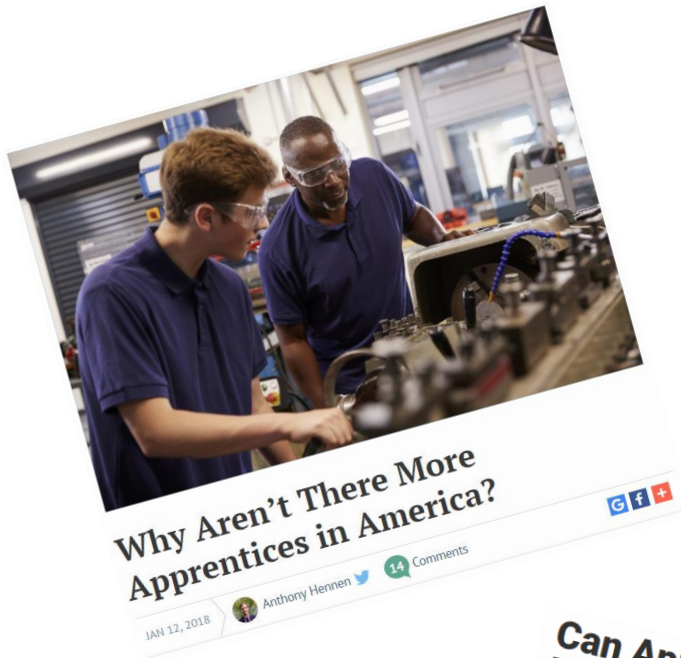


Apprenticeship Analysis for GOVA Region 3



Can Apprenticeships Train the Workforce of the Future? States Hope So.

America has a skills gap. Governments across the U.S. are turning to European-style apprenticeship programs as a possible solution.

BY J.B. WOGAN | MARCH 2018

MarketWatch

Apprentice rules are too strict, industry tells Senate panel

By Brian Baker

Published: July 26, 2018 3:21 p.m. ET

Why are apprenticeships a good idea that never really taken off in the U.S.?



Workers inspect a pane of glass at a plant in Moraine, Ohio. (John Manchillo/AP)

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EXECUTIVE SUMMARY

Apprenticeship is gaining momentum as a bipartisan workforce development strategy to address employer-expressed challenges. The combination of hands-on experience, classroom training and a paycheck are enticing policy-makers and workforce stakeholders to reexamine and reinvigorate their apprenticeship efforts.

In November 2017, the Region 3 Council for Go Virginia issued a Request for Proposals for consulting services to assess apprenticeship efforts across its 15-locality region. The Institute for Advanced Learning and Research (IALR) received the contract for services in February 2018. IALR subcontracted with the National Fund for Workforce Solutions to assist with identification of best practice models and facilitation services.

IALR and NFWS organized several best practice visits to learn about successful apprenticeship models. Project leaders and regional attendees visited Siemens facilities (Charlotte, Mulheim, Erlangen), MSI Specialties, Inc. (NC), Schaeffler (Herzogenaurach), Newport News Shipbuilding (VA) and Phillip Morris (VA). These “see the possible” experiences legitimate efforts as employers and stakeholders learn first-hand of opportunities and successful outcomes from their respective peers. It is clear from these visits that the private sector must have a defined workforce need and that apprenticeship efforts must be driven by the employer and supported at every level within the company.

To determine use of apprenticeship and gain a better understanding of employer perceptions, IALR benchmarked the number of active apprenticeships and surveyed Region 3 employers. There were an average of 2,536 apprenticeship listings for Virginia according to the Virginia Department of Labor and Industry (DOLI) website. During this same timeframe (April and September 2018), Region 3 employers offered an average of 74 apprenticeships, approximately 2.9% of the total number of active apprenticeship postings. Given that Region 3 comprises 4.4% of Virginia’s population, the number of apprenticeships is lower, but not significant; however, the diversity of apprenticeship positions is lacking.

From April – June 2018, IALR conducted an online survey of regional employers to learn about current practices, perceptions of, and future interest in apprenticeship. Over 100 employers completed the survey and, based on the analysis, there is significant opportunity to expand apprenticeship within Region 3:

- Employers believe that apprenticeships help meet the demand for skilled labor, assisting with recruitment and retention.
- Employers *did not* support notions that apprenticeships increase accidents, are difficult to establish or take too long.
- Employers expressed uncertainty with regard to the cost of apprenticeship.
- Employers currently using apprenticeships provide financial support for related instruction (75%) and wages while attending class (69%), best practices that improve retention.

- 87 companies expressed interest in offering apprenticeships in the near term - within three years. Only 17 companies were not interested.
- 71 companies expressed interest in a pre-apprenticeship program that begins in the last year of high school.
- Employers identified more than 75 occupational titles for 200 apprenticeship positions. Manufacturing, Education, and Health & Human Services employers identified the greatest number of positions.

Not only is there interest in apprenticeships at the regional level; there are indications that the current federal administration is very interested in expanding apprenticeships and providing funding to support the expansion to include development of Industry-Recognized Apprenticeships as a parallel to Registered Apprenticeships. Region 3 has an opportunity to develop appropriate systems and supports in order to take advantage of future opportunities. In addition, as Region 3 continues its economic development efforts by working to attract U.K. and other European companies, it is imperative that we demonstrate the ability to support a robust apprenticeship system.

While apprenticeship scholars agree that the U.S. cannot easily replicate the Swiss and German models of apprenticeship, there is opportunity to develop new systems embracing this proven work-and-learn model. Region 3 must give consideration to long-term strategies that influence a mindset shift from viewing apprenticeship as a blue-collar-only training opportunity to a culture that understands apprenticeship as “college but without the debt”, appropriate for a variety of skilled disciplines to include those that require a bachelor’s degree.

In the near-term, the Region 3 Council and stakeholders should consider opportunities to work with employers who have expressed an interest in apprenticeship. There is a pilot effort currently underway in industrial maintenance, supported by five manufacturing employers who have expressed interest and support for: pre-apprenticeship that begins in high school, standardizing wages during apprenticeship to reduce competition; sharing responsibility to promote the program; and, using this pilot to develop an Apprenticeship Consortium, similar to those found in North Carolina.

Recommended near-term action steps include:

1. share report findings with stakeholders,
2. identify lead intermediary,
3. build employer champions,
4. engage with state agencies, and
5. reach out to surveyed employers.

Apprenticeship will not solve the region’s workforce challenges; however, it is critical that this proven talent-development tool be expanded as a viable pathway for skilled occupations, beginning in high school. Private sector leadership is critical to expansion efforts. GO Virginia, with its emphasis on employer engagement, is a logical entity to drive this effort. The Region 3 Council has an opportunity to lead.

BACKGROUND and CURRENT TRENDS

According to the U.S. Department of Labor's (US DOL) Office of Apprenticeship (FY2018), there are more than 550,000 active apprentices in approximately 22,500 registered programs in the United States, with California, New York, Ohio and Virginia registering the largest number. In FY17, over 190,000 individuals entered an apprenticeship and nearly 49,000 individuals completed a program. In the last five years, the U.S. has experienced a 48% growth in apprenticeships (see Figure 1). Almost half of U.S. apprenticeships are in the construction field and another 35% are in manufacturing.

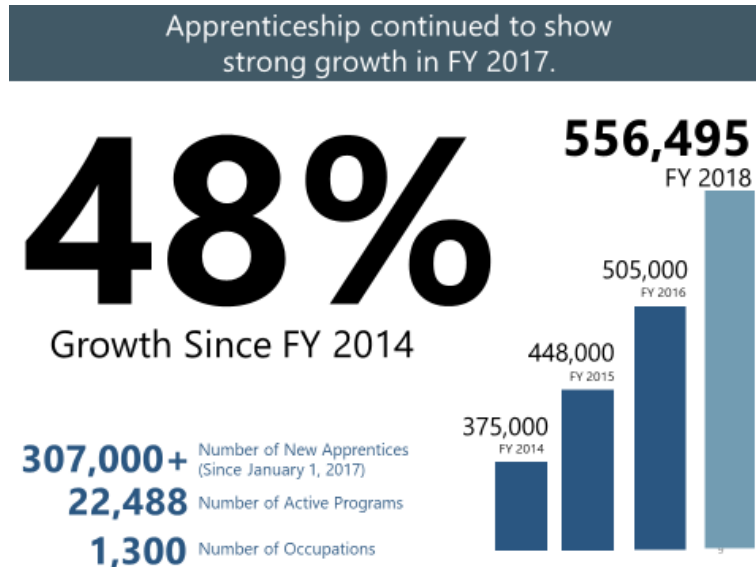


Figure 1. U.S. Department of Labor. Presentation by Dudley Light, Regional Director, USDOL/ETA – Office of Apprenticeship.

While the number of apprentices has increased steadily in the last decade due to support from the previous and current administrations, the United States lags behind other countries in that only 0.3 percent of the workforce are apprentices. According to *The Atlantic* (“Why Germany is so much better at training its workers”, T. Jacoby, Oct. 2014), “Today in America, fewer than 5 percent of young people train as apprentices, the overwhelming majority in the construction trades. In Germany, the number is closer to 60 percent – in fields as diverse as advanced manufacturing, IT, banking and hospitality.”

Numerous states have developed new apprenticeship initiatives and incentives, and have realigned their reporting structures to build capacity:

South Carolina - Apprenticeship expansion was promoted by the state Chamber of Commerce through a widely circulated white paper, advocacy within the state's technical college system, and promotion with other state partners. In 2007, these efforts resulted in the state legislature appropriating \$1 million a year to fund the initiative's small staff. The legislature also approved an employer tax credit worth \$1,000 per apprentice. They have hired apprenticeship consultants to make apprenticeship as accessible as possible.

Montana – offers a business tax credit to employers who sponsor an apprentice (\$750 or \$1500 for military veterans).

Maryland – enacted the More Jobs for Marylanders Act of 2017 that included a tax credit for employers, student financial aid for noncredit training and an outcome goal for the percent of students participating in apprenticeship. State leaders moved oversight for apprenticeships from labor and industry to the workforce division and are adopting competency-based apprenticeships.

Colorado – created a division/unit for work-based learning to coordinate efforts between businesses and the federal registered apprenticeship programs. Launched a statewide effort to place 20,000 high school students in high-demand, high-pay apprenticeship positions by 2027. The Department of Labor and Employment has staff to work with industry-led sector partnerships to expand opportunities.

North Carolina - The Eastern Triad Workforce Initiative (ETWI) will get \$3.2 million for job training opportunities in Alamance, Guilford, Randolph and Rockingham counties to support the development and implementation of pilot apprenticeship programs in targeted industries throughout the region. Funds will be used for training materials, apprenticeship employment costs and curriculum development. ApprenticeshipNC: Eligible applicants have the opportunity to enroll tuition-free in community college courses that lead to a certificate, diploma, or degree as well as provide entry-level job skills. Participating employers, in turn, commit to pay all associated costs for their apprentice's education.

While momentum for apprenticeships continues to build, there are challenges. The International Foundation of Employee Benefit Plans conducts numerous surveys of U.S. and Canadian employers. Their most recent survey assesses top trends in apprenticeships and identifies top challenges over the next two years (see Figure 2).

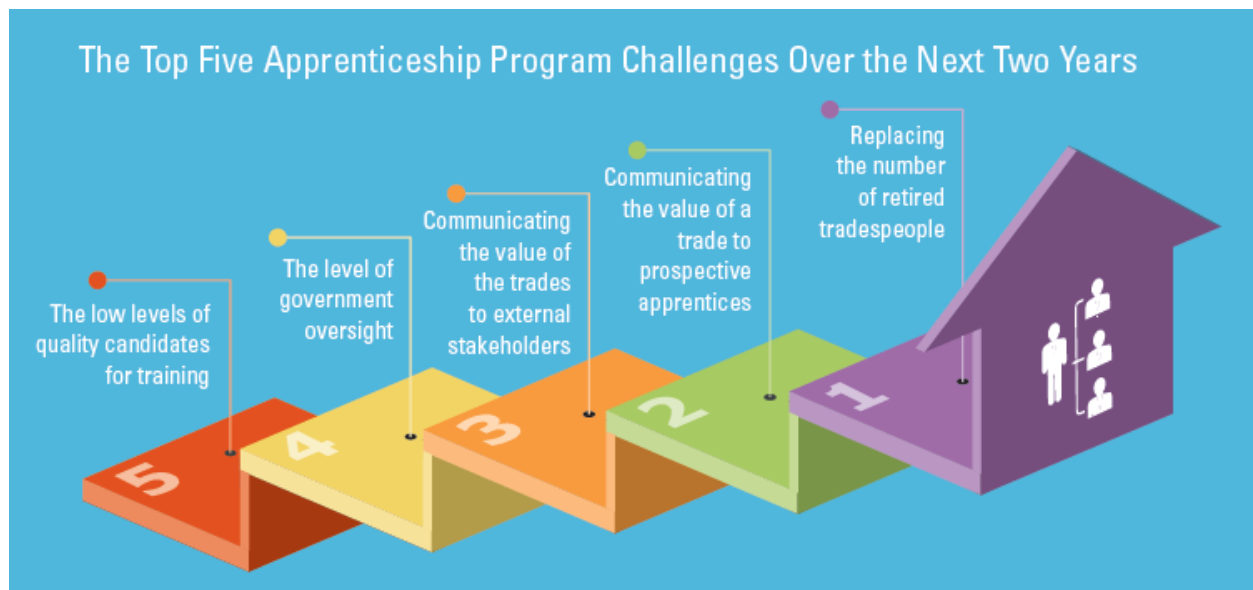


Figure 2. Top Trends in Apprenticeship Programs: 2018 Survey Results, International Foundation of Employee Benefit Plans.

These challenges – jobseekers who are unprepared with appropriate hard and soft skills, the need to help parents and students understand the value of skilled trades, and baby boomer retirements - are echoed by employers across the country, not only with regard to apprenticeship, but for those middle-skill jobs that require less than a four-year degree but more than a high school diploma.

Virginia Funding to Support Apprenticeships:

In 2016, the U.S. Department of Labor awarded \$10.4 million in State Accelerator Grants to 52 states and territories to support the expansion of quality and innovative Registered Apprenticeship programs. Each Accelerator grant of \$200,000 allowed states to develop a strategic plan and build partnerships for apprenticeship expansion and diversification with state education, workforce and economic development systems. Virginia Registered Apprenticeship administered the Commonwealth's grant. Accelerator grant funds were available for expenditure through May 30, 2018.

Separate from funds received by the state, in 2016, the U.S. Department of Labor awarded \$175 million in American Apprenticeship (AA) Grants to 46 public-private partnerships marrying the efforts of employers, organized labor, non-profits, local governments, and educational institutions to expand high-quality apprenticeships. The winning grantees pledged to train and hire more than 34,000 new apprentices in high-growth and high-tech industries including health care, IT and advanced manufacturing over the next five years. Virginia received two grant awards:

1. J. Sargeant Reynolds Community College was awarded a \$2.9 million grant to lead the *Apprentice Virginia: Collaborative Workforce Solutions in Information Technology & Advanced Manufacturing* project. Partnerships with key employers including DuPont Spruance and Rolls-Royce as well as the South Central, Resource, Crater Regional and West Piedmont Workforce Investment Boards will ensure program sustainability. The project hopes to create and expand pre-apprenticeship and apprenticeship opportunities for over 330 workers in targeted H-1B industries of IT and Advanced Manufacturing in Virginia. Danville Community College and Southside Virginia Community College are subgrantees.
2. The Shenandoah Valley Workforce Investment Board was awarded \$4 million to fund the *Valley to Virginia Apprenticeship Initiative (V2V)*. The project targets skilled trades in the advanced manufacturing industry and in-demand occupations in H-1B career pathways including; Mechatronics, Industrial Maintenance Technician, CNC Machine Operator, Welder and Production Technician. V2V plans to serve 600 participants in Virginia. Promotion for V2V will include a just launched yearlong campaign, "InDEMAND Careers in the Shenandoah Valley" including 26 television spots promoting high-wage, high-growth, high-demand jobs closely aligned with apprenticeships.

German Model of Apprenticeship

Hailed as the gold standard for apprenticeship, the German model utilizes a "dual training" approach. Apprentices split their days between classroom instruction at a vocational school and on-the-job training at a company. Classroom theory is reinforced by the work practice. Apprentices are paid for their time, including the hours they spend in related classroom instruction. The Dual VET (vocational education and training) lasts between two and four years, depending on the sector (see Figure 3).

German Postsecondary Education & Training

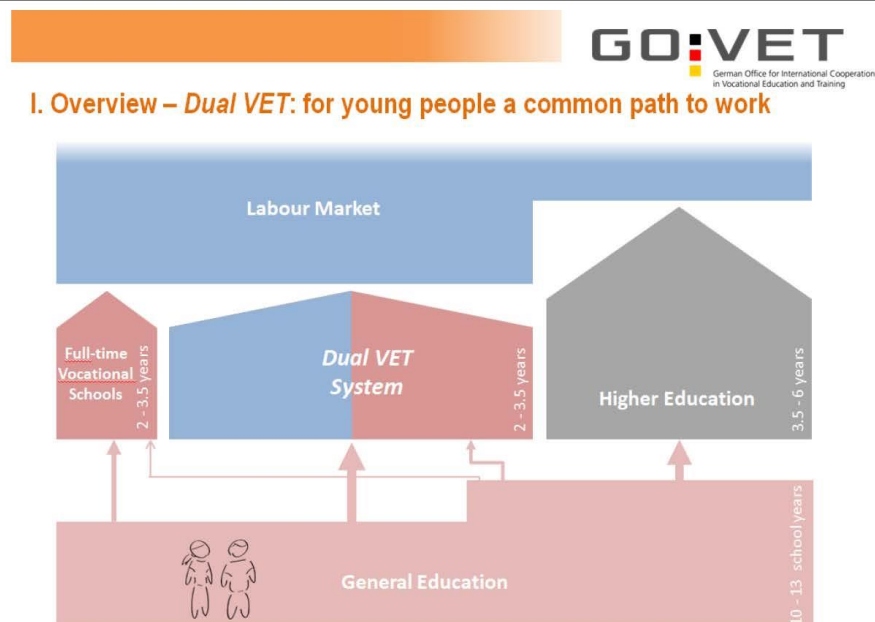


Figure 3. German dual VET pathway. Graphic provided by Technical University - Darmstadt.

Many criticize the German model which requires tracking at a young age. German children choose at age 10 among an academic high school, a vocational track, or something in between (see Figure 4). While thought to be a very rigid system, there are opportunities for trainees to switch tracks later on. Students can go back to school to specialize further or earn a master craftsman's certificate or train as a trainer in the company's apprenticeship program.

German apprenticeship is embedded in their culture as part of the social good. There is a deep respect for skilled labor. Employers express that apprenticeship is a shared civic responsibility; it is an expected part of their budget and headcount. Germany currently has 200,000 apprenticeship openings that they cannot fill.

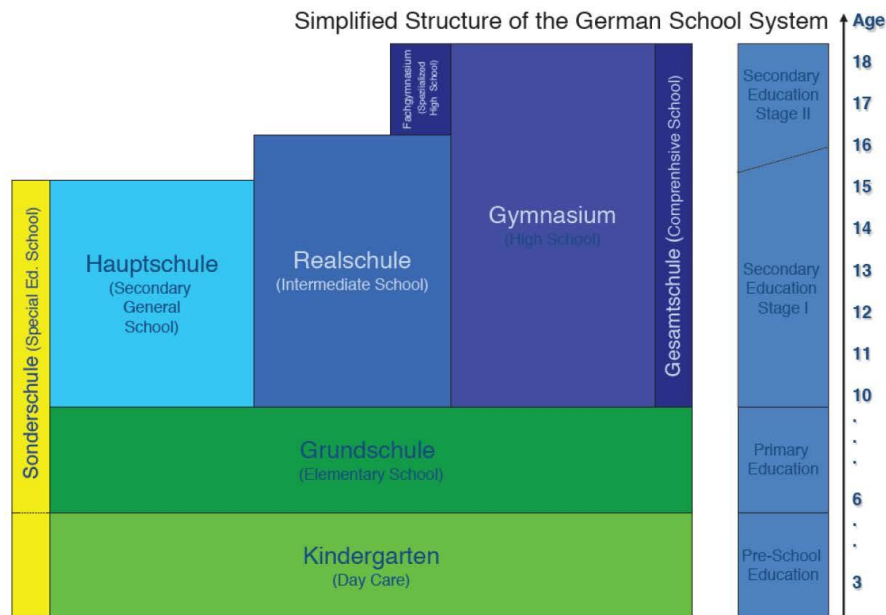


Figure 4. German education model. Graphic provided by Technical University - Darmstadt.

BENCHMARKING APPRENTICESHIP IN REGION 3

While Virginia is one of the top four states for enrolling apprentices, GO Virginia's Region 3 and its business community have not embraced a diversity of apprenticeship occupations. There were an average of 2,536 apprenticeship listings for Virginia according to the Virginia Department of Labor and Industry (DOLI) website (data pulls for two comparative months – April and September 2018). During this same timeframe, there were an average of 74 active apprenticeships in Region 3 74, approximately 2.9% of the total number of active apprenticeship postings in Virginia (see Table 1). Given that Region 3 comprises 4.4% of Virginia's population, the number of apprenticeships is lower, but not significant; however, the diversity of apprenticeship positions is lacking. The largest percentage of apprenticeships in Region 3 are offered in cosmetology and barbering, typically considered lower wage occupations.

Table 1. VA DOLI Active Apprenticeship Listing – April 2018

County	Cos/Bar/ Nail	Constr/ Elec	Utility	Manuf.	Opt	IT	Military/ DMA	Trans/ Logist	Total
Amelia	1								1
Brunswick	1	1		1		1			4
Buckingham	1	1		1					3
Cumberland		1							1
Danville	8		2	1	3	2	5		21
Halifax				3	2			1	6
Henry		1		4	1				6
Lunenburg	1	1							2
Martinsville	2		2						4
Mecklenburg	3	2	2	2		1			10
Nottoway	3	2	3				7		15
Pittsylvania		1		1					2
Prince Edward	2	2			1				5
TOTAL	22	12	9	13	7	4	12	1	80
	28%	15%	11%	16%	9%	5%	15%	1%	
<i>Sept. 2018</i>									
County	Cos/Bar/ Nail	Constr/ Elec	Utility	Manuf.	Opt	IT	Military/ DMA	Trans/ Logis	Total
Amelia	1			1					2
Brunswick	1	1		1		1			4
Buckingham	1	1							2
Cumberland		1							1
Danville	9		3	1	4				17
Halifax		1		3		1			5
Henry		1		4	1				6
Lunenburg	1	1							2
Martinsville	2		2						4
Mecklenburg	3	2	2	3		1			11
Nottoway	2	1	3	1					7
Pittsylvania				1					1
Prince Edward	2	2			1				5
TOTAL	22	11	10	15	6	3	0	0	67
	28%	14%	13%	19%	8%	4%	0%	0%	
** No listings for Charlotte Co. & Patrick Co.									

BEST PRACTICE SITE VISITS

IALR and NFWS organized several best practice visits to learn about successful apprenticeship models. Regional attendees visited Siemens facilities (Charlotte, Mulheim, Erlangen), MSI Specialties, Inc. (NC), Schaeffler (Herzogenaurach), Newport News Shipbuilding (VA) and Philip Morris (VA). These “see the possible” experiences legitimate efforts as employers and stakeholders learn first-hand of opportunities and successful outcomes from their respective peers. It is clear from these visits that the private sector must have a defined workforce need and that apprenticeship efforts must be driven by the employer and supported at every level within the company.



Machine Specialties, Inc. (Greensboro, NC)
March 2, 2018

The Dan River Collaborative had the opportunity to visit Machine Specialties Inc., a partner in Guilford Apprenticeship Partners (GAP; <http://gapnc.org/>) which is a public/private sector partnership that recruits, screens and tests high school youth into pre-apprenticeships and apprenticeships in advanced manufacturing. The visitors were able to hear from company representatives and apprentices about MSI’s very successful program.

Side-note: MSI provides space for on-site daycare. The employees utilizing the service pay for the childcare worker.

The Apprentice School - Newport News Shipbuilding
May 8, 2018

The Apprentice School, founded in 1919 at Newport News Shipbuilding, offers four-, five-, and eight-year apprenticeships in nineteen shipbuilding disciplines and eight advanced programs of study. The Apprentice School, with its brand new 85,000 square-foot facility, is accredited by the Commission of the Council on Occupational Education and registered with



the Virginia Apprenticeship Council. The school offers apprentices the opportunity to earn college credit, receive competitive pay and benefits and learn a trade. Apprentices have the opportunity to participate in athletics at the Division III-level in football, wrestling, men's and women's basketball, baseball and golf. Two of the three apprentices on the panel learned about the apprenticeship program through their high school coach. Attendees included: Dr. Karl Stauber, DRF and GOVA Region 3 Council; Peter Basica, JPSS; Joyce Culley, DPS; Allison Moore DPC Chamber; Dr. Leanna Blevins, NCI; Angela Rigney, PCS; Dr. Julie Brown, IALR; Cam Hagan, Unison Tube. Not Pictured: Dr. Pamela Howze, NFWS; Pam Taylor, SVCC; Dr. Meagan Healy and Felix Shapiro, Governor's Office of Workforce Dev.

Siemens (Charlotte, NC)

June 7, 2018

The Dan River Collaborative participated in an apprenticeship convening at Siemens Energy, Inc. in Charlotte, NC. The convening hosted a panel of apprenticeship employers and other partners in the National Fund for Workforce Solutions network. The panelists discussed best practices around apprenticeships in Cincinnati and North Carolina. There was also a Siemens panel of machining and maintenance apprentices. The day culminated with a plant tour of the highly advanced manufacturing facility where the company builds power generation equipment. Richie Barker, General Manager with Unison Tube, and Dr. Julie Brown, IALR, attended.

Philip Morris (Richmond, VA)

June 14, 2018

Seminar was coordinated by the VA Department of Labor and Industry (DOLI); Dr. Julie Brown attended. Philip Morris has ~2,000 employees at the Richmond facility. Expressed workforce challenges include: attrition, different levels of talent showing up, pathways for advancement, evolution of technology and ability of workers to participate in cross-functional teams.

Workforce development is a corporate goal and Philip Morris views apprenticeship as a way to develop employees who will retire with the company. They bring in six apprentices per year into two positions: manufacturing fixer and instrument electrician, both four-year apprenticeships.

Electrical apprentices receive their DOLI certificate and an AAS degree from John Tyler Community College. Apprentices start at 80% of a journeyworker's wage and earn a 2.5% increase every six months until pay is aligned with hourly workers. Apprentices attend class two to three nights per week, unpaid. Classes and books are paid for by Philip Morris.

Siemens (Mulheim and Erlangen, Germany)

July 24 & 26, 2018

The Dan River Region Collaborative group visited two Siemens' facilities in Germany (Siemens operates 30 training centers in Germany). The first visit was to a Siemens facility in Muhlheim



that has an apprenticeship academy for ~80 apprentices each year in manufacturing. Assessments for entrance are not academic, but rather focus on social and personal skills. The second visit was at the Siemens Professional Education facility in Erlangen, where there are a number of professional youth apprenticeships for college students in engineering and project management. Provides an example of degree apprenticeships which include double-majors in business and language studies.

Schaeffler (Herzogenaurach, Germany)

July 26, 2018

Schaeffler is a global automotive supplier manufacturing facility, with 450 apprentices on-site and 10,000 employees. Globally, Schaeffler has 3,000 apprentices and 140 full-time trainers; two-thirds of the apprentices remain with the company. Attendees had the opportunity to interact with youth apprentices in manufacturing and engineering. Apprentices are noted by green and black coveralls. High school students are allowed to come in for one week to learn more about Schaeffler's apprenticeship program and gain hands-on experience; instruction is led by current apprentices. The schools provide insurance to allow for the one-week program. The company also hosts "Future Day" to encourage female students to consider apprenticeship.



Left: Apprentice shares information about the one-week high school program while a prospective apprentice uses the grinder to hand-tool a part. Right: Group photo of attendees and Schaeffler employees in the apprenticeship training area.

REGION 3 APPRENTICESHIP SURVEY

From April to June 2018, businesses in southern Virginia were asked to complete a survey to assess perceptions of apprenticeship, current practice and future interest. The survey (Appendix A) was distributed through partner agencies, such as Chambers of Commerce, Community Colleges, and Workforce Development Boards via web link. There were 139 respondents. Nine responses were duplicated by company and 17 respondents did not complete the survey, yielding 113 final respondents (N=113).

Respondents by Industry Sector

Respondents could identify with eleven industry sectors and were given the opportunity to select “Other” if the sector title did not adequately describe their industry. Respondents also indicated the size of their company based on the number of employees. Responses are noted in Table 2.

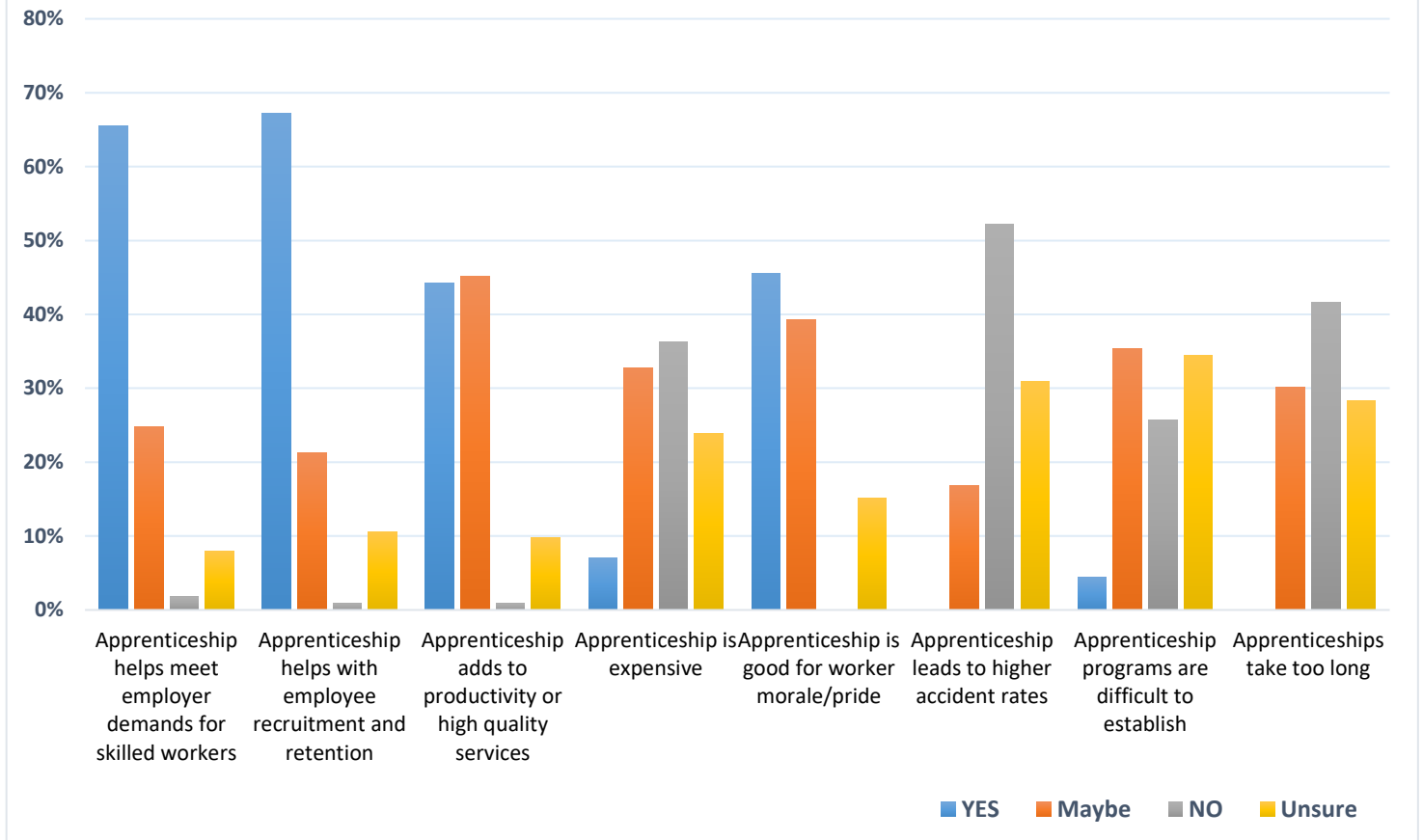
Table 2. Respondents to Survey by Industry Sector and Number of Employees (Size)							
Sector	N	1 - 10	11 - 25	26 - 50	51 - 100	101 - 200	200+
Automotive & Aviation	3	2	1				
Business Services & Banking	20	16		2		1	1
Construction	5	4				1	
Education Services	13	3	2	1	1		6
Health & Human Services	19	2	3	4	7		3
Hospitality & Food Service	6	2	2		1		1
IT/Telecommunications	5	3		2			
Manufacturing	19		2		4	6	7
Retail Trade	4		3		1		
Transportation & Logistics	7	1	1	1	3	1	
Utilities	2			1		1	
Other	10	5	2	1		1	1
TOTAL	113	38	16	12	17	11	19
Percent (%)		36.0%	14.2%	10.6%	15.0%	9.7%	16.8%

Overall there was good participation from employers in a variety sectors and from small to large-sized companies (based on the number of employees); therefore the perceptions and interest expressed can be considered representative of the region’s private sector employers.

Perceptions of Apprenticeship by Industry Sector

Respondents were asked to respond to various statements to assess their perception of apprenticeships. It is important to understand employers’ overall predispositions prior to developing new initiatives. Barriers and negative impressions can be addressed in a proactive manner. See Figure 5.

Figure 5. Perceptions of Apprenticeship



More than 65% of respondents perceive apprenticeship as a strategy to meet their needs for skilled workers and help with employee recruitment and retention. Roughly 90% percent expressed that apprenticeship may or does add to productivity and/or high quality services and that it's good for worker morale - generally positive impressions. None of the respondents supported notions that apprenticeship leads to higher accident rates or takes too long. There was more uncertainty regarding cost and the difficulty in establishing programs. Overall, employer perceptions of apprenticeship are very positive.

When examining perceptions by industry sector, the top four sectors (by number of employer responses) – business services and banking, education, healthcare and manufacturing – are very positive about apprenticeship (see Table 3). The Education sector appears to be the most positive while there is a little more uncertainty in the business sector.

Table 3. Perceptions by Top 4 Industry Sectors					
<i>Apprenticeship helps meet employer demands for skilled workers</i>					
	YES	Maybe	NO	Unsure	N
Business Services & Banking	55%	25%	5%	15%	20
Education	85%	15%	0%	0%	13
Healthcare	68%	26%	0%	5%	19
Manufacturing	74%	21%	0%	5%	19
<i>Apprenticeship helps with employee recruitment and retention</i>					
	YES	Maybe	NO	Unsure	N
Business	65%	20%	0%	15%	20
Education	85%	8%	0%	7%	13
Healthcare	84%	16%	0%	0%	19
Manufacturing	63%	32%	0%	5%	19
<i>Apprenticeship adds to productivity or high quality services</i>					
	YES	Maybe	NO	Unsure	N
Business	45%	45%	0%	10%	20
Education	69%	23%	0%	8%	13
Healthcare	47%	53%	0%	0%	19
Manufacturing	32%	58%	0	10%	19
<i>Apprenticeship is expensive</i>					
	YES	Maybe	NO	Unsure	N
Business	5%	45%	30%	20%	20
Education	15%	31%	39%	15%	13
Healthcare	0%	26%	47%	27%	19
Manufacturing	0%	42%	37%	21%	19
<i>Apprenticeship is good for worker morale/pride</i>					
	YES	Maybe	NO	Unsure	N
Business	21%	47%	0%	32%	19
Education	85%	8%	0%	7%	13
Healthcare	53%	42%	0%	5%	19
Manufacturing	53%	47%	0%	0%	19
<i>Apprenticeship leads to higher accident rates</i>					
	YES	Maybe	NO	Unsure	N
Business	0%	25%	45%	30%	20
Education	0%	15%	62%	23%	13
Healthcare	0%	5%	69%	26%	19
Manufacturing	0%	21%	47%	32%	19

Apprenticeship programs are difficult to establish					
	YES	Maybe	NO	Unsure	N
Business	0%	30%	30%	40%	20
Education	8%	23%	38%	31%	13
Healthcare	0%	37%	16%	47%	19
Manufacturing	5%	37%	26%	32%	19
Apprenticeships take too long					
	YES	Maybe	NO	Unsure	N
Business	0%	30%	30%	40%	20
Education	0%	39%	46%	15%	13
Healthcare	0%	27%	47%	26%	19
Manufacturing	0%	42%	42%	16%	19

See Appendix A for employer comments regarding apprenticeship.

Current Use of Apprenticeship

Thirty-two companies indicated that they had offered apprenticeship opportunities in the last year. Seventy-nine companies had not offered apprenticeships (two companies did not respond). Approximately 40% of the respondents with apprenticeship experience indicated numerous years of experience (five years or more) while 60% of companies are relatively new (less than five years) to using apprenticeship as a talent development strategy (see Table 4).

Table 4. Number of Years Offering Apprenticeships		
Years	Percent	# Companies
One year or less	6.67%	2
More than one year but less than 5 years	53.33%	16
5 to 10 years	20.00%	6
More than 10 years	20.00%	6
TOTAL	100.00%	30

Of the companies offering apprenticeships in the last five years (N=32), 77% sponsored fewer than two apprentices (see Table 5). Only three companies had supported more than five apprentices.

Table 5. Number of Apprentices		
# apprentices	Percent	# Companies
0	35.48%	11
1 - 2	41.94%	13
3 - 5	12.90%	4
6 - 10	6.45%	2
11 +	3.23%	1
Total	100.00%	31

Several respondents indicated support for other forms of work-based learning, including student teachers and interns (surveying, programming, finance, and civil engineering). Current apprenticeship positions included:

Accounting	Family Services Specialist	Network engineer
Apparatus Technician	Finance Assistant	Office Support (2)
Architect (Graduate)	Human Resources Assistant (2)	Operations
Assistant Dir/Teacher	Human Services Assistant	Processing Technician (2)
Career Center Assistant	Industrial Maintenance	Project Management
Carpenter - Helper	Line Technician	Purchasing
CDL	Machine Operator	Service Techs
Civil Engineering	Machinist	Staking Technician
Clean-up Lead	Maintenance mechanic	Supervisor
Customer Service/Billing	Maintenance (7)	Surveyor
Driver	Management Trainee	System Operator
Engineering (2)	Marketing & communications asst.	Teacher
Events Assistant	Media Support	Welder (2)

One of the required components of an apprenticeship program is formal classroom instruction or related instruction (RI), typically 144 hours per year. Companies offering apprenticeships in the last five years used a myriad of RI training providers; however, they were most reliant on themselves and the community college to provide this training (see Table 6).

Table 6. Organization Providing Related Instruction		
Organization	Percent	Number of Employers
Community College	41.38%	12
Four-year college or University	13.79%	4
Proprietary Vendor	6.90%	2
Technical School	13.79%	4
High School	6.90%	2
Our Company	48.28%	14
Other (please specify)	6.90%	2

Respondents were asked to indicate who paid the cost for the related instruction. Respondents could select multiple options. Of the 28 respondents, 75% indicated that the company paid for some or all of the related instruction. Twenty-five percent indicated funding was provided through public sources such as Pell, WIOA and/or grants. Less than 15% of companies indicated that the apprentice paid for some or all of the related instruction.

Of those companies who had offered apprenticeships in the last five years, 69% (N=20) indicated that apprentices were paid a wage while attending related instruction. Approximately 24%

(N=7) paid apprentices a wage for some of the related instruction hours. Less than 7% (N=2) indicated that apprentices were not paid while attending required related instruction.

Thirteen companies, roughly 48% of respondents who had offered apprenticeship, indicated that 10% or less of their apprentices were successful in completing the apprenticeship and maintaining employment. Almost 30% (N=8 companies) indicated that 75% or more of their apprentices were successful in completing the internship. Four companies indicated completion rates of 51% - 75% while one company had an 11% - 25% rate and one company had a 26% - 50% completion rate.

Future Interest in Apprenticeship

Based on the number of companies who had experience with apprenticeship, the same number of companies stated that they have a good understanding of apprenticeship and did not need additional information. Almost 60 employers expressed interest in learning more. Only 16 employers (15%) did not want to learn more about apprenticeship. See Table 7.

Table 7. Future Interest in Apprenticeship						
	YES		NO		We already have a good understanding	
	%	#	%	#	%	#
Our company is interested in learning more about apprenticeship.	56.19%	59	15.24%	16	28.57%	30
	Yes		Maybe		NO	
	%	#	%	#	%	#
Our company is interested in offering apprenticeships in the near term - within three years.	32.69%	34	50.96%	53	16.35%	17
Our company would be interested in a pre-apprenticeship program that begins in the last year of high school.	31.43%	33	36.19%	38	32.38%	34

Eighty-seven companies are potentially interested in offering apprenticeship in the next three years and 71 companies are potentially interested in pre-apprenticeship programs that begin in high school, indicating that fewer companies are interested in apprenticeship options for those who are under eighteen.

When examining interest by sector (see Table 8), it is evident that apprenticeship is a strategy of interest to multiple industry sectors with the strongest support coming from the education and manufacturing sectors.

Table 8. Interested in offering apprenticeships in the near term - w/in 3yrs

	YES		NO		Maybe		No Response	
	N	%	N	%	N	%	N	%
Automotive					1	33%	2	67%
Business Services & Banking	2	10%	6	30%	11	55%	3	15%
Construction	1	20%	1	20%	2	40%		
Education Services	7	54%	3	23%	3	23%		
Health & Human Services	4	21%	3	16%	12	63%		
Hospitality & Food Services	3	50%			3	50%		
IT/Telecommunications	2	40%			2	40%	1	20%
Manufacturing	10	53%			8	42%	1	5%
Retail	2	50%	2	50%				
Transportation & Logistics					7	100%		
Utilities	1	50%			1	50%		
Other	2	20%	2	20%	3	30%	2	
TOTAL	34	30%	17	15%	53	47%	9	8%

The greatest interest in pre-apprenticeship is in the education and retail sectors while the greatest opposition is in the health and human services sector. See Table 9.

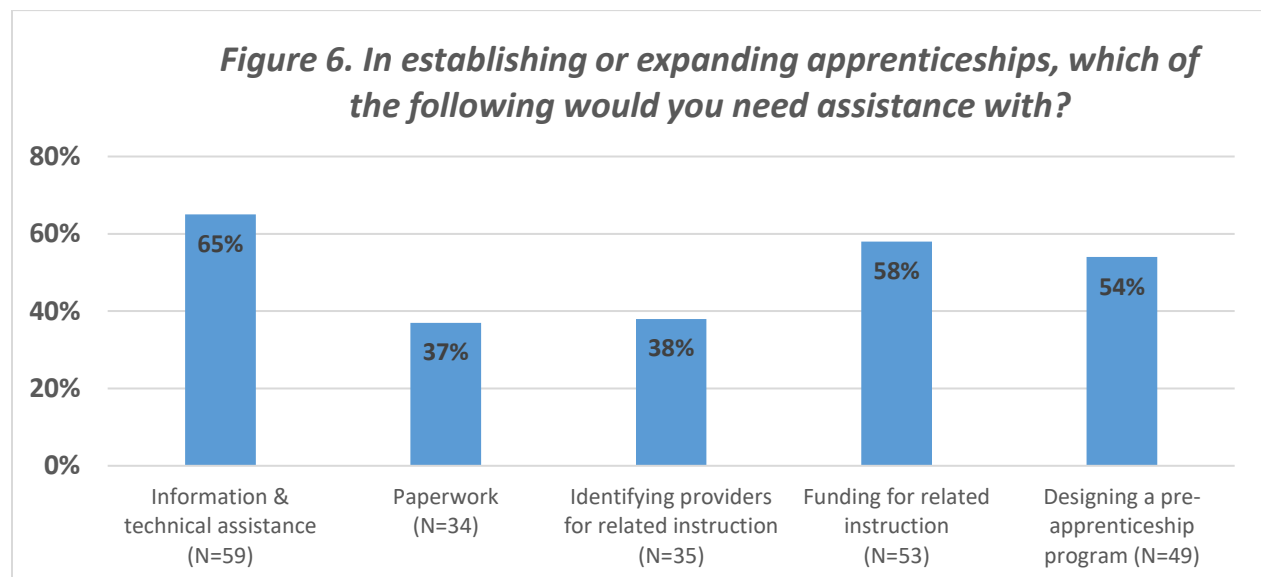
Table 9. Interested in pre-apprenticeship

	YES		NO		Maybe		No Response	
	N	%	N	%	N	%	N	%
Automotive			1	33%	1	33%	1	33%
Business Services & Banking	3	15%	11	55%	5	25%	3	15%
Construction	1	20%	1	25%	2	50%		
Education Services	8	62%	3	23%	2	15%		
Health & Human Services	4	21%	2	11%	13	68%		
Hospitality & Food Services	1	17%	3	50%	2	33%		
IT/Telecommunications	2	40%			2	40%	1	20%
Manufacturing	8	42%	4	21%	6	32%	1	5%
Retail	2	50%	1	25%	1	25%		
Transportation & Logistics	2	29%	3	43%	2	29%		
Utilities	1	50%	1	50%				
Other	1	11%	4	44%	2	22%	2	22%
TOTAL	33	29%	34	30%	38	34%	8	7%

Interested employers have identified over 200 apprenticeship positions, a 175% increase from the benchmark data (see Table 10). Again, the greatest opportunities seem to be in education, manufacturing, and health and human services.

Table 10. Number of Potential Apprentices by Sector	
Sector	# Apprentices
Automotive & Aviation	1
Transportation & Logistics	5
Construction	8
Education Services	72
Health and Human Services	34
Hospitality and Food Services	8
IT / Telecommunications	3
Manufacturing	53
Retail Trade	1
Utilities	2
Business Services & Banking	10
Other	7
TOTAL	204

In thinking about expansion potential, employers indicated that they are most in need of information (65%) and assistance with funding (54%). They also expressed a need for assistance in designing a pre-apprenticeship program. See Figure 6.



TASKFORCE ON APPRENTICESHIP EXPANSION

On June 15, 2017, President Trump issued Executive Order 13801, *Expanding Apprenticeships in America* “to identify strategies and proposals to promote apprenticeships, especially in sectors where apprenticeship programs are insufficient.” In May 2018, the Taskforce proposed 26 recommendations in four areas: Education and Credentialing; Attracting Business to Apprenticeship; Expanding Access, Equity and Career Awareness; and Administrative and Regulatory Strategies to Expand Apprenticeship. See Appendix C for the full list of the 26 recommendations.

The Taskforce recommended expansion of apprenticeship through the establishment of Industry-Recognized Apprenticeship Programs or IRAPs. Registered Apprenticeships will remain as a primary means of accrediting programs while IRAPs, endorsed by national organizations representing industry, will allow for new models. An IRAP must be certified as a high-quality program by a third-party certifier who has received favorable determination from the USDOL. Certifiers may be existing organizations or may be created for the express purpose of certifying IRAPs. While regulations have not been released, early discussions indicate that IRAPs may not be WIOA or GI Bill eligible. In addition, programs offered by the U.S. military and the construction industry will initially be excluded from IRAPs due to the existing high concentration of apprenticeships in these areas. For additional information, see the *Training and Employment Notice 3-18*, July 27, 2018.

RECOMMENDATIONS for REGION 3

Timing to expand apprenticeship could not be better. Many states, including Virginia, are experiencing record low unemployment; talent is hard to come by and employers, who may have been reluctant to try apprenticeship, are feeling the pain. Second, the federal government, in rare bipartisan fashion, is extremely supportive of apprenticeship and is poised to release additional funding and new, more flexible guidelines in order to expand opportunities and increase employer engagement. Third, Virginia’s new *Profile of a High School Graduate* emphasizes the need to include work-based learning as a new graduation requirement; school divisions must provide opportunities for students to learn about workplace expectations and career options. The K-12 system will be a willing partner in expanding apprenticeships that begin in high school.

The primary consideration for Region 3 leadership is the support and engagement from the private sector that will be required to expand apprenticeship. Based on feedback from employers included in this report, there is interest from the private sector in expanding opportunities. It is also clear that employers will require assistance in developing programs and in funding the required related instruction.

Big Picture Strategies:

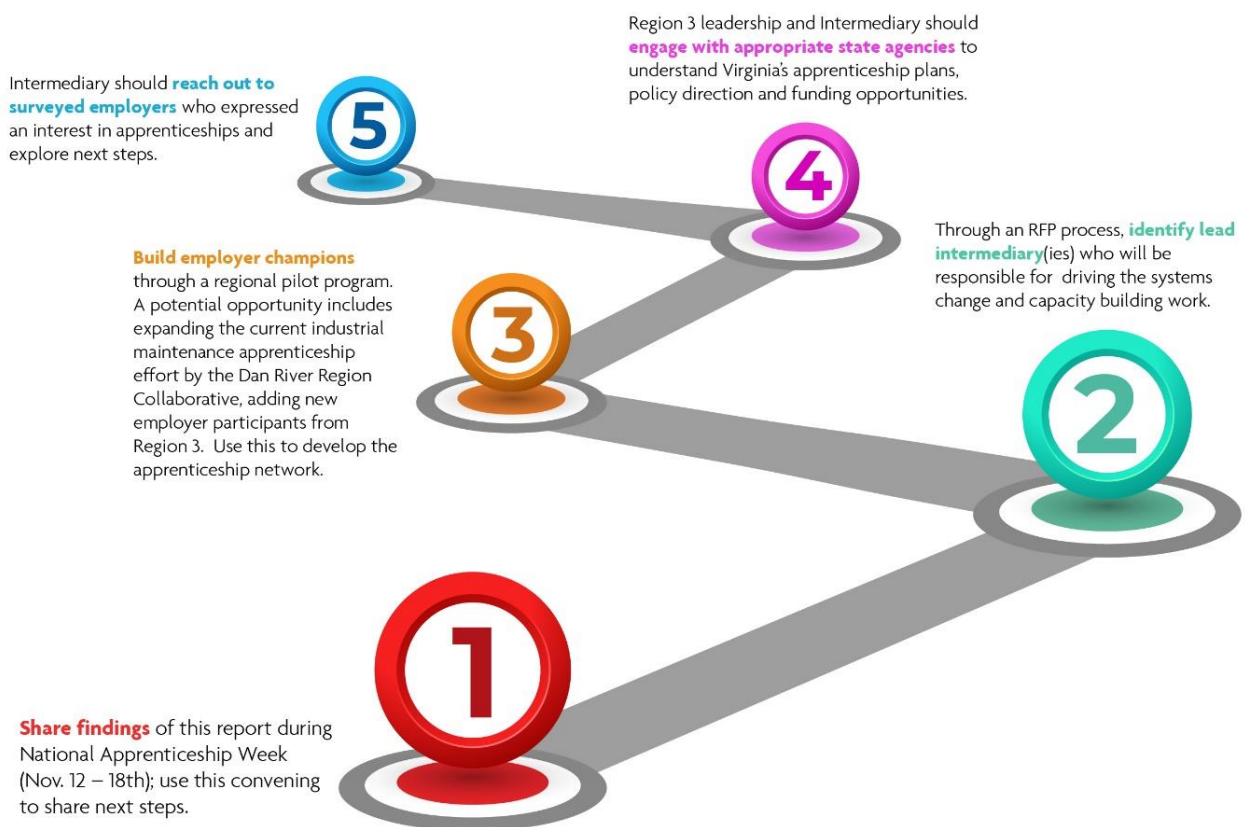
At the 30,000 foot level, here are some development strategies for the Region to consider:

- ❖ Create a **vision** where apprenticeship is a critical component of a larger work-based learning strategy.
- ❖ Change the **perception and culture**: apprenticeship as “college but without the debt.”
- ❖ Make it **easy for employers** to engage by developing and/or modifying tools that simplify and localize the process.
- ❖ Create regional **apprenticeship consortiums**, similar to the North Carolina model.
- ❖ Partner with employers and the K-12 system to establish **pre-apprenticeships** starting in high school, especially in strategic sectors such as manufacturing and healthcare.
- ❖ Explore **degree apprenticeship** in professional fields such as engineering, teaching and nursing. This will support perception efforts to establish apprenticeship as a college-option.

Near Term Actionable Steps:

If Region 3 has an immediate interest in building capacity to support apprenticeship expansion, there several near term action steps to begin the effort (see Figure 7).

Figure 7. Near-term Steps for Advancing Apprenticeship in Region 3.



1. **Share findings** of this report during National Apprenticeship Week (Nov. 12 – 18th); use this to springboard next steps and assess interest in a larger convening around work-based learning for spring 2019. The Dan River Region Collaborative can assist Region 3 leadership in planning a breakfast or luncheon event to disseminate findings and recommendations from this report.
2. Through an RFP process, **identify lead intermediary(ies)** who will be responsible for driving the systems change and capacity building work. Examination of best practices and new state initiatives clearly identifies the need for an intermediary to drive the effort. Potential intermediaries include:
 - a. IALR
 - b. Workforce Development Boards
 - c. Community Colleges
 - d. Chambers of CommerceRFP should include request for funding to pilot employer engagement incentives and/or identification of existing funds that could be leveraged (private, state, federal) towards apprenticeship expansion. The *estimated* cost for a one-year contract is \$100,000.
3. **Build employer champions** through a regional pilot program. A potential opportunity includes expanding the current industrial maintenance apprenticeship effort by the Dan River Region Collaborative, adding new employer participants from Region 3. Use this to develop the apprenticeship network/consortium. The intermediary would be responsible for this work. Funding would be required to support the related instruction costs. DCC and SVCC may have funds from an existing grant to support this effort.
4. **Engage with appropriate state agencies** to understand Virginia’s apprenticeship plans, policy direction and funding opportunities. This would also be the intermediary’s responsibility and the only additional cost would be travel. Appropriate agencies include:
 - Virginia Department of Labor and Industry, Division of Registered Apprenticeship
 - Virginia Department of Education
 - Virginias’s Workforce Development Board
 - Virginia Economic Development Partnership
5. Intermediary should **reach out to surveyed employers** who expressed an interest in apprenticeships and explore next steps. If funding resources have been identified, there should be support for related instruction. Additional funding options include: the Virginia Tobacco Commission, Region 3 per capita funds, and leveraged WIOA funds. Employer wage expenses for new apprenticeship positions should count as private matching funds.

If these near-term steps are achieved, within twelve months the Region should be in a good position to apply for impending federal funds and other grant opportunities. There is potential to double the number of active apprenticeships within this timeframe. In the next five years, Region 3 could have an employer-driven system that is sustained by the private sector, leveraging state investments in workforce development.

APPENDIX A – Region 3 Employer Comments

<i>Region 3 Employer Comments Regarding Apprenticeship</i>	
1	As long as the apprentice is at least 18 (due to bonding requirements) we would be interested in considering this program at our bank.
2	We already utilize unpaid college interns so it may be difficult to pay a less skilled high school student. The college student may feel this is unfair and we don't have the funds in our budget at this time.
3	Programs such as this would have to be approved through corporate prior to implementing locally and I am unsure as to corporate appetite. That would have to be determined.
4	Great program
5	I think apprenticeship is great idea however it is not something that is applicable to my business.
6	Excellent option, we have offered internships in the past
7	We are a small public library. Our guidelines are to use our own staff to accomplish the work that needs to be done. Note - we also do not use volunteers for standard tasks.
8	I would love to have an apprenticeship program at my business but we would not be able to fund it.
9	We are considered local government, but would need this option to meet VDSS requirements.
10	I am familiar with apprenticeships generally, however I am not sure of the relationship: costs/benefits between WF development and the company and / or apprenticeship participants. I am much more familiar with the term internship or practicum. Consequently we would need a lot of guidance in developing and implementing such a program-but we remain interested nonetheless.
11	Healthcare is unique in that most all clinical positions require a state license to practice.
12	I believe apprenticeship opportunities would be an enhancement for any company or business
13	Apprentices need to be 21.
14	Education system needs earlier identification of aptitude and interests in careers so appropriate courses are taken; otherwise by the time we would like to have them intern as high school senior, they are not prepared
15	We have not determined to go forward with apprenticeships at this time, but are interested in information concerning the program.
16	Certainly a good opportunity and would like to learn more about what is available in the Danville area.
17	The current educational system is failing to provide the skills needed. I am most familiar with the system in Germany where the apprenticeship programs are helping to bridge the gap between unskilled and skilled workers. Apprenticeship programs could be a great means of supporting both business and education.
18	Will need people with an aptitude for the position
19	As we are operating in tobacco, we will be able to hire apprentices only after they reach age 18. Therefore, we would need an adjusted program vs.others. We are very interested in the program.
20	We have been working with Kelly Arnold with SVCC, excellent results.
21	We only provide apprenticeship to employees who have work experience at our preschool.
22	I think there is a huge need in our community for the auto tech industry. There are 30 more or less shops within a 20 mile radius.
23	Our company's greatest needs are in transportation and service technicians who are responsible for the installation and trouble-shooting of appliances that use our fuels.
24	Will love to work with the program but the insurance cost to train a truck driver is too much for our company

25	in the trucking industry we are having trouble hiring qualified drivers. the hard part for us is hiring with 2 years driving experience. Not exactly sure how apprenticeship would work for smaller trucking providers. large companies can hire drivers right out of driving school and put them in a program immediately where we have to wait for them to come back around to have an opportunity.
26	Our apprenticeships have worked beautifully over the years, by allowing us to hire employees and have them trained and educated while working.

APPENDIX B – Positions of Interest by Sector

Apprenticeship Positions of Interest by Sector		
Sector	Title	# Employers Noting Title
Automotive & Aviation	AUTO SPECIALTY TECH	1
	Other	1
	Other titles: Aircraft component technician	
Transportation & Logistics	DIESEL MECHANIC	1
	MECHANIC, INDUSTRY TRUCK	1
	TRUCK DRIVER, HEAVY	3
	SMALL-ENGINE MECHANIC	1
	Other	1
	Other titles: Service Technician for Petroleum products and Telecommunications Techs; Veneer grader; Customer Service; data entry; marketing	
Construction	CONSTRUCTION ENGINEER	1
	CONSTRUCTION EQUIPMENT	1
	COST ESTIMATOR	1
	HVAC-ENVIRONMENTAL-CTRL	1
	PLUMBER	1
Education Services	CHILD CARE DEV SPECIALIST	5
	COUNSELOR, GUIDANCE	3
	EDUCATION & TRAINING	8
	NURSERY SCHOOL ATTENDANT	1
	YOUTH DEVEL. PRACTITIONER	1
	TEACHER AIDE I	7
	TEACHER PRESCHOOL	4
	TRADE/INDUSTRIAL TEACHER	2
	TRAINING SPECIALIST	1
	Other	4
	Other titles: Graphics, PR, Web design, customer service; Clerical, landscaping, maintenance; Welding, Mechatronics, IT; Library Assistant	
Health and Human Services	CASEWORKER, FAMILY	3
	DENTAL ASSISTANT	2
	LEGAL SECRETARY- CLERICAL	2
	MEDICAL ASSISTANT	6
	MEDICAL LABORATORY TECH	3
	MEDICAL SECRETARY	4
	NURSE ASSISTT II, GOV	3

	HUMAN RESOURCES	5
	HUMAN RESOURCES ASSIST.	7
	SECURITY GUARD	1
	SECRETARY, CLERICAL	6
	Other	6
	Other titles: Medical Equipment Technicians/Respiratory Therapists; Customer Service Call Center; Mentoring, Direct Support Professional, Peer Support Spec; Community Health Worker/Patient Navigator; Personal Care Aides/Asst.; Veterinarian tech; Early Childhood Teacher Court Advocate Maintenance Tech Cannery Operator Human Service Worker	
Hospitality and Food Services	COOK	1
	COSMETOLOGIST	1
	MANAGER (food/retail)	3
	Other	4
	Other titles: Brewer, viticulturist, enologist; Events Asst.; Front Desk Associate; Housekeeping; Maintenance; Vineyard Manager, Winemaker	
IT / Telecommunications	COMPUTER PROGRAMMER	2
	NETWORK SUPPORT (various)	2
	TECHNICAL SUPPORT SPEC.	1
	Other	2
	Other titles: Cyber security; retail telecommunications	
Manufacturing	MACHINE OPERATOR I	9
	MACHINE REPAIRER, MAINT	5
	MACHINE SET-UP OPERATOR	3
	MACHINIST (various)	3
	MAINT REPAIR (various)	5
	MAINTENANCE MACHINIST	5
	MAINTENANCE MECHANIC	12
	MAINTENANCE/REPAIR WORK	9
	INDUSTRIAL ENGINEER TECH	4
	FABRICATOR-ASSEM, METAL	1
	INDUSTRIAL MANUF. TECH	2
	INSPECT, METAL FABRICATOR	1
	INSPECTOR, QUALITY ASSUR	4
	INVENTORY MANAGEMENT	4
	JOINER	1
	BOILERHOUSE MECHANIC	3
	ELECTRICAL TECHNICIAN	7
	ELECTRICAL-APPL REPAIR	2
	ELECTRICAL-INSTRUMENT REP	4
	ELECTROMECHANICAL TECH	5

	ELECTRONICS MECHANIC	5
	ELECTRONICS TECHNICIAN	3
	PIPE FITTER (various)	3
	METAL FABRICATOR	1
	MILLWRIGHT	3
	PRODUCTION PLANNER	3
	SHEET-METAL WORKER	1
	RECEIVING LAYOUT INSP	1
	QUALITY CONTROL INSPECTOR	6
	MATERIAL COORDINATOR	5
	WELDER (various)	2
	REPAIRER, WELDING INDUSTR	1
	STOCK-CONTROL CLERK	3
	OPERATING ENGINEER	3
	OPERATIONS COORDINATOR	3
	Other	2
	Other titles: Construction Trades; Production management	
Retail Trade	Other	1
	Other titles: automotive tech	
Utilities	ELECTRICAL-INSTRUMENT REP	1
	WATER-TREAT-PLANT OPER	1
	TREATMENT-PLANT MECHANIC	1
Business Services & Banking	Title Searches	1
	Operations Clerks; Teller	2
	Survey field crew	1
	Front desk receptionist, admin.	5
	Drafting	1
	Marketing	1
	Research analyst	1
Other	Assistant Teacher /Teacher	1
	Administrative Asst. /Event Coord.	2
	Processing/Chemistry	1

APPENDIX C – Taskforce Recommendations

Taskforce Recommendations to Expand Apprenticeships, May 2018		
Education and Credentialing	1. Expansion of Traditional Work-and-Learn Models	The industry-recognized apprenticeship program (IRAP) should expand more traditional work-and-learn models to incorporate criteria of modern apprenticeship and ensure better outcomes for workers and employers. Competency-based models.
	2. Core Components of Work-and-Learn Models	Certifiers of Industry-recognized apprenticeships should ensure apprenticeships incorporate successful core components: blended learning, credit for prior knowledge and experience, industry recognized skill standards and credentials, structured mentorship, paid work experience and advancement opportunities, portable credentials, certificates and/or degrees with demonstrable labor market value
	3. National Recognition and Portability of Credentials	The industry-recognized apprenticeship program should ensure the opportunity to earn credentials and evidence that related instruction is aligned to theory and performance based outcomes.
	4. Clearly Articulated Requirements for Credentials	Public-private sector partners articulate the requirements for standards-based, nationally portable credentials.
	5. Strategies for Affordability	The U.S. DOL and Dept. of Ed. should implement/support strategies to make technical instruction more affordable by: partnering with virtual learning providers to expand reach and reduce costs; identifying or producing foundation core curriculum in each sector and "open sourcing" it for learning providers; cease federal funding of duplicative curriculum or assets
	6. Identification and Availability of Capacity-building Resources	Clarification or alignment of funding via WIAO, Perkins, Federal Work Study and Pell Grant programs at a minimum. Use of H-1B resources for competitive grants to support non-redundant, competency-based pathways.

Attracting Business to Apprenticeship	7. Improved Risk Sharing Tools and Streamlined Processes to Manage Them	Update federal funding criteria to ensure equal treatment of Registered and Industry-recognized programs, reallocate state resources and develop programs for new and incumbent workers. Create a single apprenticeship program application. Explore sector-led financial options such as income sharing models with private capital. Evaluate federal workforce programs and realign funding for underperforming programs to Industry-recognized programs.
	8. A Robust Needs Analysis to Narrow-down the Areas of Most Acute Skills Shortage	DOL should include a needs analysis adaptable to businesses of all sizes. BLS and Census Bureau should develop a joint project to measure skill shortages based on new survey tools. DOL and Census Bureau should research and publish metrics on long-term employment outcomes.
	9. Centralized Apprenticeship Resources	Recommendations specific to industry-recognized programs such as Playbook, Benefits and costs, occupational competencies and standards, instruction and resource guides, and case studies.
Expanding Access, Equity and Career Awareness	10. Building Brand Awareness of Apprenticeship	Federal financial support for online campaigns that speak to multiple generations and promote the monetary return on investment.
	11. Apprenticeship as a Model to Expand Pathways of Opportunity	Support pre-apprenticeship in middle and secondary schools for CTE. Reduce reciprocity barriers. Promote use of technology. Streamline credit for prior learning and work experiences. Develop linkages between digital platforms and social media channels where stakeholders can easily connect.
	12. Ensuring Equity	DOL should implement clear guidelines that reinforce equity and define certifier, sponsor and Office of Apprenticeship responsibilities and comprehensive outreach strategies. DOL should continue funding Community-based organization efforts.
	13. Improvements to Existing Registered Apprenticeship Program	DOL should take available legislative and regulatory actions to improve and preserve the Registered Apprenticeship system.
	14. Pilot Project	Begin pilot in an industry without well-established RA programs. Test process to support industry groups working on Industry -recognized programs.
	15. Industry Sector Standards	Focus on mastery and competency not seat time or training hours.

**Administrative
and Regulatory
Strategies
to Expand
Apprenticeship**

16. Standards and Guidelines	DOL Industry Recognized Apprenticeship program will spell out quality standards and require that industry groups detail structured learning experiences.
17. Inapplicability of the Davis-Bacon Act	Industry recognized apprenticeship program participants cannot be considered apprentices for the purpose of meeting the Davis-Bacon Act wage requirements (recommendation is specific to the construction industry).
18. Inapplicability of Wage Progression Rules	Industry-recognized apprenticeship programs are not required to follow specific wage progression rules but should make clear to apprentices what wages they will be paid.
19. Multiple Associations in Single Industry Sector	DOL should solicit proposals for governing bodies that include multiple trade associations to reach agreement on certification standards.,
20. Credentialing Standards	Governing body would establish credentialing standards and negotiate with colleges and/or employers to partner on credit agreements.
21. State Agency-administered Training Funds	DOL should clarify whether training funds are available to Industry recognized apprenticeship programs and how they will be distributed through to credentialing bodies.
22. Performance Reporting Requirements	Industry-Recognized system should have a single reporting platform utilized at state and federal level. Allows DOL to verify outcomes from IRAPs.
23. WIOA Waivers and Set-asides	Make it easier for sponsors to receive WIOA funding, allowing incumbent worker participation.
24. WIOA Performance Measures - Earnings	Recognize that employment earning for apprentices may appear smaller than for those who are unemployed at the beginning of the program.
25. WIOA Performance Measures - Time to Completion	Apprenticeships take longer to complete and wage progression, persistence and credential attainment should be viewed as positive interim
26. Wage and Hour Rules	Reform wage and hour rules to allow apprentices under 18 to work on the manufacturing floor, use hoists and lifts in healthcare, use power tools and equipment, when properly supervised.

APPENDIX D – Region 3 Survey

*survey begins on the following page (13 pages total)

GO Virginia Region 3 Apprenticeship Survey

Company Information

1. Name and Company Information

Name (First and Last)

Company

Address

City/Town

State/Province

ZIP/Postal Code

Email Address

Phone Number

2. How many employees do you have (locally)?

☐

1 - 10

☐

51 - 100

☐

11 - 25

☐

101 - 200

☐

26 - 50

☐

More than 200

GO Virginia Region 3 Apprenticeship Survey

Experience with Apprenticeship

Apprenticeship is an arrangement that includes a paid-work component and an educational or instructional component, wherein an individual obtains workplace-relevant knowledge and skills (Dept. of Labor).

3. Respond to the following based on your understanding and/or experience with apprenticeship.

	YES - definitely	Maybe	NO	Don't know / unsure / no experience
Apprenticeship helps meet employer demands for skilled workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeship helps with employee recruitment and retention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeship adds to productivity or high quality services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeship is expensive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeship is good for worker morale/pride	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeship leads to higher accident rates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeship programs are difficult to establish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeships take too long	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Has your company offered apprenticeship opportunities within the last 5 years?

- ☐ Yes
- ☐ No

GO Virginia Region 3 Apprenticeship Survey

Employers with Apprenticeship Experience

5. Number of years you have been offering apprenticeships.

- ☐ One year or less
- ☐ More than one year but less than 5 years
- ☐ 5 to 10 years
- ☐ More than 10 years

6. Number of apprentices you are **currently** sponsoring.

☐ 0

☐ 6 - 10

☐ 1 - 2

☐ 11 +

☐ 3 - 5

7. Position titles for apprentices.

Position 1

Position 2

Position 3

Position 4

8. Percent of apprentices (estimate) in the last five years who successfully completed the program, earning the apprenticeship certificate and maintaining employment.

☐ 10% or less

☐ 51% - 75%

☐ 11% - 25%

☐ 75% or higher

☐ 26% - 50%

9. What organization(s) provided the related instruction for your apprentices? Check all that apply.

☐ Community College

☐ Technical School

☐ Four-year college or University

☐ High School

☐ Proprietary Vendor

☐ Our Company

☐ Other (please specify)

10. The cost for the related instruction was paid by (check all that apply):

☐ the apprentice

☐ our company

☐ public funding (Pell, WIOA, grants)

☐ Other (please specify)

11. Apprentices are paid while they attend/complete related instruction.

- ☐ Yes - for every hour
- ☐ Yes - for some of the hours
- ☐ No

GO Virginia Region 3 Apprenticeship Survey

Plans for and Interest in Apprenticeship

According to the Department of Labor (2017), there are over 533,000 apprentices across 22,000 registered programs obtaining the skills they need to succeed while earning the wages they need to build financial security.

We would like to understand your interest in continuing an apprenticeship program and/or starting a new program.

12. Our company is interested in learning more about apprenticeship.

- ☐ Yes
- ☐ No
- ☐ We already have a thorough understanding of apprenticeship

13. Our company is interested in offering apprenticeships in the near term - within three years.

- ☐ YES
- ☐ Maybe
- ☐ NO

14. The Dept. of Labor allows students under the age of 18 to work in industry settings if they are enrolled in a registered apprenticeship program. This creates an opportunity to engage high school students and influence their career decisions.

Our company would be interested in a **pre-apprenticeship program** that begins in the last year of high school.

- ☐ Yes
- ☐ Maybe
- ☐ No

15. Industry sector that best describes your business (select one):

- | | |
|---|---|
| <input type="radio"/> Automotive and Aviation (repair/services) | <input type="radio"/> Information Technology / Telecommunications |
| <input type="radio"/> Business Services and Banking | <input type="radio"/> Manufacturing |
| <input type="radio"/> Construction | <input type="radio"/> Retail Trade |
| <input type="radio"/> Education Services | <input type="radio"/> Transportation and Logistics |
| <input type="radio"/> Health and Human Services | <input type="radio"/> Utilities |
| <input type="radio"/> Hospitality and Food Services | |
| <input type="radio"/> Other (please specify) | |

GO Virginia Region 3 Apprenticeship Survey

Apprenticeship Positions - Automotive and Aviation / Transportation

16. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

- | | |
|---|--|
| <input type="checkbox"/> AIR TRANSPORT PILOT | <input type="checkbox"/> MECHANIC, INDUSTRY TRUCK |
| <input type="checkbox"/> AIR-CON, WIND INSTALL | <input type="checkbox"/> MECHANICAL-ENGINEER TECH |
| <input type="checkbox"/> AIRCRAFT MECHANIC | <input type="checkbox"/> MODEL MAKER, AIRCRAFT |
| <input type="checkbox"/> AIRFRAME-AND-POWER-PLANT | <input type="checkbox"/> SYSTEM DISPATCH OPERATOR |
| <input type="checkbox"/> AUTO SPECIALTY TECH | <input type="checkbox"/> TRANSPORTATION ENGINEER |
| <input type="checkbox"/> AUTOMOBILE MECHANIC | <input type="checkbox"/> TRANSPORTATION OPERATOR |
| <input type="checkbox"/> AVIATION ORDNANCEMAN | <input type="checkbox"/> TRUCK DRIVER, HEAVY |
| <input type="checkbox"/> AVIATION RESOURCE MGMT | <input type="checkbox"/> LOGISTICIAN |
| <input type="checkbox"/> AVIATION SUPPORT EQUIP | <input type="checkbox"/> LOGISTICS ENGINEER PROF |
| <input type="checkbox"/> DIESEL MECHANIC | <input type="checkbox"/> MARINE ENGINEER |
| <input type="checkbox"/> INSTRUMENT MECHANIC | <input type="checkbox"/> MOTORBOAT MECHANIC |
| <input type="checkbox"/> INSTRUMENTATION TECH | <input type="checkbox"/> SMALL-ENGINE MECHANIC |
| <input type="checkbox"/> HYDRAULIC REPAIR | <input type="checkbox"/> RADIO STATION OPER AIRCRAFT |
| <input type="checkbox"/> Other (please specify) | |

17. Based on the positions you have identified, how many apprentices could you support?

GO Virginia Region 3 Apprenticeship Survey

Apprenticeship Positions - Construction

18. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

- | | |
|--|--|
| <input type="checkbox"/> CABINETMAKER | <input type="checkbox"/> HIGHWAY CONSTRUCTION INSP |
| <input type="checkbox"/> CARPENTER (various) | <input type="checkbox"/> FURNITURE UPHOLSTERER |
| <input type="checkbox"/> CONSTRUCTION ENGINEER | <input type="checkbox"/> HVAC-ENVIRONMENTAL-CTRL |
| <input type="checkbox"/> CONSTRUCTION EQUIPMENT | <input type="checkbox"/> PATTERNAKER, WOOD |
| <input type="checkbox"/> CONSTRUCTION-EQUIP MECH | <input type="checkbox"/> PLUMBER |
| <input type="checkbox"/> BRICKLAYER | <input type="checkbox"/> STRUCTURAL-STEEL WORKER |
| <input type="checkbox"/> ELECTRICIAN (various) | <input type="checkbox"/> SURVEYOR (PARTY CHIEF) |
| <input type="checkbox"/> CRANE OPERATOR | <input type="checkbox"/> LAND SURVEYOR |
| <input type="checkbox"/> ELEVATOR CONSTRUCTOR | <input type="checkbox"/> ESTIMATOR AND DRAFTER |
| <input type="checkbox"/> INSULATION WORKER | <input type="checkbox"/> PAINTER (various) |
| <input type="checkbox"/> BOATBUILDER, WOOD | <input type="checkbox"/> LOCKSMITH |
| <input type="checkbox"/> COST ESTIMATOR | <input type="checkbox"/> ELEVATOR REPAIRER |
| <input type="checkbox"/> DRAFTER (various) | <input type="checkbox"/> REFRIGERATION MECHANIC |
| <input type="checkbox"/> DRY-WALL APPLICATOR | <input type="checkbox"/> SAFETY INSPECTOR/TECH |
| <input type="checkbox"/> Other (please specify) | |

19. Based on the positions you have identified, how many apprentices could you support?

GO Virginia Region 3 Apprenticeship Survey

Apprenticeship Positions - Education Services

20. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

- ☐ CHILD CARE DEV SPECIALIST
- ☐ COUNSELOR, GUIDANCE
- ☐ EDUCATION & TRAINING
- ☐ NURSERY SCHOOL ATTENDANT
- ☐ YOUTH DEVEL. PRACTITIONER
- ☐ TEACHER AIDE I
- ☐ TEACHER PRESCHOOL
- ☐ TRADE/INDUSTRIAL TEACHER
- ☐ TRAINING SPECIALIST
- ☐ Other (please specify)

21. Based on the positions you have identified, how many apprentices could you support?

GO Virginia Region 3 Apprenticeship Survey

Apprenticeship Positions - Health and Human Services

22. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

- ☐ CASEWORKER, FAMILY
- ☐ CHAPLAINCY
- ☐ DENTAL ASSISTANT
- ☐ FIRE FIGHTER
- ☐ FIRE MARSHALL
- ☐ LEGAL SECRETARY- CLERICAL
- ☐ COURT REPORTER
- ☐ CRIMINAL INVESTIGATOR
- ☐ EMERGENCY MEDICAL TECH.
- ☐ MEDICAL ASSISTANT
- ☐ MEDICAL LABORATORY TECH
- ☐ MEDICAL SECRETARY
- ☐ NURSE ASSISTT II, GOV
- ☐ HUMAN RESOURCES
- ☐ HUMAN RESOURCES ASSIST.
- ☐ POLICE LIEUTENANT
- ☐ POLICE OFFICER, PATROL
- ☐ PARALEGAL
- ☐ SECURITY GUARD
- ☐ SECRETARY, CLERICAL
- ☐ OPTICIAN, DISPENSING II
- ☐ Other (please specify)

23. Based on the positions you have identified, how many apprentices could you support?

24. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

- | | |
|---|---|
| <input type="checkbox"/> COOK | <input type="checkbox"/> MEAT CUTTER |
| <input type="checkbox"/> COSMETOLOGIST | <input type="checkbox"/> MANAGER (food/retail) |
| <input type="checkbox"/> BARBER | <input type="checkbox"/> LANDSCAPE TECHNICIAN |
| <input type="checkbox"/> CLEANER, COMM OR INSTITU | <input type="checkbox"/> NAIL TECHNICIAN |
| <input type="checkbox"/> FLORAL DESIGNER, RETAIL | <input type="checkbox"/> PHOTOGRAPHER, LITHOGRAPH |
| <input type="checkbox"/> Other (please specify) | |

25. Based on the positions you have identified, how many apprentices could you support?

GO Virginia Region 3 Apprenticeship Survey

Apprenticeship Positions - IT & Telecommunications

26. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

- ☐ COMPUTER ENVIR CNTRL INSP
- ☐ COMPUTER PROGRAMMER
- ☐ COMPUTER SYSTEMS TECH
- ☐ COMPUTER-PERIPHERAL-EQUIP
- ☐ NETWORK SUPPORT (various)
- ☐ TECHNICAL SUPPORT SPEC.
- ☐ TELECOMM INSTALLER
- ☐ Other (please specify)

27. Based on the positions you have identified, how many apprentices could you support?

Apprenticeship Positions - Manufacturing

28. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

- | | |
|--|--|
| <input type="checkbox"/> MACHINE OPERATOR I | <input type="checkbox"/> ELECTRONICS MECHANIC |
| <input type="checkbox"/> MACHINE REPAIRER, MAINT | <input type="checkbox"/> ELECTRONICS TECHNICIAN |
| <input type="checkbox"/> MACHINE SET-UP OPERATOR | <input type="checkbox"/> GROUNDSKEEPER-INDUSTRIAL |
| <input type="checkbox"/> MACHINIST (various) | <input type="checkbox"/> NUMERICAL CONTROL OPER |
| <input type="checkbox"/> MAINT REPAIR (various) | <input type="checkbox"/> TOOL & DIE MAKER |
| <input type="checkbox"/> MAINTENANCE MACHINIST | <input type="checkbox"/> TOOL DESIGNER |
| <input type="checkbox"/> MAINTENANCE MECHANIC | <input type="checkbox"/> TOOL-MACHINE SET-UP OPER. |
| <input type="checkbox"/> MAINTENANCE/REPAIR WORK | <input type="checkbox"/> PIPE FITTER (various) |
| <input type="checkbox"/> INDUSTRIAL ENGINEER TECH | <input type="checkbox"/> METAL FABRICATOR |
| <input type="checkbox"/> INDUSTRIAL HYGIENIST | <input type="checkbox"/> MILLWRIGHT |
| <input type="checkbox"/> INDUSTRIAL MANUF. TECH | <input type="checkbox"/> MOLD MAKER, DIE-CAST |
| <input type="checkbox"/> FABRICATOR-ASSEM, METAL | <input type="checkbox"/> MOLDER |
| <input type="checkbox"/> INSPECT, METAL FABRICATOR | <input type="checkbox"/> PIPE COVER AND INSULATOR |
| <input type="checkbox"/> INSPECTOR, QUALITY ASSUR | <input type="checkbox"/> PRODUCTION PLANNER |
| <input type="checkbox"/> INVENTORY MANAGEMENT | <input type="checkbox"/> SHEET-METAL WORKER |
| <input type="checkbox"/> JOINER | <input type="checkbox"/> RECEIVING LAYOUT INSP |
| <input type="checkbox"/> BLACKSMITH | <input type="checkbox"/> QUALITY CONTROL INSPECTOR |
| <input type="checkbox"/> BOILERHOUSE MECHANIC | <input type="checkbox"/> MATERIAL COORDINATOR |
| <input type="checkbox"/> ELECTRIC-MOTOR REPAIRER | <input type="checkbox"/> WELDER (various) |
| <input type="checkbox"/> ELECTRICAL TECHNICIAN | <input type="checkbox"/> REPAIRER, WELDING INDUSTR |
| <input type="checkbox"/> ELECTRICAL-APPL REPAIR | <input type="checkbox"/> STOCK-CONTROL CLERK |
| <input type="checkbox"/> ELECTRICAL-INSTRUMENT REP | <input type="checkbox"/> OPERATING ENGINEER |
| <input type="checkbox"/> ELECTROMECHANICAL TECH | <input type="checkbox"/> OPERATIONS COORDINATOR |
| <input type="checkbox"/> Other (please specify) | |

29. Several manufacturers have expressed an interest in industrial maintenance apprentices. If you have the same need, how many industrial maintenance apprentices could you support?

☐ 1

☐ 4 - 6

☐ 2

☐ Not interested

☐ 3

30. Based on the positions you have identified, how many total apprentices could you support?

GO Virginia Region 3 Apprenticeship Survey

Apprenticeship Positions - Retail Trade

31. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

☐ CUSTOMER SERVICE REP

☐ OFFICE CLERKS, GENERAL

☐ FIRST LINE MANAGER

☐ OFFICE MANAGER/ADMIN. SER

☐ FIRST LINE SUPERVISOR/MGR

☐ STOCKROOM CLERK

☐ Other (please specify)

32. Based on the positions you have identified, how many apprentices could you support?

GO Virginia Region 3 Apprenticeship Survey

Apprenticeship Positions - Utilities

33. Based on your industry sector, here is a listing of some of the apprenticeships that have been approved in Virginia. Which positions would you have interest in apprenticing?

- ☐ DISPATCHER, SERVICE UTIL
- ☐ LINE ERECTOR
- ☐ LINE INSTALLER-REPAIRER
- ☐ GAS-MAIN FITTER
- ☐ ELECTRIC-MOTOR REPAIRER
- ☐ ELECTRICAL TECHNICIAN
- ☐ ELECTRICAL-APPL REPAIR
- ☐ ELECTRICAL-INSTRUMENT REP
- ☐ ELECTROMECHANICAL TECH
- ☐ ELECTRONICS MECHANIC
- ☐ ELECTRONICS TECHNICIAN
- ☐ NONDESTRUCTIVE TESTER
- ☐ NUCLEAR TEST TECHNICIAN
- ☐ POWERPLANT MECHANIC
- ☐ SUBSTATION OPERATOR
- ☐ WATER & SEWER SYSTEM SUP
- ☐ WATER-TREAT-PLANT OPER
- ☐ HAZARDOUS WASTE MATERIAL
- ☐ PUMP OPERATOR
- ☐ PUMP SERVICER
- ☐ PUMPER-GAUGER
- ☐ STATION INSTALLER/REPAIR
- ☐ TREATMENT-PLANT MECHANIC
- ☐ Other (please specify)

34. Based on the positions you have identified, how many apprentices could you support?

Apprenticeship Positions - Other

35. Which position(s) within your company would be suitable for apprenticeship?

36. Based on the positions you have identified, how many apprentices could you support?

GO Virginia Region 3 Apprenticeship Survey

Assistance Needed

37. In establishing or expanding apprenticeships, which of the following would you need assistance with?

- ☐ Information on requirements/technical assistance
- ☐ Assistance in completing paperwork
- ☐ Assistance in identifying providers for related instruction (classroom)
- ☐ Assistance with funding for related instruction
- ☐ Assistance in designing a pre-apprenticeship program that begins in high school
- ☐ Other (please specify)

38. Please share any additional thoughts or comments you have regarding apprenticeship as a workforce development option for your company.