prime market for international and regional investment opportunities. Their localities include the counties of Isle of Wight, James City, Southampton, and York and the cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg.

Virginia Department of Health – Health Service Area 5

The Virginia Department of Health lists the Hampton Roads region in Health Service Area (HSA) 5. HSA 5 is designated to help coordinate planning strategies between the different counties and cities within its boundaries. HSA 5 includes the counties of Accomack, Essex, Gloucester, Isle of Wight, King and Queen, King William, Lancaster, Mathews, Middlesex, Northampton, Northumberland, Richmond, Southampton, Westmoreland, and York. The cities include Chesapeake, Franklin, Hampton, James, Newport News, Norfolk, Poquoson, Suffolk, Virginia Beach, and Williamsburg.
Geographical Boundaries of the CEDS Update

Measuring Economic and Social Performance

The numerous geographical boundaries in the region speak to the diverse planning initiatives and to the interconnected nature of economic development and planning efforts that are ongoing across Hampton Roads. This CEDS seeks to leverage and build on the partnership that currently exist both within Hampton Roads proper, and surrounding localities that are tightly woven into the greater Hampton Roads economy. Figure 1 illustrates the location and proximity of those jurisdictions that are members of partner planning organizations in Hampton Roads.

FIGURE 1
Map of Hampton Roads and Localities in Partner Planning Organizations
The Economy

Hampton Roads is a dynamic metropolitan area with a rich history, a diverse landscape, and a growing population of more than 1.7 million people. The region's vibrant mix of people, places, and employment opportunities combine to make the region a popular destination for people to live, work, and play. As with any metropolitan region, there are many factors that influence the region's quality of life, such as economic conditions, education, and air quality. The following section will provide a brief snapshot of the current socioeconomic condition of the Hampton Roads region. For a more extensive analysis of the region's current economic condition, please refer to the Hampton Roads Benchmarking Study referenced in the CEDS appendix.

The Hampton Roads economy had experienced strong growth from 2001 up until the Great Recession. The region entered into the Great Recession in July of 2007 following the closure of the Ford plant in Norfolk. Regional employment began declining 6 months prior to the official start date of the national recession in December of 2007. It took the region's economy a full decade to recover the loss in gross product that resulted from the economic slide of the Great Recession, far longer than that of the Commonwealth, the nation, and the vast majority of peer metropolitan areas. In 2017, Hampton Roads' decennial growth in gross product ranked 39 out of the 40 metropolitan areas with populations between one and four million.

GRAPH 1
Gross Product, Inflation Adjusted 2012 Dollars
Hampton Roads, 2001-2019

Sources: Bureau of Economic Analysis and HRPDC
Economic Background

The Economy: Civilian Employment

In 2018 and 2019 the region’s economy began tracking towards recovery, with real respective economic growth rates of 1.6% and 1.9%. In 2020, Hampton Roads joined the rest of the world in reeling from the devastation brought about by the COVID-19 pandemic. At the time of this writing, the pandemic has claimed almost 3,000 lives in Hampton Roads, resulting in immeasurable sorrow and loss experienced by hundreds of thousands of residents across the region.

The pandemic has significantly changed the social and economic behaviors of Hampton Roads residents in a myriad of ways, most evident is the regional employment levels. Regional civilian employment had reached an all-time high of 804,500 in January 2020, and quickly plummeted by more than 100,000 jobs to a recent low of under 700,000 by April 2020, just a few months after the onset of the pandemic. While the regional economy has regained roughly 60,000 jobs in the ~17 months since the onset of the pandemic, the recovery has begun to slow with civilian employment levels still 46,000 below pre-COVID levels.

GRAPH 2
Indexed Civilian Employment Levels
Hampton Roads, Virginia, U.S. 2005 - 2021

GRAPH 3
Total Civilian Employment
Hampton Roads, 1990 - 2021

Sources: Bureau of Labor Statistics and HRPDC
The Economy: Industry Employment

As with any region, economic behavior is heavily influenced by the regional sector composition, with the current industrial make-up of a region influencing future economic growth. In Hampton Roads in 2020, Professional and Business services, an industry often influenced by government contracting, was the largest regional employment sector, followed by Healthcare and Social Assistance and Retail, Local Government, and the Leisure and Hospitality industries. While Hampton Roads, like the rest of the country, has experienced some recovery in job growth since the onset of the pandemic, COVID-19 did not affect all industries equally. When compared to 2011, the Information, Construction, Federal Government, and Healthcare sectors showed the largest amount of growth, while the Leisure and Hospitality, Scientific and Technical, Retail, and Local Government sectors showed a large comparative decline. These shifts are due mostly in part to the nature of the impact the pandemic had on the respective industries.

GRAPH 4
10-year Change in Civilian Employment by Industry
Hampton Roads 2011 – 2021

Sources: Bureau of Labor Statistics and HRPDC
The Economy: Unemployment Rate

Unemployment rates reflect both the general well-being of the labor force and the ability of that labor force to meet the needs of employers. Comparing the regional unemployment rate to the rates in both the Commonwealth and nation helps portray the condition of the regional labor market over time.

Historically, Hampton Roads and Virginia has had a low unemployment rate compared to the rest of the nation, a trend that has continued throughout the recovery from the Great Recession, with the gap closing in 2015. Hampton Roads fared slightly better during the COVID-19 pandemic as well, likely due to the high concentration of active duty military and federal government employees in the region, jobs that were not as heavily impacted by the pandemic as other industries.

GRAPH 5
Monthly Unemployment Rate, Seasonally Adjusted

Sources: Bureau of Labor Statistics and HRPDC
The Economy: Labor Force

While the trend in unemployment rates is indicative of changes to the labor market, the breakdown of the labor force is much more informative of labor market conditions. An economy’s labor force is defined as those who are either employed or actively seeking work, and the breakdown of the labor force is often used in conjunction with the unemployment rate to offer some perspective into the true state of the economy. Using the unemployment rate alone might not capture the entire picture; unemployment rates could be low or stagnant, but that is due to people dropping out of the labor force. Hampton Roads’ seasonally adjusted total labor force sits around 824,000 as of August 2021, roughly 41,000 (4.8%) below February 2020. During the same time period, when seasonally adjusted, Hampton Roads lost roughly 54,700 employed persons (6.5% decrease) and gained over 12,800 unemployed persons (51% increase). This mismatch indicates that there is a large number of previously employed persons who are no longer actively seeking employment. This could have a myriad of causes – early retirement, fear of contracting the coronavirus, cost and availability of childcare, transportation issues, and much more that may have been exacerbated by the onset of the pandemic. This issue is just one of many that makes the adoption of this CEDS update so important.

GRAPH 6
Monthly Labor Force Breakdown
Hampton Roads, 2005 - 2021

Sources: Bureau of Labor Statistics and HRPDC
The Economy: Income

Per capita income is one of the most widely available statistics on regional and individual economic well-being, and is derived by dividing total personal income by the population of a region. In 2019, Hampton Roads per capita income is roughly in line with other reference MSAs, albeit on the lower end. Low income disparity coupled with below average labor force participation rates help suppress the region's per capita income, but it is also useful to track how well Hampton Roads performs in relation to the state and the nation. Regional per capita income levels have steadily been dropping since 2011, but its performance compared to the Commonwealth's has held relatively steady over the same period, suggesting the same forces propel growth in incomes for both Virginia and Hampton Roads.

GRAPH 7
Relative Per Capita Income
Hampton Roads, 1969 - 2019

Sources: Bureau of Economic Analysis and HRPDC
The Economy: Military Employment

economy in Hampton Roads, as the region is home to several military bases, including the largest Navy base in the world. Since 1969, when data is first available, uniformed military personnel in Hampton Roads represented over 25% of all employment in Hampton Roads. Since then, the share of direct military income and employment in Hampton Roads has steadily declined. The Hampton Roads experience mirrors the national experience, where uniformed military employment has decreased, as employment in the defense contracting industry has increased. Following sequestration in 2013 (which included cuts to defense contracts), Hampton Roads has experienced some increases in federal contracts, which have buoyed the Department of Defense industry in the region. Regardless of the historical declines in regional military employment, the largest sector of the Hampton Roads economy, military income and employment in Hampton Roads has decreased, as uniformed military employment has decreased, as well.

**GRAPH 8**

Military Employment and Income
Hampton Roads, 1969 - 2019

Sources: Bureau of Economic Analysis and HRPDC
The Economy: The Port

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GRAPH 9
General Cargo in Hampton Roads, 1973 - 2020

Sources: Port of Virginia and HRPDC
The Economy: Tourism

Hampton Roads economy, produces a large amount of regional economic output and is a large part of the Virginia tourism industry, indicated by the outside dollars that tourists bring into the regional economy. The Virginia Tourism Corporation estimates the expenditures of tourists in each locality, indicating the outside dollars that tourists bring into the regional economy. In 2019, tourism spending rose to $5.2 billion, representing 5.1% of regional GDP and indicating that tourism is a significant driver of regional GDP.

At the time of writing, data for 2020 was not yet available by locality, but preliminary data for Virginia show that visitor spending in the Commonwealth was down by nearly 40% from the previous year, stressing the impact of COVID-19 on the tourism industry while also highlighting its importance.

GRAPH 10
Tourism Expenditures, Inflation-Adjusted
Hampton Roads, 2003 – 2019

Sources: Virginia Tourism Corporation and HRPDC
Demographics

Hampton Roads was the 37th most populous metropolitan area in 2019, behind San Jose, Austin, and Nashville, and ahead of Providence, Milwaukee, and Jacksonville. According to the U.S. Census Bureau, the region’s population grew to 1.73 million in 2019, adding just under 500 individuals to the region. While the region’s population growth is relatively steady, it lags behind several of its reference MSAs. The region has seen high levels of population growth when the federal government invests heavily in defense, such as during the 1960s and again at the end of the 1980s, but Hampton Roads has trailed national and state levels of population growth since the early 1990s, even during the most recent uptick in defense spending where population did not increase significantly in return.

GRAPH 11
Population Growth Rate

Sources: U.S. Census Bureau and HRPDC
Hampton Roads has consistently had a high level of births relative to deaths in the region, which in theory should lead to a much higher population growth. On average, the region has experienced significant out-migration (on average, roughly 1,000 persons per year for the last 10 years). Since this region usually has low levels of unemployment, it is theorized that this out-migration is partially driven by military families that start families in this region, but move as they leave the service, as well as recent college graduates who leave the region as they start their careers.

**GRAPH 12**

*Births, Deaths, and Net Migration*

*Hampton Roads, 1970 - 2019*

*Sources: Weldon Cooper Center, Virginia Department of Health, HRPDC*
Economic Background

Population

The share of the population 65 and older in Hampton Roads is growing, at 15% in 2019, increasing from 10% in 2000, likely because of the declining presence of military personnel and aging. This has pushed the region's dependency ratio to 59.2% (a record high) from a low of 54% in 2011. The dependency ratio indicates the number of potential dependents (persons 65 and older, as well as minors) an economy needs for every person in their prime working age (persons aged 20-65). It has traditionally been difficult for regions with a higher dependency ratio to make investments and grow their economy, although several factors can mitigate these risks.

Another change over time has been that the number of females has surpassed males in the region's population. This is likely derived by the decreasing number of military personnel in the region and the growth of the rest of the population and economy.

GRAPH 13
Hampton Roads Population Histogram, 2020

Sources: Weldon Cooper Center, HRPDC
Race and Ethnicity

Understanding racial and ethnic diversity is important in order to ensure equal opportunities for all persons, especially when evaluating regional employment trends. Hampton Roads has a significant African American population relative to that of the nation, as well as a smaller percentage of the population of Hispanic or Latino ethnicity when compared to the national average.

**GRAPH 14**
Hampton Roads Race & Ethnicity, 2019

- White: 59%
- Black/African American: 31%
- Asian: 4%
- Two or More Races: 4%
- Other: 3%

Population of Hispanic or Latino Ethnicity: 7.1%

Sources: American Community Survey, HRPDC
Education

The quality of education provided in Hampton Roads will determine future economic success in the region, with improved outcomes enabling a higher quality of life for the residents of the region. High school education is important to individual residents, as workers with high school equivalence have lower unemployment rates and higher wages than those who do not. K-12 education quality has the capacity to attract and retain residents with children when considering where to settle down.

Hampton Roads’ graduation rate has steadily grown, reflecting progress in the region’s school systems. In 2019 and 2020, Hampton Roads outpaced the Commonwealth with higher graduation rates, with 2021 rates negligibly behind.

GRAPH 15
High School Graduation Rates
Virginia and Hampton Roads, 2008 - 2021

Source: Virginia Department of Education
To produce and retain a workforce that can adapt to ever changing employer needs, the region needs to retain workers at every education level. Furthermore, to adapt to the knowledge-based economy of today, higher levels of education are essential. Graph 16 shows that in 2019, the proportion of adults with some post-secondary education was above the state average. However, Hampton Roads lags the Commonwealth in the rate of the adults with bachelor’s and graduate or professional degrees, but is slightly above that of the nation. In Hampton Roads, 19.5% of adults have a bachelor's degree; slightly below the national average of 19.8%. The region has room to improve to keep pace with the nation in developing a skills-based workforce that will attract employers.

**GRAPH 16**

**Educational Attainment**

*United States, Virginia, and Hampton Roads, 2019*

A key educational area for the region is in STEM (Science, Technology, Engineering, Mathematics) related fields. Graph 17 shows the degrees awarded in the computer and mathematics subset of STEM in Hampton Roads. From 2010 to 2018, the total number of degrees increased 51%. A large contributor has been the growth in the number of bachelor's degrees awarded in this subset, increasing 92% over the same period. While accounting for only 15% of total awards in 2018, the number of post-graduates has also grown significantly this decade, increasing 212%.

**GRAPH 17**

Degrees Awarded in Computer and Mathematical Occupations
Hampton Roads, 2010-2018

Source: JobsEQ. CIP Code 15-0000
Another key STEM subset is engineering. Graph 18 presents degrees awarded in engineering and engineering-related fields. The total number of degrees awarded in these fields increased 43% from 2010 to 2019. At the same time, the composition of degrees has changed significantly. In 2010, certificate awards accounted for 5.2% of all degrees awarded, increasing to 23.4% of all degrees awarded in 2018. Certificate awards have replaced associate degrees in this field, declining from 42% of all awards in 2010, to 20% in 2018. This reflects a continuing trend where workers prefer certificate awards in particular fields instead of a more general associate degree.

**GRAPH 18**

**Degrees Awarded in Engineering, Engineering Technologies, and Engineering-Related Fields**

*Hampton Roads, 2010-2018*

*Source: JobsEQ*
Infrastructure

The Hampton Roads region is home to a number of unique assets, including one of the largest natural harbors in the country, the third largest port on the East Coast, multiple military installations including the largest naval base, and some of the longest bridge-tunnel complexes in the world. The regional transportation system – which is made up of an intricate system of highways, bridges, tunnels, rail lines, and waterways – not only connects these important assets but also the places where people live, work, and recreate within and outside of the region. Maintaining an efficient transportation network is critical not only for important components of the regional economy including the military, ports, and tourism, but also for the quality of life in the region.

Regional transportation planning is led by the Hampton Roads Transportation Planning Organization (HRTPO). HRTPO is responsible for planning the region's future multi-modal transportation system, allocating federal transportation funds to projects and programs, and approving the implementation of regionally significant transportation projects through a continuing, comprehensive, and cooperative transportation process. The HRTPO Board is comprised of officials from 15 cities and counties in the region along with representatives from the Virginia General Assembly, Department of Transportation, Department of Rail and Public Transportation, regional transit agencies, and regional airports, among others.

Air Transportation

Hampton Roads is home to two commercial service airports: Norfolk International Airport (ORF) and Newport News-Williamsburg International Airport (PHF). While air traffic saw a significant decline in 2020 due to the impacts of the COVID-19 pandemic, over 2.2 million passengers boarded flights at the two commercial service airports in 2019, with nearly 2.0 million of those passengers traveling through Norfolk International. While the number of passengers using the region's airports only increased by 1% during the 2010s, 2019 boardings increased 28% from the low seen in 2015.

The increase in passenger levels in Hampton Roads since 2015 has outpaced many similar-sized airports. Among the 100 "small" and "medium" airports, Norfolk International ranked 36th highest in terms of the largest percentage growth in passenger volumes between 2015 and 2019.

As of late 2019 there were a total of 30 airports in 24 markets served nonstop from Hampton Roads, with the most popular destinations being New York City, Chicago, and Atlanta. An average of 97 commercial flights departed from Hampton Roads airports each day in 2019. This is an increase from 82 flights offered each day in 2018 but lower than the 110 flights offered each day as recently as 2010.

**GRAPH 19**

Annual Passenger Boardings at Hampton Roads Airports, 2010 - 2020

Source: Federal Aviation Administration & HRTPO
Economic Background

Water Transportation

The Port of Virginia serves as one of the pillars of the regional economy. The Port is comprised of four facilities in Hampton Roads: Norfolk International Terminals (NIT), Newport News Marine Terminal, Portsmouth Marine Terminal (PMT), and the Virginia International Gateway (VIG) facility in Portsmouth.

Just over 21 million tons of general cargo, primarily transported in containers, was handled by the Port of Virginia in 2020. While the amount of general cargo handled by the Port has remained largely unchanged since 2017, it increased 43% between the height of the economic downturn in 2010 and 2019, with a slight decrease from 2019 to 2020 due to the initial impacts of the pandemic. In addition, Hampton Roads continues to be the largest exporter of coal in the country, with over 26 million tons of coal being shipped through the region in 2020.

The region is also served by passenger and vehicle ferries. Hampton Roads Transit operates a passenger ferry service between Downtown Norfolk and Portsmouth, and VDOT operates vehicular and passenger ferry service across the James River between Surry County and Jamestown. The HRT ferry carried 312,628 passengers in 2019, while the VDOT ferry carried 936,000 vehicles that year.

Finally, the cruise industry also has a presence in Hampton Roads, with cruises calling at the Decker Half Moone Cruise Center in Norfolk. Carnival Cruise Lines resumed offering cruises from Norfolk as a home port in 2019 with cruises scheduled to the Caribbean. In addition, a number of other cruise lines provide scheduled stops in Norfolk during their itineraries. A total of 34 cruise ships visited Norfolk in 2019, with 19,832 embarking/disembarking passengers and another 24,147 transiting passengers visiting for the day.

GRAPH 20

General Cargo Tonnage Handled by the Port of Virginia, 2010-2020

Source: Virginia Port Authority & HRTPO
**Rail Transportation**

A number of passenger rail options are available in Hampton Roads. Amtrak provides passenger rail service to stations in Norfolk, Newport News and Williamsburg. The total number of passengers boarding Amtrak trains in the region has grown over the last decade, largely due to Amtrak’s introduction of service to Norfolk. While the pandemic caused rail travel to decline drastically in 2020, in Federal Fiscal Year (FFY) 2019 a total of 214,600 passengers boarded or departed Amtrak trains in Hampton Roads, with 95,500 passengers at the Newport News station, 54,600 passengers at the Williamsburg station, and 64,500 passengers at the Norfolk station.

In 2011 the Tide, a 7.4-mile light rail line, began operation in the City of Norfolk. The Tide carried 1.3 million passengers in 2019, which comprised 9 percent of all regional public transit trips in that year.

Rail connections are also critical to the movement of freight to and from the Port of Virginia terminals. In 2019, 34 percent of the general cargo handled by the Port of Virginia was transported by rail. This percentage has increased from 28 percent in 2010, and port officials expect this percentage to increase to as much as 50 percent in the future.

**GRAPH 21**

*Total Passengers Boarding or Departing Amtrak Trains in Hampton Roads, 2010-2020*

*Source: Amtrak & HRTPO*
Roadway Travel

After years of flat or decreasing roadway travel levels in Hampton Roads, regional traffic volumes started increasing again in 2015, and reached record levels in 2019 (declining to record lows in 2020 due to impacts of the pandemic). The amount of roadway travel is measured in terms of vehicle-miles of travel, which is the total number of miles every vehicle in the region travels over a period of time. VDOT estimates that there were nearly 42 million vehicle-miles of travel (VMT) on the typical day in Hampton Roads in 2019.

Another method of measuring the change in roadway travel is by using count stations that continuously collect traffic volume data throughout the entire year. In Hampton Roads there are approximately 80 locations equipped with continuous count stations, primarily on major roadways such as freeways and principal arterials. Based on the data collected at these locations, regional traffic volumes grew 13% between 2000 and 2019. However, after falling throughout the Great Recession and remaining largely flat earlier in the decade, regional traffic volumes increased 7.3% from 2014 to 2019.

Graph 22
Change in Regional Roadway Travel Based on Continuous Count Stations, 2000 - 2020

Source: VDOT, CBBT, various localities, and HRTPO
Economic Background

Roadway Infrastructure

The large number of rivers, bays, and streams as the Hampton Roads Bridge-Tunnel, Monitor-Merrimac Memorial Bridge-Tunnel, Coleman Bridge, James River Bridge, and High Rise Bridge provide a

Not surprisingly, Hampton Roads dominates VDOT's "Special Structures" list – which consists of movable bridges, tunnels, and complex structures – with 13 of the 25 Special Structures statewide being located in Hampton Roads.

There are 1,268 bridges in Hampton Roads. These important components of the roadway network, however, are aging. The median age of bridges in Hampton Roads is currently 41 years old, and 100 bridges (8%) are at least 70 years old.

Bridges may be classified as "structurally deficient," which are structures with elements that need to be monitored and/or repaired. Structurally deficient bridges typically need to be rehabilitated or replaced when they are determined to be "functionally obsolete." There were 45 bridges (3.5%) that were classified as structurally deficient in Hampton Roads as of 2021. The number of structurally deficient bridges has decreased nearly every year since 2014 when 80 bridges (6.6%) in the region were classified as structurally deficient.

The percentage of bridges that are classified as structurally deficient in Hampton Roads is better than most other comparable metropolitan areas. However, Hampton Roads ranks much lower in terms of the percentage of bridges that are classified as being in "Good" condition. At 29.2%, Hampton Roads ranks 4th lowest among the 39 metropolitan areas between one and four million people in terms of the percentage of bridges classified as being in good condition. This means that without additional investment, the number of structurally deficient bridges will likely increase faster in Hampton Roads in future years than in other metropolitan areas.

Pavement condition in Hampton Roads has greatly improved in recent years. As recently as 2010, more than one third of state-maintained Interstate and Primary roadways in Hampton Roads had a deficient pavement condition. After extensive repaving efforts throughout the region, only 10% of state-maintained Interstate and Primary roadways in Hampton Roads had a deficient pavement condition in 2019. Interstates in Hampton Roads have particularly improved, with only 6% having a deficient pavement condition in 2019. This surpasses VDOT's goal that no more than 18% of Interstate and Primary roadway pavement condition be classified as deficient.

GRAPH 23

Structurally Deficient Bridges in Hampton Roads, 2011 – 2021

Source: VDOT, FHWA, and HRTPO
Commuting Patterns

Hampton Roads is an economically interdependent region, and the region’s traffic and commuting reflect it. This is highlighted by the percentage of workers that work outside of their locality of residence, which is an area where Hampton Roads ranks particularly high. In 2019, 48% of all workers in Hampton Roads worked in a jurisdiction that was different than the one they resided in. This percentage is higher than that seen in 1990 (44%) but is lower than the high that was experienced in 2005 (50%). The percentage in Hampton Roads is higher than the percentage seen in most other areas, ranking 3rd highest among the 39 large metropolitan areas with populations between one and four million people.

In 2019, 81% of commuters in Hampton Roads drove alone to work. While this is up from 73% in 1990 and 79% in 2000, it has varied between 79% and 83% since 2010. In turn, the percentage of commuters in Hampton Roads carpooling to work has decreased from 14% in 1990 to 12% in 2000 and to 8% in 2019. The percentage of commuters using public transportation in Hampton Roads has also decreased, while the percentage that commute via bicycling/walking has slightly increased since 2000. According to the US Census Bureau, the mean travel time to work in Hampton Roads was 24.6 minutes in 2019. Although the regional mean travel time to work has largely remained between 23 and 25 minutes throughout the 2000s, 35% of commuters in the region had a commute of 30 minutes or longer in 2019, and 6% of commuters had a commute of 60 minutes or longer.

**GRAPH 24**


Source: US Census Bureau & HRTPO
The Hampton Roads region will face many transportation challenges over the next several decades. These challenges include enhancing mobility and accessibility for all users, minimizing negative impacts to and from the environment (such as sea level rise), and identifying sufficient funding to maintain and improve the transportation system. To help meet some of these challenges while maximizing scarce transportation funds, the HRTPO develops a Long-Range Transportation Plan (LRTP).

The LRTP is a comprehensive multimodal blueprint for infrastructure improvements covering a minimum twenty-year period. The LRTP is developed through a collaborative process involving many regional stakeholders and the public to prioritize transportation needs and identify anticipated transportation revenues from federal, state, regional, and local sources to cover these needs.

The current LRTP for Hampton Roads has a planning horizon of 2045 and was adopted by the HRTPO Board in June 2021. To effectively address potential changes between today and the year 2045, multiple growth scenarios were used to evaluate and prioritize approximately 260 candidate projects with a total estimated cost of $70 billion.

HRTPO staff used a Regional Scenario Planning Framework, the updated HRTPO Project Prioritization Tool, and the HRTPO Title VI Environmental Justice Methodology to analyze the technical merits, regional benefits, and potential impacts of candidate projects. An improvement to the updated HRTPO Project Prioritization Tool includes enhanced resiliency measures. Hampton Roads is vulnerable to sea level rise and is experiencing land subsidence, or sinking land, in some areas. These issues combined with threats from potential storm surge create significant vulnerabilities to the region's transportation infrastructure, which can be exacerbated by flooding on evacuation routes during severe weather. Factoring in these vulnerabilities along with other technical criteria across different growth scenarios resulted in the identification of the most robust projects to include in the 2045 LRTP based on the anticipated transportation revenue forecast.

The 2045 LRTP identifies $17 billion to maintain the existing transportation system and an additional $13.7 billion for multimodal projects and studies that will help reduce congestion, increase reliability, support economic vitality, and improve the quality of life for residents across Hampton Roads. The Plan contains major improvements to bridges, tunnels, roads, and interchanges across the region. The Plan also includes enhanced transit service, planned Bus Rapid Transit on the Peninsula, and new regional bicycle and pedestrian facilities. As a system, these planned investments will help achieve the overall vision of an adaptive transportation system that seamlessly integrates transportation modes for all users.

Over the past five years, improvements have been made to the region's interstate system. This includes the widening of I-64 on the Peninsula, a major thoroughfare that many residents use on their daily commutes as well as the primary way drivers enter and exit the region, as well as improvements to the I-64/I-264 Interchange, a major bottleneck for the region. Construction is currently underway on several other large regional priority projects. These include widening another section of I-64 on the Peninsula, more improvements to the I-64/I-264 Interchange, the widening of I-64 on the Southside (including the High-Rise Bridge), and the $3.8 billion widening of the Hampton Roads Bridge-Tunnel and adjacent sections of I-64. The 2045 LRTP includes these and other regional priority projects that represent main arteries in the region, and are significant choke points for traffic. The I-64 connection to the Richmond Region is crucial for the long-term success of Hampton Roads; however, of the 29-mile gap, only 9 miles are within the scope of the 2045 LRTP.
Economic Background

Industry Clusters

The Hampton Roads regional economy has often been referred to as a three-legged stool, consisting of government spending, the port and tourism. The largest leg on the stool, government spending, has left the private sector exposed to contractions in federal spending since a large part of the private sector is focused on government contracting.

In 2016 the Hampton Roads Cluster Mapping Project identified 8 industry clusters to assist economic development partners in focusing their business development efforts and diversifying the regional economy. Industry clusters provide a useful organizing framework to measure the competitiveness of particular sectors based on local strengths and national trends. The Cluster Mapping Project leveraged both quantitative and qualitative analysis. The quantitative analysis used publicly available labor market data and calculated location quotients for each industry cluster. A location quotient is a simple way to measure the specialization of a region in a certain cluster, where the larger the location quotient the more specialized and export-oriented firms are in the cluster. The qualitative analysis used interviews with firms in each cluster. The interviews helped validate the quantitative analysis and asked about each firm's level of business activity inside and outside the region to shed light on what each cluster needs to grow.

The industry clusters include: Advanced Manufacturing, Food and Beverage Manufacturing, Ship Repair and Ship Building, Port Operations, Logistics and Warehousing, Life Sciences, Business Services, Information Analytics and Security and Tourism and Recreation. Table 1 shows an overview of data on the eight clusters in 2015. The eight clusters represented 153,215 private jobs, 20 percent of the total employment of the region. They were chosen for their historic significance, future growth potential, strong connection to existing regional assets, ability to pivot toward non-federal markets and relatively high average wages. The industry clusters already play a significant role in the economic fabric of the region, because growing existing clusters is a much more pragmatic approach than creating clusters.

Advanced Manufacturing (MAN)

The advanced manufacturing cluster is defined by an industry definition championed by the Brookings Institution in their recent study on advanced industries. The requirement for an industry to make the Brookings' list was Research and Development (R&D) spending in the 80th percentile or $450 per worker and 21 percent or more of the occupations requiring STEM education. The advanced manufacturing cluster in Hampton Roads had over 10,000 employees with an average wage of $65,632.

Ship Repair and Ship Building (SRB)

The ship repair and ship building cluster has been a historic strong point in the region. The cluster includes shipyards along with firms that supply products to the industry - electronics, instrumentation, chemicals, metals and firms that supply services – marine architects, marine attorneys and marine insurance. This cluster has the largest location quotient of any cluster in the analysis (41.29 in 2015).

Food and Beverage Manufacturing (BEV)

This cluster is composed of firms representing old stalwarts of the region (ham, peanuts, seafood and cotton) and new niches (breweries, distilleries and wineries). However, the cluster is broadly defined – food production (including products from both land and sea), farming and farm management and food equipment manufacturing. The food and beverage manufacturing cluster also had a location quotient above 1, suggesting it is an export-oriented industry, however the average wage in this cluster is second lowest of the clusters analyzed at $43,538.

Port Operations, Logistics and Warehousing (PLW)

The port operations, logistics and warehousing cluster consists of the various port terminal facilities in the region. However, this cluster also extends beyond the Port of Virginia itself and includes material moving, shipping services and warehousing. There were approximately 14,500 jobs in this cluster in 2015, which has been stable over the previous 10 years.
Economic Background

Life Sciences (LIF)

The life sciences cluster includes two types of firms – firms that manufacture health related products (Medical Manufacturing) and labs that engage in biotech related research and development (Medical R&D). This is still a relatively nascent industry in the region with only 1,767 employees in 2015 and a low location quotient of 0.33.

Business Services (BUS)

The BUS cluster is comprised of financial service companies (mostly private banks) and business service companies, such as law offices and engineering services. However, consulting services, often included in BUS, are in the information analytics and security cluster. Business services have a location quotient close to 1, suggesting that the Hampton Roads business services industry cluster is not any more specialized than the rest of the U.S. The BUS industry cluster has a very high average wage at $80,497.

Information Analytics and Security (IAS)

The sub-industries in the IAS cluster are broadly categorized into three areas: software publishing, computer related services and data analytics and consulting services. Traditionally, the industries in this cluster have been heavily connected to federal spending. This industry cluster has seen solid growth over the previous 10 years (4,145 employees), however the location quotient is 1, suggesting the cluster is not any more specialized than in the rest of the U.S.

Tourism and Recreation (REC)

The region is rich with tourist and recreation destinations, such as historic sites, museums, amusement parks and golf courses. The REC cluster in Hampton Roads is composed of service establishments such as hotels, motels, restaurants and bars serving both tourists as well as the local population. Thus, determining the export-oriented aspects of REC in contrast with services for the local population is challenging. This is the largest cluster in terms of employment in 2015 (45,583), but also the lowest average wage ($22,296).

Unmanned Systems and Aerospace

Unmanned Systems is a priority emerging cluster in Hampton Roads, and is supported by significant regional assets including NASA Langley Research Center, National Institute of Aerospace, ReAKTOR (Peninsula Technology Incubator) and the Virginia Institute of Marine Science at the College of William & Mary (VIMS). Estimated average annual wages in the unmanned systems sector ($86,480) are the highest of all the regional priority clusters.

Progress Since Original Report

Table 1 shows the comparison of the employment level, average wage and location quotient between 2015 and 2019. Data for several of the clusters, REC, BUS and IAS, were unavailable because of inadequate information from the original report on how the data were adjusted to capture only export-oriented employment. Nonetheless, the business services cluster, defined by US Cluster Mapping in JobsEQ, does provide a useful comparison for BUS and IAS.

Table 1 shows mixed signals for the region between 2015 and 2019. Beverage Manufacturing, Port Operations, Logistics and Warehousing, Ship Repair and Ship Building, and Port Operations all saw increases in employment and average wages between 2015 and 2019. Although employment and average wage growth in several of the industry clusters represents good news for the region, only Ship Repair and Ship Building saw an increase in the location quotient over the same period. The change in the location quotient provides some evidence on how each industry’s regional specialization is changing relative to the U.S. The region is becoming more specialized in SRB, and potentially business services, however it is becoming less specialized in many of the other industry clusters.
Economic Background

Water Technology: A New Cluster

The Hampton Roads region faces a significant amount of water-related issues. Those issues include recurrent flooding from heavy rain, along with tidal flooding and beach erosion from tropical systems. Furthermore, those issues are forecast to worsen over time due to sea level rise and land subsidence. The regional demand surrounding water-related technology products and services has already stimulated significant business activity, making it a prime target as a new industry cluster.

A 2017 report for the Commonwealth Center for Recurrent Flooding Resiliency analyzed the prospects for a water technology cluster in the region. The report highlights how a water technology cluster in the region would contain a mix of firms in construction, engineering, mapping, environmental consulting and academia. The strength of a water technology industry cluster in the region would inevitably come from the ability of firms to export their goods and services around the country or even the world.

The report displays location quotients to show how specialized (export oriented) industries in water technology are compared to the U.S. as a whole. Several industries suggest significant specialization in the region logistics services (2.49), engineering services (2.39), civil engineering construction (1.94) and water and sewer line construction (1.71). On the other hand, several important industries have quite low location quotients, such as environmental consulting (0.42) and industrial construction (0.23).

Water technology provides the region with an opportunity to establish a nationally recognized brand and industry cluster. However, similar to several of the other aspirational clusters, it will take a commitment from local firms, local cities and the Commonwealth. The prerequisites for a regional water technology cluster could include a local trade association, a research park to facilitate networking among cluster firms and provide a central location for auxiliary firms, and an export-oriented business strategy for the existing firms in the cluster, among others.

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Source: JobsEQ

Water Technology: A New Cluster

Prospects for a water technology cluster in the region would contain a mix of firms in construction, engineering, mapping, environmental consulting and academia. The strength of a water technology industry cluster in the region would inevitably come from the ability of firms to export their goods and services around the country or even the world.
SWOT analysis and strategy development
Over the past decade, organizations within Hampton Roads have diligently worked to create plans to foster economic development, workforce development, industrial cluster development, and a host of other objectives. These efforts form a body of knowledge, but also highlight the challenge to developing, refining, and implementing a unified strategy in a region defined by competing interests and heterogenous jurisdictions. These challenges, however, are not unique to Hampton Roads. The poor performance of strategic plans can often be found in the weak linkages between policy making, planning, and budgeting. Developing and maintaining institutional linkages that facilitate tradeoffs to be made in the public interest is difficult, at best. There must also be a mechanism by which strategy and affordability are explicitly linked, otherwise resource constraints become the focal point of any discussion.

Furthermore, charting a path forward for Hampton Roads during the COVID-19 (“Coronavirus”) pandemic is an exercise fraught with uncertainty. Decisions on strategic and operational actions to invigorate the regional economy while building economic resiliency must be aligned with strategic intent. We must, in essence, choose activities and perform them differently than our competitors.

The development of a regional strategy must ask and answer the difficult question: what unique position will the Hampton Roads region be able to achieve and sustain in the coming decade?

The purpose of this section is two-fold: understand where we are as a region and identify where we want to go. To understand where we are, we examine the strengths and weaknesses of the regional economy. We can, through specific action, leverage our existing strengths and mitigate our weaknesses. We must also discuss the external environment, that is, the opportunities and threats that shape the outcomes of the regional economy.

Using the overview of the regional economy and the SWOT analysis, we then develop a regional strategy for economic development. The strategy establishes the framework to define the outcomes of interest, that is, the benchmarks against which we will measure success or failure over time. In the following section of this report, we develop these outcomes and the strategic directions necessary to achieve these outcomes.

Hampton Roads has distinctive strengths that can be leveraged to foster economic recovery and build resiliency. The region’s role in national security, for example, continues to provide the foundation for economic activity and has reduced economic shocks in previous recessions. Reliance on federal government spending, and in particular, the Department of Defense (DoD) procurement and operation budget, however, has also inhibited the ability of the region to foster private sector development. Externally, the region is poised to take advantage of the continuing shift toward renewable sources of energy and its competitive cost structure can attract firms in the post-COVID environment. The region, however, must also adapt to sea level rise, the ongoing efforts of regional competitors to improve their economies, and the post-COVID economic and social environment. In the following sections, we explore each of these elements in greater detail.

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SWOT Analysis and Strategy Development

**Strengths**

The Hampton Roads region has historically been regionally competitive in the following areas:

1. A historic and continuing role in the security of the nation;
2. Demographic diversity;
3. The concentration of high-quality institutions of public education;
4. An educated private sector workforce;
5. A strong federal workforce across agencies and departments;
6. Relatively competitive business costs;
7. Domestic and international market access through the Port of Virginia;
8. Strong and effective public health institutions of learning and practice in the post-COVID environment;
9. A relatively high-quality of life;
10. Vibrant tourism and recreation.

### Historic Role in National Security

The Hampton Roads region is home to 18 military bases (including two joint bases), five of the six branches of the military services, and approximately 140,000 military servicemembers and federal employees. Not only is the region home to the nation's largest naval base, it hosts a variety of military and federal facilities that conduct theoretical and applied research. NASA's Langley Research Center, the first civilian aeronautical laboratory in the nation, is conducting research on unmanned systems and computational methods. The Department of Energy's Thomas Jefferson National Accelerator Facility in Newport News delves into topics in nuclear physics research in concert with industry and university partners.

The presence of the federal government is a source of strength for the regional economy. Approximately 40 percent of economic activity in the region is either directly or indirectly the result of DoD spending. It should be no surprise that recent increases in DoD budgeting have led to increased economic activity in the region. Average compensation levels are significantly higher for military personnel and federal civilian employees. According to data from the Bureau of Economic Analysis, in 2019 the average compensation of a military service member in Hampton Roads was $100,764. The average compensation in 2019 of private nonfarm employees in the region was $44,338. In other words, the average military servicemember generated the compensation of approximately 2.2 private sector jobs. With the emergence of COVID-19 and the imposition of social distancing measures, many of these employees were also able to transition to remote work, unlike a significant proportion of private sector counterparts.

### Demographic Diversity

Hampton Roads is a demographically and culturally diverse region. Diversity occurs across a range of dimensions, including race, education, ethnicity, and culture. The increasing diversity of the region over time has led to conversations about inequalities in education, income, and wealth and positions of public leadership. Having these conversations at the personal, organizational, city and county, and regional level may be difficult, but Hampton Roads has been increasingly willing to examine its history, culture, and institutions. These conversations and resulting action are a strength the region can...
SWOT Analysis and Strategy Development

Leverage to attract new residents, businesses, and investment.

Of the region's approximately 1.7 million residents in 2019, approximately 542,000 were Black or African American, 71,500 were Asian, and 126,000 were Hispanic according to the US Census 2014-2019 American Community Survey. Relative to the Commonwealth and the nation, Hampton Roads' population was comprised of a higher percentage of Black or African American residents. The median household income of Black or African American households was higher in the region than the nation and for most of the Commonwealth's metropolitan areas. Yet, we would be remiss to also recognize that Black or African American household income was only 63% of White household income in Hampton Roads in 2019. Research from the Federal Reserve Bank Board of Governors also finds that Black and African American households have substantially less wealth than White or Asian households. Our relative strength in demographic diversity should not be an excuse for complacency but, instead, should motivate our efforts to improve the fortunes of all the residents of Hampton Roads.

Institutions of Higher Education

The Hampton Roads region is home to seven public and four private institutions of higher education. Over 12,000 undergraduate students and 3,600 graduate students earned their degrees from these institutions in 2020. These institutions of higher education include 2-year community colleges, 4-year colleges primarily focused on undergraduate education, and research universities that combine teaching and research. Not only do these institutions produce skilled graduates that can join the workforce of the region, faculty and staff also engage in research projects at the local, state, federal, and international level.

Strong growth in graduate output over the last decade (+7,300 awards) raised the region's educational attainment rates slightly above the national average. Output of bachelor's degrees increased the most at 51 percent. Still, the talent pipeline remains heavily concentrated at mid-level/Associate's degrees, driven by the region's military population. Some of the fastest growing programs are Construction, Mechanics & Machine Repair, and Science & Engineering at the certificate level; Healthcare, Personal Services, and Creative Design at the Associate's level; and Software and Family Development at the Bachelor's level. Healthcare continues to produce the most degrees, providing significant new talent to one of the region's largest industry clusters.

An Educated Private-sector Workforce

Over the last decade, industry and K-12 educators have improved communication and collaboration with specific attention on future workforce needs. Across the region, there has been a marked increase in the number of career pathways offered to high school students. High school students, in some programs, can now graduate with an occupational license or credential. These continuing efforts are crucial to developing a workforce capable of meeting future industry needs.

Hampton Roads also benefits from the significant number of military exits that occur annually from military bases located in the region. Servicemembers who are exiting the military at the end of an initial contract or retiring after completing several contracts have distinctive skillsets and experiences that are often transferrable to jobs in the region's target industries. These exits provide an influx of talent that can foster economic development in the region, if sufficiently leveraged in existing and emerging industrial clusters.

Strong Federal Workforce Across Agencies and Departments

Hampton Roads is not only home to a large number of military personnel, it is also a region that has an average of 59,000 federal civilian employees in the region and the average annual employment in the region and the average annual employment is also a region that has an average of 59,000 federal civilian employees. In other words, the average federal civilian employee

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^ State Council of Higher Education for Virginia, Completions Summary, 2020
The presence of the federal civilian workforce enhances the region's economic resiliency in times of crisis. Many federal employees transitioned quickly to remote work during the COVID-19 crisis. Federal employees also serve in key community leadership positions and volunteer across Hampton Roads. Federal civilian employment levels have climbed over the past decade, boosting the overall level of compensation in the region.

### Competitive Business Costs

A 2018 analysis of Hampton Roads business costs found that the region fares well relative to other metropolitan regions in the United States. A number of industry clusters, to include data centers, distribution centers, shared-services, software development, and transport technologies, all offered high-quality services and relatively competitive business costs. The value proposition for the region is built upon the quality and flexibility of human capital, relatively competitive costs and domestic and international market access.

### Domestic and International Market Access

Hampton Roads is among a select number of large metropolitan areas of the United States that have a year-round, deep-water, internationally focused port. The Port of Virginia not only provides access to international markets to businesses located in the region, it is an engine of economic growth for Hampton Roads and the Commonwealth. The Port of Virginia handled approximately 21.1 million tons of cargo traffic in 2020. As the Commonwealth is investing in updating landside facilities and dredging the port to allow for improved traffic flows, the competitive position of the Port of Virginia is likely to improve in the coming years.

### Health Institutions of Learning and Practice

The COVID-19 crisis illustrates the importance of public health for economic activity. Hampton Roads is home to Eastern Virginia Medical School (EVMS) and several high-quality nursing programs. The region's higher education institutions have also worked with local Community Service Boards (CSBs) on improving patient outcomes. During the onset of the pandemic when COVID-19 tests were scarce, the ability of Sentara Healthcare to generate its own test and offer it to residents underscores the capacity for public health interventions in the region.

Hampton Roads can leverage its private and public health institutions to attract businesses and new residents in the coming years. Regions that lack these institutions will be at greater risk from emerging diseases or will have to take more strict measures to control the spread of emerging public health threats.

### High Quality of Life

While it is empirically difficult to quantify “quality of life,” numerous reports and surveys refer to the region as having a relatively high quality of life. A reasonably temperate climate, access to water and other forms of recreation, cultural and historical resources, and an emerging reputation for unique places and events form this perception. While quality of life may not be the single factor in a decision to relocate to Hampton Roads, it can be an influencing factor and the region can capitalize on this perception.

### Tourism and Recreation

Given the importance of the accommodation and food services industry to the region, we should recognize that tourism and recreation are a strength of the region. Undoubtedly, millions of people visit Hampton Roads annually for business and recreation. The Virginia Tourism Corporation (VTC) estimated that direct tourism expenditures in Hampton Roads were over $5.25 billion in 2019. Hotel revenues collected in 2019 were at a record high of over $900 million, with COVID-19 causing a significant decline in 2020 with just $577 million. Hotel room revenue may fall further in FY 2021, depending on the impact of COVID-19 on domestic and international travel. One of the primary reasons given in surveys for visiting the region was recreation, followed by cultural and historical sites, and restaurants and entertainment. The success of the “Something in the Water” festival in 2019 points to cultural institutions that can be leveraged to improve economic growth in the coming years. Sports and other forms of recreation also foster travel to the region, and Hampton Roads can leverage this to improve economic growth in the coming years.

Continuing to invest in tourism and recreation is important not only for the economy but also for the overall quality of life.
**Weaknesses**

- Dependence on Federal Spending
  - **Hampton Roads** is either direct federal spending, spending from individuals and businesses directly
  - **in the region** or **spending that results from the rise in economic activity due to the federal government's presence.**
  - **Revenue:**
    - **4 out of every 10 dollars** of output in Hampton Roads is either direct federal spending, spending from individuals and businesses directly
    - **in the region** or **spending that results from the rise in economic activity due to the federal government's presence.**

- Private Sector Job Growth
  - While economic growth in Hampton Roads increased from the malaise after the Great Recession and sequestration, this growth was fueled primarily by increases in DoD spending. While numerous reports have identified federal government dependence as a strength and weakness of the regional economy, the growth of the private sector in Hampton Roads has lagged the state and the nation. Without sustained growth in private sector establishments

- **Outmigration of Residents**
  - to other domestic locales

- **Quality of Infrastructure and Transportation**

- **Lack of Affordable Housing**

- **Inequalities in Income, Wealth, and Education**

- **Relatively small emerging industrial clusters**

- **Limited research and technology development base**

- **Lack of regional collaboration and cooperation**

- **Corporate Headquarters**
SWOT Analysis and Strategy Development

Hampton Roads Comprehensive Economic Development Strategy

SWOT Analysis and Strategy Development

In comparison to neighboring regions, the Hampton Roads area has lagged due to the loss of manufacturing jobs, the region's economic prospects in the next expansion will be relatively dim compared to its competitors. As previously noted, it took the region ten years to recover all the jobs lost during the Great Recession – for every job added in Hampton Roads from 2010 to 2019, the nation added two. Private sector job growth took another hit in 2020 with record declines in response to the COVID-19 pandemic, and as of late 2021 recovery has plateaued and remains well below both pre-pandemic and pre-Great Recession levels.

Hampton Roads lacks concentration in any nationally competitive private-sector industries outside of Shipbuilding. From an occupational standpoint, recent growth mostly occurred in unskilled or semi-skilled occupations supporting the Retail, Entertainment, and Logistics industries, though increases were also seen in Healthcare, Business, and Computer-related occupations which require more highly skilled and technical talent. Long-term investments in education and workforce development will require time to increase the attractiveness of the region to private sector employers.

Outmigration

A signal of the attractiveness of a region is whether it is attracting new residents or losing residents to other domestic locations. While residents may leave for a variety of reasons, if there is a continued outmigration of residents over time, it is a signal of the relative attractiveness of a region. Over the last 15 years, Hampton Roads' population grew modestly while the composition of the population changed significantly. Over the last five years, the Hampton Roads population has grown by just over one percent.

While an initial glance at the data may suggest that Hampton Roads is attracting younger residents, care must be taken to recognize the flows of military personnel. If we examine adults 35 to 54, we observe that the region has lost substantial ground relative to its peers. The inability to retain those in prime working ages may force companies to look outside the region for more experienced talent. As the nation, Commonwealth, and region age in the coming years, retaining and attracting talent will be a crucial component of any economic development strategy.

Infrastructure and Transportation

Hampton Roads has two commercial airports: one in Norfolk and one in Newport News. Splitting passenger traffic between the two airports has likely reduced opportunities for expansion. A reasonable course of action would be to explore the possibility of consolidating operations in one airport or to collaborate with Richmond on the construction of a regional airport that would serve both metropolitan areas. Larger airports attract more airlines and a greater set of alternatives with respect to domestic and international travel. If it is relatively difficult to travel to Hampton Roads by air, it will make it harder to attract businesses relative to competitors with larger airports with more travel options.

Affordable Housing

Several surveys have found that the quality of life in Hampton Roads is perceived to be high, especially when compared to larger metropolitan areas with high housing prices and large volumes of traffic. On the other hand, rental and single-family housing in the region appears to be relatively expensive when compared to the median income. Because median housing prices have increased faster than median income over the past decade, and especially so in the past 18 months in response to the COVID-19 pandemic, fewer residents can afford to purchase a home. Multi-family housing rental costs have increased faster than single-family housing. If there is one glimmer of good news, it is that housing and infrastructure and transportation are crucial components of any economic development strategy.
The challenge of affordable housing is important given the proportion of residents employed in the accommodation and food services and retail trade sectors. These sectors support travel and tourism in the region and without affordable housing, employers will find it more difficult to staff establishments that provide services to visitors. A lack of adequate housing reduces the attractiveness of the region to potential employers and residents.

The region's reputation as a tourism destination creates a market for higher housing costs while its unique geography compounds issues with transportation and accessibility. Previous reports have found evidence of how the perception of the lack of affordable housing affects business location decisions. In one report, employers expressed concern over the impact that a lack of affordable housing and insufficient public transportation have on their access to talent.

Inequities in Income and Wealth

Median household income for all households in Hampton Roads was $66,759 in 2019, compared to $74,222 in Virginia, and $62,843 in the United States. When we examine median household income by race, however, we find that several groups have higher levels of household income in Hampton Roads than the national average. Black or African American median household income was $48,408 in 2019, above the national average ($41,935), but below Virginia ($51,654). Asians were the only minority group in the region to have a lower median household income than the group's corresponding national average.

While the median income for Black or African American households in Hampton Roads is higher than the national average, they had significantly lower levels of median household income than White households. National level data provides insight into how these income disparities affect wealth accumulation. In the United States, the median wealth of White households was almost 10 times that of Black or African American Households. Mean net housing wealth was lower for Black or African American households ($94,400) relative to White households ($215,800). Black or African American households also held a higher proportion of their wealth in housing and thus were more exposed to economic shocks that negatively affected housing prices.

Small Emerging Industrial Clusters

While Hampton Roads has a comparative advantage in several industrial clusters, primarily those associated with manufacturing and closely linked to federal spending, other clusters are relatively small and have not demonstrated robust job or wage growth over the last decade. Port Operations, Logistics, and Warehousing, Cyber Security, Water Technologies, and Unmanned Systems and Aerospace have been previously identified as priority clusters for the region. The average establishment size in Hampton Roads for these clusters is below the U.S. average and employment growth has lagged that of the nation. In other words, the firms in these clusters are relatively small and growing more slowly than the national average. Without a concerted strategy to promote the development of these clusters, it will be difficult to attract firms and talent to the region.

Limited Research Base

Innovation in Hampton Roads is key to economic development. The expansion of existing firms and the creation of new firms is fundamental to growing jobs in the region. Yet, the perception of the region is that it remains focused on defense and defense-related technologies and is unable to capitalize on innovation in the private sector. If we examine the level of research funding to institutions of higher education in Hampton Roads, the sum for the region is less than some peer universities in peer competition areas. In other words, while progress has been made in terms of research funding for universities and colleges, there is much work to do to close the gap.

Examining real (after-inflation) federal research and development expenditures shows that these expenditures peaked nationally in 2004 and have continued to decline relative to GDP. Defense research and development expenditures fell by...
SWOT Analysis and Strategy Development

Regional Fragmentation

Over the last decade, expenditures were concentrated in fewer systems. Given the region’s ties to federal spending, especially defense spending, it is likely that changes in federal research and development expenditures influenced the pace of innovation in Hampton Roads.

Virginia differs from other states in that cities and counties in Virginia are autonomous. As stated in the Encyclopedia of Virginia website, “Virginia's 39 incorporated cities are politically and administratively independent of the counties with which they share borders, just as counties are politically and administratively independent of each other.” In addition to having autonomous political subdivisions, the code of Virginia has historically made it very difficult for annexation to occur in the Commonwealth, severely restricting the ability of Virginia’s urban centers to grow in the same way that most American cities have grown. As jurisdictional borders in Virginia became rigid, metropolitan regions have grown in a fragmented fashion. Hampton Roads was especially susceptible to fragmented growth, as the region’s large defense presence and numerous employment centers resulted in a multi-nucleic metropolitan area.

In recognition of the fragmented nature of Hampton Roads, there are a multitude of impressive efforts in place that are actively working to collaborate and cooperate across the region. Localities across the region work together collectively on issues related to workforce development, emergency management, transportation, economic development, water resources, planning, solid waste, transit, sanitation, and maintaining the region’s federal assets. Business leaders, local elected officials, and local government staff are continuously working together to find regional solutions to regional problems. Due to the politically fragmented nature of the region, collaborative efforts are always ongoing, and there is always work to be done.

A recent effort to address perceptions of Hampton Roads noted that the region does not have a name issue, it has a marketing issue, noting there is no unified marketing strategy for the region. Instead of one name and one marketing campaign, there are numerous competing campaigns. As the report aptly notes, “It’s hard to promote a region if you don’t know about it or act like one.” With more than 1.7 million residents, Hampton Roads has struggled to leverage its combined resources to not only market itself, but also to attract businesses and new residents. While the cities and counties have distinctive characteristics, data shows that residents of the region typically live in one jurisdiction and work in another. Yet, instead of duplication of systems, there is a multiplication of systems and increased administrative costs due to political fragmentation.

Regional fragmentation will continue to be an issue that the residents of Hampton Roads and Virginia must work to address in order to remain competitive with other metropolitan areas across the nation and the globe.

Lack of Corporate Headquarters

Attracting and retaining corporate headquarters to the region is an increasingly difficult prospect. Corporate headquarters are increasingly concentrated in areas with other corporate headquarters. The relocation of corporate headquarters to larger metropolitan areas is driven by a variety of factors, including talent access, travel availability, and amenities. The movement of corporate headquarters from smaller metropolitan regions is not limited to Hampton Roads and should be viewed as a larger trend across the United States. Rather than focusing on attracting a corporate headquarters from the list of Fortune 500 firms, Hampton Roads should focus its resources on retaining headquarters and growing talent and firms in the region. In other words, if you can’t attract large headquarters, create an environment that leads to the creation and retention of successful firms. These ‘home grown’ firms attract talent and investment to the region and given the dynamism of smaller companies, may foster increased economic growth.

Hampton Roads noted that the region does not have a name. However, the region has a strong identity and a rich history. Hampton Roads should focus its efforts on building its brand and promoting its unique qualities. The region has a diverse economy, a beautiful waterfront, and a strong sense of community. Hampton Roads should leverage these assets to attract businesses and residents alike. In conclusion, Hampton Roads has the potential to be a thriving metropolitan area, but it must work to address its regional fragmentation and lack of corporate headquarters if it is to achieve its full potential.
**Opportunities**

Opportunities are external events or conditions that can be acted upon by a region to promote economic development. Some opportunities are fleeting, while others persist over time. Hampton Roads' regional competitiveness could be improved if it took advantage of the following opportunities:

1. **COVID-19**
2. **Sea Level Rise**
3. **Increasing importance of advanced manufacturing**
4. **Onshoring of manufacturing**
5. **Technology transfers from federal facilities**
6. **Business ready sites**

### COVID-19

The COVID-19 pandemic and ensuing downturn in economic activity is an opportunity and a challenge for the region. The quick transition of many firms to remote or hybrid work has illustrated that operations can continue and, in some cases, thrive outside of what was once thought of as the typical office environment. Anecdotal evidence suggests that firms are looking at the costs of locating in dense urban areas as the benefits of colocation are likely less if social distancing measures persist. Given that the last decade has seen the emergence of three coronaviruses (SARS, MERS, and COVID-19) along with other public health threats, the attractiveness of a region may now include its ability to respond to an emerging public health crisis.

Given the strong private and public health care and social assistance sector, the region can leverage the following strengths in the post-COVID environment. The flow of graduates from medical programs is another strength that the region could leverage in the post-COVID environment. The ability of broadband and useable office space plus cost-competitiveness are likely to only increase in importance in the near-term.

### Sea Level Rise

Sea level rise is an external condition that is largely beyond the control of the residents and policymakers in Hampton Roads. Sea level rise, however, is an opportunity for the region to further develop its expertise and industrial cluster in Water Technologies. Given the projections on sea level rise over the next fifty years, developing this expertise in the region would be beneficial in terms of exporting goods and services to other locales domestically and internationally.

Sea level rise also is an opportunity to foster collaboration and cooperation among the jurisdictions in the region to build economic resilience. A flood control project in one city could be undermined by actions in another city, so close coordination is required to maximize benefits and minimize costs. Approaching sea level rise from an experimental perspective may also foster innovation in the region, attracting investment, firms, and talent.
Information, Information Technology, and Data Cables

The current industrial revolution is driven by data. Regions that foster innovation and capabilities in this sphere are more likely to be economically successful than regions that rely on legacy technologies. The development of autonomous vehicles, for example, requires large amounts of data and will also disrupt the transportation industry over the coming decades. Efforts to develop industrial clusters in the region should include these developments and examine ways to leverage existing strengths to foster innovation and resiliency.

The increasing number of transatlantic data cables landing in Hampton Roads presents a distinctive opportunity. These high-speed, high-capacity cables require data centers and analytical capabilities. The question is whether the data flow merely land in Hampton Roads and flow to other areas of the Commonwealth for analysis or will the region capitalize on the opportunity to build a strong data center cluster? Merely serving as a landing point for transatlantic data cables would be a significant missed opportunity for the region and would hinder efforts for the region to capitalize on the digital transformation. Using these cables and existing broadband capability to create a truly high-speed broadband region is a crucial element of economic development. Cooperation between Hampton Roads and Richmond could see the development of a Global Internet Hub in the RVA-757 Connects Mega-Region.

Renewable Energy

The global economy is currently undergoing an energy transformation. The demand for coal for power production, for example, has fallen domestically over the past two decades. While natural gas has risen in prominence, the federal government forecasts that much of the growth in energy production over the next three decades will be in renewable energy.

The Hampton Roads region has several features that may allow it to take advantage of the transition towards renewables. First, the geographical area favors wind and solar power. Second, access to water lowers transportation costs. Third, the manufacturing sector can produce renewable wind turbines and, if there is investment, solar energy manufacturing sector can produce renewable wind turbines and, if there is investment, solar energy on the trend towards renewables over the coming decades.

Cybersecurity and Information Warfare

The rise of cyber theft, identity theft, and disinformation campaigns highlights the need for capabilities in the cybersecurity and information warfare sphere. This need will only increase over time as more sophisticated tools become cheaper to field and thus more widely available. If a region desires to build economic resiliency, then it must ensure that its public and private networks are as secure as possible from unwanted intrusion. Actively combatting disinformation campaigns will become increasingly important as state and non-state actors attempt to sway public opinion. If a region is unable to combat disinformation, then its citizens may adopt positions that are based on falsehoods and not aligned with the public good.

Hampton Roads can leverage the increasing importance of cybersecurity and information warfare through the transfer of knowledge and capabilities gained in support of the DoD and federal government. Encouraging students to seek STEM degrees is not only important for workforce development but to also increase the economic resiliency of a region to outside threats. Without this capability, a region that has widely available broadband may be increasingly vulnerable to outside intrusion.

Increasing Importance of Advanced Manufacturing

Manufacturing, especially in Ship Building and Assembly (low-tech) manufacturing that uses low-cost labor in place of machines. China, for example, has used its relatively low-cost workforce to its advantage to attract foreign investment, however, in many cases, this investment is on
In other words, assembling parts that are made by advanced manufacturing companies in other countries. Over time, these assembly lines become increasingly automated or shift geographically in the pursuit of even lower cost labor. Hampton Roads should position itself to capitalize on the movement towards advanced manufacturing. First, the region has a skilled workforce in this sector. Second, the region has institutions that can help educate and train new workers in advanced manufacturing. Information technology, engineering, data analysis, and cybersecurity are all components of an advanced manufacturing cluster. Leveraging the region’s growing strength in distribution and logistics would not only improve flows through the Port of Virginia but would generate positive spillovers for advanced manufacturing. Recognizing the increasing role of automation and machine learning in food and beverage processing may also provide the region the ability to link improvements in advanced manufacturing, distribution and logistics, and the food and beverage processing industries. The challenge for the region is bringing these existing elements together to leverage changes in the global economy in the region’s favor.

Onshoring of Manufacturing

The COVID-19 economic shock has demonstrated the fragility of domestic and international supply chains. Firms that offshored manufacturing and services to international locations with lower costs now face significant challenges. International travel remains and will likely remain significantly constrained in the short-term. Just-in-time international supply chains may lower costs but are also increasingly fragile to corruption, political unrest, public health concerns, and, over the longer-term, environmental change. Hampton Roads can leverage these discussions by providing a region to which firms can ‘onshore’ or return manufacturing and services to the United States. Not only does Hampton Roads have a major Port, the region is a landing point for high-speed, transatlantic data cables, and an educated, diverse workforce. Onshoring would require the region to more effectively collaborate to attract firms from overseas locations and significant discussions on reducing administrative complexities and costs. The region should avoid ‘selling the farm’ in terms of providing economic incentives and instead should focus its resources on creating the conditions in which firms wish to locate. Why? Research continues to show that economic incentives are marginal, at best, in firms’ location decisions. Amazon’s decision to locate HQ2 in Northern Virginia, even though it could have received more incentives from other states, is an example of how location drives decisions, not taxpayer-funded incentives.

Technology Transfer from Federal Facilities

Hampton Roads is not only home to the nation’s largest naval base, but a myriad of other important federal facilities. The Thomas Jefferson National Accelerator Laboratory in Newport News (commonly referred to as JLAB) conducts research into the physical nature of the universe and is exploring topics in computing, applied sciences, and other topics. The NASA Langley Research Center in Hampton explores topics in spaceflight and materials and continues to play a crucial role in human spaceflight. These and other facilities in the region present opportunities beyond employment.

Technology transfer occurs when ideas created in a federally funded laboratory, for example, are transferred to the commercial sector for further development. The Advanced Research Projects Agency Network (ARPANET), for example, was the first wide-area packet-switching network with distributed control and the first network to implement the TCP/IP protocol suite. However, it was limited to the federal government. When these concepts and technologies were developed for commercial use, the Internet as we know it today was effectively born. If Hampton Roads can foster an environment in which technology transfer and commercialization take place, then firms will start up in the region to take advantage of this environment. The challenge is to increase collaboration among these laboratories, institutions of higher education and businesses.

Hampton Roads can leverage these discussions by returning manufacturing and services to the United States and leveraging its strength in logistics and distribution. These concepts and technologies were developed at national laboratories and federal facilities and these concepts and technologies can foster an environment in which technology transfer and commercialization occur.

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SWOT Analysis and Strategy Development

**Business Ready Sites**

Being site-ready is paramount to winning the interest of companies who would invest in Hampton Roads. Site readiness allows the region to keep up with the "speed of business" and outpace project competition. According to the Virginia Economic Development Partnership (VEDP), "absences of developable sites cost Virginia at least 47 projects and $6.5 billion in capital investment in the last 5 years." Per VEDP, with at least nine large projects included, this translates to an average opportunity cost of 1,800 jobs and $1.2 billion per lost project.

Having shovel-ready sites, or the availability of quality sites that can be shovel-ready within 12-18 months, gives companies more incentive to invest in our region over another, which may be outside of the Commonwealth.

The Hampton Roads Economic Development Sites project, currently funded by GO Virginia, will elevate three sites to Tier 4 status across three localities in Hampton Roads, allowing for a more economically agile region that can attract business quickly. By increasing the number of shovel-ready business sites aiding to attract new business and development to the region, the project addresses the first and second goals of creating a coordinated regional capacity for innovation and increasing job creation through expanding and attracting out-of-region firms in the region's key cluster areas.

Working towards these goals of attracting and expanding industry and jobs in the region will help to achieve a third goal of closing skills, credentialing and degree gaps in the workforce as new talent becomes attracted to the region due to expanded opportunities in new and exciting industries. This initiative directly addresses GO Virginia's Region 5 Growth & Diversification Plan recommendations to create an environment to spur establishment, attract out of region firms, provide opportunities for expansion of existing firms and increase diversification in the private sector. At the time of writing, there are three sites funded for this work, with plans to apply for other sites as they become available and ready for elevation to Tier 4 or 5 on a rolling basis.
**Threats**

- COVID-19
  - The COVID-19 pandemic and measures to limit its spread in Virginia have disrupted economic activity in Hampton Roads. The accommodation and food services industry was significantly impacted by social distancing requirements and is likely to remain disrupted for the near-term as new variants spread and vaccination rates plateau. Retail trade and transportation were also negatively affected, though these sectors may recover more quickly.
  - The significant decline in economic activity will lower local and state tax revenues, leading to procyclical expenditure reductions throughout the region. COVID-19 presents a historic challenge to the region.
  - While localities in the region adopted local policies throughout the height of the pandemic, many of the social distancing requirements came from Richmond. These external requirements limited travel to and from the region, closed or limited businesses, and the economic development of the region will undoubtedly slow. The region, to its credit, has aggressively pivoted towards mitigating the damage from sea level rise, however, much more remains to be done.

- Sea Level Rise
  - Sea level rise over the next 50 years is an existential challenge for Hampton Roads. Without action, critical infrastructure will be adversely impacted, and the economic development of the region will undoubtedly slow. The region, to its credit, has aggressively pivoted towards mitigating the damage from sea level rise, however, much more remains to be done.
  - Hampton Roads must build resiliency in the face of sea level rise. Improved planning tools and acknowledging that some structures will be lost will help residents and policymakers understand the tradeoffs associated with sea level rise. Examining the interaction between ground subsidence and sea level rise is also an important component of resiliency. If the ground is sinking, the question is whether this process can be slowed, stopped, or reversed. Answering these questions now will help the allocation of resources over the coming years. Demonstrating competency in holistically and innovatively addressing this challenge will also enable the region to attract firms and residents. Failure to do so will likely lead to increased outmigration over time. There are several projects underway in the region currently researching and addressing the issue of sea level rise and land travel to and from the region, closed or limited...
District’s (HRSD) Sustainable Water Initiative for Tomorrow (SWIFT). This project is an innovative water treatment initiative designed to ensure a sustainable source of groundwater while addressing environmental challenges such as sea level rise and salt water intrusion.

Budgetary and Policy Decisions Made Outside the Region

Hampton Roads’ role in the national security of the nation, the presence of federal research laboratories and centers, and the presence of military personnel and federal civilian employees depends upon decisions in Congress, the White House, and the Departments and Agencies of the federal government. When federal discretionary spending for the DoD increases overall, direct DoD spending typically increases in the region, fueling economic growth. When federal discretionary spending has stagnated or declined or when the DoD has drawn down personnel, the region’s growth has suffered as a result. Decisions made in Washington, DC invariably impact the prospects of Hampton Roads. Changes in federal policy may also affect the region. A ‘pivot towards Asia,’ for example, would redirect assets stationed in the region to ports and bases on the west coast of the United States. A shift away from carrier strike groups to small, more autonomous platforms would likely reduce the number of systems and personnel stationed in the region. If Congress were to pass a carbon-tax, that might benefit the region, if it took advantage of the continuing shift to renewable forms of energy. It is not only decisions made in the United States that could affect the region. Continued trade conflicts could harm trade flows through the Port of Virginia. Investments by competitors in anti-ship and area-denial weaponry could undermine the value of large naval platforms, harming the defense industrial base. Because of the region’s role in national security, its prospects are determined, in part, by other actors.

To reduce the impact of this threat, the region should focus efforts on leveraging its existing strengths while seeking out ways to improve private sector growth. Diversification of the economy should not imply a diminished role for the DoD, but that a vibrant private sector complements the presence of a robust defense sector.

Natural Disaster Risk

While Hampton Roads has not been struck by a Category 3 or higher hurricane in over 150 years, past may be prologue. The physical and economic damages from a major hurricane making landfall in our region would be catastrophic. A recent report estimated that residential housing would bear the brunt of the estimated $18 billion in wind and water damage. More than 200,000 residents would be immediately displaced in the aftermath of the storm, with almost 16,000 seeking accommodation in public shelters. In the first year after the hurricane, over 150,000 jobs could be lost, and economic activity could decline by over $20 billion. All told, the physical and economic impacts of a Category 3 hurricane making landfall in Hampton Roads could exceed $40 billion in the year following the storm. Whether a major hurricane will impact Hampton Roads is not a question of if, but when. Understanding the extent of the potential physical and economic impacts will assist decision-makers in weighing the costs of planning and preparation with those of response. We must also recognize that even if a hurricane does not make landfall in Hampton Roads, the remnants of hurricanes often travel through our cities. Improving the economic resiliency of the region to these future storms complements the ongoing efforts to mitigate and adapt to sea level rise.

Regional Competitors

Regional Competitors

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be an important part of any economic development. Events outside the region's control will be an important part of any economic development.

Understanding these nuances and adapting to local conditions will be an important part of any economic development. While Portland and Austin may share the same affinity for "weirdness," for example, this does not mean each pursues the same strategy for economic growth and resilience.

To learn and adapt, Hampton Roads must take a longer view of what kindles the fire of economic growth over time for regions. Investments in human capital and infrastructure may take much longer to bear fruit and having strategic patience is indeed a virtue.
FIGURE 2
Summary of SWOT Analysis for Hampton Roads

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<th>Weaknesses</th>
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<td>Need for tax reform at the state level to foster competitiveness</td>
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Over the last two decades, it has become increasingly apparent that a region’s long-term viability is influenced by its ability to identify, plan, adapt, mitigate, and recover from severe disruptions. Regions that ignore sea level rise, downplay the threat of public health emergencies, ignore policy and budgetary changes at the federal and state level, and engage in wishful thinking regarding economic change are more likely to be left behind. Regions have risen and fallen over the past decades, in part, because of their ability, or lack thereof, to adapt in the face of disruptions. Many of the challenges facing Hampton Roads are not new, however, the region must incorporate economic resiliency in its efforts or face the prospect of being left behind in the coming decades.

Enhancing Hampton Roads’ economic resilience consists of two steps: planning and communication. First, the region must identify potential shocks and engage in planning to mitigate and recover from these disruptions. Once shocks are identified, strategies and actions must be determined in order to implement changes to make Hampton Roads’ economy more resilient throughout all sectors. Second, as we have noted throughout this document, the region’s localities must continue to enhance cooperation and collaboration. Improving communication among localities, the public, private sector organizations, and non-profit entities is imperative to increase the scope of resources to improve economic resiliency.

What is Economic Resilience and Why is it Important?

Economic resilience can be broadly thought of as a region’s ability to anticipate, adapt, mitigate, withstand, and recover from a disruption or series of disruptions. Disruptions, otherwise known as shocks, can range from natural disasters to economic turmoil to social changes and much more. The impacts of climate change will likely pose physical and structural challenges to many regions over the coming decades. Economic disruptions, ranging from the ongoing impacts from the COVID-19 pandemic to changes in national security policy, may adversely impact a region’s ability to grow. Social challenges may rise from the changing composition of the workforce, to changes in population, to the aging of the population. These disruptions pose long-term threats to the ability of a region to grow and thrive. Resiliency planning and preparation, by its very nature, spans local boundaries. As the local, state, national, and global economies become increasingly interconnected, the need for collaboration and cooperation increases accordingly. A closure of a large employer in Chesapeake, for example, would likely impact cities and counties across the region as many residents of the region live in one locality and work in another. A major hurricane making landfall in Hampton Roads would likely impact low-lying and coastal communities more severely than localities further away from the ocean. Yet, because of the interconnected nature of our regional economy,
Disruptions to employment in Virginia Beach or Norfolk would ripple throughout the region. It is important to note here the difference between the terms “recovery” and “resilience,” as the two are interrelated ideas but not interchangeable. Recovery is defined as returning to a normal state of mind, health, or strength, while resilience is defined as the capacity to recover quickly from difficulties. By simply focusing on recovering the regional economy to status quo, in the face of future economic shocks the region will not be resilient enough to react quickly to avoid similar economic damage any particular shock may have caused. By focusing on a resilient economy – increasing diversity and inclusion in the workforce and supply chain, bringing new industries to the region like offshore wind, providing businesses with resources they need to become adaptable in the face of shock, building regional pride to attract and maintain talent, finding solutions to the region’s sustainable infrastructure needs, and so much more, Hampton Roads will be better situated to not only withstand the next economic shock, but thrive in the face of it. While the region recovers from today’s most recent shock, having a strategic plan in place will help prepare Hampton Roads for the shocks of the future.

Overarching Themes to Improve Economic Resilience

Economic resilience can be viewed through many lenses, through which various actions may be taken to implement. Below are four major themes to focus on when planning for a resilient future of economic development in Hampton Roads:

Improved development practices that incorporate resiliency: Hampton Roads benefits from its relationship with water. The same proximity to water, however, creates transportation challenges and the likelihood of major flooding due to sea level rise and the landfall of a major hurricane. The region should continue to develop and improve development practices that incorporate natural disaster risk as a facet of the planning process. Improving the robustness of infrastructure to a natural disaster not only can mitigate the impact of a natural disaster but can also improve the recovery process. Hampton Roads can learn lessons from Florida and North Carolina, for example, to increase the resiliency of development projects. Given the potential for disruption from a major hurricane, Hampton Roads should collaborate to emphasize development with a resiliency focus. The effort to develop greenbelt areas is important and should be expanded over time as these green spaces not only enhance the quality of living but also serve as a buffer in the event of a major storm. Hampton Roads localities should ask the hard question of whether frequently flooded properties should be rezoned into buffer or overflow zones. Increasing reliance on flood insurance programs is risky given the increasingly precarious financial position of the federal government. Increasing and improving regional planning with regards to natural disasters not only enhances preparedness but it also lowers the risk to Hampton Roads would ripple throughout the Commonwealth and the nation, exacerbating the economic toll. Hampton Roads should continue to emphasize business continuity and preparedness in its development planning. Businesses may need assistance to identify vulnerabilities and to engage in continuity planning. Likewise, the public sector should continue to develop continuity of operations planning and should rigorously test emergency systems and capabilities. As evidenced by disasters in other localities, the closer the collaboration between the public and private sector, the more robust the response to a severe disruption.

Improving data: Data are the lynchpin of the modern economy. However, data regarding business license, tax information, development information, and other aspects of the private sector are disconnected within and across localities. Without geographic information systems (GIS) that link these disparate databases, analysis is typically ‘one off’ because of the unique needs of the question of interest and the effort involved to collect data. Simply put, there is not one central depository or dashboard to inform decision makers, business owners, and the public as to the progress of the region. This effort would also not only enhance the quality of living but also serve as an example for other localities to follow. Improving the robustness of infrastructure to a natural disaster but can also improve the recovery process.
Economic Resiliency

produce benefits for economic development as it would enable the region to examine, in a timelier fashion, business ‘births and deaths.’ Hampton Roads could then start to ask which businesses tend to succeed, which tend to fail, and whether policy actions had any discernable impact on business formation and survival. Improving data (and the backup of data) would also increase the capacity of the region to quickly gauge the impact of a natural disaster or other adverse event. This would improve the post-event allocation of resources and help localities and regions target the most vulnerable populations and establishments.

Improving networks to promote resiliency: If data are the lynchpin of the modern economy, then the networks that carry data are the backbone. Without robust, scalable networks, the promise of economic development is limited. As evidenced by the collapse of networks in the face of natural disasters in other states, the need for a robust information infrastructure is a necessity. Without the ability to effectively and efficiently communicate in the aftermath of a crisis, localities will not be able to identify concerns and request assistance when needed. Businesses, in the absence of information networks, will find themselves challenged as many back-office operations now reside in the cloud. Consumers will not be able to access personal financial information, communicate with loved ones, or know where assistance is available. Hampton Roads must improve the robustness of its information networks and test whether a major natural disaster would overwhelm these networks. Are power sources located on lower floors? Where are the crucial nodes and can these nodes survive hurricane force winds and flooding? What current cybersecurity capabilities can be employed to protect networks? Each of these questions requires a sustained effort to answer.

Anticipating Disruptions to Improve Resilience

One component of the 2020 CEDS for Hampton Roads is the analysis of the region’s Strengths, Weaknesses, Opportunities, and Threats (SWOT). The threats to the region are varied and significant and cannot be addressed sufficiently without concerted collaborative action. We must also recognize that there is a tradeoff between completeness and the resources available to plan for, adapt, mitigate, and recover from potential shocks. Anticipating disruptions is an uncertain process because we are attempting to gauge the most significant risks today in an environment characterized by uncertainty. We must be aware that new threats will emerge and that our planning, over time, must evolve and adapt to these new potential shocks. While not exhaustive, the most likely disruptions to the region’s economic growth and resilience are:

1. COVID-19 / Public Health Emergency
2. Sea Level Rise
3. Natural Disaster
4. Federal Policy
5. Tax Reform
6. Regional Brand Recognition

COVID-19, for example, is a contemporaneous threat to the region, which as of November 2021 has caused nearly 9,500 hospitalizations and over 2,700 deaths in Hampton Roads. The associated recession has significantly impacted employment and the level of economic activity in the region. Even with several vaccines available, hesitancy to take the vaccine and emerging variants may contribute to a lengthy recovery for accommodation and food services, health care, retail trade, tourism sectors.

Given the increasing frequency of public health events, the region should proactively anticipate and prepare for another influenza-type pandemic in the coming decade.

Sea level rise is already underway and poses a significant threat to the economy of Hampton Roads. In all likelihood, sea level rise will accelerate over the coming decades unless there is a significant change in the emission of greenhouse gases globally. While sea level rise presents an opportunity for Hampton Roads to diversify its economy, it also poses a significant and predictable threat to the viability of the region. Ignoring sea level rise, much like ignoring COVID-19, will only consume our most precious resource: time.

While Hampton Roads has not been struck by a Category 3 or higher hurricane in over 150 years, the vaccine and emerging variants may contribute to a lengthy recovery for accommodation and food services, health care, retail trade, tourism sectors.

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Economic Resiliency

The past may be prologue. The physical and economic damages from a major hurricane making landfall in our region would be catastrophic. According to a recent study from the Dragas Center for Economic Analysis and Policy at ODU, residential housing would bear the brunt of the estimated $18 billion in wind and water damage. More than 200,000 residents could be immediately displaced in the aftermath of the storm, with almost 16,000 seeking accommodation in public shelters. In the first year after the hurricane, over 150,000 jobs could be lost, and economic activity could decline by over $20 billion. All told, the physical and economic impacts of a Category 3 hurricane making landfall in Hampton Roads could exceed $40 billion in the year following the storm.

The Budget Control Act of 2011 (BCA), the subsequent sequestration of federal discretionary spending in Fiscal Year (FY) 2013, and the stagnation of defense spending in the region through FY 2017 illustrate the dependency of the region on decisions made in Washington, DC. Given the impact of COVID-19 and the ongoing recession on the federal deficit, there is a significant likelihood of future reductions in defense spending. Furthermore, many of the region’s strengths in training and procurement in support of the DoD are undermined by changes in the national security environment. China, for example, is investing heavily in anti-ship/Area-denial systems to erode the United States advantage in aircraft carriers. The increasing expense of weapons systems only undermines the argument for these platforms in the coming years. A shift in federal spending or defense policy could severely reduce federal spending in the region which would undoubtedly impede economic growth in the following decades.

Two other threats require attention: the need for tax modernization and the lack of domestic and international brand recognition. Unlike the previous threats, the region cannot grow if these threats are not adequately addressed in the coming years. On the other hand, addressing these threats would likely improve the rate of growth, thus it is a choice of how fast does Hampton Roads wish to grow? Advocating for tax reform in Richmond would not only build collaboration across the region but would have positive externalities (if successful) in attracting new investment to the region and the Commonwealth. While domestic and international brand recognition may not imperil economic growth, increasing the visibility of the Commonwealth and Hampton Roads through increased marketing dollars would likely lead to increased tourism. Increases in tourism, business, and other traffic would, in turn, increase economic activity over time.

The 757 Recovery & Resilience Action Framework

In the months directly following the COVID-19 pandemic, several leading regional business organizations came together as one coalition to help the business community navigate the crisis through a variety of initiatives. In the second half of 2020, this coalition embarked on a comprehensive strategic planning process to create the 757 Recovery & Resilience Action Framework, a dynamic playbook designed to guide the Hampton Roads region’s COVID-19 economy recovery and resilience-building efforts. The overarching goals of the Action Framework is to build a better, more resilient economy for the people of the 757, and contains three measurable economic objectives.

1. Accelerate our region’s economic rebound. Move from low-30s out of 40 to a top-15 position in our peer group as measured by job growth, wage growth, and GDP.
2. Make the region’s overall economy and local companies more resilient to future shocks.
3. Ensure everyone is empowered by and benefits from our new economy.

We need to build our economic resilience to prepare for future shocks. Our recovery needs to be orchestrated in a way that prepares Hampton Roads for future challenges – the next pandemic, flooding, sea level rise, and military sequestration. The Action Framework is guided by a shared vision for the economy we want to build for the people, and has been released to the Hampton Roads community, with several action items already having been implemented in 2021. Many elements of the plan are incorporated into this document, ensuring that the Comprehensive Economic Development Strategy considers regional economic development work already being done, and an existing framework for the future.
Below, we touch upon two core issues at the heart of economic resiliency: building a more resilient workforce and economic development.

**Building a Resilient Workforce**

A 2016 workforce analysis for Hampton Roads identified the top ten trends that the region must address in the coming decade, representing the challenges facing the workforce in Hampton Roads and the need to build its resilience. The aging of the population, the forthcoming retirements of baby boomers, the need to attract younger workers and adjust workplace culture are just a few of the challenges facing the region’s workforce.

With these trends in mind, Hampton Roads should leverage its institutions of higher education to increase the flow of new graduates into the regional economy and to upgrade the skills of the existing workforce. As noted elsewhere in this report, efforts to promote advanced manufacturing, cybersecurity, data analysis, digital shipbuilding, health care, logistics, supply chain analysis, and other related fields are needed to build economic resiliency. The region’s workforce council and other organizations should monitor trends in these and emerging fields to measure whether the workforce development strategy is improving the quality of the workforce.

**Improving the Resilience of the Economy Through Economic Development**

Improving economic resiliency is an effort of years, not months. While the idea of landing an ‘economic homerun’ is appealing, it is also unlikely. Regions that focus their efforts on enhancing their strengths and investing in long-term growth typically fare better than regions that attempt to lure new headquarters or a manufacturing plant. In other words, as noted in the economics literature, businesses select regions because of their strengths and complementarities to business operations rather than the volume of economic incentives.

The 2019 biennial update of the GO Virginia Region Growth and Diversification Plan noted many of the same strengths and weaknesses identified in this CEDS update. Action items from this report that, over time, would improve the resiliency and diversification of the Hampton Roads economy have been incorporated into the Strategic Direction and Action Plan of this CEDS update. That these points originate from the 2010 Growth and Diversification Plan shows the need for consistent focus and application of resourcing.

There are, of course, many possible actions that can be taken to improve economic resilience. As we have noted throughout this CEDS update, a shift in focus from the short-term to the long-term is necessary from the short-term to the long-term is necessary to promote advanced manufacturing, cybersecurity, data analysis, digital shipbuilding, health care, and other areas. As we have noted throughout this CEDS update, a shift in focus from the short-term to the long-term is necessary to promote advanced manufacturing, cybersecurity, data analysis, digital shipbuilding, health care, and other areas.

Measuring Resilience

Improving resilience in Hampton Roads is meant to promote advanced manufacturing, cybersecurity, data analysis, digital shipbuilding, health care, and other areas. As we have noted throughout this CEDS update, a shift in focus from the short-term to the long-term is necessary to promote advanced manufacturing, cybersecurity, data analysis, digital shipbuilding, health care, and other areas. As we have noted throughout this CEDS update, a shift in focus from the short-term to the long-term is necessary to promote advanced manufacturing, cybersecurity, data analysis, digital shipbuilding, health care, and other areas.
strategic direction and action plan
Our economy is resilient and innovative. Here, we all work together to grow our economy and advance the well-being of all residents. We're inspired by what we value: a commitment to inclusion and equity, a strong military presence, a welcoming community spirit, and our old salt, new vibe coastal lifestyle, making our region one of a kind, and one for all.

This section highlights several overarching goals and specific action items that support the broader vision for economic development in Hampton Roads. The goals and action items take advantage of the region's strengths and propel its opportunities, while also reflecting on the region's threats and weaknesses.

Through the SWOT Analysis and 757 Recovery & Resilience Action Framework planning process, seven significant categories were identified. These are:

1. Catalyzing Economic Development and Innovation
2. Developing and Retaining a Competitive Workforce
3. Utilizing and Expanding Federal Government Assets
4. Improving Regional Infrastructure
5. Providing High Quality of Life
6. Advancing Regional Unity
7. Building Economic Resiliency

These categories build upon the previous regional strategic planning efforts, which produced actions that ranged from enhancing regional citizenship to laying an adequate physical infrastructure for the future and developing a regional economic strategy. The preceding SWOT analysis provides a detailed overview of each of the individual components that fed into the strategic direction and actions. Each category is discussed individually as a part of the broader strategic direction and action plan. Each category starts with a broad goal or objective followed by strategic actions.

Catalyzing Economic Development and Innovation

**Goal:** To create high-skill, higher-wage jobs within innovative clusters as a means to diversify the regional economy and improve economic conditions in the region for years to come.

**Proposed Organization for Implementation:** Hampton Roads Alliance

**Strategy 1:** Enhance inter- and intra-region collaboration to propel private sector business growth.

**Action 1.**

- **Proposed Organization for Implementation:** Hampton Roads Alliance

- **Goals:**
  - Enhancing inter- and intra-region collaboration to propel private sector business growth.

  **Assets:**
  - catalyst for economic development and growth
  - Improving Regional Infrastructure
  - Advancing Regional Unity
  - Building Economic Resiliency

  **Overview:**
  - looking at how each of the individual components contribute to the overall goal of catalyzing economic development and innovation.
Action 2. Support new company/startup formation by supporting the creation of the 757Collab and help implement the recommendations of TechStars Analysis, a detailed assessment on how to accelerate the performance of the region’s startup ecosystem.

Action 3. Use the RVA-Hampton Roads Megaregion Collaborative, which has been accelerated by GO Virginia, to enhance economic development and competitiveness in the RVA and Hampton Roads region.

Action 4. Utilize the I-64 Science and Technology Corridor – To create workforce development programs, innovation programs and commercialization opportunities in science and technology anchors along route 64 from Richmond to Virginia Beach. There are several anchor institutions such as Virginia Commonwealth University, Old Dominion University, William and Mary, Jefferson Lab, and NASA Langley Research Center, among others.

Action 5. Improve the coordination of innovation programs, starting with the creation of innovation districts similar to the Norfolk Innovation Corridor.

Action 6. Continue to enhance regional cooperation for economic development through ReInvent Hampton Roads and the Hampton Roads Alliance.

Strategy 2: Develop a diverse industrial and commercial base that is competitive in the global economy and not reliant on Federal spending.

Action 1. Maintain a regional economic development focus on the eight industry clusters previously identified:

- Advanced manufacturing
- Ship repair and ship building
- Wesselmann
- Life sciences
- Food and beverage manufacturing
- Port operations, logistics and warehousing
- Life sciences
- Business consulting services
- Information analytics and security
- Tourism and recreation

Action 2. Set up introductory meetings with global C-level executives of key potential investing companies in each priority target subsector, with an initial focus on companies with an existing presence in the US with expansion potential.

Action 3. Improve business retention through programs that encourage businesses to remain in and grow within the region through technical assistance and creative incentives.

Action 4. Recruit new businesses from targeted industries that complement the region’s economic base.

Action 5. Support cross-industry developments and collaboration (e.g. IT for ports/logistics, IT for transport technologies etc.) to allow firms to move up the value chain and to grow the industry through higher value added as opposed to higher production volumes and low value-added exports.

Action 6. Support entrepreneurs, start-ups, and SMEs in Hampton Roads, and create a vibrant environment for starting and building businesses.

Strategy 3. Ensure the availability of sufficient high quality and competitively priced real estate products to guarantee companies have sufficient options available to meet their investment and expansion plans in the region.

Action 1. Work with real estate developers and city planners to improve real estate offerings in the region, notably in or near urban centers.

Action 2. Ensure the awareness and availability of sufficient high quality and competitively priced real estate products.

Action 3. Connect with and leverage the VEDP Site Development Fund for Hampton Roads, and explore opportunities for using this as a vehicle for creating shovel ready sites in the region.

Action 4. Ensure potential sites are connected to relevant infrastructure and utilities.
Action 5. Seek opportunities to speed up zoning and development processes, and remove unnecessary barriers.

Action 6. Increase transparency of the office and site markets in Hampton Roads, highlighting investment opportunities for real estate developers and local investors.

Action 7. Expand capacity for industrial land development and develop a strategy for the remediation, renovation, and removal of antiquated office space.

Strategy 4: Cultivate promising new industries (ex. Offshore Wind, Unmanned Systems, Water Technologies, Bio-Health Services)

Action 1: Establish Hampton Roads as the East Coast supply chain hub for offshore wind.

Action 2: Coordinate local actions with the State’s initiatives by developing an offshore wind strategic plan, analyzing offshore wind supply chain and define gaps, and conducting B2B series regarding supply chains.

Developing and Retaining a Competitive Workforce

Goal: To develop and retain a highly-trained, competitive, and entrepreneurial workforce that addresses and compliments the growing needs of the Hampton Roads business community.

Proposed Organization for Implementation: Hampton Roads Workforce Council/757 Collab

Strategy 1: Facilitate collaboration among business stakeholders and education institutions to address the current and future employment and skill needs of the regional business community.

Action 1. Establish regional convener role to coordinate sector partnerships and aggregate skill development needs across sectors.

Action 2. Convene employers on issues of talent development through a variety of venues such as ‘lunch and learns’ to highlight promising practices, working groups to identify common skill standards, and promoting industry-recognized credentials.

Action 3. Create greater awareness of and facilitate greater alignment between supply and demand of skills in high demand areas of engineering, information communication technologies, and life sciences.

Action 4. Set up a collaboration platform, managed by an organization with regional outreach, that takes stock of and continuously monitors all relevant talent actors and the education and training programs offered.

Action 5. Identify future talent needs by closely coordinating with the work of the RVA-757 Connects Megaregion through a comprehensive workforce study. Additionally, the Hampton Roads Workforce Council, through GO Virginia grant funding, will be expanding its Talent Division to include a Director of Employer Engagement.

Strategy 2: Create greater opportunities for mixing the worlds of work and education for students, aimed at giving students the opportunity to get exposed to work experience and industry while studying (e.g. internships, apprenticeships, P-TECH etc.)

Action 1. Enhance current transfer programs for military personnel to target them at least 6 months prior to leaving service and provide them with career guidance and insight into opportunities for employment in Hampton Roads.

Action 2. Engage companies in key target sectors in a program similar to P-TECH to advance technical skills for young people who do not necessarily follow the traditional university route.
Action 3. Identify requisite skills, education, certification, and/or experience required to access key occupations at various levels, as well as transition points to either higher-level roles or lateral moves from other industries into higher-demand occupations; include cost of related education programs as applicable and salary/benefit information.

Action 4. Explore the role that Talent Analytics can play in supporting education outcomes and alignment between skills supply and demand by addressing problems preemptively and accommodating needs of individual students in a better way.

Strategy 3: Attract and retain skilled people in Hampton Roads, making sure that the region maintains its skills base.

Action 1. Establish an Attract & Retain policy to ensure Hampton Roads locals, as well as domestic/foreign immigrants remain, return, or settle in Hampton Roads. Possible actions include: targeted career guidance for graduates, Hampton Roads quality of life branding in the US, targeting Hampton Roads ‘diaspora’ through the local business community.

Action 2. Actively market to former residents/graduates of local institutions who have left the region about career opportunities, quality of life, and cost of living.

Action 3. Build an official coalition of young professional organizations of the 757; continue to support the newly established 501(c)(3) 757Proud. Create a consistent communications platform that unites all members, like the following groups:

- tHRive
- Emerging Leaders Society
- CBDX
- Urban League of Hampton Roads
- Tidewater Jewish Federation, Young Adults Division
- Virginia Beach and Peninsula Jaycees
- ASPIRE
- Campus757
- WHRO Emerging Leaders Board

Action 4. Carefully study the success of the newly launched maritime industry worker out-of-market recruitment campaign.

Action 5. Explore ways to replicate similar marketing efforts supporting other industries. This may include the creation of a regional jobs posting website and a 757 lifestyle and cultural website.

Action 6. Retain new 757 graduates by supporting the important work of Campus757 and ensure close coordination with Campus757 and the area’s HBCUs.

Strategy 4: Train and up-skill as many people as possible to become qualified workers. Provide household financial education and training to keep more people financially healthy when they find employment.

Action 1. Collectively identify the most prominent career avenues in which to direct dislocated workers in the 757. This will include the determination of the hard-to-fill positions in local industry that, through programmatic training and credentialing, can be filled by this population of job-seekers.

Action 2. Coordinate existing training programs and facilitate the development of new training programs that align directly with the most-needed open positions in Hampton Roads. Further align funding streams with apprenticeship and pre-hire programs that serve as talent pipelines into certain industries.

Action 3. Achieve additional alignment by working with each partner in the HRWC local network of training providers and institutions of higher education to ensure that their offerings map directly to areas of critical need for businesses in the 757.

Action 4. Build on Sentara’s support of Financial Opportunity Centers that support job and skills training with household financial education and training that keeps more people financially healthy when they find employment.
Utilizing and Expanding Federal Government Assets

**Goal:** To attract, expand, and retain assets owned, operated, and funded by the Federal government while growing related private-sector economic activity.

**Proposed Organization for Implementation:** HRMFFA

**Strategy 1:** Maintain and grow investments owned, operated, or funded by the Federal Government in Hampton Roads.

**Action 1.** Develop and implement a proactive, action-oriented strategy led by the Hampton Roads Military and Federal Facilities Alliance (HRMFFA) that addresses stability and viability of mission-critical entities and prepares for future Base Realignment and Closures (BRAC).

**Action 2.** Enhance regional transportation connectivity between military installations in the region.

**Action 3.** Study the impact of sea level rise on federal lands, in particular Department of Defense facilities in Hampton Roads, to develop comprehensive solutions to sea level rise in the region.

**Action 4.** Enhance and coordinate political engagement among local elected leaders, the Hampton Roads Caucus of the General Assembly, the Governor and his Administration, and the Virginia Congressional Delegation.

**Strategy 2:** Grow the private-sector business community located in the Hampton Roads region due to federal assets.

**Action 1.** Conduct a supply chain analysis, combined with government contractor surveys to reveal the extent and types of government contract work that fuels the regional economy.

**Action 2.** Support contractors that serve federal installations by implementing appropriate economic development strategies such as creating on-site spaces and developing a regional water strategy.

**Action 3.** Identify and address the needs of ancillary and emerging businesses.

**Action 4.** Further utilize groups like the Maritime Industrial Base Ecosystem (MIBE) to assist and propel the region’s supply base for naval and commercial maritime opportunities.

**Action 5.** Encourage and incentivize the creation of dual-use products and services for both military and private-sector needs.

Improving Regional Infrastructure

**Goal:** To invest in infrastructure improvements that strengthen and diversify the regional economy.

**Proposed Organization for Implementation:** HRTPO/HRPDC

**Strategy 1:** Improve the role of the Port of Virginia as economic catalyst.

**Action 1.** Develop a logistics services strategy to help local manufacturers collaborate, manage and bundle transport flows and enhance the cost-efficient use of alternative or optimized transport mode (e.g., rail, full truck loads, sector specific logistics platforms, optimization of empty container usage).

**Action 2.** Set up a port and logistics collaboration and management platform where information and data are shared between actors.

**Action 3.** Support the development of local innovation initiatives in the area of port and logistics technologies by establishing the Port as a “living laboratory,” where logistics companies, research organizations, technology companies and startups, community organizations, and the government interact to develop innovative solutions enhancing the competitiveness of the port and surrounding area.

**Action 4.** Create sufficient critical mass through consolidated and orchestrated flows and concentrate higher cargo volumes at the Port by attracting additional logistics services provider companies (e.g., DHL, UPS, FedEx, DSV etc.).
**Action 5.** Support the attraction of value-added assembly/manufacturing operations taking advantage of those companies that could benefit from close proximity to the Port.

**Strategy 2.** Improving transportation accessibility, both by road, rail, and air.

**Action 1.** Ensure that planned improvements to road infrastructure have adequate funding and are underway.

**Action 2.** Continue to pursue growth and expansion policies for regional airports to improve passenger and freight services.

**Action 3.** Improve intermodal connectivity by creating better linkages and collaboration between different modes of transport (port, road, rail, and airport) to provide an improved transport offer to companies, notably in distribution and manufacturing.

**Strategy 3.** Bolster the regional energy supply to ensure a reliable and sustainable energy with sufficient redundancy (assets and commercial) to meet the commercial and residential needs.

**Action 1.** Encourage investment in more renewable energy, e.g. off-shore wind or tidal/wave, to provide more green energy options for large energy users.

**Action 2.** Conduct a comprehensive study of the region's current and future energy needs and sources for the next 10-20 years and develop a fact-based energy strategy based on the results of this study. (The initial stages of this study have commenced and study will begin in early 2022).

**Strategy 4.** Invest in infrastructure improvements to combat the regional impacts of sea level rise while advancing a business approach to recurrent flooding and sea level rise.

**Action 1.** Establish a regional team to analyze and prepare for the local impacts of sea level rise.

**Action 2.** Assist municipalities and counties with storm water and natural hazard mitigation infrastructure.

**Action 3.** Restore and build up natural infrastructure that can act as a buffer against storms and coastal flooding.

**Action 4.** Study "managed retreat" from flood prone areas.

**Action 5.** Support HRPDC's efforts to establish a sea level rise authority.

**Action 6.** Calculate and package the business case to engage business leaders now. Tie into insurance and other costs.

**Action 7.** Develop long-range capital projects planning/budgeting process similar to approach used for transportation.

**Action 8.** Convene business community and other stakeholders via group and one-on-ones to address resilience/flooding/sea level rise.

**Action 9.** Support regional efforts to deploy flood sensors which would provide real-time transportation information and ensure motorists and transportation entities can more carefully move through the region during flood/storm events to help ensure business continuity.

**Strategy 5.** Advance a business approach to the region's broadband infrastructure to ensure its reliability and growth – faster service, expanded coverage, and lower cost while increasing internet access for underserved neighborhoods and residents.

**Action 1.** Support the development of the Southside Network Authority's regional broadband network. The Network Ring will enable, not compete with, the internet service providers. It will serve as the backbone of the 757's digital ecosystem. The Network Ring will connect to the Trans-Atlantic subsea cables.
Hampton Roads Comprehensive Economic Development Strategy

Strategic Direction and Action Plan

Strategy 1. Develop diverse housing options for all income levels to ensure the availability of housing for workers brought in by expanding businesses and new firms in the region.

Action 1. Family housing to support young families, elderly family members, and low-income families, so that residents have options for purchase or rent.

Action 2. Establish short-term housing options for new and seasonal workers and residents in the hospitality and tourism sectors.

Action 3. Develop a resource to collect and distribute information about Federal and state funds available for housing and workforce housing.

Strategy 2. Invest in the region's arts, culture, and recreation programs.

Action 1. Ensure existing arts and cultural facilities are properly provided with consistent funding and support.

Action 2. Determine a local populace's unmet and supportable arts and cultural needs and expand the current programming to encompass those activities and events.

Action 3. Use regional branding strategies to advertise and highlight the region's high quality of life with access to water, American history and other cultural resources.

Action 4. Quantify, through research, the economic impact of travel and tourism for new, significant investment in Tourism and Arts & Culture.

Advancing Regional Unity

Goal: To think, believe and act as one unified region. This will take everyone getting behind and advancing a new vision for the 757 economy, building knowledge of and pride in who we are and what we have to offer, holding each other accountable for specific actions and initiatives, and reporting on and celebrating our success.

Proposed Organization for Implementation: Hampton Roads Chamber

Strategy 1: Enhance the region's brand to more seamlessly promote our region as a remarkable place to live, work, play, learn, and visit.

Action 1. Position the region as the place where people easily connect to each other, our coastal environment, our country, and the world.

Action 2. Use the leading assets and experiences as the pillars of our region's story. These include our...
Strategic Direction and Action Plan

Hampton Roads Comprehensive Economic Development Strategy

Deep connection to the history of the United States, spectacular waterways with over 3,000 miles of coastline along three rivers, the connection to the military, a world-class port, a cultural destination for travelers from around the world, and innovative growth opportunities at NASA, and Jefferson Lab, among others.

Action 3. Advance 757 as an instrument of regional pride.

Action 4. Create and run the "757 Did You Know" pride building campaign.

Action 5. Designate an organization as the home base for the regional branding work. This provides a conduit to engage the region's creative talent to create digital marketing resources and partner with the business community.

Strategy 2. Build a network of 1,000 regional 757 Champions supporting the Action Framework.


Action 2. Run an ongoing campaign to recruit business and nonprofit leaders (lead with prominent co-chairs). Provide digital support – sign-up pages, and focus the program on a list of "12 responsibilities" – a "to do" list for all 757 Champions.

Action 3. Support this program with ongoing communication outreach and updates. Showcase the work of exceptional 757 Champions.

Building Economic Resiliency

Goal: To help all in the region better withstand future shocks – to the overall economy, individual companies/non-profits, minority suppliers and others.

Proposed Organization for Implementation:

Strategy 1: Increase business resiliency.

Action 1. Increase business resiliency with business model education and training: Create a three-tiered strategic business model resiliency education and training program for 757 businesses and nonprofits. Content will include best practices from 757 companies and nonprofits who have successfully shifted their business models during COVID-19.

Action 2. Increase business resiliency with diversity education and training: Create a three-tiered strategic business model resiliency education and training program for 757 businesses and nonprofits. Content will include best practices from 757 companies and nonprofits who have successfully shifted their business models during COVID-19.

Action 3. Increase business resiliency with health literacy education and training: Create a strategic partnership with Healthier757 to improve the health of our citizens with access to a digital health platform. Expand Healthier757 outreach strategies to improve health literacy within the general population. Develop a marketing outreach program to improve the health literacy of the Hampton Roads workforce.

Strategy 2. Increase minority business resiliency through mentorships and a minority supplier database.

Action 1. Inventory all existing minority support services and resources in the region.

Action 2. Formulate a comprehensive minority supplier support ecosystem.

Action 3. Create an online minority supplier database that will provide information and links to state/federal grants, ongoing assistance, peer-to-peer networking, business-to-business marketing assistance, training, etc. Ensure it profiles minority firms and their contact information.

Action 4. Create mentorship programs to help minority businesses participate in this resource, and market this service to all businesses and non-profits across the 757.
**Strategic Direction and Action Plan**

This CEDS outlines seven strategic direction objectives, associated strategies to reach those general economic development goals, and specific action items that organizations can take over the next five to ten years in order to purposefully work towards progress. Pursuing these goals will help Hampton Roads achieve the vision of economic empowerment and growth for all.

The following implementation matrix outlines each goal and its associated strategies, assigns associated organizational ownership for oversight, and estimates an approximate cost and timeline to each strategy. Action items for implementing each strategic direction objective are discussed in detail in the Strategic Direction and Action Plan section of this CEDS (pages 62 – 72). Please note that costs and timelines may be combinations of scales due to the variety of associated action items.

### IMPLEMENTATION MATRIX

<table>
<thead>
<tr>
<th>Strategic Direction Objective 1: Catalyzing Economic Development and Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
</tr>
<tr>
<td>Enhance inter- and intra-region collaboration to propel private sector business growth.</td>
</tr>
<tr>
<td>Develop a diverse industrial and commercial base that is competitive in the global economy and not reliant on Federal spending.</td>
</tr>
<tr>
<td>Ensure the availability of sufficient high quality and competitively priced real estate products to guarantee companies have sufficient options available to meet their investment and expansion plans in the region.</td>
</tr>
<tr>
<td>Cultivate promising new industries (ex. Offshore Wind, Unmanned Systems, Water Technologies, Bio-Health Services)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Direction Objective 2: Developing and Retaining a Competitive Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
</tr>
<tr>
<td>Facilitate collaboration among business stakeholders and education institutions to address the current and future employment and skill needs of the regional business community.</td>
</tr>
<tr>
<td>Create greater opportunities for mixing the worlds of work and education for students, aimed at giving students the opportunity to get exposed to work experience and industry while studying (e.g. internships, apprenticeships, P-TECH etc.)</td>
</tr>
<tr>
<td>Attract and retain skilled people in Hampton Roads, making sure that the region maintains its skills base.</td>
</tr>
<tr>
<td>Train and up-skill as many people as possible to become qualified workers. Provide household financial education and training to keep more people financially healthy when they find employment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Direction Objective 3: Utilizing and Expanding Federal Government Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
</tr>
<tr>
<td>Maintain and grow investments owned, operated, or funded by the Federal Government in Hampton Roads.</td>
</tr>
<tr>
<td>Grow the private-sector business community located in the Hampton Roads region due to federal assets.</td>
</tr>
<tr>
<td>Strategic Direction Objective 4: Improving Regional Infrastructure</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Bolster the regional energy supply to ensure a reliable and sustainable energy with sufficient redundancy (assets and commercial) to meet the commercial and residential needs.</td>
</tr>
<tr>
<td>Invest in infrastructure improvements to combat the regional impacts of sea level rise while advancing a business approach</td>
</tr>
<tr>
<td>Advance a business approach to the region's broadband internet access for underserved neighborhoods and residents.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Direction Objective 5: Providing High Quality of Life</th>
<th>Ownership</th>
<th>Cost</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invest in the region's arts, culture, and recreation programs.</td>
<td>HRPDC</td>
<td>$</td>
<td>Short</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Direction Objective 6: Advancing Regional Unity</th>
<th>Ownership</th>
<th>Cost</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance the region's brand to more seamlessly promote our region as a remarkable place to live, work, play, learn, and visit.</td>
<td>The Alliance, HRPDC &amp; ReInvent Hampton Roads</td>
<td>$</td>
<td>Short - Medium</td>
</tr>
<tr>
<td>Build a network of 1,000 regional 757 Champions supporting the Action Framework.</td>
<td>Hampton Roads Chamber</td>
<td>$</td>
<td>Immediate - Ongoing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Direction Objective 7: Building Economic Resiliency</th>
<th>Ownership</th>
<th>Cost</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase minority business resiliency through mentorships and a minority supplier resource platform.</td>
<td>Norfolk State University, Hampton University, Hampton Roads Urban</td>
<td>$</td>
<td>Medium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Scale</th>
<th>Cost Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>Cost</td>
</tr>
<tr>
<td>$</td>
<td>Minimal to no cost (existing resources)</td>
</tr>
<tr>
<td>$</td>
<td>Estimated less than $100,000</td>
</tr>
<tr>
<td>$</td>
<td>Estimated $100,000 to $1M</td>
</tr>
<tr>
<td>$</td>
<td>Estimated more than $1M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing</td>
<td>Consistently occurring</td>
</tr>
<tr>
<td>Immediate</td>
<td>Currently occurring or imminent</td>
</tr>
<tr>
<td>Short</td>
<td>Less than 5 yrs</td>
</tr>
<tr>
<td>Medium</td>
<td>5 to 10 yrs</td>
</tr>
<tr>
<td>Long</td>
<td>More than 10 yrs</td>
</tr>
</tbody>
</table>
evaluation
framework
The evaluation framework serves as a mechanism to gauge progress on the successful implementation of the overall CEDS while providing information for the CEDS Annual Performance Report. These regular updates keep the strategic direction and action plan outlined in the CEDS current and relevant. The performance measures chosen to track must not only be able to help answer the broad questions "How are we doing?" and "What can we do better?" but should also help to answer more specific questions that evaluate the progress of activities in achieving the vision, goals and objectives of the strategic action framework of this CEDS. Lastly, the selected indicators must be able to be easily tracked with publicly available data and benchmarked against itself within a reasonable timeframe, ideally data that has been historically tracked over time.

### Evaluation Framework Measurements

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Goal</th>
<th>On Track</th>
<th>Achieved</th>
<th>Missed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>vvpP;vεθvεθ regional annualized growth rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Wages</td>
<td>vvpP;vεθvεθ regional annualized growth rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Wages</td>
<td>vvpP;vεθvεθ regional annualized growth rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor Force</td>
<td>vvpP;vεθvεθ regional annualized growth rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>Maintain Unemployment Rate below average unemployment rate of peer M SAs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual growth in gross product to</td>
<td>vvpP;vεθvεθ annualized growth rate to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual growth in per-capita income to</td>
<td>vvpP;vεθvεθ annualized growth rate to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>Annual growth in per-capita income to vvpP;vεθvεθ annualized growth rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>vvpP;vεθvεθ annualized growth rate to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional annualized growth rate</td>
<td>vvpP;vεθvεθ annualized growth rate to</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Closing Remarks

Hampton Roads has a rich history and a strong economic foundation, with pillars in the defense industry, the port, and tourism. While these three foundational economic drivers are strong, the region still lags behind other metro areas of similar population and size with regards to economic output, the ability to attract and retain new businesses, and a truly diverse and innovative workforce of the future. The region has long relied on these foundational, yet comfortable, industries, but needs to begin embracing the new that can move not only Hampton Roads, but the entire nation as a whole, forward into the 21st century. This Comprehensive Economic Development Strategy offers a blueprint to continue the work it will take to get there.
Regional History & Socioeconomic Conditions

Hampton Roads is nestled along the Mid-Atlantic Coast in southeastern Virginia, forming a set of interconnected communities clustered around one of the world's largest natural harbors at the mouth of the Chesapeake Bay. This harbor, which welcomed the first English settlers to America in 1607, is now home to nearly 1.8 million people. Hampton Roads' storied past, thriving maritime industry, and beautiful waterfront landscapes merge with livable communities, modern technology, economic prosperity, and a strong military presence to create a unique and welcoming place for all.

The region's cities and counties have a rich history that begins with the Native American tribes that thrived off the teeming waters and woodlands. Tribes such as the Powhatans, Chesapeaks, Nasemonds, Kecoughtans, Pamukeys, and Weyanokes were among the original inhabitants of the present-day Hampton Roads. At the start of the 17th century, English settlers arrived on the shores of Virginia Beach and established Jamestown Island, the first permanent English settlement. The natural harbor and rivers of Hampton Roads were immediately recognized as prime locations for commerce, trade, shipbuilding, and military installations, with early fortifications at Old Point Comfort in Hampton and Gosport Navy Yard, now Norfolk Naval Shipyard. Decisive battles of the Revolutionary War, War of 1812, and the American Civil War took place and were won on the lands and waters of Hampton Roads.

Today, the US military and federal government continue to recognize and value Hampton Roads' premier locational advantage. Consequently, the region has the largest concentration of military bases and federal research facilities of any metropolitan area in the world. As home to over 83,000 active-duty military personnel representing every branch of the United States Military, the region is a critically important asset in advancing and keeping America safe and secure. Private shipbuilding, ship repair, and other maritime industries further support the military and together serve as the foundation of the regional economy.

The region's unique geography, including the deepest water harbor on the entire U.S. East Coast and nearly 3,000 miles of shoreline, have allowed for port and tourism industries to flourish and add second and third pillars to the regional economy. The Port of Hampton Roads ranks as the second busiest port on the East Coast and is home to one of the largest containerized operations in the United States. Access to beaches and water provide visitors and residents alike a full range of activities, including fishing, boating, swimming, and some of the best seafood in the country.

Hampton Roads is among the world's most welcoming and diverse communities. The diverse and inclusive orientation is even expressed in the region's name, which means "safe harbor" in nautical interpretation. From the thousands of fully trained military personnel that discharge each year to graduates of numerous community colleges and institutions of higher education, including two of the top HBCUs, the diversity of thought and talent make Hampton Roads a unique community.

Despite the independent nature of local governments up the Hampton Roads region embrace their climate change, broadband, and inclusive economic and a new industry cluster focused on renewable energy. With a legacy as "America's First Region," Hampton Roads is proud of where it has been but is embracing a future of where the region continues to serve as a national asset while celebrating its diversity and innovating for the next generation.

Given the wide variety of economic activity occurring in the region combined with the large number of individual municipalities and economies that coalesce to form one greater metro area and regional economy, it is important to track regional progress across a broad range of categories. On an annual basis, the Hampton Roads Planning District Commission (HRPDC) updates 13 categories of regional socioeconomic data covering roughly 100
Appendices

Hampton Roads Regional Benchmarking Data
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1. Locality Summary (updated August 2021)
2. The Economy (updated August 2021)
3. Defense Industry (updated July 2021)
4. The Port (updated July 2021)
5. Tourism Industry (updated September 2021)
6. Retail Industry (updated April 2021)
7. Real Estate (updated July 2021)
8. Demographics (updated September 2021)
9. Transportation (updated July 2021)
10. Education (updated July 2021)
11. Government Finances (updated September 2021)
12. Quality of Life (updated July 2021)
13. Local Comparisons (updated August 2021)

Public Participation in CEDS Process

Public Participation for Previous Regional Plans

757 Recovery & Resilience Action Framework (2020)

Envision 2020 – Regional Branding Initiative (2020)

Hampton Roads State of the Workforce Gap Analysis (2017)

of the seven clusters were interviewed by a senior
study, forty-five business leaders representing each
of the seven clusters were interviewed by a senior
research team from Old Dominion University's
Strome College of Business and the ODU Center
for Social Research. The results of these interviews
are summarized in a report entitled "Growing and
Diversifying the Economic Base of Hampton Roads:
Identifying Requirements and Restrictions for
Growth from Interviews with Corporate Executives."
This "Requirements for Economic Growth" section
of this report highlights those results.

Public Participation for this CEDS Document

Public participation is intrinsic to the work done
at the HRPDC, Hampton Roads Alliance, ReInvent
Hampton Roads, and all partner organizations. In
addition to synthesizing the steady stream of public
feedback received during the course of regular
operation, the studies and plans listed directly
above were heavily leaned on during the course of
this CEDS update process, all of which had public
participation components.

Over the course of two years, the CEDS Strategy
Committee met multiple times, beginning in 2019
with the formation of the committee and an outline
of a workplan. Multiple drafts, working meetings,
rounds of edits, and data analysis were circulated
among the group over the course of two years,
which has culminated in this final draft.
This document will be distributed to the public via
the HRPDC website (https://www.hrpdcva.gov/
page/current-public-notices/) for no less than 30
days, where interested parties will submit comment
via email. The public notice will be sent to all
HRPDC and HRTPO members via email newsletter
as well. At the end of those 30 days, comments
will be reviewed by the CEDS Strategy Committee
and any changes will be incorporated into the main
document for adoption of the final plan.

Supporting Documents

Over the course of the last decade, there have
been numerous reports on various elements of the
regional economy. These studies focused on the
broad issues identified in the 2010 CEDS process:
transportation, regional awareness, education,
innovation, and economic resiliency, as well as the
emerging challenge of sea level rise up to the most
recent economic shock of the COVID-19 pandemic.
The specific documents that supported the CEDS
update process are as follows:

- 757 Recovery & Resilience Action Framework
  - 2020
  com/
- Envision 2020 – Regional Branding Initiative –
  2020
  https://www.hrpdcva.gov/uploads/
docs/02-Regional_Branding_Initiative_2020.
pdf
- Go Virginia Region 5 Growth and Diversification
  Plan – 2019
  https://www.hrpdcva.gov/uploads/
docs/03-Growth_and_Diversification_
  Plan_2019.pdf
- Hampton Roads Business Plan – 2019
  https://www.hrpdcva.gov/uploads/
docs/04-Hampton_Roads_Business_Plan_
- Hampton Roads Workforce Council Talent
  Alignment Strategy – 2019
  https://www.hrpdcva.gov/uploads/
docs/05-Hampton_Roads_Industry_Cluster_
  Analysis_2018.pdf
  https://www.hrpdcva.gov/uploads/
docs/09a-HR_Talent_Alignment_
  Strategy-Report_1_2018.pdf
  https://www.hrpdcva.gov/uploads/
docs/09b-HR_Talent_Alignment_
  https://www.hrpdcva.gov/uploads/
docs/09c-HR_Talent_Alignment_
  https://www.hrpdcva.gov/uploads/
docs/09d-HR_Talent_Alignment_
  Strategy-Appendix_2019.pdf
- ReInvent Hampton Roads Industry Cluster
  Analysis – 2018
  https://www.hrpdcva.gov/uploads/
docs/05-Hampton_Roads_Industry_Cluster_
  Analysis_2018.pdf
- HREDA’s Business Environment Improvement Strategy – 2018

- Hampton Roads State of the Workforce Gap Analysis – 2017

- The Port of Virginia: Opportunity Analysis – 2017

- Strategic Plan for Economic Development of the Commonwealth – 2017