How to Use the Trailblazers Labor Market Data Dashboard Tool for New CTE Course Applications

TOOL OVERVIEW AND INSTRUCTIONS

FEBRUARY 2024







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Background Information

Report to the Governor and the General Assembly of Virginia

Virginia's Workforce Development **Programs**











December 2014

- In 2014, a Joint Legislative Audit and Review Commission (JLARC) report recommended that Virginia develop criteria to determine whether new Career and Technical Education (CTE) courses proposed by school divisions were in alignment with regional labor market demand.
- In response, the Virginia Department of Education (VDOE) Office of Career, Technical, and Adult Education developed a "New CTE Program/Course Application" that requires applicants to provide labor market data to justify the addition of a new secondary CTE program or course offering.
- The Trailblazers program at the University of Virginia Weldon Cooper Center for Public Service has been providing labor market data aligned with the CTE Career Cluster framework for use with new CTE course applications since 2014.





TOOL OVERVIEW



Tool Overview

Benefits

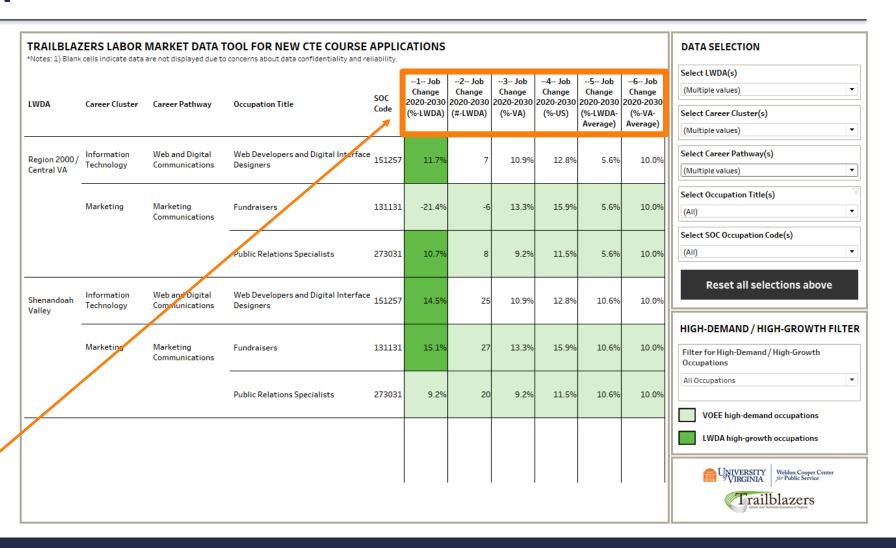
The new Trailblazers dashboard tool makes it faster and easier to analyze and submit labor market data with new CTE course applications.

- It was designed specifically for use with new CTE course applications.
- Trailblazers labor market data can be filtered and sorted in different ways.
- Regional high-demand/high-growth occupations can be identified quickly.
- Applicants will no longer be required to fill in labor market data manually in the application.
- Data assembled using the dashboard tool can be downloaded as a PDF file and attached to the new course application packet.



Tool Overview

The tool's purpose is to help new CTE course applicants identify three to five occupations related to their proposed program or course that are in high demand and/or show the most promising future job growth based on six labor market data points or measures.







TOOL DATA: MEASURES OF PROJECTED JOB GROWTH



Measures of projected job growth

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code			3 Job Change 2020-2030 (%-VA)		5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Human Services	Family and Community Services	Social and Human Service Assistants	211093	14.3%	107	13.6%	16.6%	10.6%	10.0%

What should you look for in the data when selecting an occupation to include in your list?

1. Is the occupation on the Virginia Office of Education Economics (VOEE) "high-demand" list?

WHAT TO LOOK FOR:

- Are the data points in Columns 1-6 or 2-6 highlighted in a lighter green (lighter color)?

WHAT IT MEANS IF TRUE:

- The occupation is on the VOEE "high-demand" list.



Measures of projected job growth

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)	l	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Human Services	Family and Community Services	Social and Human Service Assistants	211093	14.3%	107		16.6%	10.6%	10.0%

What should you look for in the data when selecting an occupation to include in your list?

2. Is the occupation's regional projected job growth rate greater than its state projected job growth rate?

WHAT TO LOOK FOR:

- Is the value in Column 1 highlighted in darker green (darker color)?

WHAT IT MEANS IF TRUE:

- The value in Column 1 (Job Change %-LWDA) is greater than the value in Column 3 (Job Change %-VA).
- The occupation is a Local Workforce Development Area (LWDA) "high-growth" occupation.



Measures of projected job growth

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 1		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Human Services	Family and Community Services	Social and Human Service Assistants	211093	14.3%	107	13.6%	16.6%	10.6%	10.0%

What should you look for in the data when selecting an occupation to include in your list?

3. How many new jobs are projected to be created within the occupation in the region from 2020-2030?

WHAT TO LOOK FOR:

- Is the value in Column 2 reasonably large?

WHAT IT MEANS IF TRUE:

- The occupation is projected to add a reasonably large number of jobs to the region through 2030.



Measures of projected job growth

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Human Services	Family and Community Services	Social and Human Service Assistants	211093	14.3%	107	13.6%	16.6%	10.6%	10.0%

What should you look for in the data when selecting an occupation to include in your list?

It is good practice to always review the values in Columns 1 & 2 together (i.e., both an occupation's projected job change rate (%) and its projected job change number.)

For example, the addition of only one new job in an occupation currently consisting of only one job in a region represents a job change rate of 100%. On the other hand, the addition of 40 new jobs in an occupation currently consisting of 100 jobs in a region represents a job change rate of only 40%. In the second scenario, despite a lower projected job change rate (%) than in the first scenario, 40 new jobs have been created in the region compared to only one new job in the first scenario.





Measures of projected job growth

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Human Services	Family and Community Services	Social and Human Service Assistants	211093	14.3%	107	13.6%	16.6%	10.6%	10.0%

What should you look for in the data when selecting an occupation to include in your list?

4. Is the occupation's regional projected job growth rate greater than the average projected job growth rate for ALL occupations in the region?

WHAT TO LOOK FOR:

- Is the value in Column 1 greater than the value in Column 5?

WHAT IT MEANS IF TRUE:

- The occupation's regional job growth rate is expected to be higher than average for the region.



Measures of projected job growth

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)		5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Human Services	Family and Community Services	Social and Human Service Assistants	211093	14.3%	107	13.6%	16.6%	10.6%	10.0%

What should you look for in the data when selecting an occupation to include in your list?

5. Is the occupation's state projected job growth rate greater than the average projected job growth rate for ALL occupations in the state?

WHAT TO LOOK FOR:

- Is the value in Column 3 greater than the value in Column 6?

WHAT IT MEANS IF TRUE:

- The occupation's state job growth rate is expected to be higher than average for the state.



Measures of projected job growth

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code			3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Human Services	Family and Community Services	Social and Human Service Assistants	211093	14.3%	107	13.6%	16.6%	10.6%	10.0%

What should you look for in the data when selecting an occupation to include in your list?

6. Is the occupation's state projected job growth rate greater than its national projected job growth rate?

WHAT TO LOOK FOR:

- Is the value in Column 3 greater than the value in Column 4?

WHAT IT MEANS IF TRUE:

- The occupation's state job growth rate is expected to be stronger than its national job growth rate.

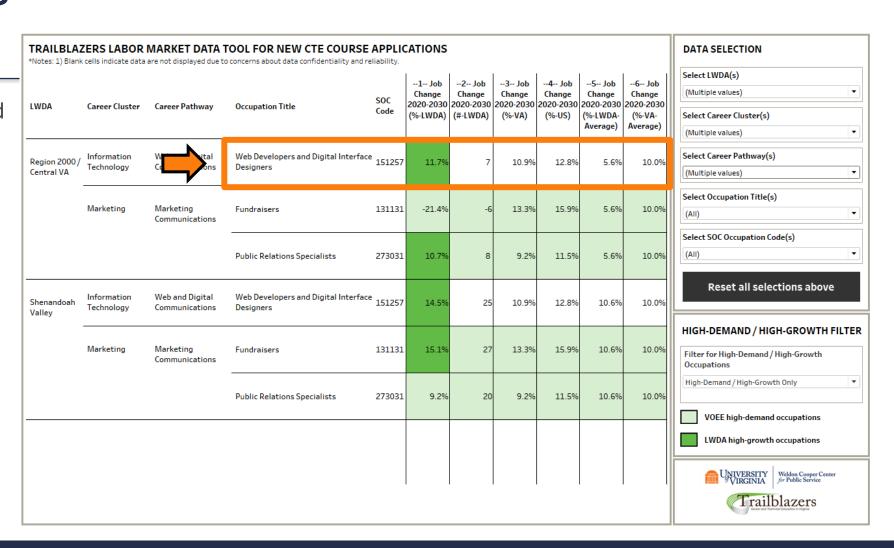


TOOL FEATURES: DASHBOARD LAYOUT



Dashboard layout

Each row in the dashboard represents an occupation and displays its data across the six measures (columns) used for evaluation.







Dashboard layout

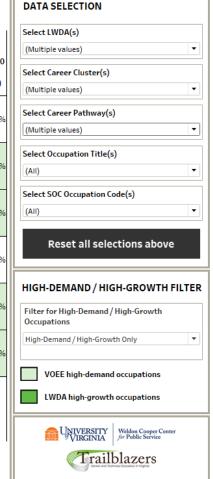
The left side of the dashboard displays the Local Workforce Development Areas (LWDAs), career clusters, and career pathways of the occupations in a nested hierarchy.

These categories are collapsible and sortable.

TRAILBLAZERS LABOR MARKET DATA TOOL FOR NEW CTE COURSE APPLICATIONS

*Notes: 1) Blank cells indicate data are not displayed due to concerns about data confidentiality and reliability.

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)	
Region 2000 / Central VA	Information Technology	Web and Digital Communications	Web Developers and Digital Interface Designers	151257	11.7%	7	10.9%	12.8%	5.6%	10.0%	
	Marketing	Marketing Communications	Fundraisers	131131	-21.4%	-6	13.3%	15.9%	5.6%	10.0%	
			Public Relations Specialists	273031	10.7%	8	9.2%	11.5%	5.6%	10.0%	
Shenandoah Valley	Information Technology	Web and Digital Communications	Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%	ŀ
	Marketing	Marketing Communications	Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%	
			Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%	
											L







Dashboard layout

In the upper right corner of the dashboard are the Data Selection filters that determine which occupations are displayed on the dashboard.



			OOL FOR NEW CTE COURSE concerns about data confidentiality and re		ATIONS						DATA SELECTION
				SOC	1 Job Change 2020-2030	2 Job Change	3 Job Change 2020-2030	4 Job Change 2020-2030	5 Job Change 2020-2030	6 Job Change	Select LWDA(s) (Multiple values) ▼
LWDA	Career Cluster	Career Pathway	Occupation Title	Code	(%-LWDA)		(%-VA)	(%-US)	(%-LWDA- Average)	2020-2030 (%-VA- Average)	Select Career Cluster(s) (Multiple values)
Region 2000 / Central VA	Information Technology	Web and Digital Communications	Web Developers and Digital Interface Designers	151257	11.7%	7	10.9%	12.8%	5.6%	10.0%	Select Career Pathway(s) (Multiple values)
	Marketing	Marketing Communications	Fundraisers	131131	-21.4%	-6	13.3%	15.9%	5.6%	10.0%	Select Occupation Title(s) (All)
			Public Relations Specialists	273031	10.7%	8	9.2%	11.5%	5.6%	10.0%	Select SOC Occupation Code(s) (All)
Shenandoah Valley	Information Technology	Web and Digital Communications	Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%	Reset all selections above
	Marketing	Marketing Communications	Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%	HIGH-DEMAND / HIGH-GROWTH FILTER Filter for High-Demand / High-Growth Occupations
			Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%	High-Demand / High-Growth Only ▼
											VOEE high-demand occupations LWDA high-growth occupations
											University Virginia Weldon Cooper Center for Public Service Trailblazers

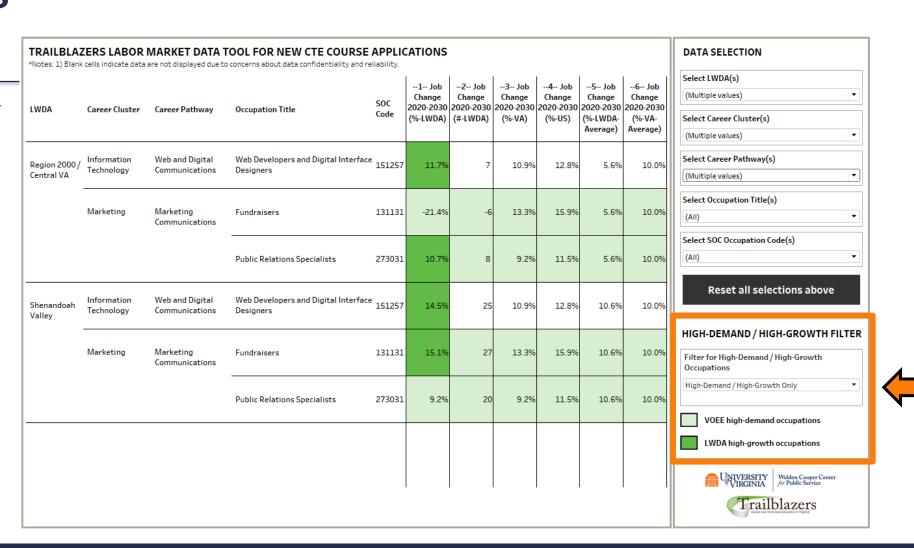




Dashboard layout

In the lower right corner of the dashboard is the High-Demand/High-Growth filter, which can be toggled between two options:

- displaying <u>all</u>
 occupations in the
 dashboard view (the
 default option)
- displaying only those occupations that are high-demand or highgrowth.







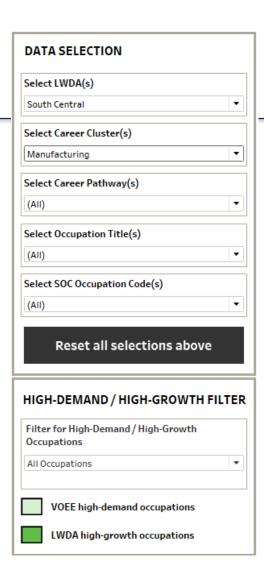
TOOL FEATURES: DATA SELECTION AND FILTERING



Data selection and filtering

Tool users can quickly filter Trailblazers labor market data by:

- 1. Local Workforce Development Area (LWDA)
- 2. CTE Career Cluster
- 3. CTE Career Pathway
- 4. Occupation Title
- 5. Standard Occupational Classification (SOC) Occupation Code
- 6. High-Demand/High-Growth Occupations





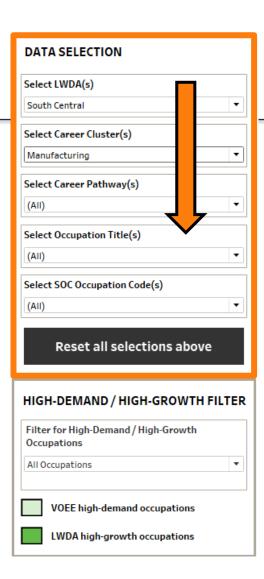


Data selection and filtering

The data selection filters operate as a nested hierarchy from top to bottom.

Each filter controls what options are available in the filters below it in the hierarchy.

The <u>bottommost</u> filter with <u>active</u> selections is the most specific limiter of what occupations are displayed in the dashboard.

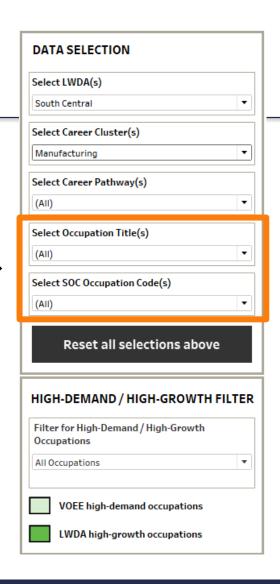






Data selection and filtering

An exception to the hierarchy rule is that the Occupation Title and Occupation Code filters always work together in tandem since they both refer to the same occupation.







Data selection and filtering

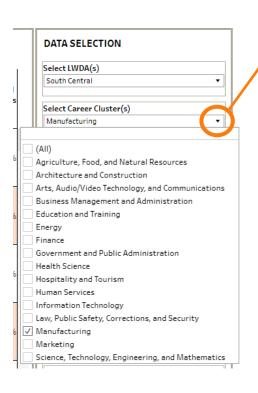
Search terms can be entered at the top of the data Electric Motor, Power Tool, and Related Repairers selection filters to limit Electrical and Electronic Engineering Technologists and Technicians Electrical and Electronics Drafters checkable options. Electrical and Electronics Installers and Repairers, Transportation Equipment ✓ Electrical and Electronics Repairers, Commercial and Industrial Equipment Electrical and Electronics Repairers, Powerhouse, Substation, and Relay ✓ Electrical Engineers Check the boxes next your ✓ Electrical Power-Line Installers and Repairers desired selections. Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers ✓ Electricians ✓ Electro-Mechanical and Mechatronics Technologists and Technicians ✓ Electronics Engineers, Except Computer √ Helpers--Electricians Public Safety Telecommunicators Telecommunications Equipment Installers and Repairers, Except Line Installers Telecommunications Line Installers and Repairers





Data selection and filtering

Individual data selection filters can be cleared in one of two ways:



-1) Open the data selection filter menu and either uncheck current selections or check then uncheck the "(All)" checkbox.



2) Move your cursor over the right side of the filter and click on the filter icon with the red "x" on it. This will clear your current selections by showing all values in the filter.



Data selection and filtering

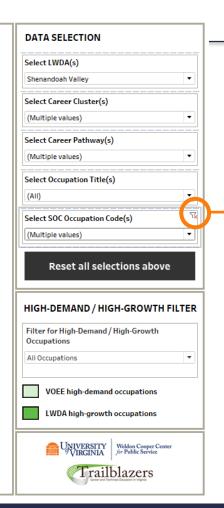
TRAILBLAZERS LABOR MARKET DATA TOOL FOR NEW CTE COURSE APPLICATIONS

*Notes: 1) Blank cells indicate data are not displayed due to concerns about data confidentiality and reliability.

If the dashboard view goes blank while you are filtering the data, your data selection filters may be in conflict.

For example, you may have certain occupations selected that do not align with the career clusters and/or pathways you also have selected.

In this case, you will need to either change your data selections so they are not in conflict or clear some of your filters.

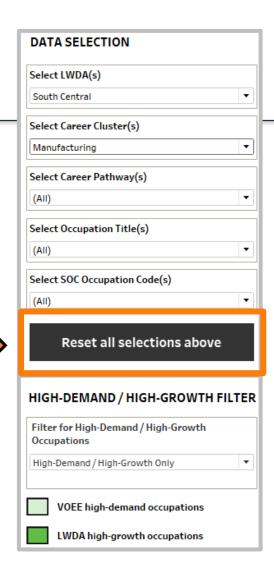


Clicking on the filter icon with the red "x" on it will "clear" the current filter selections by selecting all values within the filter.



Data selection and filtering

To reset/clear <u>ALL</u> of the data selection filters <u>ALL AT ONCE</u>, click on the "Reset all selections above" button.



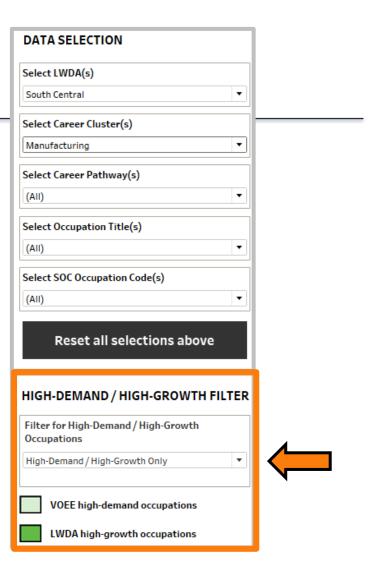




Data selection and filtering

To limit your current data selections to display only Virginia Office of Education Economics (VOEE) high-demand occupations or LWDA high-growth occupations, select the "High-Demand/High-Growth Only" option in the High-Demand/High-Growth filter.

Selecting the "High-Demand/High-Growth Only" filter option will also affect the Occupation Title and SOC Occupation Code data selection filters above—only high-demand/high-growth occupations will be available for selection in those filters.







TOOL FEATURES: IDENTIFYING HIGH-DEMAND/HIGH-GROWTH OCCUPATIONS



Identification of high-demand/high-growth occupations

VOEE high-demand occupations were classified as such by the VOEE based on several factors:*

- 1. Minimum Annual Wage at the 50th Percentile of Occupational Earnings
- 2. Typical Entry-Level Education Range
 - Minimum: No formal education required
 - Maximum: Bachelor's degree
- 3. Average Annual Job Openings
 - Minimum 100 openings statewide
- 4. Minimum 5-year Job Change Requirement (2023–28)
 - Minimum 1% growth over 5-year projection period
- 5. Qualified Registered Apprenticeship
 - Linked to a sponsor's program with a minimum of 10 active, registered apprentices since 2018



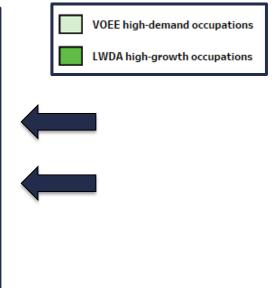
^{*}Source: Virginia Office of Education Economics. "Virginia's High-Demand Occupations List." December 2023.



Identification of high-demand/high-growth occupations

VOEE high-demand occupations have measures 1-6 or 2-6 highlighted in a lighter color on the dashboard.

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Western Virginia	Architecture and Construction	Maintenance/ Operations	Boilermakers	472011	-4.7%	-3	-0.3%	-1.3%	4.4%	10.0%
	Manufacturing	Production	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	512028	17.0%	112	8.2%	6.8%	4.4%	10.0%
	Science, Technology, Engineering, and Mathematics	Engineering and Technology	Electrical and Electronics Drafters	173012	6.7%	2	6.3%	2.5%	4.4%	10.0%
	Transportation, Distribution, and Logistics	Facility and Mobile Equipment Maintenance	Electrical and Electronics Installers and Repairers, Transportation Equipment	492093	4.3%	2	5.7%	6.6%	4.4%	10.0%





Identification of high-demand/high-growth occupations

LWDA high-growth occupations are those with positive (>0) LWDA job change rates that are greater at the regional level than at the state level (i.e. Column 1 is greater than Column 3). These occupations have measures in Column 1 highlighted in a darker color.

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1	2 Job Change 2020-2030 (#-LWDA)	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)			mand occi	
Western Virginia	Architecture and Construction	Maintenance/ Operations	Boilermakers	472011	-4.7%	-3	-0.3%	-1.3%	4.4%	10.0%				
	Manufacturing	Production	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	512028	17.0%	112	8.2%	6.8%	4.4%	10.0%				
	Science, Technology, Engineering, and Mathematics	Engineering and Technology	Electrical and Electronics Drafters	173012	6.7%	2	6.3%	2.5%	4.4%	10.0%	4			
	Transportation, Distribution, and Logistics	Facility and Mobile Equipment Maintenance	Electrical and Electronics Installers and Repairers, Transportation Equipment	492093	4.3%	2	5.7%	6.6%	4.4%	10.0%				



Identification of high-demand/high-growth occupations

Some occupations are VOEE high-demand only. All measures are highlighted in a lighter color.

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
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	Transportation, Distribution, and Logistics	Facility and Mobile Equipment Maintenance	Electrical and Electronics Installers and Repairers, Transportation Equipment	492093	4.3%	2	5.7%	6.6%	4.4%	10.0%







Identification of high-demand/high-growth occupations

Some occupations are LWDA high-growth only. Measure 1 is highlighted in a darker color; measures 2-6 are not highlighted.

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1	2 Job Change 2020-2030 (#-LWDA)	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
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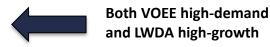


Identification of high-demand/high-growth occupations

Some occupations are both VOEE high-demand and LWDA high-growth. Measure 1 is highlighted in a darker color; measures 2-6 are highlighted in a lighter color.

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
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Identification of high-demand/high-growth occupations

Some occupations are neither VOEE high-demand nor LWDA high-growth. No measures are highlighted in the row.

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
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	Transportation, Distribution, and Logistics	Facility and Mobile Equipment Maintenance	Electrical and Electronics Installers and Repairers, Transportation Equipment	492093	4.3%	2	5.7%	6.6%	4.4%	10.0%





Neither VOEE high-demand nor LWDA high-growth



TOOL FEATURES: DATA SORTING



Data sorting

The default sort order in the dashboard is descending alphabetical order within each classification level (LWDA, Career Cluster, Career Pathway, and Occupation Title).

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Information Technology	Programming and Software Development	Computer Programmers	151251	-13.7%	-18	-10.7%	-9.9%	10.6%	10.0%
		·	Computer Systems Analysts	151211	6.6%	22	9.2%	7.0%	10.6%	10.0%
			Software Developers and Software Quality Assurance Analysts and Testers	151256	22.6%	175	21.9%	22.2%	10.6%	10.0%
		Web and Digital Communications	Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%
	Marketing	Marketing Communications	Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%
			Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%

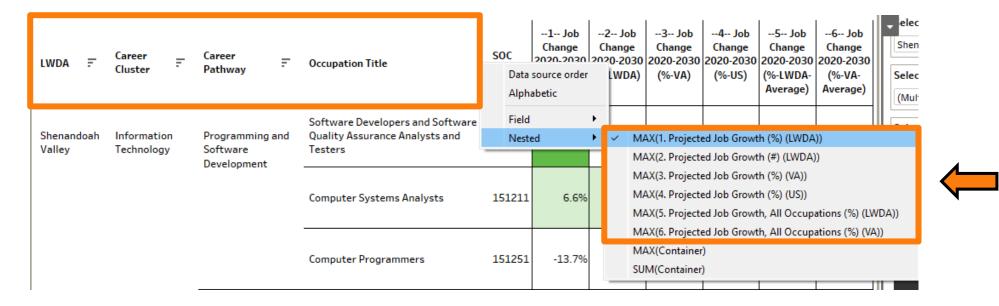




Data sorting

All categories except SOC Code (LWDA, Career Cluster, Career Pathway, and Occupation Title) can be sorted by the measure values in Columns 1-6.









Data sorting

This dashboard is sorted with Column 1 values (LWDA Job Change %) in descending order.

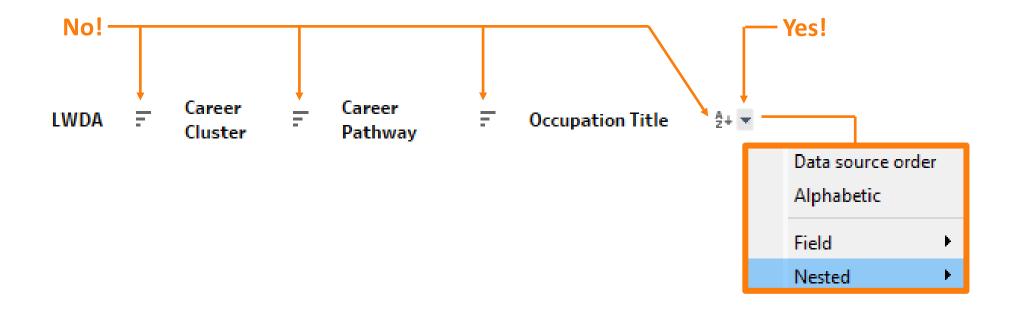
LWDA	F	Career Cluster	F	Career Pathway	F	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)	2 Job Change 2020-2030 (#-LWDA)	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenand Valley	loah	Information Technology		Programming Software Development		Software Developers and Software Quality Assurance Analysts and Testers	151256	22.6%	175	21.9%	22.2%	10.6%	10.0%
						Computer Systems Analysts	151211	6.6%	22	9.2%	7.0%	10.6%	10.0%
						Computer Programmers	151251	-13.7%	-18	-10.7%	-9.9%	10.6%	10.0%
				Web and Digit Communication		Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%
		Marketing		Marketing Communication	ons	Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%
						Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%





Data sorting

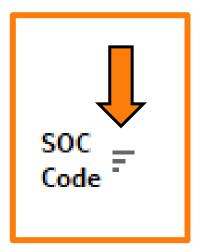
SORTING RULE #1: Always use a category's sort menu to sort it (accessed by the sort menu arrow reach category heading) instead of using the single click "Sort" ☐ or "A-Z" ♣ icons.





Data sorting

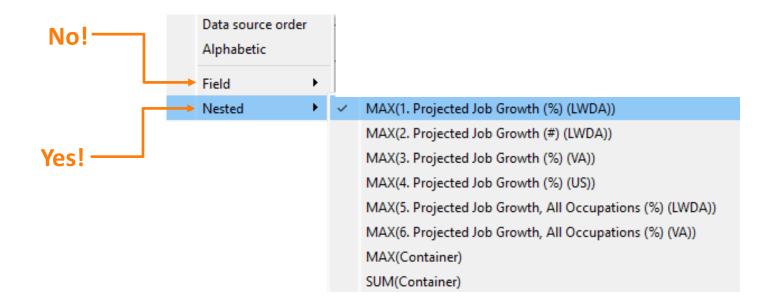
EXCEPTION TO SORTING RULE #1: The SOC Code category does not have its own sort menu since it sorts with the Occupation Title category. You can use the single-click "Sort" icon **=** next to the SOC Code heading if you want to sort your results by SOC code, but doing so will override all other sort selections since the occupations will now be sorted by the numerical values of the SOC codes.





Data sorting

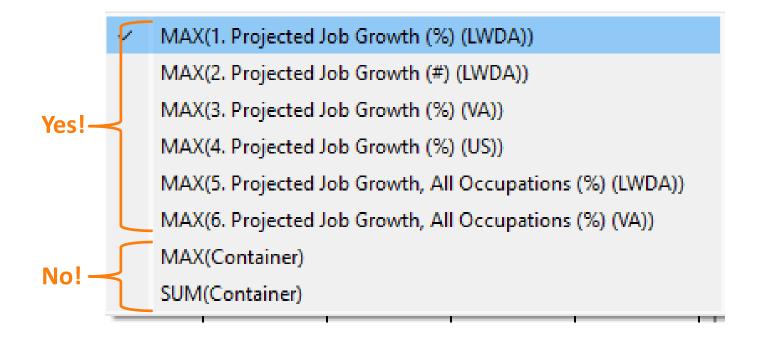
SORTING RULE #2: When sorting by measure in the sort menu, never use the "Field" sorting option; always use the "Nested" sorting option.





Data sorting

SORTING RULE #3: Never sort by "Container" in the sort menu.





Data sorting

<u>SORTING RULE #4</u>: When sorting by a measure, be sure the LWDA, Career Cluster, Career Pathway, and Occupation Title categories are <u>ALL</u> being sorted by the <u>SAME</u> measure.

Data source order

Alphabetic A category is being sorted Field MAX(1. Projected Job Growth (%) (LWDA)) Nested by a measure if a check MAX(2. Projected Job Growth (#) (LWDA)) mark appears next to that MAX(3. Projected Job Growth (%) (VA)) measure in the category's MAX(4. Projected Job Growth (%) (US)) sort menu. MAX(5. Projected Job Growth, All Occupations (%) (LWDA)) MAX(6. Projected Job Growth, All Occupations (%) (VA)) MAX(Container) SUM(Container)



Data sorting

To fully clear a sort by measure, click on the measure again in each and every category's sort menu. You can tell the measure has been cleared from a sort when there is no check mark next to it.

Data source order Alphabetic A measure has been Field cleared from the sort if no MAX(1. Projected Job Growth (%) (LWDA)) Nested MAX(2. Projected Job Growth (#) (LWDA)) check mark appears next MAX(3. Projected Job Growth (%) (VA)) to it in a category's sort MAX(4. Projected Job Growth (%) (US)) menu. MAX(5. Projected Job Growth, All Occupations (%) (LWDA)) MAX(6. Projected Job Growth, All Occupations (%) (VA)) MAX(Container) SUM(Container)



Data sorting

The LWDA, Career Cluster, and Career Pathway categories are also collapsible for sorting purposes. To collapse or expand these categories, click on the (-) or (+) icon at the bottom right of the LWDA or Career Cluster category headings.





Data sorting

This dashboard has all categories fully expanded and is sorted by values in Column 1.

Occupations are arranged in descending order of their Column 1 values within each pathway.

LWDA =	Career =	Career =	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Information Technology	Programming and Software Development	Software Developers and Software Quality Assurance Analysts and Testers	151256	22.6%	175	21.9%	22.2%	10.6%	10.0%
		•	Computer Systems Analysts	151211	6.6%	22	9.2%	7.0%	10.6%	10.0%
			Computer Programmers	151251	-13.7%	-18	-10.7%	-9.9%	10.6%	10.0%
		Web and Digital Communications	Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%
	Marketing	Marketing Communications	Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%
			Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%



Data sorting

To collapse all career pathways into their corresponding career clusters, click on the (-) icon at the bottom right of the Career Cluster heading.

LWDA =	Career Cluster	Career =	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)	2 Job Change 2020-2030 (#-LWDA)	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Shenandoah Valley	Information Technology	Programming and Software Development	Software Developers and Software Quality Assurance Analysts and Testers	151256	22.6%	175	21.9%	22.2%	10.6%	10.0%
			Computer Systems Analysts	151211	6.6%	22	9.2%	7.0%	10.6%	10.0%
			Computer Programmers	151251	-13.7%	-18	-10.7%	-9.9%	10.6%	10.0%
		Web and Digital Communications	Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%
	Marketing	Marketing Communications	Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%
			Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%





Data sorting

In this dashboard, career pathways have now been collapsed into career clusters.

Occupations are now arranged in descending order of their Column 1 values within each cluster.

- LWDA	λ Ξ	.	Career Cluster	F	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)	2 Job Change 2020-2030 (#-LWDA)	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020- 2030 (%-LWDA- Average)	6 Job Change 2020- 2030 (%-VA- Average)
Shena Valle		ıh	Information Technology		Software Developers and Software Quality Assurance Analysts and Testers	151256	22.6%	175	21.9%	22.2%	10.6%	10.0%
					Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%
					Computer Systems Analysts	151211	6.6%	22	9.2%	7.0%	10.6%	10.0%
					Computer Programmers	151251	-13.7%	-18	-10.7%	-9.9%	10.6%	10.0%
			Marketing		Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%
					Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%



Data sorting

To collapse all career clusters into their corresponding LWDAs, click on the (-) icon at the bottom right of the LWDA heading.

	LWDA	Career =	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)	2 Job Change 2020-2030 (#-LWDA)	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020- 2030 (%-LWDA- Average)	6 Job Change 2020- 2030 (%-VA- Average)
	Shenandoah Valley	Information Technology	Software Developers and Software Quality Assurance Analysts and Testers	151256	22.6%	175	21.9%	22.2%	10.6%	10.0%
			Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%
_			Computer Systems Analysts	151211	6.6%	22	9.2%	7.0%	10.6%	10.0%
			Computer Programmers	151251	-13.7%	-18	-10.7%	-9.9%	10.6%	10.0%
		Marketing	Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%
			Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%



Data sorting

In this dashboard, career clusters have now been collapsed into LWDAs.

Occupations are now arranged in descending order of their Column 1 values within each LWDA.

- LWDA =	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)	2 Job Change 2020-2030 (#-LWDA)	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%- LWDA-Average)	6 Job Change 2020-2030 (%-VA-Average)
Shenandoah Valley	Software Developers and Software Quality Assurance Analysts and Testers	151256	22.6%	175	21.9%	22.2%	10.6%	10.0%
	Fundraisers	131131	15.1%	27	13.3%	15.9%	10.6%	10.0%
	Web Developers and Digital Interface Designers	151257	14.5%	25	10.9%	12.8%	10.6%	10.0%
	Public Relations Specialists	273031	9.2%	20	9.2%	11.5%	10.6%	10.0%
	Computer Systems Analysts	151211	6.6%	22	9.2%	7.0%	10.6%	10.0%
	Computer Programmers	151251	-13.7%	-18	-10.7%	-9.9%	10.6%	10.0%



TOOL FEATURES: TOOLTIPS & UNDO/REDO/RESET OPTIONS



Tooltips showing related career clusters and pathways

When moving the cursor over the data, tooltips appear that show additional career clusters and pathways related to that occupation. This may be helpful in locating additional occupations for inclusion in your final list.

LWDA	Career Cluster	Career Pathway	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)		5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Western Virginia	Energy	Energy Transmission, Distribution, and Storage	Control and Valve Installers and Repairers, Except Mechanical Door	499012	0.0%	0	3.7%	2.2%	4.4%	10.0%

LWDA: Western Virginia

CTE Career Cluster: Energy

CTE Career Pathway: Energy Transmission, Distribution, and Storage

Occupation: Control and Valve Installers and Repairers, Except Mechanical Door

Career clusters and pathways related to this occupation

Manufacturing - Maintenance, Installation, and Repair

Energy - Power Generation

Energy - Energy Transmission, Distribution, and Storage

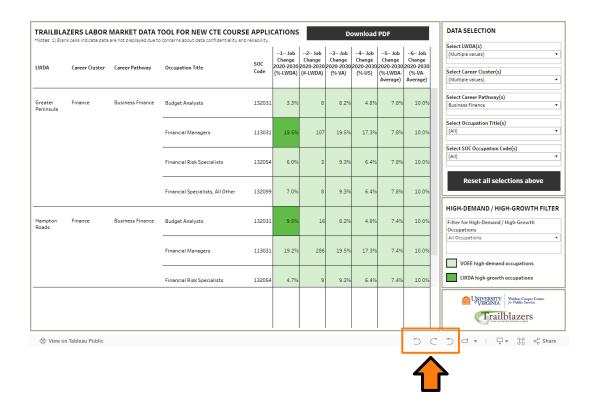






Undo/Redo/Reset

Undo, redo, and reset options are available below the dashboard on the right.





Undo your last action



Redo your last action



Reset all filters to default settings





DATA SUPPRESSION



Data Suppression

Blank cells indicate suppressed data due to concerns about data confidentiality and reliability.

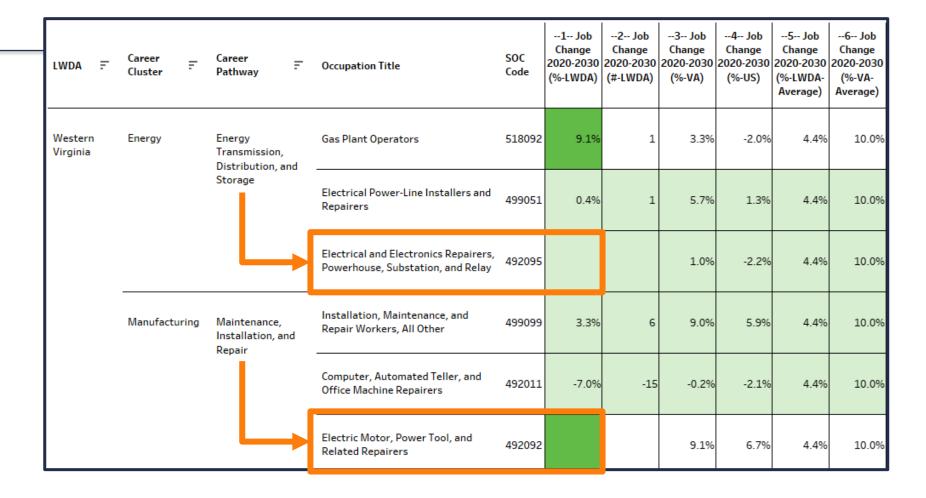
LWDA =	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)	2 Job Change 2020-2030 (#-LWDA)	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%- LWDA-Average)	6 Job Change 2020-2030 (%-VA-Average)
Western Virginia	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	492095			1.0%	-2.2%	4.4%	10.0%
	Electric Motor, Power Tool, and Related Repairers	492092			9.1%	6.7%	4.4%	10.0%





Data Suppression

When sorting by measures, occupations with suppressed values will always sort to the bottom of the category.







Data Suppression

You shouldn't be hesitant to use occupations with suppressed data for your applications if necessary.

In this dashboard example, even though regional job change data (Measures 1 & 2) are suppressed for occupation 492095, we know it's a VOEE high-demand occupation (because it's highlighted in light green) and has 1.0% projected state-level job growth (Measure 3).

LWDA	F	Career Cluster	F	Career Pathway	F	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)		3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Western Virginia		Energy		Energy Transmission, Distribution, a	nd	Gas Plant Operators	518092	9.1%	1	3.3%	-2.0%	4.4%	10.0%
				Storage		Electrical Power-Line Installers and Repairers	499051	0.4%	1	5.7%	1.3%	4.4%	10.0%
					> [Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	492095			1.0%	-2.2%	4.4%	10.0%
		Manufactu	ring	Maintenance, Installation, an Repair	d	Installation, Maintenance, and Repair Workers, All Other	499099	3.3%	6	9.0%	5.9%	4.4%	10.0%
						Computer, Automated Teller, and Office Machine Repairers	492011	-7.0%	-15	-0.2%	-2.1%	4.4%	10.0%
						Electric Motor, Power Tool, and Related Repairers	492092			9.1%	6.7%	4.4%	10.0%





Data suppression

In this dashboard example, we know that occupation 492092 is an LWDA high-growth occupation because its Column 1 cell is highlighted in darker green.

Although the exact value of this occupation's Measure 1 is unknown, we can deduce Measure 1 is greater than 9.1% since, by definition, LWDA high-growth occupations have Measure 1 values that are greater than their Measure 3 values.

LWDA	F	Career Cluster	F	Career Pathway	F	Occupation Title	SOC Code	1 Job Change 2020-2030 (%-LWDA)	I	3 Job Change 2020-2030 (%-VA)	4 Job Change 2020-2030 (%-US)	5 Job Change 2020-2030 (%-LWDA- Average)	6 Job Change 2020-2030 (%-VA- Average)
Western Virginia		Energy		Energy Transmission, Distribution, a	nd	Gas Plant Operators	518092	9.1%	1	3.3%	-2.0%	4.4%	10.0%
				Storage	-	Electrical Power-Line Installers and Repairers	499051	0.4%	1	5.7%	1.3%	4.4%	10.0%
						Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	492095			1.0%	-2.2%	4.4%	10.0%
		Manufactu	uring	Maintenance, Installation, ar Repair	nd	Installation, Maintenance, and Repair Workers, All Other	499099	3.3%	6	9.0%	5.9%	4.4%	10.0%
						Computer, Automated Teller, and Office Machine Repairers	492011	-7.0%	-15	-0.2%	-2.1%	4.4%	10.0%
						Electric Motor, Power Tool, and Related Repairers	492092			9.1%	6.7%	4.4%	10.0%



MOW TO DOWNLOAD DASHBOARD DATA AS PDF FILE



Saving/Downloading Results

How to download final dashboard selections as a PDF file

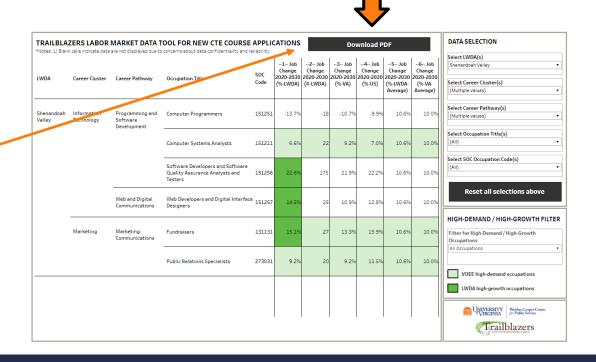
Your final list of occupations providing justification for a new CTE course can be downloaded from the dashboard as a PDF document and attached to the new course application.

<u>Step 1</u>:

Click on the "Download PDF" button at the top right of the dashboard view.



Download PDF





Saving/Downloading Results

How to download final dashboard selections as a PDF file

Your final list of occupations providing justification for a new CTE course can be downloaded from the dashboard as a PDF document and attached to the new course application.

Step 2:

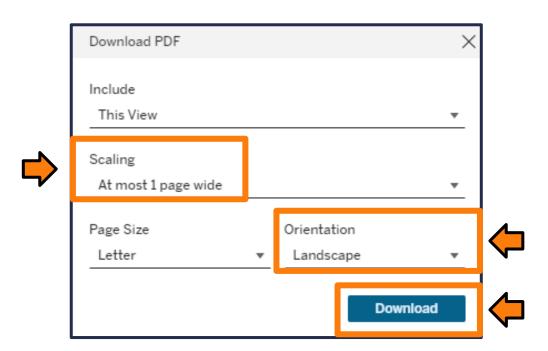
In the "Download PDF" menu that appears, change the "Scaling" setting to "At most 1 page wide" and the Orientation setting to "Landscape."

<u>Step 3:</u>

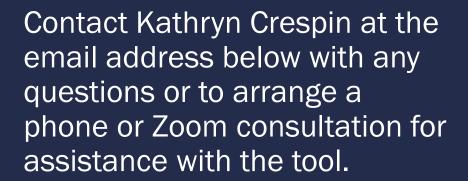
Click on the "Download" button.

Step 4:

Save the PDF document in your own files and attach it to your application packet.



Questions? Need help?



<u>kathryn.crespin@virginia.edu</u>





Weldon Cooper Center for Public Service