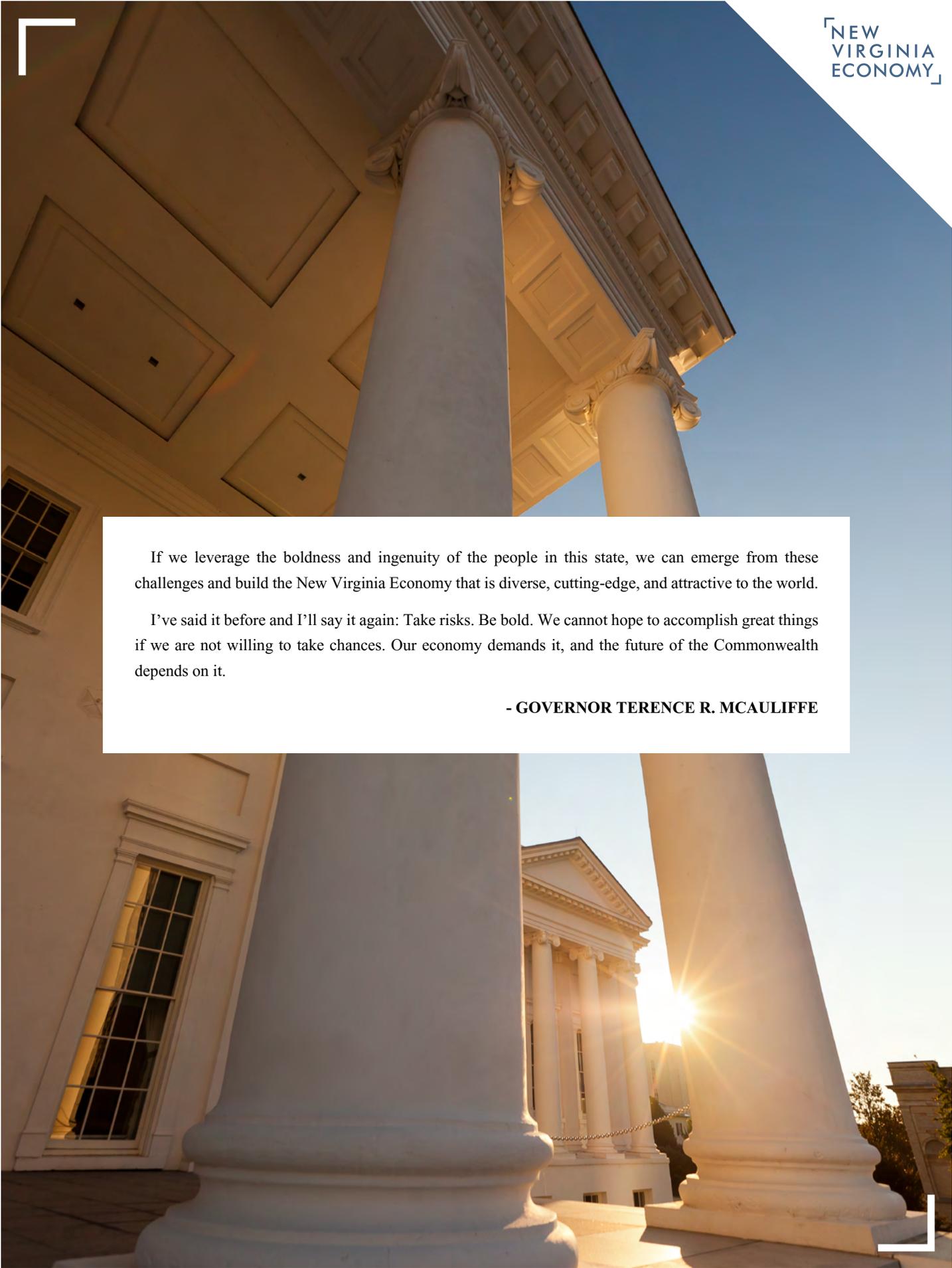


# NEW VIRGINIA ECONOMY





If we leverage the boldness and ingenuity of the people in this state, we can emerge from these challenges and build the New Virginia Economy that is diverse, cutting-edge, and attractive to the world.

I've said it before and I'll say it again: Take risks. Be bold. We cannot hope to accomplish great things if we are not willing to take chances. Our economy demands it, and the future of the Commonwealth depends on it.

**- GOVERNOR TERENCE R. MCAULIFFE**

# OVERVIEW

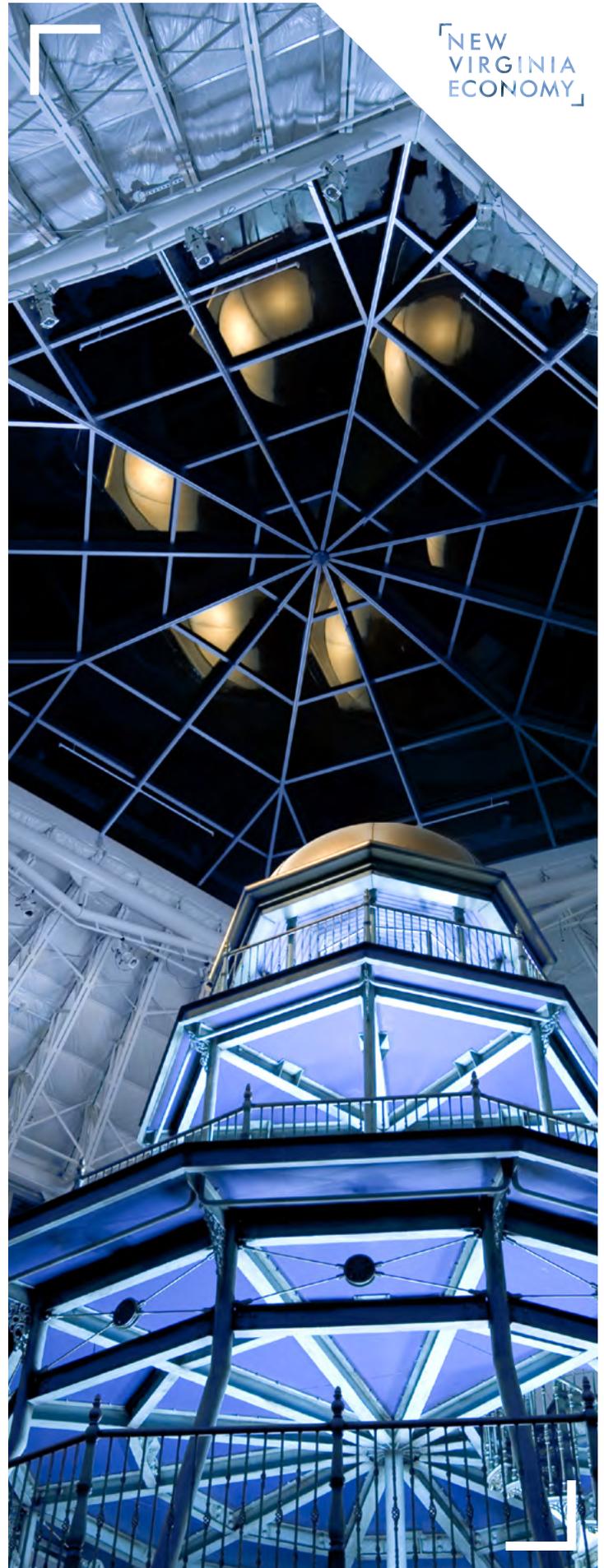
The Commonwealth of Virginia features world class assets that serve as a foundation of economic strength. Virginia's unparalleled education system, highly talented workforce, competitive business climate, central location and premium infrastructure have earned the Commonwealth years of well-deserved recognition as a preeminent state for business and economic growth.

Virginia is well-positioned to capitalize on opportunities in various high-growth industries, including healthcare, biosciences, cyber security and energy. According to the Information Technology and Innovation Foundation, the Commonwealth ranks among the nation's best globalized, entrepreneurial, IT-driven and innovative economies. Virginia also has one of the largest higher education systems, and her residents are among the most educated individual in the nation.

Virginia's fourteen commercial airports (including Dulles International) are able to move people and products quickly and efficiently. We offer the third largest state maintained transportation network with six major interstates, an extensive railroad system, and a high-tech and deep port, capable of handling Post Panamax vessels. Agriculture and forestry remain among Virginia's more robust industries, with a combined annual economic impact of \$70 billion. Increasing shipments around the world presents the opportunity for the Commonwealth to become the East Coast capital for agricultural and forestry product exports.

While Virginia enjoys distinct advantages and possesses unique assets, the state is facing unforgiving economic headwinds. Recent federal budget cuts, reductions in defense spending and the impact of sequestration have highlighted serious challenges. Decisive action is required to enhance Virginia's fiscal resilience and bolster economic growth. Going forward, it is vital that we treat these economic challenges as opportunities for improvement. By intensifying efforts on diversified, sustainable and prospering industry sectors, the Commonwealth will be able to excel in the global marketplace and lay the foundations for the New Virginia Economy.

NEW  
VIRGINIA  
ECONOMY





# PROCESS

Executive Order 26 (EO 26) created The New Virginia Economy Steering Committee. This steering committee, chaired by Secretary of Commerce and Trade Maurice Jones, was charged with guiding the production of the Governor’s four-year economic development strategic plan. EO 26 focuses on five priorities for the plan: enhance our economic development infrastructure; diversify and grow strategic industry sectors; solidify and promote the existing competitive business climate; nurture a sustainable entrepreneurial environment; and equip Virginia’s workforce with in-demand skills to meet the needs of business and industry. The plan must recommend specific executive and legislative actions needed to achieve these aspirations.

EO 26 instructed the Steering Committee to engage with relevant state agencies, local and regional economic development organizations, chambers of commerce, business leaders, sector innovators, and other organizations or individuals as designated by the Governor. Nine regional input sessions were coordinated across the Commonwealth in 2014 to solicit a wide-range of suggestions regarding future economic development directions. An online survey was distributed to individuals who could not attend the meetings and to allow for comment from the general public. Secretary Jones began each meeting by describing the current economic climate, outlining Virginia’s assets and explaining the risks going forward. Each participant was then encouraged to make substantive recommendations to the Governor.

Following the conclusion of the input sessions, staff analyzed and synthesized the material to find common themes that cut across regional, local and cultural arenas. The ideas gained from this extensive listening tour were then incorporated into a series of recommendations that were presented to the Governor. This report serves as a roadmap for putting these approved recommendations into practice and building the foundations of the New Virginia Economy.

## PRIORITIES OF THE NEW VIRGINIA ECONOMY

### “Project Ready” Infrastructure

Virginia must ensure that assets such as project ready sites, energy, housing, and broadband are able to attract multi-scale projects throughout the Commonwealth and advance the state’s competitive position both nationally and globally.

### Diversified High-Growth Industries

Virginia must devote vital resources to bolster thriving industries while diversifying our economy to include high-growth industry sectors and expanded trading partnerships.

### Preeminent Business Climate

Virginia must ensure that available tax incentives, regulations, and economic development tools can sustain and improve the Commonwealth’s position as the best state in which to start and grow a business.

### Innovation and Entrepreneurs

Virginia must pursue policies and public-private partnerships which attract talent, encourage entrepreneurship, promote business development and investment, and champion the creation and commercialization of cutting-edge products and services.

### “Credentials to Careers” Workforce

Virginia must align educational priorities with the needs of public and private sector employers in order to supply students, workers and transitioning veterans with the skills they need to thrive in a diversified 21st century economy.

# VIRGINIA'S ASSETS

Virginia was founded as a business venture more than 400 years ago, and that spirit of daring entrepreneurship lives on in the Commonwealth. Continuously named as a “Best State for Business,” Virginia possesses the kind of human, economic, geographic, educational, and regulatory assets that make it the envy of other states.

## PRO-BUSINESS CLIMATE

From the robust economy to competitive taxes and incentives, Virginia’s pro-business climate has few, if any, peers. For over 40 years, Virginia’s commitment to business growth and prosperity has been evidenced by its unchanging and attractive six percent corporate income tax rate. Virginia has one of the lowest average worker’s compensation costs in the nation. Depending on the region of the Commonwealth, building costs range from eight to 22 percent lower than the national average. The unemployment insurance tax rate is the second lowest in the nation.

TAXES	RATES		
	VIRGINIA	U.S. (MEDIAN)	SOUTH ATLANTIC (MEDIAN)
<b>INCOME TAXES:</b>			
CORPORATE INCOME TAX	6.00%	6.75%	6.90%
<b>SALES AND USE TAXES:</b>			
STATE TAX	4.30% OR 5.00%	6.00%	6.00%
STATE AND AVERAGE LOCAL TAX(COMBINED)	5.30% OR 6.00%	6.80%	6.04%

Source: Research Institute of America, State and Local Taxes: All States Tax Guide and The Tax Foundation, Ranking State and Local Sales Taxes

Virginia’s tradition of fiscal discipline has earned the Commonwealth a coveted AAA bond rating since 1938, longer than any other state. Indeed, 11 localities in Virginia have a AAA bond rating, more than in any other state as reaffirmed by Moody’s in September 2014.

As a strong recruitment and retention tool, Virginia has invested in its economic future by creating incentives that meet the needs of new and expanding employers. From tax credits to tax exemptions, Virginia continues to demonstrate its willingness to partner with those who invest and reinvest in the Commonwealth.

<b>INCENTIVES</b>				
FUNDS	Governor's Opportunity Fund (GOF)	Transportation Partnership Opportunity Fund	Governor's Agriculture and Forestry Industries Development Fund (AFID)	
PROGRAMS	Virginia Jobs Investment Program (VJIP)	Economic Development Access Program	Rail Industrial Access Program	Virginia Small Business Financing Authority (VSBFA)
TAX CREDITS	Green Job Creation	Research and Development	Virginia Port Programs	Recycling Equipment
	Worker Retraining	Day Care Facility Investment	Major Business Facility Job	Angel Investor
ZONES	Enterprise	Technology	Foreign Trade	Defense Production
PERFORMANCE	Virginia Investment	Major Eligible	Virginia Economic	Clean Energy
INCENTIVES	Partnership (VIP)	Employer Grant (MEE)	Development Incentive Grant (VEDIG)	Manufacturing Incentive Grant (CEMIG)
EXEMPTIONS	Sales and Use Tax Exemption	Property Tax Exemption	Data Center Tax Exemption	

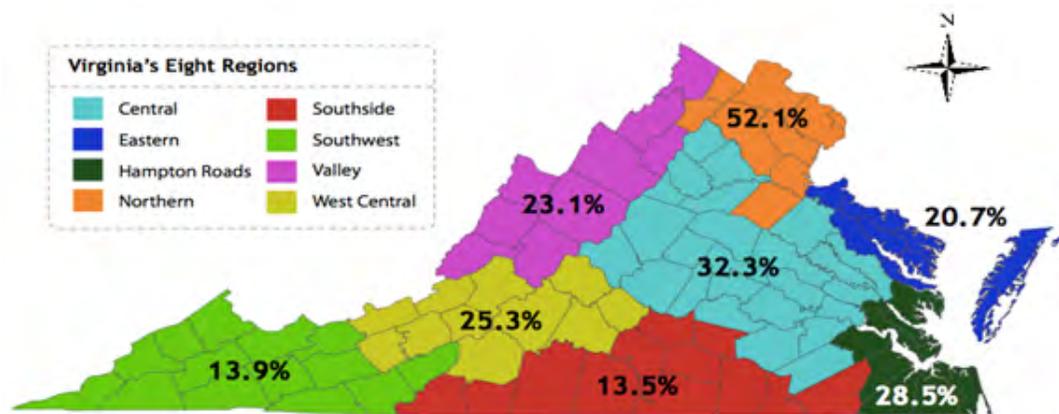


### WORLD-CLASS WORKFORCE

An educated and well-trained workforce is fundamental to building a resilient, globally competitive Commonwealth ready to meet the demands of the 21st century. Virginia’s higher education system is the 11th largest in the nation with over 80,000 graduates annually receiving associates, bachelor, master and doctoral degrees a year. Currently, more than 500,000 students are enrolled in over 90 in-state institutions of higher education. With at least one community college located within approximately 30 miles of almost every resident, Virginia’s workforce development programs are strategically positioned to provide workforce solutions in an efficient and effective manner.

As target industries continue to seek highly-skilled, highly-trained professionals to fill critical gaps, postsecondary education is key to building the New Virginia Economy. There is a strong correlation between educational attainment and job opportunities with higher incomes. In 2012, only 12.1 percent of Virginia adults did not have a high school diploma, which was better than the national average of 13.7 percent. Even so, Virginia boasts the greatest number of scientists and engineers of any state. Additionally, Virginia has the highest concentration (1 in 10) of private sector high tech workers in the country.

### PERCENTAGE OF ADULTS OVER THE AGE OF 25 WITH A BACHELOR’S DEGREE



Source: Virginia Performs, Council on Virginia’s Future

Currently, around 800,000 veterans reside in Virginia, and that number grows by 2,000 a year. With a strong military presence, defense activities and civilian contractors, Virginia is a natural leader in veterans affairs and trailblazer in developing veteran employment strategies. Through experience and training, Veterans retain the kind of technical talent needed to help build the workforce of the 21st century.

## INTERNATIONAL POWERHOUSE

In 2013, Virginia exports totaled \$34 billion. Virginia exported \$15.2 billion in manufacturing goods, around \$16 billion in services and \$2.5 billion in agriculture products. Canada has been the number one recipient of Virginia's goods for the past 17 years. However, with exports to 212 destinations throughout the world, Virginia is primed to continue to grow and improve trade relations across the globe. Over 230,000 jobs in Virginia exist because of Virginia company exports. About 80 percent of the world's purchasing power resides outside of America.

## VIRGINIA GOODS EXPORTS, BY REGION



Source: Virginia Economic Partnership

## TOP VIRGINIA GOODS EXPORTS

Rank	Description	Export Value, 2013	Change, 2013/2012	Top 3 Destinations		
-	Total Merchandise Exports	\$ 17,940.5	-1.9%	Canada	China	Mexico
1	Industrial Machinery	\$ 2,624.0	3.0%	Canada	Germany	Mexico
2	Electrical Machinery	\$ 1,975.5	3.5%	Singapore	Taiwan	Canada
3	Plastics	\$ 1,187.5	8.4%	Canada	China	Japan
4	Vehicles (not Railway)	\$ 1,163.7	-14.5%	Canada	Australia	UAE
5	Aircraft & Spacecraft	\$ 778.2	-36.8%	UK	French Guiana	Netherlands
6	Paper & Paperboard	\$ 772.8	1.2%	Canada	Mexico	China
7	Soybeans	\$ 719.6	-0.4%	China	Russia	Indonesia
8	Optical & Medical Instruments	\$ 673.7	13.6%	Canada	Netherlands	Afghanistan
9	Manmade Staple Fibers	\$ 511.2	16.8%	Indonesia	Belgium	China
10	Food Waste & Animal Feed	\$ 466.6	-3.0%	Indonesia	Poland	Saudi Arabia
11	Special Classifications	\$ 451.2	35.0%	UK	Dominican Rep.	Tajikistan
12	Nonwoven Textiles	\$ 423.2	40.1%	Japan	Belgium	China
13	Organic Chemicals	\$ 354.4	-12.7%	China	Taiwan	Germany
14	Wood & Wood Charcoal	\$ 344.0	19.0%	China	UK	Italy
15	Aluminum	\$ 319.1	9.9%	China	Mexico	Canada

In US\$ millions (Global Trade Atlas)

Source: Virginia Economic Partnership

## PORT OF VIRGINIA

As a prime hub for international exports, Virginia has the capacity to lead the nation. The Port of Virginia is the only port on the East Coast that has 50 foot deep channels, which are necessary for large, Post Panamax vessels. Over 2.22 million TEUs (Twenty-Foot Equivalent Units) were throughput in 2013. The port also has 22 Suez-class ship to shore cranes port-wide. Virginia's transportation strengths extend inland as well. Thirty-four percent of cargo arrives and departs by rail, the largest percentage of any US East Coast port. Trucks carry 62 percent of the goods on Virginia's six maintained interstate highways, which make up the third largest state maintained transportation network in the country.



## LOGISTICS AND STRATEGIC LOCATION

Virginia's companies provide services and manufactured goods to customers across the state and around the globe. The Commonwealth's distribution base remains strong and continues to grow as companies like The Home Depot, Best Buy, Target, Wal-Mart, Ace Hardware and Amazon.com deliver goods from their Virginia-based distribution centers. Millions of square feet of new warehousing space have been added at new distribution centers around the state.

Virginia's distribution industry employs nearly 69,000 people, primarily in trucking (20,000 employees), warehousing (19,000 employees) and transportation support (14,900 employees). In the past 10 years, 380 global logistics industry projects have announced over 15,300 new jobs and capital investment of more than \$1.8 billion. The global logistics industry has a direct economic output of \$9.2 billion and supports an additional \$6.6 billion in economic activity in Virginia. Centrally located, Virginia is within a two-day drive time of approximately 70 percent of the US population and over 307,000 manufacturing establishments.

Two of the nation's largest railroads, CSX Corporation and Norfolk Southern Corporation, have extensive infrastructure throughout the Commonwealth. Nine short-line railroads operate in Virginia, providing one of the strongest rail networks in the nation.

## INTERNATIONAL AIR TRAVEL

Washington Dulles International Airport (IAD) is located in Northern Virginia on 12,000 acres of land 26 miles from downtown Washington, DC. The Airport has invested in its infrastructure through a major construction program called D2, Dulles Development, which included two parking garages, a new airport traffic control tower, expanded B-gates, a new fourth runway, an automated people mover system called AeroTrain and an expanded International Arrivals Building. The airport is connected to the region's highway system via an Authority-operated, 16-mile Airport Access Highway dedicated to airport users. A 23-mile expansion of the region's Metrorail system is planned to reach Dulles in 2018. Dulles is Virginia's largest airport and provides international and domestic services for passengers and cargo.

Dulles welcomes 445 weekly flights on 28 carriers from 50 international destinations. The airport has significant capacity for future growth. With minor expansion, the current facilities could accommodate 45 million annual passengers (22.5 million enplanements). With all future facilities in the master plan constructed, the airport could accommodate 70 million annual passengers (35 million enplanements) operating out of 250 airline gates. The current four-runway configuration has a capacity of up to 600,000 aircraft operations per year. With a future fifth runway constructed, the airfield capacity could increase to 1 million aircraft operations per year.

# VIRGINIA'S RISKS

Virginia is blessed to be a state with assets that are desired and recognized around the world. Among Virginia's largest assets, however, are also its largest risks. When examining Virginia's twenty largest employers for example, one quickly observes that thirteen of the top twenty are either public sector enterprises or contractors overwhelmingly dependent on the public sector. Virginia's largest employer, The U.S. Department of Defense, has no rival. Counting just civilian employees, defense employs more people than the next two of the largest employers combined.

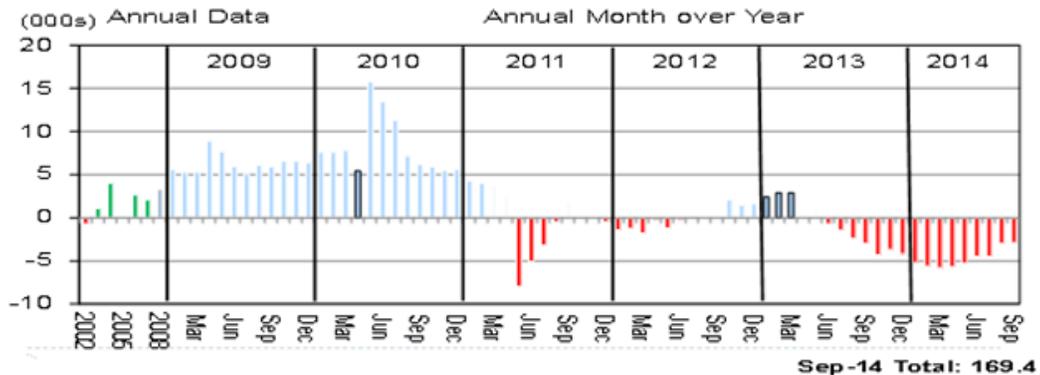
## PRO-BUSINESS CLIMATE

- |   |  |
|---|--|
| 1. U.S. Department of Defense           | 11. Prince William County School Board   |
| 2. Walmart                              | 12. Capital One Bank                     |
| 3. Fairfax County Public Schools        | 13. City of Virginia Beach Schools       |
| 4. Huntington Ingalls Industries, Inc.  | 14. Loudoun County Schools               |
| 5. Sentara Healthcare                   | 15. Inova Health System                  |
| 6. Food Lion                            | 16. University of Virginia and Hospital  |
| 7. U.S. Postal Service                  | 17. Virginia Tech with Extension Offices |
| 8. County of Fairfax                    | 18. Virginia Commonwealth University     |
| 9. HCA Virginia Health System           | 19. Lowe's Home Centers, Inc.            |
| 10. U.S. Department of Homeland Defense | 20. U.S. Department of Commerce          |

Source: Virginia Employment Commission

In 2012, as the private sector economy was improving, the threat of sequestration prolonged unease about Virginia's financial future. With 30 percent of Virginia's economy tied to federal spending, a 15.2 percent decline from 2011 to 2014 put extra pressure on the public sector, namely public contract businesses. The Department of Defense reduced procurement spending by 21.8 percent, or about \$9.8 billion. Federal payroll dropped 7.5 percent or \$1.16 billion, resulting in 13,700 fewer federal jobs since 2010. Federal contract spending was reduced in FY 14 by 4.5 percent and is estimated to be reduced by double that at 9.2 percent in FY 15 resulting in the loss of nearly 22,000 jobs in Virginia that year.

## COMMONWEALTH OF VIRGINIA: FEDERAL GOVERNMENT JOBS



Source: Virginia Employment Commission

The national average Gross State Product (GSP) growth in 2012-2013 was 1.84 percent. At only 0.06 percent, Virginia ranked 48th in the nation for growth in GSP. Maryland was 49th and DC was 51st showing a negative growth rate of -0.49 percent.

# THE JOB TO BE DONE

So the big job to be done is to inject more balance into Virginia's economic growth engine. The Commonwealth currently has a material imbalance in its job generating machinery. We are overly dependent on the public sector for economic prosperity. The recession and its aftermath have highlighted the costs of this imbalance which include: substantial job and wage losses from recession; public sector cuts and sequestration; tepid economic growth during a season of public sector spending reductions; the loss of thousands of good paying federal jobs unreplaced by anything in the private sector as of yet; and the current expectation of a state growth rate over the next three years that for the first time in the 21st century trails the projected national economic growth rate.

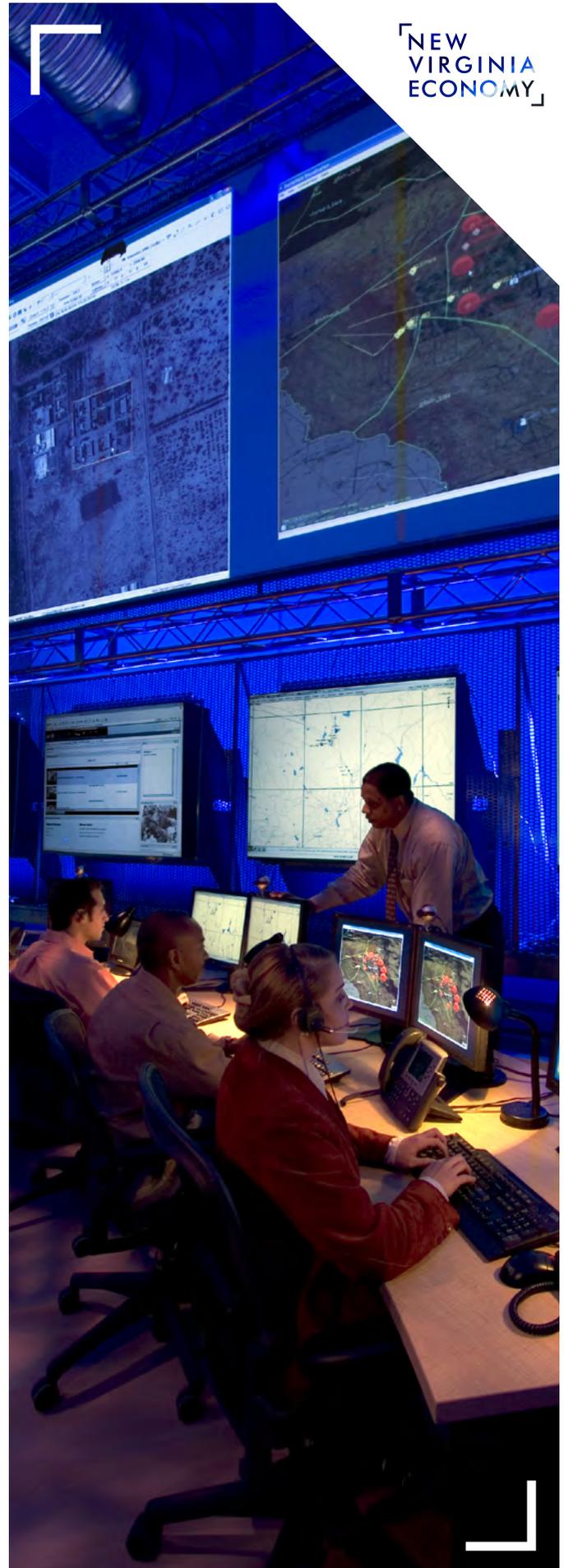
## VIRGINIA AND U.S. ECONOMIC GROWTH 2012 - 2018

YEAR	VIRGINIA	U.S.
2000 - 2007	3.0	2.5
2008 - 2009	-0.8	-3.1
2012	1.1	2.8
2013	1.0	1.9
2014	1.5	2.4
2015	2.3	3.2
2016	2.6	3.5
2017	2.7	3.2
2018	2.7	2.7

Source: HIS Global Insight; GMU Center for Regional Analysis

The key point here is to achieve this balance via private sector growth, not reduction in the public sector opportunities. The public sector, particularly the defense component, will remain an enormously important contributor to the Commonwealth's success for years to come.

While continuing to pursue the opportunities that arise as a result of Virginia's strategic location bordering the nation's capital, Virginia must take action now to catalyze the growth of the private, nonpublic dependent components of its economy. Fostering this growth will interject more resilience into Virginia's economic engine. To foster this private sector led growth, the Commonwealth must focus on the being best in class in five areas: infrastructure; strategic growth sectors; overall business climate; entrepreneurship and innovation; and talent.



# GOALS & STRATEGIES

## “PROJECT READY” INFRASTRUCTURE

Sustainable economic growth requires world class infrastructure. Certainly, roads and highways are critical components of that infrastructure. However, just as crucial to economic development and growth are: widespread access to low cost, abundant and reliable energy sources; strategic broadband access; a portfolio of small, medium and mega project ready sites; easy access to international and markets via land, air, and sea; abundant, affordable housing for the workforce; and regional airports with sufficient air carrier service to affordably and efficiently transport business travelers to important destinations for commerce throughout the country.

The current and future energy landscape in the Commonwealth demands a focus on utilizing a diverse portfolio of energy sources to encourage and enhance economic development. Diversity in the fuel mix provides a hedge against market volatility of particular sources and reduces the likelihood of over-reliance on a select number of sources. This strategy is critical for economic growth as it promotes the growth of energy sectors with significant untapped potential, aides in maintaining affordable and competitive energy costs, and ensures reliability for businesses and consumers. Governor McAuliffe announced in October 2014 his Energy Plan which sets forth the actions this administration is and will be taking to diversify the Commonwealth’s fuel mix and provide an energy infrastructure that is conducive to economic growth. The relevant components of that plan are:

## ENERGY

### 1. Diversify and grow innovated energy sectors

- Establish the Virginia Solar Energy Development Authority based on the model of the Virginia Offshore Wind Development Authority.
- Increase the rated generating capacity for renewable energy that can be owned and operated by customer-generators from 1 percent to 3 percent of an electricity distribution company’s adjusted Virginia peak-load forecast from the previous year.
- Make third-party Power Purchase Agreements (PPA) available throughout all utility service territories in Virginia. Double the current cap on total megawatt installation through PPA’s from 50 MW to 100 MW.
- Establish Virginia as the ideal manufacturing, operation and supply chain hub for offshore wind development in the mid-Atlantic region and provide support and resources to accelerate development of Virginia’s offshore wind resources.
- Go global with coal technology by building a proactive outreach program that creates an awareness of international opportunities, conduct an “export tour” in Southwest Virginia and increase technical assistance for future growth of coal in international markets.
- Conduct a readiness study to determine Virginia’s ability to sustain any potential offshore gas and oil exploration and industry development.
- Ensure Virginia maintains a diverse energy generation mix to keep costs stable and affordable for consumers and create an environment where emerging energy technology companies can grow.

### 2. Reduce greenhouse gas emissions and lower energy consumption throughout the Commonwealth

- Establish the Governor appointed Board on Energy Efficiency

to develop a strategic plan to achieve the goals of reducing energy consumption during the administration.

- Meet the goal established by the 2007 Virginia Energy Plan which reduces energy consumption at the retail level by 10 percent by 2020.
- Aggressively implement energy efficiency in State government by instructing the newly appointed Chief Energy Efficiency Officer to oversee the implementation of energy efficiency measures in state agencies, including Energy Performance Contracting (EPC); reducing electricity consumption by 15 percent during the administration; and pilot energy efficiency programs at state agencies.
- Develop a marketing, outreach, and pilot assistance program to engage local municipalities in Energy Performance Contracting (EPC).

### 3. Strengthen our business climate by investing in reliable and resilient energy infrastructure

- Support legislative and regulatory policy to allow Virginia’s natural gas utilities to expand into underserved areas; support the improvements and expansion of interstate natural gas pipeline infrastructure to increase capacity in currently restricted market areas, such as Central and Coastal Virginia to improve the ability to attract new businesses and stimulate economic development in these areas.
- Support nuclear energy generation, research, education and workforce development and recognize nuclear energy’s important role in the Commonwealth’s diverse electricity generation portfolio.
- Create flexible financing mechanisms that leverage private sector funding to improve energy infrastructure and other high-priority, energy programs.

## BROADBAND

Broadband coverage is very uneven across the Commonwealth with high quality infrastructure in heavily populated, mostly urban/suburban regions and an estimated less than 25 percent coverage in most of the rural parts of the state. Quick, reliable and affordable access to the internet is a prerequisite for all business, large, small and home-based, and thus for economic growth. Accordingly, the opportunity is for the public and private sectors to intensify efforts to work together in creative and innovative ways to ensure access to affordable broadband for businesses and entrepreneurs throughout rural Virginia. To pursue this aspiration, this administration will pursue the following areas:

### 1. Leverage existing assets to build the future for Virginia's broadband

- Maximize the use of state owned land, buildings and other assets to increase connectivity.
- Continue to make capital investments in broadband equipment that will allow consumers to increase the penetration rate and also provide higher speed service.
- Utilize many taller agriculture structures such as mills for wireless towers.
- Utilize broadband connectivity of schools and libraries to form wireless hotspots after school closes.
- Maximize the use of state resources to help localities develop strategic plans to acquire broadband service.

### 2. Search for additional funding through private or public sector

- Examine the outcomes of creating a limited tax exemption to fiber provider for new extension to offset long term capital costs.
- Consider creating a low cost, long term financing mechanism easily accessible to any entity seeking to provide competitive broadband service for economic development purposes
- Explore capitalizing on the Virginia Broadband Infrastructure Loan Fund currently authorized under the Virginia Resources Authority (VRA).

## SITE DEVELOPMENT

Attracting manufacturing enterprises to the state is a big opportunity for growing Virginia's economy. The largest economic development project secured so far under Governor McAuliffe's leadership is an advanced manufacturing business, paper and fertilizer producer, that will invest \$2 billion and create 2,000 jobs in Chesterfield County. This project is the largest greenfield investment ever by a Chinese firm in the United States. To compete for this investment, Virginia needed a project ready site of more

than 500 acres of land that was served by rail and road and that had all utilities in place, including water, sewer, electricity, fiber and natural gas. Currently Virginia has only three such sites in the entire Commonwealth. Unless we get more sites ready, urgently, we will miss big opportunities expected to come online over the course of the next three years. This job will require collaboration among state government, local government and the private sector. Our plan takes a leadership role with the following actions:

### 1. Perfect Data

- Prepare an exhaustive inventory of current sites in public and private hands that are almost ready but not quite because of certain barriers such as funding, environment or infrastructure.
- Identify regional training centers that may be able to provide plumbers, contractors, and HVAC workers who can move around the state building the infrastructure.

### 2. Support site creation and development

- Explore the prudence of developing a state infrastructure loan program to fund last stages of development.
- Identify one or two mega and medium, and five or six, mini sites each year scattered throughout the state to invest significant money to develop the sites.
- Accelerate the state permitting process required for site development.
- Work with the Army Corps of Engineers to accelerate the federal permitting process.
- Provide more state grant monies to collaborate with localities on development.
- Enhance opportunities for VRA to provide funding assistance for megasite development.
- Investigate ways to create possible incentives to reduce initial energy costs for companies bringing new jobs to Virginia.

### 3. Market sites to all audiences

- Advocate for and track data on all sites so state can assist economic developers.
- Advertise Virginia's commitment to developing sites for any business.

## HOUSING

Quality, affordable housing is a core component of sustainable economic growth. Housing is foundational for a high quality workforce, great school performance and healthy communities. Accordingly, this fall Governor McAuliffe issued EO 32 outlining his housing priorities and executive actions. Those relevant priorities and actions are:

**1. Evaluate current and future housing opportunities**

- Establish working groups as determined by the Secretary of Commerce and Trade and invite stakeholder participation to provide input regarding housing and related issues.
- Conduct a review of programs and policies in coordination with activities of state-level housing and economic development policy-setting efforts.
- Identify the links between housing and economic and community development.

**2. Craft policy to address future needs**

- Advance economic and community development strategies integrated with housing initiatives for urban and rural revitalization, including adaptive reuse, mixed-use development and mixed-income housing, and the preservation of existing affordable housing.
- Improve cross-secretariat and agency collaboration and identification of resources to assist individuals receiving supportive services within a community, as appropriate, rather than in institutional settings.
- Create affordable housing that meets the needs of working Virginians in areas where high housing costs impede economic development, productivity and the quality of life.

# GOALS & STRATEGIES

## DIVERSIFIED HIGH-GROWTH INDUSTRIES

The Commonwealth's business assets provide a solid foundation for both growing and diversifying our private sector. Virginia is currently the headquarters location for over 40 firms with annual revenues exceeding \$1 billion and house over 30 Fortune 1,000 companies. More than 750 international companies from 45 countries call Virginia home. With this base, Virginia is well positioned to grow the number of firms it hosts and to expand in sectors with good paying jobs. The sectors below are key industries that present opportunities for growth. Each region will more than likely have its own particular targets that best fit with its assets. Accelerating the growth of these sectors will require, among other things, a high functioning team consisting of state, local and private sector partners. Regional and local economic development, talent, higher education, workforce personnel and others have crucial roles to play.

### TARGET INDUSTRY SECTORS

- Advanced Manufacturing
- Cyber Security
- Big data & data analytics
- Information Technology
- Tourism
- Aerospace
- Energy
- Modeling and Simulation
- Data Centers
- Federal Government:
- International Trade
- Healthcare
- Agriculture and Forestry
- Life Sciences
- Professional and Business Services

While this plan will not discuss all of the sectors listed above, it is useful to highlight a few to clarify the opportunities in the Commonwealth.

### ADVANCED MANUFACTURING

The manufacturing sector remains a vital component of the U.S. and Virginia economies. While not the dominant employer it was a generation ago, manufacturing helps drive technology, productivity, and innovation across many industry sectors. While Virginia has seen job losses in manufacturing, the sector employs over 240,000 employees and represents over \$118 billion in direct annual economic output. Accounting for direct and indirect jobs in Virginia, 13% of all jobs in Virginia are related to manufacturing. Wage levels and overall industry multipliers are higher for the manufacturing sector than other industry sectors, contributing to overall state income and economic stability. Key manufacturing operations are found in most regions of Virginia and provide a viable foundation on which to build.

There is a diverse array of key sub-sectors represented and indications are that the reshaped transportation sector provides continued opportunities for automotive equipment and components and other transportation equipment manufacturers. Likewise, recent business opportunities in aerospace equipment, unmanned automated systems, agribusiness and advanced materials, provide evidence that Virginia is capturing manufacturing market share. Virginia has just been selected as one of 6 test ranges for Unmanned Aerial Vehicle testing (the Mid-Atlantic Aviation Partnership). Virginia is also home to unique capabilities in R&D and in workforce development through entities such as the Commonwealth Center for Advanced Manufacturing. Projections are for significant growth in this segment and Virginia possesses many of the assets needed to scale up a manufacturing presence in this growing sector.

### INFORMATION TECHNOLOGY

Virginia has enjoyed national and international acclaim for its leadership in the broad arena of information technology. Currently, there are over 300 cyber security companies in Virginia, and more firms are being established each month. Systems and integration design and data center operations are some examples of the formidable information technology footprint here in Virginia. In fact, there are 10,800 employees working in datacenters at an average salary of \$94,000. The Northern Virginia region is clearly the dominant presence for the industry, but this is being dispersed in varying degrees to other regions of the state. A recent national data center summit in Virginia reinforced the industry's view of continuing growth, and companies reiterated that Virginia's infrastructure and tax policies make it an excellent location for growth.

As the world's commerce and telecommunications interface increasingly is migrating to the cloud, new opportunities for investment across Virginia are in play. The recognition of data analytics as a new frontier for business and government decision making provides Virginia with a competitive advantage. Assets such as access to abundant talent, university research support, robust infrastructure, and key customer proximity strengths should serve Virginia well as Big Data and analytics gathers momentum. Organizations such as the Commonwealth Center for Advanced Logistics Systems represent opportunities for Virginia to expand its reputation in this area.

Virginia's information technology strength bodes well for other sectors in Virginia, as the technologies and capabilities which arise out of the technology arena inevitably migrate to and find useful applications in most other industries. Advanced manufacturing

operations in all sectors—medical and life technologies, bioinformatics, global logistics, research and development, corporate management and headquarters, and even federal and defense/security related operations—are all dependent on highly robust and reliable technologies in sensing, monitoring, processing, managing and controlling systems as the lifeblood of these industries. Information technology is the connective tissue and enabling activity that is common to all and gives rise to a distinct competitive leverage point for Virginia.

## LIFE SCIENCES & MEDICAL TECHNOLOGIES

Virginia has made fitting overtures in the biotechnology and life sciences space. Some 20,000 Virginians are employed in the sector with a healthy average salary of \$48,000. Key companies such as Merck, Abbott, Teva, Novozymes Biologicals, and Fareva are represented in this sector and give a nucleus around which to build. Research in Virginia continues to grow and provides a set of unique strengths. The Howard Hughes Medical Institute and SRI International provide the Commonwealth with strong research credentials.

In 2013, Virginia created the Virginia Biosciences Health Research Corporation (VBHRC/the Catalyst) as a means of bringing corporate research together with Virginia's six major research universities on key focal areas of collaborative research in which Virginia has demonstrated world-class strengths: bioinformatics, medical informatics, point of care diagnostics, and drug discovery and delivery. Though early in its life, this program is already attracting the interest of major, non-Virginia-based pharma companies. Also, there are assets in place to build upon the information technology and advanced manufacturing infrastructure to pursue health information technology & services and medical devices.

## PROFESSIONAL AND BUSINESS SERVICES

Professional and business services activity in Virginia has been a leading contributor to Virginia income and job growth. Federal spending policy has certainly impacted this, particularly as it relates to the contracting community in Northern Virginia, Hampton Roads, and elsewhere. Still, there is a considerable base of highly skilled talent in Virginia, requisite infrastructure, and a network of highly formidable companies that are adept at reading and responding to dynamic market changes. As companies continue to right-size, engage in strategic alliances, mergers, and develop new strategies for survival and growth, Virginia and its economic development team need to be positioned to assist and add value. Many of these operations have multiple locations outside of Virginia. Virginia Economic Development Partnership (VEDP) and other Virginia officials must reinforce the case for consolidation and growth in Virginia, to take advantage of the long-standing pro-business

advantages Virginia offers. VEDP, for example, is increasing its on-ground staffing in Northern Virginia to ensure that it can aggressively deploy ongoing, relentless outreach to companies in the market.

Notwithstanding recent trends of reduced federal spending, federal and security operations offer certain opportunities for Virginia for the same reasons cited by the private sector. There are opportunities to be had in agency footprint consolidations and reorganizations that result from a diminished physical federal footprint. Virginia, especially Northern Virginia, has ample inventory of office space which can be a strong consideration in evaluating a Virginia option. Likewise the other assets (access, talent, vendors, taxes policy, regulation, utilities) help promote the Virginia case relative to competitor options. In some areas, such as intelligence and security related establishments, certain segments of government operations are in a growth mode and may require additional outposts.

## TOURISM

With over \$59 million spent each day by domestic travelers, tourism is the fifth largest private employer in Virginia. Virginia ranks 9th in domestic traveler to spending among 50 states and Washington D.C. With 213,000 jobs supported by domestic travel, on average every \$100, 998 spent by domestic travelers in Virginia during 2013 supported one job. . Seven percent of jobs in Virginia are supported by domestic travel in some fashion. With such a large economic impact on the state, it is no surprise that tourism has contributed 23 cents in payroll income per every dollar spent from a domestic traveler. With \$2.8 billion in tax revenue for federal, state, and local governments, increasing tourism is a top priority for Virginia. Forty-one of Virginia's 134 counties and independent cities received over \$100 million in domestic travel expenditures in 2013.

## AGRICULTURE AND FORESTRY

According to a 2013 economic impact study conducted by the Weldon Cooper Center for Public Service at the University of Virginia (UVA), agriculture and forestry have a combined economic impact in Virginia of \$70 billion annually. Agriculture generates more than \$52 billion per annum, while forestry induces over \$17 billion. The industries also provide more than 400,000 jobs in the Commonwealth. Every job in agriculture and forestry supports 1.5 jobs elsewhere in the Virginia economy. Virginia farms employ 55,000 farmers. This sector alone generates approximately \$3.3 billion in total output. Value-added and other related agriculture and forestry industries employ more than 250,000 workers and generate over \$48 billion in total output.

Virginia's top three agricultural and forest product export markets in 2013 were China, followed by Canada and Switzerland. Exports to China totaled more than \$580 million in 2013, up from

approximately \$170 million in 2009. These countries and many others are purchasing a variety of Virginia agricultural commodities, wood products, seafood, and specialty food and beverage items. In general, exports of Virginia's agricultural and forestry products increased by more than 64 percent from 2007 to 2013.

Agricultural and forestry exports from Virginia will continue to grow in importance for both Virginia's farming and overall economies. According to the United States Department of Agriculture (USDA), exports account for more than 30 percent of all farm sales and that figure is expected to grow. In addition, USDA states that for every \$1.00 in agricultural exports from a state such as Virginia, approximately \$1.27 is generated in-state from the port all along the business chain to farms. When considering that more than 80 percent of the world's customers live outside the U.S., Virginia stands to gain significant new revenue and job creation by increasing the amount of products it moves into the global marketplace.

To capitalize on the growing importance of agricultural and forestry exports, Virginia has opened nine new representative trade offices since 2010. The Commonwealth now has trade representatives in China, India, Russia, Canada, Mexico, Costa Rica, and the United Kingdom, supplementing an existing office in Hong Kong.

The following strategies will help bolster thriving industries while diversifying the economy to attract additional high-growth industry sectors and expand trading partnerships.

**1. Elevate the profile of the industry within and outside the state, communicate the state's focused commitment, and challenge the industry to reach its potential**

- Host roundtables and other discussions with business, research, and academic leaders to discuss how to move Virginia to the next level in each industry.
- Seek input and support for a "Virginia Business Expo" to showcase our strengths in research and innovation, both in industry and academia, to top level executives and business development staff of national and global corporations, venture capital, and federal government funders.
- Prepare an inventory of state industry assets, including university core research facilities and key researchers and the private sector. This inventory should be made public, searchable and marketed to future Virginia businesses.

**2. Integrate industries to strengthen individual and combined sectors**

- Partner universities with big data firms to strengthen bioinformatics around health diagnostics, panomics and interventions.
- Become a national leader in promoting access to health care innovation by leveraging state-influenced reimbursement

policies.

- Create a manufacturing workgroup which will work closely with bioscience industries to bring products and pharmaceuticals to production.

**3. Share with the world Virginia's assets and strong sectors**

- Launch a new, proactive branding campaign to bring new businesses to the state. Each region can develop an individual campaign to market strengths that align to the state campaign or have its own branding identity.
- Coordinate a marketing campaign to attract foreign direct investments. These campaigns will leverage Virginia's high quality workforce, business climate, infrastructure, and proximity to the North America markets.
- Establish anchor business institutes that can help attract international companies.
- Elevate the World Trade Center concept with strong industry sectors and universities.
- Expand export assistance to existing companies.
- Explore the creation of the Tourism Growth Incentive Fund to assist in development projects.
- Promote the Tourism Development Financing Program to stimulate tourism product development by lowering the capital threshold developers need to access the program.

**4. Continue and enhance the state's focus on its thriving and diversified agriculture and forestry industries**

- Build domestic capacity.
  - » Continue efforts to fully utilize and expand the Governor's Agriculture and Forestry Industries Development (AFID) Fund with Facility and Planning Grants by continuing to recruit and incentivize new agricultural and forestry economic development projects and existing agribusiness expansions.
  - » Encourage the purchase and use of Virginia's agriculture and forestry products and specialty foods, particularly through the Virginia's Finest and Virginia Grown programs.
  - » Increase opportunities for Virginia's wine production and grape growing industries and significantly grow both, building on the record-breaking success of number of cases sold and export sales reaching an all-time high in Fiscal Year 2014.
  - » Work with public and private sector partners to further promote and enhance the use of Virginia grown products in the state's growing craft beverage industry, including craft beer, hard cider, and distilled spirits.
  - » Work with the First Lady of Virginia to promote Virginia's

agriculture economy through the Commonwealth Council on Bridging the Nutritional Divide, focusing on efforts to help solve childhood hunger by capitalizing on the Commonwealth's vast agricultural assets to support local programs related to community nutrition, food access, and health strategies.

- » Establish a Virginia Agricultural Biotechnology Initiative as part of the Governor's Virginia Biotechnology Initiative, including the establishment of a Virginia Ag Bio Advisory Committee with recognized public and private partners in the ag bio sector for domestic and international business development.
- Globally market Virginia grown products.
  - » Strive to make Virginia the East Coast Capital for agricultural and forestry Exports by continuing to work with private sector partners and VDACS International Marketing staff in Richmond and Hong Kong and trade representatives in China, India, Russia, Canada, Mexico, Costa Rica, and the United Kingdom to grow Virginia agricultural and forestry exports beyond the record \$2.85 billion reached in 2013.
  - » Create an export training and educational program within VDACS Division of Marketing & Development for small- to medium-sized Virginia agribusinesses targeted to the unique characteristics of agricultural, including specialty foods and beverages, and forestry products.
  - » Examine the expansion of Virginia's presence for agricultural and forestry products in developed and emerging markets such as Southeast Asia, Northern Africa, and the Middle East.
- Protect Virginia's Natural Resources for Economic Growth.
  - » Protect and enhance Virginia's abundant and renewable forest resources, including enhancing the Reforestation of Timberlands program to ensure a supply of raw materials for the thriving forest products industry and other future needs.
  - » Enhance water quality in the Chesapeake Bay basin and all of Virginia's watersheds for both environmental health and the protection and promotion of the state's marine products industry.



## GOALS & STRATEGIES

### PREEMINENT BUSINESS CLIMATE

Maintaining a world class business climate is a prerequisite for accelerating business and job growth in the Commonwealth. Virginia must continue efforts to offer firms the lowest operating costs, smartest regulatory environment and high quality, competitive incentives. These benefits must be available for businesses considering expanding in or relocating to Virginia.

More than 400 years ago, Virginia was founded as a business venture. To extend the Commonwealth's brand as leading state for business well into the future, Virginia must take the following actions:

#### 1. Right size regulations

- Strengthen the Virginia Jobs Investment Program (VJIP) to ensure it can help businesses navigate the workforce system and reach underserved areas.
- Conduct a thorough regulatory review analyzing and recommending the modification and repeal of redundant and outdated regulations.
- Consider the appointment of a regulatory ombudsman that assists economic development projects with navigating all state and local regulations at the speed of business.

#### 2. Enhance incentives and credits to recruit, retain and grow companies

- Keep Governor's Opportunity Fund competitive with other states.
- Create an internal working group which will evaluate current policies and study the ROI on incentives and programs.
- Enhance state research capacity on collecting, reporting, and conducting return on investment analyses for incentive programs.
- Reform the Tobacco Commission to maximize ROI on Commission investments and create a long term sustainable funding model.

#### 3. Promote business climate and Virginia's assets to compete in the national and international marketplace

- Invest in a worldwide marketing campaign, similar to others states such as New York, Michigan and California, to reach broad audiences.
- Examine the business case for opening a Virginia Economic Development Office in South Korea.
- Develop marketing tools for VEDP that demonstrate the impact of Virginia's cost climate on businesses relocating.

# GOALS & STRATEGIES

## INNOVATION AND ENTREPRENEURS

Startup firms constitute a particularly important source of job sector growth for the Commonwealth and the rest of the nation. Indeed, according to the Kaufman Foundation, job creation by very small firms (less than 20 employees) and newly formed firms account for a majority of overall job creation in any given year. Thus, in addition to the attention Virginia pays to attracting enterprises from elsewhere to come and do business, the Commonwealth must ensure that we marshal its resources on behalf of nurturing, attracting and retaining entrepreneurs.

Entrepreneurism and innovation are keys to growth in every part of the Virginia, urban, rural, and suburban. To strengthen the entrepreneurial ecosystem, Virginia will consider taking the following actions:

### 1. **Develop a robust, statewide infrastructure that would support start-ups and existing business**

- Utilize the newly created Entrepreneur in Residence legislation to evaluate current business climate for new companies.
- Build the Virginia Innovation Network for Entrepreneurs (VINE) which will direct entrepreneurs to services they need including financial, legal, consulting, and mentoring.
- Create a world-class, well-funded business plan competition with experienced business leader mentors to attract the brightest entrepreneurs and their best ideas and businesses to Virginia. The competition will facilitate growth of a sustainable entrepreneurial ecosystem and brand Virginia as an innovator's destination.
- Engage with Virginia law schools on the possibility of providing free patent clinics to entrepreneurs.
- Develop an online market place and inventory to allow businesses to connect to suppliers/vendors within the Commonwealth to build a supply chain ecosystem.
- Recruit and retain immigrant entrepreneurs and researchers by working with universities and businesses.
- Incentivize large businesses to support start-ups and small businesses by sharing resources such as accounting, cyber security, facilities and business mentors.
- Provide proprietary research and data access to businesses with high growth potential.

### 2. **Encourage innovation in all regions of Virginia**

- Assist efforts to develop regional business plan competitions.
- Promote entrepreneurship as a life skill in K-12 and higher education curriculum.
- Encourage regions to reach out to entrepreneurs that left the region; use these people as mentors.

- Increase accelerators and small business development centers, particularly in rural areas.
- Explore the establishment of Innovation Zones in cities and regions throughout the state.

### 3. **Maintain a robust portfolio of incentives**

- Continue to invest in VBHRC and the CRCF.
- Develop specific legislative proposals to expand the individual limits and/or total cap on the R&D and Angel Investor tax credits and make the credits transferrable.
- Study the funding infrastructure for second stage small businesses.
- Extend Capital Gains Tax Exemption for tech startups.

### 4. **Lead the nation in the ease of commercializing translational research from public universities**

- Create best-in-nation system of public university technology transfer by focusing on incentives and structures of licensing; access to a clearinghouse of technology opportunities and needs; management of conflict of interest and intellectual property issues arising from researcher/entrepreneurs sponsored research; use of public core research facilities and space; and proof-of-concept funds.

# GOALS & STRATEGIES

## “CREDENTIALS TO COMPETE” WORKFORCE

Arguably the most transformative asset for sustainable economic growth is the workforce. The quality of the workforce is the most influential determinant of a business success and resilience. For Virginia to consistently outpace the rest of the country in economic growth, it must have the best prepared workforce for the jobs of the 21st century. Virginia’s workforce development system therefore must be led by the demands and opportunities in business and industry. Accordingly, this plan recommends the following action steps:

### 1. Reform Virginia’s Public Workforce System

- Develop a consortium comprised of the Governor’s Chief Workforce Advisor, VEC and VCCS to administer, on a state level, Virginia’s workforce system and the state’s Workforce Innovation and Opportunities Act (WIOA) grant.
- Identify regional workforce and economic development partners by Local Workforce Investment Areas (LWIAs) to engage and energize public and private partners in developing sector strategies and career pathways to alleviate regional skills gaps in targeted industry sectors.
- Recommend a stipulated minimum percentage of local grant funds that must be spent on training by the LWIAs.
- Align One Stop Career Centers within local workforce investment areas and to develop a plan to reduce the number of VEC offices and satellite One Stop Centers to reduce administrative and overhead costs.
- Revise state code regarding the Virginia Board of Workforce Development to reflect economic development priorities and new federal workforce legislation.
- Create a transparent workforce system by requiring any agency that receives state funds to post a budget that shows state and local allocations, a line item budget for state retained funds (also called administration and leadership funds, and discretionary funds), and the percentage of overall program funds (state and local funds collectively) that are budgeted to administration, education and training, and other direct client services such as support services.

### 2. Build Robust Public-Private Partnerships to Drive Skills

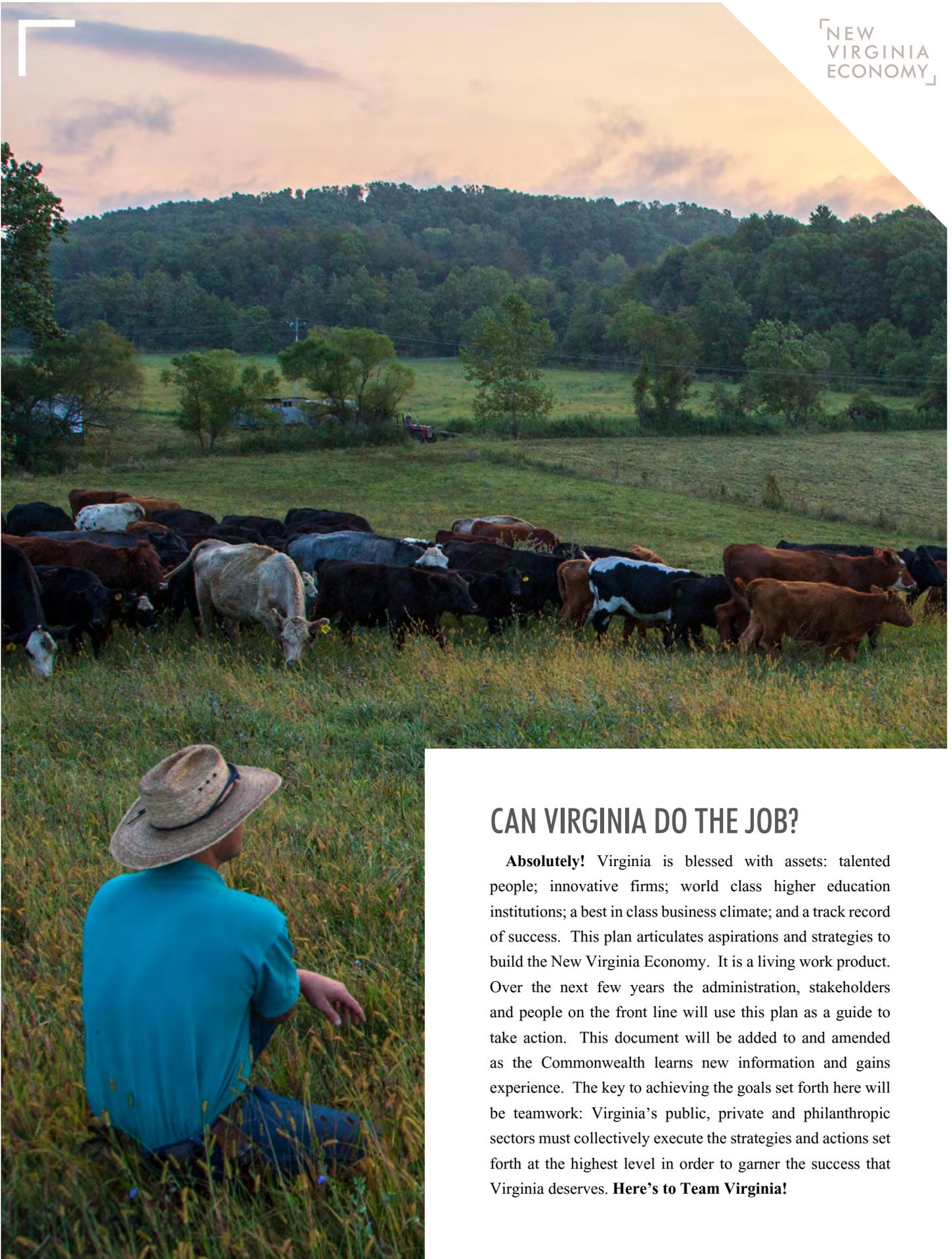
- Shift all administration of registered apprenticeship programs to Virginia Department of Labor and Industry (VDOLI).
- Provide state support for regional business consortia seeking to expand workforce pipelines into available high value jobs
- Enhance apprenticeship tax credit to encourage more businesses to work with education and training system to build on the job skills.
- Create statewide awards on public-private partnerships

around innovation, workforce production, business growth and best practices.

- Signal business needs to all levels of education by business driven curriculum and programs.

### 3. Create strong pipeline that helps strengthen target sectors, especially STEM-H

- Drive “stackable” workforce credentials by community colleges through career pathways teams comprised of all levels and types of education and workforce program providers at the state and regional levels.
- Pursue financial aid for students taking non-credit instruction leading to an industry certification or license in high growth industries.
- Grow own workforce by increasing access to all levels of education face to face or online at a public education institution.
- Produce 50,000 STEM-H credentials, certifications, licensures, apprenticeships and associate degrees to meet current and anticipated industry needs.
- Keep students in Virginia after graduation by increasing internships, community recruiting and regional support for young professionals.
- Repatriate alumni who have moved away using alumni networks especially from Silicon Valley or other entrepreneurial hot spots.
- Retain retiring federal workers and veterans.
- Innovate high schools to meet demand of employers.
- Drive the awarding of 500,000 business driven certifications and licenses by 2030.



## CAN VIRGINIA DO THE JOB?

**Absolutely!** Virginia is blessed with assets: talented people; innovative firms; world class higher education institutions; a best in class business climate; and a track record of success. This plan articulates aspirations and strategies to build the New Virginia Economy. It is a living work product. Over the next few years the administration, stakeholders and people on the front line will use this plan as a guide to take action. This document will be added to and amended as the Commonwealth learns new information and gains experience. The key to achieving the goals set forth here will be teamwork: Virginia's public, private and philanthropic sectors must collectively execute the strategies and actions set forth at the highest level in order to garner the success that Virginia deserves. **Here's to Team Virginia!**