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FRANK BATTEN SCHOOL  
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## Disclaimer

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

## Honor Pledge

On my honor, as a student of the University of Virginia, I have neither given nor received unauthorized aid on this Applied Policy Project.

## Acknowledgments

I would first like to thank Andrew Pennock, Assistant Professor of Public Policy, and Daniel Player, Associate Professor of Public Policy, for serving as my advisors throughout this process. Your guidance, support, and feedback taught me invaluable skills and helped me grow as a student.

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## Note on the Analysis

The bulk of this analysis was completed prior to the COVID-19 outbreak and does not reflect shifts in policy priorities or the economy occurring due to the global pandemic. The recommendation remains unchanged and may be adapted and pursued when there is greater certainty about the future.

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## Executive Summary

**With changing industry and demographic trends, Louisa County is struggling to compete in the region to produce a high-quality workforce.** With over half of Louisa County residents commuting to nearby localities for employment, Louisa County could improve its quality of life and increase its tax base through focusing on workforce development (Louisa County, VA). In working with targeted industries in central Virginia to determine which skills are desired in a workforce, Louisa County can attract companies to relocate within its borders to provide more job opportunities for its residents.

Workforce development programs are most effective when there is coordination between those administering the program, those participating in the program, and those who are the intended future employers of the participants (Weigensberg, et al, 2012). Companies across a variety of fields have expressed interest within central Virginia to expand operations provided that there is a readily available skilled workforce (Camoin Associates, pages 7-8, 2017). Through taking the preliminary steps to design a program that would address this main industry concern, Louisa County can work towards its goal of increased employment within the locality.

This analysis focuses on workforce development within rural Virginia, focusing on policy alternatives that address specific needs of central Virginia and Louisa County more specifically. This analysis uses five criteria—cost effectiveness, administrative control, political feasibility, and economic impact, and speed of implementation—to assess the projected outcomes of three policy proposals:

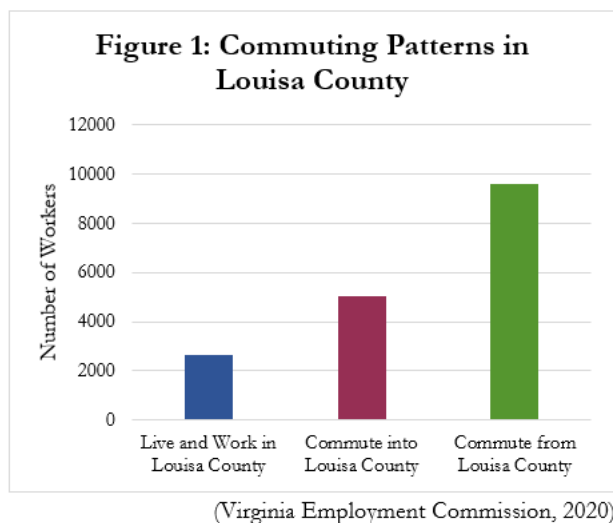
- Policy Alternative 1: Increased Career and Technical Education Spending
- Policy Alternative 2: Creating a Venture Hub
- Policy Alternative 3: Partnering with Piedmont Virginia Community College

A successful policy will minimize the cost to Louisa County of training residents in skills to be later determined by targeted industries. **This report recommends Policy Alternative 3: Partnering with Piedmont Virginia Community College.** This policy alternative has a small budgetary impact for Louisa County and will stimulate the local economy; however, it has a long implementation timeline and requires that Louisa County cedes authority over administration.

## Problem Definition

**With changing industry and demographic trends, Louisa County is struggling to compete in the region to produce a high-quality workforce.**

Population trends are shifting across rural communities in the United States. Unemployment rates recently returned to their pre-Great Recession levels and labor market conditions are slowly improving (United States Department of Agriculture Economic Research Service, 2018). Despite these recent trends, there is still a long-standing difference between the demand for labor and the supply of qualified labor in rural communities (Neumark, Johnson & Mejia, 2013; Bozarth & Strifler, 2019). Employers have been offering various incentives and skill-development programs in an attempt to increase the size of their labor force, but this has not been effective at improving the quality of the entire workforce within a community (Schumann, 2018). While this gap persists, many employment positions have moved into more urbanized areas in recent years, leaving behind less-skilled and lower-paying jobs in rural areas. As nearby job opportunities diminish in number, residents of rural counties are forced to commute longer distances for work capable of supporting themselves and their families. This is the case for central Virginia, including Louisa County.



Louisa County has an average commute time of 36.3 minutes, substantially above the average of 28.4 minutes for the Commonwealth of Virginia. The Louisa County average is comparable to the other rural counties in neighboring region, such as Fluvanna County (33.6 minutes) and Orange County (37.6 minutes) (United States Census Bureau, 2019). This average is noticeably higher than that of the City of Charlottesville (17.0 minutes) and Albemarle County (21.7 minutes), two of the most urbanized centers within the region (United States Census Bureau, 2019). According to the Louisa County profile by the Virginia

Employment Commission, more than four times as many residents of Louisa County out-commute than work within County borders, as seen in Figure 1. About one-third of these workers are commuting to the City of Charlottesville or Albemarle County (Virginia Employment Commission, pages 11-12, 2020). Research has shown that longer commute times can have negative long-term impacts on physical and mental well-being, particularly for rural areas (Christian, 2012; Jillcott et al, 2010).

For residents of Louisa County, however, these long commute times are not translating to increased quality of life. Approximately 11.3 percent of the adult population in Louisa County lives in poverty, putting the County behind other rural counties in central Virginia (United States Census Bureau, 2019). Likewise, almost 13 percent of the population are without health insurance. This is particularly problematic as a relatively large proportion of the population of Louisa County is disabled (11.9 percent) (United States Census Bureau, 2019). Lastly, approximately one in four

residents of Louisa County do not have access to broadband Internet, limiting educational and economic opportunities across the locality (United States Census Bureau, 2019).

These commuting trends also inhibit economic conditions for Louisa County as a whole. Research has shown that high levels of in-commuting and out-commuting are associated with decreased income growth for residents (Goetz et al, 2010). With a large proportion of the population working outside of Louisa County, this decreases the tax base for the County. Thus far, Louisa County has been unsuccessful at attracting companies to relocate within its borders. The Louisa County local tax code is favorable to companies willing to operate within its jurisdiction (Louisa County Department of Economic Development). Louisa County is well-positioned within central Virginia, as it lies 15 miles east of the City of Charlottesville and 15 miles west of the greater Richmond area (Louisa County, VA). Nationally, the County is equidistant from two of the largest cities along the East Coast: Atlanta and New York (Louisa County, VA). In spite of this, Louisa County still fails to entice companies that stand to benefit from what the County has to offer.

Furthermore, this problem will continue to get worse based on population projections for Louisa County. Louisa County has experienced population growth in recent years and this trend is expected to continue (United States Census Bureau, 2019; Virginia Employment Commission, page 8, 2020). While employment is also expected to increase, projections are that this increase will not match the rate of overall population growth (Virginia Employment Commission, pages 8 & 30, 2020). More notably, the industries that are expected to grow primarily provide low-skill job opportunities. Skilled employment positions are generally projected to decrease over the next two decades (Virginia Employment Commission, page 30-35, 2020).

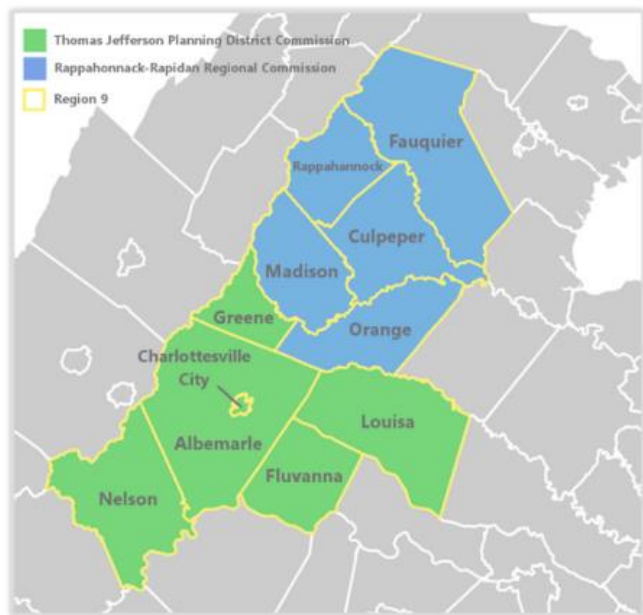
## Background

### Employment Priorities and Initiatives across Central Virginia

Companies have expressed interest in expanding operations throughout central Virginia. In 2017, the state government of Virginia surveyed companies throughout the region about what their biggest challenges were and what problems they expected to face in the future. In all 142 companies were included in this survey. The companies represented skilled industries of a variety of fields. Every industry within the sample expected to see increases in hiring over the next decade (Camoin Associates, page 7, 2017). Twenty-eight percent of respondents noted that one of the biggest workforce challenges they faced was hiring a qualified workforce, with over half of total respondents reporting that hiring skilled labor was either “difficult” or “very difficult” (Camoin Associates, pages 7-8, 2017). An additional 12 percent of companies surveyed said that finding employees with soft skills. Within this broad statement, a majority of respondents stated that the soft skills they most desired yet struggled to find in job applicants were problem solving (67 percent), critical thinking (62 percent), and decision making (55 percent) (Camoin Associates, pages 7-8, 2017). Lastly, when questioned about what support the state and local governments can provide to ease their hiring issues, among the most popular responses were increased technical training and other forms of job training workshops (Camoin Associates, page 7, 2017).

Local governments have been working alongside the state government of Virginia to find solutions to the issues surrounding workforce development. The largest entity involved in this is GO Virginia, a partnership between the Virginia Department of Housing and Community Development and private sector actors aimed at spurring economic growth and opportunities across the state (GO Virginia, 2019). GO Virginia has divided the state into regions to simplify its funding efforts, with Louisa County located within Region 9, as seen in Figure 2 (Camoin Associates, page 17, 2017). In applying for funding for proposed projects, Region 9 collectively is first considered. After a project has been approved for funding, an analysis of where the project should be based is done to determine how the Region collectively will benefit. To date, most projects within Region 9 have been based out of either the City of Charlottesville or Albemarle County due to their relatively high population densities and their more-developed infrastructures and support systems.

Figure 2: Map of GO Virginia Region 9



(Camoin Associates, page 17, 2017)



## Overview of Workforce Development in Louisa County

Louisa County has already identified its underdeveloped workforce as a problem to address. Louisa County Public Schools have already implemented career and technical education (CTE) programs in Louisa County High School and Louisa County Middle School to teach students trade and technical skills to prepare them for their future. The CTE program is an important local initiative as most residents of Louisa County will not continue their education after completing high school: while over 80 percent of the adult population of Louisa County has completed high school or an equivalent, less than a quarter of the adult population holds a bachelor's degree or higher (United States Census Bureau, 2019). The CTE program primarily function through partnering with local businesses to provide students apprenticeship-like opportunities to learn trade skills while also developing soft skills and learning about the expectations of the working world (Louisa County Public Schools, 2019).

In addition, as a long-term investment in improving employment opportunities within County borders, the Louisa County government purchased and rezoned a 700-acre plot of land in late 2018 with the intent of using the property to attract companies to relocate to the County. Located on Shannon Hill, Louisa County purchased the land using both public funds and a conditional grant from the state government. Exact plans for how to use the property are still being discussed, but at least part of the land is expected to be converted into a business or manufacturing park. Louisa County projects that it will require approximately 13 years from when development on the site is complete for its investment in the property to break even (Louisa County Department of Economic Development, 2018).

## Designing Effective Programs

Researchers have assessed implementation strategies of workforce development programs. A meta-analysis of over 100 studies on the various contextual factors affecting workforce development programs provided insight into the environments in which programs will succeed. Effective programs offered support services to their participants, were flexible in meeting participant needs, involved participants' families, and focused on the quality of job placement. On an organizational level, these programs typically received funding from a variety of sources and were smaller in size. Lastly, the best programs exist in environments where potential employers and the community at large are engaged and invested in the program's success (Weigensberg, et al, 2012). Overall, these characteristics have been corroborated by other meta-analyses and are common in successful case studies (Lewis, et al, 2013; Juniper & Prince, 2016). This research may be limited in that it requires standardization of various methodologies to reach these conclusions.

Other research has analyzed how the actual structure of workforce development programs impacts their effectiveness. These cases have found that the actual structure of the program is less important than how the various involved entities interact. These entities include local governments, non-profits, potential employers, and participants. Research shows that programs that are focused more on employers have been most successful (Green & Galetto, 2005). Other researchers have cautioned that, in prioritizing employers, the skillsets participants develop may be limited and that this could negatively impact their long-term careers (Mills, Bowman, Crean & Ranshaw, 2012).



## Evaluative Criteria

The proposed policy alternatives will be assessed on five criteria: cost effectiveness, administrative control, political feasibility, economic impact, and speed of implementation.

### Cost Effectiveness

Cost effectiveness measures the cost to Louisa County of each skilled worker produced by the policy alternative. Cost is determined based on the budgetary impact the policy alternative will have on Louisa County. Effectiveness is an estimate of the maximum number of individuals able to participate in the program. Under this criterion, the best policy solution will have a low cost for each skilled worker produced.

In this analysis, this criterion is measured in 2020 real dollars over a ten-year period. It is discounted and considers capital costs and operational costs.

### Administrative Control

Administrative control refers to the amount of authority the Louisa County government has over implementing the policy alternative. It considers the number of actors, both public and private, required in implementing the policy alternative. It also includes the capacity of the local government to effectively implement the policy to produce the intended results. Under this criterion, the best policy solution will give complete control to the Louisa County government and will not require a minimal number of private actors and public agencies.

In this analysis, administrative control is measured on an ordinal scale consisting of low, medium, and high.

### Political Feasibility

Political feasibility refers to the level of pressure the policy alternative is expected to face from private actors. It considers the opinions of non-public stakeholders and the intensity of their positions. Under this criterion, the best policy solution will have high political acceptability and would not face pushback from the general public.

In this analysis, political feasibility is measured on an ordinal scale consisting of low, medium, and high.

### Economic Impact

Economic impact refers to the ability of the policy alternative to increase the tax base for Louisa County. It includes anticipated tax revenue stemming from industries relocating to Louisa County as a result of successful implementation. It also includes potential tax revenue generated by increased patronage to Louisa County establishments from those residing outside of the County borders. Under this criterion, the best policy solution will have a large, positive impact on the tax revenue generated for the Louisa County government.

In this analysis, economic feasibility is measured on an ordinal scale consisting of low, medium, and high.

### **Speed of Implementation**

Speed of implementation measures how long the policy alternative will take to begin operating and producing skilled workers. It takes into account the time needed for the policy alternative to receive approval and the time required to develop and produce the content of the policy alternative. Under this criterion, the best policy solution will be implemented quickly and will have few potential obstacles to implementation.

In this analysis, speed of implementation is measured in time. Due to the variable nature of policy debate and approval processes, it is noted if the time frame begins from present or from when the policy alternative has been adopted.

## Policy Alternatives

### Policy Alternative 1: Increased Career and Technical Education Spending

**This policy alternative would entail increasing career and technical education in Louisa County Public Schools spending by 50 percent.**

Career and technical education (CTE) refers to a class of programs that teach participants skills specifically geared towards the working world. It often includes a certification process for participants to demonstrate mastery of the skills taught in the course or program. The Virginia Department of Education sets the guidelines and standards for CTE throughout the state, with localities or other entities implementing this program on the ground level (Virginia Department of Education). Virginia has accepted the 16 nationally-recognized fields of CTE, demonstrating that the Commonwealth is in accordance with national standards (Virginia Department of Education).

Overall CTE programs have been shown to be effective policies for workforce development. CTE programs have been found to decrease unemployment rates among those with a high school degree (Brand, Valent, & Browning, 2013). They also have been found to increase wages, both in the short term and over one's entire career (Bishop & Mane, 2004; Willner & Kemple, 2008). In one of the largest studies on CTE effectiveness, researchers followed more than 100,000 students in Arkansas from eighth grade through college or entering the workforce. Through the use of longitudinal survey data, the researchers corroborated the findings of most other assessments of CTE programs and recommended that states and localities invest more into CTE programs (Doughtery, 2016).

Currently, 50 programs are available to middle- and high-school students in Louisa County (Louisa County Department of Education, 2019). Louisa County reported that 450 students each year participate in the CTE program on the middle and high school levels. Some students participate in multiple programs offered by the school system (Virginia Department of Education, 2019). Current funding for CTE in Louisa County is around 24,580 dollars each year (Louisa County School Board, 2018).

This policy alternative would increase the funding Louisa County provides to its CTE program by 50 percent, or 12,290 dollars, so that the County could offer more opportunities to students. The intent is to increase the number of students going through the program which would result in a more-qualified workforce in upcoming years. To implement this alternative, the Louisa County Board of Supervisors would need to raise the yearly appropriation for CTE spending. The Louisa County Departments of Economic Development and Education would need to find companies willing to work with students enrolled in these programs.

## Policy Alternative 2: Creating a Venture Hub

**This policy alternative would entail building and staffing a venture hub on the Shannon Hill property.**

In 2017, GO Virginia approved the construction of a “venture hub” in Region 9. In late 2019, it was determined that the venture hub would be located in either Albemarle County or the City of Charlottesville (Camoin Associates et al, 2019). The venture hub will provide a place to work and support services to local small businesses within the region. It will be staffed with experts who can help aspiring entrepreneurs by providing information or advice. This venture hub is also expected to provide networking opportunities. Small business owners who use its services will have each other to work with, while the hired experts will also provide support. This support will include reaching out to subject-matter professionals from nearby institutions of higher learning, including Piedmont Virginia Community College and the University of Virginia and its centers. It also would include creating a database of other small business owners in the region interested in working with other entrepreneurs.

This plan for Region 9 is still in its early stages of implementation. As an innovative idea, there has been little research into the effectiveness of such a program at stimulating economic growth or increasing job opportunities within an area.

After Louisa County was not selected to house the venture hub in Region 9, discussions in the Louisa County government began to discuss opening a similar site at the Shannon Hill property to provide support to small business owners in Louisa County. Currently, most businesses in Louisa County are small businesses, but a majority of the workforce works for larger companies (Virginia Economic Commission, page 22, 2020). The proposed center would be self-sufficient, though outside funding support could be pursued to decrease the budgetary impact of the center.

This policy alternative would pursue the proposed venture hub for Louisa County. Louisa County would construct a center on the Shannon Hill site and would hire or contract workers to staff it. The targeted audience for the venture hub would be rural entrepreneurs, particularly those trying to start a new business for the first time. Initial implementation would require securing funding from the Louisa County Board of Supervisors and then building the venture hub. During construction, the Louisa County Department of Economic Development would begin looking for potential experts to staff the site for when it eventually opened. Long term implementation would require maintenance, monitoring its effectiveness, and continuing funding.

### Policy Alternative 3: Partnering with Piedmont Virginia Community College

**This policy alternative would entail working with Piedmont Virginia Community College to open a center on the Shannon Hill property.**

In the late 2000s, residents of Greene County and the Greene County government voiced interest in opening a small Piedmont Virginia Community College location within County borders. Unlike the locations in Albemarle County or the City of Charlottesville, this location would not provide associate's degrees, but instead would only offer career and technical education and other certificate-granting programs. PVCC paid to renovate the upper level of the Greene County Public Library and in 2012, the Eugene Giuseppe Center opened in Standardsville (Fitzgerald, 2012). Most recent enrollment data reported that 367 students took courses through PVCC at this location (Piedmont Virginia Community College, 2014a).

As with Policy Alternative 1, this center would administer a CTE program, which has been shown to be effective in the past at developing a qualified workforce and improving individual outcomes for participants. The Eugene Giuseppe Center has given more to the Standardsville and broader Greene County community than just increased educational attainment. It functions as a community center and gathering space, meaning its effectiveness has gone beyond its stated mission. The most recent enrollment data reported that 539 residents of Louisa County were enrolled at PVCC, so there is an existing connection between the general population of Louisa County and PVCC (Piedmont Virginia Community College, 2014b).

To date, there has been no discussion between Louisa County and PVCC to pursue a center such as this. The two entities recently partnered on an initiative known as Network2Work which connects employers with qualified workers, but the proposed policy alternative would require greater commitment and cooperation between both parties (Piedmont Virginia Community College, 2020). This policy alternative gives Louisa County access to more experts and businesses within the region as PVCC is well-connected and respected institution within central Virginia. The proposed center would be constructed on a portion of the Shannon Hill property. Because it is implemented through the public school system, the current CTE program is only available to middle- and high-school students. While the current CTE program could continue, this alternative would increase its availability to a broader audience. It would also be reasonable to expect that the current CTE program would decrease in size as some students could switch to taking courses through the center instead.

This policy alternative entails Louisa County pursuing a partnership with PVCC very similar to Greene County. Louisa County would first gain cooperation from other government agencies, the Louisa County Board of Supervisors, its residents, and PVCC. Next, approval for the site plan would need to be given by the Board of Supervisors before construction began. While construction was occurring and before the center opened, the Louisa County Department of Economic Development would work with PVCC to make recommendations about the curriculum at the center and potential businesses to target for cooperation. This policy alternative requires a long timeline for implementation and involves the coordination of many actors with competing interests.

## Evaluation of Policy Alternatives

For each proposed policy alternative, the following analysis provides an estimate for cost effectiveness and an assessment of the administrative control, political feasibility, speed of implementation, and economic impact. Cost effectiveness is measured in real 2020 dollars. Administrative control, political feasibility, and economic impact are qualitatively assessed on an ordinal scale of low, medium, and high. Speed of implementation is measured quantitatively, as most applicable to the policy alternative. The analysis looks over a ten-year timeframe.

### Cost Effectiveness

Policy Alternative 3: Partnering with Piedmont Virginia Community College is the most cost effective, at .35 dollars per student. While enrollment at the center opened by PVCC will certainly include those who are residents of counties near Louisa County, this estimate is still far below those of the other proposed policy alternatives. Policy Alternative 1: Increased Career and Technical Education Spending is low at \$41.57 per student, but Louisa County must still bear the costs of this policy alternative, unlike Partnering with PVCC. The cost of Policy Alternative 2: Creating a Venture Hub is substantially higher than the other two policy alternatives. While Louisa County could reasonably seek assistance from other sources to help offset the costs of this policy alternative, this is not guaranteed. External funding could be particularly difficult to obtain given that the state government will be helping to fund the GO Virginia project in either Albemarle County or the City of Charlottesville.

Please refer to Appendix: Cost Effectiveness Analysis for a complete breakdown of the analysis.

### Administrative Control

Policy Alternative 1: Increased Career and Technical Education Spending ranks **medium** on administrative control. Louisa County already has a long-operating CTE program, including the technical support within the Louisa County Department of Education, Louisa County High School, and Louisa County Middle School (Virginia Department of Education). Expanding this program, however, will require finding additional private sector actors to work alongside. Though there is interest in increasing industry presence in central Virginia, this cooperation is not guaranteed. In addition, this policy alternative entails communication between the local government and participating businesses, which will require the local government to dedicate additional time and resources.

Policy Alternative 2: Creating a Venture Hub ranks **medium** on administrative control. As the venture hub will be a publicly-provided service, the local government will have high control over its operations; however, the cooperation of small businesses is not guaranteed. The ultimate success of this policy lies outside of the control of the local government. If small businesses do not take advantage of the services provided, this policy alternative will fail and the local government cannot reasonably coerce individual participation. In addition, if the services provided at the venture hub are administered through a privately-contracted firm, this will divert authority away from the Louisa County government. Instead, the local government will have to monitor the program and communications.



## Strategies for Workforce Development

Policy Alternative 3: Partnering with Piedmont Virginia Community College ranks **low** on administrative control. As is the case in Greene County, PVCC would have primary control over the center. Louisa County would be able to try to convince PVCC to take actions favorable to the County, but ultimately the local government would only be providing suggestions. Louisa County would not have influence over who is eligible to use the center or which courses and skills are taught. In addition, this policy alternative would require the coordination of the local government, the Louisa County populace, PVCC, and private companies. In having to consider this variety of perspectives, the influence of the local government is diminished.

### Political Feasibility

Policy Alternative 1: Increased Career and Technical Education Spending ranks **high** on political feasibility. The current CTE program is popular and low in cost relative to other programs administered by the local government. Due to this, an increase in spending for this program will likely not face much political pushback from residents of Louisa County paying for this policy change.

Policy Alternative 2: Creating a Venture Hub ranks **low** on political feasibility. The public will likely be unfamiliar with the venture hub idea and may be more skeptical about its potential effectiveness given how there is relatively less is known about this program.

Policy Alternative 3: Partnering with Piedmont Virginia Community College ranks **high** on political feasibility. In Greene County, the center is used as a community center outside of school hours. This, coupled with the low cost it has to the taxpayers of Louisa County will make it a more appealing alternative.

### Economic Impact

Policy Alternative 1: Increased Career and Technical Education Spending ranks **medium** on economic impact. It will require that the local government work with new additional companies in Louisa County. It will also produce a more-skilled workforce that may incentivize businesses to relocate to within County borders in the long term.

Policy Alternative 2: Creating a Venture Hub ranks **low** on economic impact. In primarily supporting small businesses, it will be difficult for Louisa County to bring in more tax revenue based on this approach. In addition, it does not incentivize long term investment in the County by larger businesses.

Policy Alternative 3: Partnering with Piedmont Virginia Community College ranks **high** on economic impact. By working with businesses to teach desired skills, companies will be incentivized to move to Louisa County in the long term. It also may draw individuals from nearby counties that are attending classes or other events at the center to local businesses in Louisa County.

### Speed of Implementation

Policy Alternative 1: Increased Career and Technical Education Spending would take about **16 months** to implement from the current date. Given that Louisa County already has CTE within its public school system, this policy alternative could be implemented fairly quickly. There would be administrative and logistical decisions to be made at the onset to determine which courses should be

taught and securing additional companies to partner with but the existing infrastructure enable this to be reasonably implemented at the start of the 2021-2022 school year.

Policy Alternative 2: Creating a Venture Hub would require approximately **four years from receiving approval for construction** (Prince George's County Department of Parks and Recreation). Given that there may be political pressure against this policy alternative due to its cost, receiving public approval may delay implementation. Members of the Louisa County Board of Supervisors could proceed without securing public approval; however, this is a risky decision that could lead to distrust in local government. Once funding and approval for construction have been obtained, the local government can begin focusing on the operational procedures for the venture hub. With the long time line required for construction, implementation should occur shortly after the building is completed.

Policy Alternative 3: Partnering with Piedmont Virginia Community College can be implemented approximately **four years after PVCC receives approval** from the Louisa County Board of Supervisors; however, receiving approval will likely take multiple years. The Greene County Board of Supervisors approved the construction of the Eugene Giuseppe Center in 2010 and the center began operating in fall 2012 (Fitzgerald, 2012). Greene County renovated an existing area that would be difficult for Louisa County to replicate exactly, so it can be assumed that the construction of a new facility will take closer to four years (Prince George's County Department of Parks and Recreation). In addition, there had been conversation between Greene County and PVCC prior to 2010 that made this process take a few years longer. It took approximately ten years from initial interest until the center opened in Greene County (Fitzgerald 2012).

## Outcomes Matrix

The analysis produced the following matrix comparing anticipated outcomes of each policy alternative. In considering the relative importance of each criterion in the analysis, Policy Alternative 3: Partnering with Piedmont Virginia Community College performs the best overall.

Table 1: Outcomes Matrix			
	Increased Career and Technical Education Spending	Creating a Venture Hub	Partnering with Piedmont Virginia Community College
<b>Cost Effectiveness</b>	41.57 dollars/student	2131.43 dollars/business owner	.35 dollars/student
<b>Administrative Control</b>	High	Medium	Low
<b>Political Feasibility</b>	High	Low	High
<b>Economic Impact</b>	Medium	Low	High
<b>Speed of Implementation</b>	16 Months from Present	4 Years from Approval	4 Years from Approval

## Recommendation

### Policy Recommendation

Based on the analysis above, Policy Alternative 3: Partnering with Piedmont Virginia Community College is the recommended policy alternative.

Partnering with PVCC proved to be cost effective.

Partnering with PVCC gave Louisa County the least amount of administrative control over implementation. This is a key tradeoff of the recommended policy alternative's low cost. While the other proposed policy alternatives offered greater levels of administrative control, Louisa County can still exert its interests and influence through careful consideration of the implementation process. In doing so, it can mitigate these effects and best serve its residents.

Partnering with PVCC ranked equally with Increased Career and Technical Education Spending on political feasibility. Both ranked higher than Creating a Venture Hub because of its high level of risk. Given the future projections, both high-ranked policy alternatives could be expected to receive similar acceptance by the public and policymakers due to their similar outcomes.

In terms of economic impact, Partnering with PVCC ranked the highest of the three proposed policy alternatives. Unlike the other alternatives, it is expected to positively impact tax revenue in multiple ways. Through encouraging residents of other counties in the region to go to Louisa County and offering a secondary use as a community center, Partnering with PVCC reduces risk by diversifying potential funding mechanisms for the local government. This unique quality of the recommended policy alternative would allow Louisa County more security to invest in other projects that may help address the identified problem and increase cooperation with targeted companies.

Partnering with PVCC and Creating a Venture Hub both fared worse than Increased CTE Spending on speed of implementation. Increased CTE Spending only required expanding an existing program while the other policy alternatives created new programs. This implies that, if the recommended policy alternative is pursued, the current CTE program within the Louisa County Public Schools could reasonably continue while the early implementation stages began. Once implemented, the recommended policy alternative will produce the desired results. In considering this along with the other evaluative criteria, the timeline for implementation becomes less concerning since progress on addressing the problem will still be made.

Policy Alternative 3: Partnering with Piedmont Virginia Community College provides a well-rounded solution that best considers the priorities of Louisa County. Its low cost and high effectiveness demonstrate that it will address the problem as identified. The center will also provide positive social benefits that extend beyond the scope of this analysis in acting as a community center. It also addresses larger, regional concerns while concentrating benefits to Louisa County. In the long term, implementation is expected to be relatively self-sufficient. This means that Louisa County will still improve without investing time or resources. Overall, this policy alternative provides a complete solution that will minimize the largest costs while maximizing benefits to the County.

## Implementation

Successful implementation of the suggested policy alternative will require sustained cooperation of many entities over the foreseeable future.

### **Phase 1: Collaborating with Louisa County Department of Education**

The preliminary step for implementing the recommended policy alternative is to partner with the Louisa County Department of Education. This agency will be able to better coordinate with PVCC and is likely to have information and connections that can be leveraged to further the implementation of the recommended policy alternative. Working together, the agencies will be tasked with preparing materials to present to the Louisa County Board of Supervisors and determining how the program can be successfully marketed to gain public support.

### **Phase 2: Gaining Support of Louisa County Board of Supervisors and Beginning Discussions with Piedmont Virginia Community College**

The Louisa County Board of Supervisors will ultimately decide if land within the County can be used to build a center for PVCC. In addition, any County funding that would be needed to construct or fund the center would require its approval. Therefore, the Departments of Economic Development and Education will need to compel members through presenting the potential benefits of this policy alternative for Louisa County.

### **Phase 3: Gaining Public Support in Louisa County**

While attaining administrative support will be essential to logistically progressing with implementation, the recommended policy alternative will ultimately fail if the public is not interested in its success. Communication with the public should center on aspects such as the potential for economic growth in the County and the increase in opportunities available to those not in the public school system. The local government must be prepared to actively listen to citizen concerns as public interest will play a critical role in convincing PVCC to decide to work with Louisa County going forward.

### **Phase 4: Constructing the Piedmont Virginia Community College Center and Developing the Curriculum**

Once the support of the Louisa County Board of Supervisors, PVCC, and the general populace has been secured, the physical construction process can begin. This will first entail going through the zoning process before beginning construction. During the building process, the Louisa County government and PVCC will need to work together to select course scheduling. Louisa County will want to ensure that skills for targeted industries are emphasized. To determine this, the Office of Economic Development should work alongside relevant companies in hopes of getting them to consider relocating to Louisa County. Gaining this support will encourage long term economic prosperity and job opportunities within the County. Louisa County should emphasize its dedication to welcoming these companies in the future through highlighting the time and efforts required to reach this stage. Given the previously expressed interest from industry to invest in central Virginia, company cooperation in this process should be easy to secure. The involved entities should

consistently communicate with the general public throughout the process. Adapting based on public needs and concerns will increase the likelihood of uptake after the center opens.

### **Phase 5: Opening the Piedmont Virginia Community College Center and Evaluating the Programs**

After the center is operational, the Louisa County Department of Economic Development will need to work alongside other local government agencies to continue to survey employment trends within the County borders. If the program is failing to reach employment goals determined by local agencies, the Louisa County government will need to coordinate with PVCC to adjust the courses taught at the center. This will also require cooperation with targeted companies to ensure successful implementation. If it is determined that the center has low enrollment or if residents of Louisa County are not using the services provided by the center, the local government will need to find the cause of the problem. After identifying the core issues through communicating with relevant populations, the County can provide whatever services or support will mitigate the effects of the problems. By consistently monitoring the center, Louisa County can increase the likelihood that the recommended policy alternative is effective while also maintaining positive, healthy relationships with its residents.

### **Future Considerations**

Successful implementation of the suggested policy alternative will require sustained cooperation of many entities over the foreseeable future. Given current global trends and projected economic trends, Louisa County may want to proceed with caution in adopting and implementing any new programs. Future funding streams may not be guaranteed or reliable and other priorities may take precedence over the identified issue. The recommended alternative has a longer implementation and timeline than the other proposed policy alternatives, so taking the initial steps of implementation is still encouraged. In building relationships early, the later steps of implementation can potentially be expedited once there are more favorable economic conditions.

The current economic uncertainty will also have large impacts on industry. Louisa County must remain in communication with relevant companies, as there is a high probability that their operations may adapt during the current times. Through maintaining these connections, Louisa County can signal its dedication to the targeted companies and increase the chance they cooperate once future certainty is higher.

Overall, it is recommended that Louisa County continues to demonstrate interest in the long-term implementation of this policy alternative. Though current economic circumstances are unfavorable and will require the Louisa County government to likely focus on other issues, future success for any workforce development program will benefit through taking these actions.



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## Appendix: Cost Effectiveness Analysis

The following analysis was used to compute the expected cost effectiveness of the proposed policy alternatives.

### Cost Effectiveness Criterion

Cost effectiveness measures the cost to Louisa County of each skilled worker produced by the policy alternative. Cost is determined based on the budgetary impact the policy alternative will have on Louisa County. Effectiveness is an estimate of the maximum number of individuals able to participate in the program. Under this criterion, the best policy solution will have a low cost for each skilled worker produced.

### Baseline

The baseline for comparison is Louisa County Superintendent's Proposed Budget for 2018-2019. The proposed budget was accepted by the Louisa County Board of Supervisors in complete (Louisa County School Board, 2018).

### Timeline and Discounting

The timeline of analysis is ten years. The discount rate is seven percent.

### Assumptions

The following assumptions were made:

- Discount rate of seven percent based on best practice recommendation of the Office of Management and Budget
- Inflation rate of two percent based on economic assumptions of the Office of Management and Budget

### Formula Used

The following formula was used to determine the net present value of the policy alternatives:

$$Net\ Present\ Value = \Sigma \frac{Year\ n\ Cost}{[(1 + discount\ rate)/(1 + inflation\ rate)]^n}$$

### **Policy Alternative 1: Increased Career and Technical Education Spending**

#### Cost

In 2018, 24,580 dollars were appropriated for CTE in Louisa County (Louisa County School Board, 2018). A 50 percent increase in spending would raise the budget by 12,290 dollars each year. This increase would cover total expenses of the policy change. CTE spending remains almost constant between years, so the only adjustment made was to account for inflation and discounting.

Total cost of Policy Alternative 1 over next ten years (net present value): 95,358 dollars

#### Effectiveness

The current policy serves 450 students annually (Louisa County Department of Education, 2019). An increase of 50 percent would equate to 225 students per year each year over the lifetime of the program.

Total effectiveness of Policy Alternative 1 over next ten years: 2250 students

#### Cost Effectiveness

Total cost / effectiveness =  $95,358 / 2250 = 41.57$

The cost per student of Policy Alternative 1 is 41.57 dollars.

## **Policy Alternative 2: Creating a Venture Hub**

### Cost

The initial analysis performed by GO Virginia for the venture hub to be built in Region 9 estimated annual costs of 750,000 dollars (Camoin Associates et al, 2019). The venture hub built in Louisa County will likely be half the size of that approved by GO Virginia, an annual cost of 375,000 dollars after construction of the center.

Construction of a community center is estimated to be 1,391,800 and construction takes approximately four years (Prince George's County Department of Parks and Recreation). The cost will be broken down equally across the four years for this analysis, or 347,950 dollars each year.

Cost per year, years 1-4: 347,950 dollars

Cost per year, years 5-10: 375,000 dollars

Total cost of Policy Alternative 2 over next ten years (net present value): 2,813,483 dollars

### Effectiveness

Given this policy alternative is a relatively new idea, estimating projected effectiveness is difficult to determine. In 2019, there were 879 businesses with fewer than 20 employees in Louisa County (Virginia Employment Commission, 2020). This analysis will assume that this number remains relatively constant each year and that one-quarter of these businesses will use the venture hub after it opens four years from now, or 220 businesses per year.

Effectiveness per year, years 1-4: 0

Effectiveness per year, years 5-10: 220

Total effectiveness of Policy Alternative 2 over next ten years: 1320 business owners

### Cost Effectiveness

Total cost / effectiveness =  $2,813,483 / 1320 = 2131.43$  dollars

The cost per business owner of Policy Alternative 2 is 2131.43 dollars



### **Policy Alternative 3: Partnering with Piedmont Virginia Community College**

#### Cost

Government and public support are needed before any progress with Piedmont Virginia Community College on this analysis can be made. This analysis assumes that no costs will be expended while support is gained and that conversations with PVCC will begin after two years. Year three will also have no costs as administrative progress is made.

In Greene County, PVCC covered the costs of renovation for the Eugene Giuseppe Center. Private donors contributed over one million dollars for this initiative (Fitzgerald, 2012). Greene County was not responsible for any costs of construction. Construction is estimated to take four years, during which Louisa County will experience no changes to its budget (Prince George's County Department of Parks and Recreation). Years 4-7 will incur no cost.

PVCC covers operational expenses for the Eugene Giuseppe Center, so it is reasonable to expect that it would pay the costs for a center in Louisa County. The counties within the jurisdiction of PVCC contribute funding each year to PVCC. Opening a new center would raise the operating costs of PVCC and some of this burden would be transferred to counties. After the Eugene Giuseppe Center opened, the Greene County budget for PVCC increased by 200 dollars and remained steady in the following years (County of Greene Virginia, 2019). PVCC pays one dollar each year to Greene County for rent (Fitzgerald, 2012). While a similar agreement will probably be reached between PVCC and Louisa County, this has no meaningful impact on the budget and will not be included in the analysis. In total, the operating costs for years 8-10 will be 200 dollars per year.

Cost per year, years 1-7: 0

Cost per year, 8-10: 200

Total cost of Policy Alternative 3 over next ten years (net present value): 390 dollars

#### Effectiveness

The Eugene Giuseppe Center in Greene County has annual enrollment of 367 students (Piedmont Virginia Community College, 2014a). This analysis uses that as an estimate for enrollment at the proposed center once the center opens. Given that the center is expected to open in year 8, a total of 1101 students will be served over the course of analysis.

#### Cost Effectiveness

Total cost / effectiveness =  $390 / 1101 = .35$

The cost per student of Policy Alternative 3 is .35 dollars.