

**Description of the Regional Growth Cluster:** The [West Virginia Department of Economic Development \(WVDED\)](#), in collaboration with the [Resilient West Virginia coalition and its partners](#) (formerly the RESCUING Industries coalition), is leading an unprecedented effort to diversify and restructure West Virginia’s economy by **catalyzing the development of a national security and economic security (NSES) growth cluster** through investments in the state’s capabilities in advanced manufacturing, cybersecurity, advanced air mobility, and data analytics. Our efforts are primarily focused on **coal-impacted communities in southern and central WV, including 12 Persistent Poverty Counties (PPC)**. The [2021 Interim National Security Strategic Guidance](#) identifies several priorities—which have risen in importance given current events—such as fostering equitable and inclusive economic growth, rebuilding U.S. supply chains, investing in domestic leading-edge manufacturing, and building an unmatched cybersecurity talent base. Our vision addresses West Virginia’s role in advancing these priorities and serves to diversify WV’s economy by creating near-term economic opportunities in high-growth, high-wage sectors that build upon WV’s industrial legacy, while positioning WV’s workforce, businesses, and manufacturers for long-term sustainability. **This proposal identifies critical factors and investments to grow a NSES cluster and introduces concrete tools to provide more equitable and inclusive employment prospects for WV residents, including women, minorities, and residents of underserved geographies.**

West Virginia offers strategic assets underlying an emerging NSES growth cluster: its key geographic location and [high concentration of federal agencies and high-tech federal operations](#), [aggressive development assistance](#), and the strong presence of [chemical/polymer](#), [automotive](#), and [aerospace](#) industries. The state is also home to large populations of veterans with security clearances and former coal miners with transferable skills and boasts the [lowest turnover rate in the manufacturing sector in the U.S.](#) Since 2017, under the leadership of the coalition’s Regional Economic Competitiveness Officer, **the WVDED has attracted more than \$7 billion in business investment to WV.** The state also has a robust network of colleges and universities that are coalition partners, who will train workers to support the cluster and provide research expertise around innovation and commercialization initiatives.

**Coalition Members and Cluster Partners:** The component project leads are as follows: [U.S. Research Impact Alliance \(USRIA\)](#), the [West Virginia Small Business Development Center \(WVSBDC\)](#), the [Mingo County Redevelopment Authority \(MCRA\)](#), [Marshall University Research Corporation/The Robert C. Byrd Institute \(RCBI\)](#), the [High Technology Foundation \(WVHTE\)](#), the [Bluefield West Virginia Economic Development Authority \(BEDA\)](#), [Cottageville Public Service District \(PSD\)](#), [Boone County Public Service District \(PSD\)](#), and [Center for Applied Research and Technology, Inc.](#) The coalition’s Memorandum of Understanding (MOU) establishes the operational governance, which will ensure long-term sustainability, and creates the Equity Working Group (EWG)—see attached MOU. The coalition will also work together with **89 cluster partners** to implement projects (see attached letters of commitment), including the [Energy Institute at West Virginia University \(WVU Energy Institute\)](#), the [West Virginia Community and Technical College System \(WVCTCS\)](#), [West Virginia University \(WVU\) Extension](#), two Historically Black Colleges and Universities (HBCUs)—[West Virginia State University \(WVSU\) Extension](#) and [Bluefield State College \(BSC\)](#)—[Marshall University \(MU\)](#), key Economic Development Districts (EDDs)—led by the [Region I Planning and Development Council \(PDC\)](#), which will provide grant administration services, [West Virginia Women Work](#), [West Virginia Community Advancement and Development \(WVCAD\)](#), the [Division of Early Care and Education \(ECE\)](#), and [WorkForce West Virginia](#). The coalition will also **engage private sector partners through the Resilient West**

Virginia Industry Council (RWVIC), a robust network of industry leaders who will share intelligence about gaps and opportunities to grow the NSES cluster. Early RWVIC members include [Toyota](#), [American Electric Power](#), [Hino Motors Manufacturing](#), [AmeriCarbon](#), [Parthian Battery Solutions](#), and [Omnis Building Technologies](#).

Resilient West Virginia will implement six interconnected and complementary projects designed to **equitably benefit underserved populations and geographies**, support just transitions to post-coal economies, and grow their economies at a transformational scale (see Table 1 and Figure 1). **The implementation of these projects will support the creation of 3,000 advanced manufacturing and over 1,000 cybersecurity and data analytics jobs by 2026.** In developing projects, the coalition adopted the **“Tailored, Resilient, Inclusive, and Collaborative (TRIC)” framework, an asset-based, equitable approach to rural development** that meets EDA’s Equity Investment Priority. The coalition’s projects are in line with the EDA Investment Priorities of Equity, Manufacturing, Recovery and Resilience, Technology-Based Economic Development, and Workforce Development.

**Table 1. Resilient West Virginia Coalition Component Projects**

Component Project, Lead, and Timeline	Project Goals and Phase 2 Activities
<b>ADVANCED MANUFACTURING</b> <b>Project Leads:</b> BEDA, CART, and USRIA. <b>Timeline:</b> 48 months	This project aims to support more advanced manufacturing in southern West Virginia by: (1) launching the West Virginia CREATE Center, an advanced manufacturing innovation center in Bluefield WV; (2) creating the Resilient West Virginia Industry Council to support industry-led convening on needs and opportunities and (3) expanding BEDA’s Prosperity Hub training program.
<b>SITE READINESS AND CERTIFICATION</b> <b>Project Leads:</b> WVDED, BEDA, Boone County PSD, Cottageville PSD, MCRA, and WVHTF. <b>Timeline:</b> 48 months	The lack of build-ready sites is one of the top barriers to company recruitment. It is a function of both the mountainous topography and the scale of investment required for earthmoving and basic infrastructure before a company will invest. This is a foundational component which supports construction projects at five sites. The BBBRC investment is the final investment needed to make them “build ready” for companies.
<b>ADVANCED MANUFACTURING WORKFORCE DEVELOPMENT</b> <b>Project Leads:</b> RCBI. <b>Timeline:</b> 48 months	This project addresses a recent study’s recommendations regarding the skills training needed to transition unemployed individuals to high-demand advanced manufacturing jobs. BBBRC funding will develop programs to train 2,500 individuals, including 500 women, resulting in at least 2,000 certificates and another 277 associate degrees conferred.
<b>CYBERSECURITY AND DATA ANALYTICS</b> <b>Project Lead:</b> WVHTF. <b>Timeline:</b> 48 months	This project provides a systematic approach to recruiting and producing talent to support the creation of 1,000 cybersecurity and data analytics jobs. The BBBRC investment focuses on attracting and matriculating more women, minorities, and first-generation college students to cybersecurity and data analytics degree programs. The goal is to increase the number of graduates with cybersecurity and data analytics skills by 15%.
<b>WEST VIRGINIA ADVANCED AIR MOBILITY OBSERVATORY LAB (WAAMO LAB)</b> <b>Project Lead:</b> MCRA. <b>Timeline:</b> 48 months	This project will develop a system of air navigation services for manned/unmanned aircraft and electric vertical-take-off-and-landing (eVTOL) at KEBD airport for military and commercial use. This will represent West Virginia’s first remote tower command center and will serve as an anchor for a future network of innovative traffic control technology.
<b>INNOVATION AND ENTREPRENEURIAL SUPPORT</b> <b>Project Lead:</b> WVDED through the WV SBDC. <b>Timeline:</b> 48 months	This project will expand technical assistance to 180 tech-based companies increasing investment and sales by \$22.5 million and doubling West Virginia Small Business Innovation Research/Small Business Technology Transfer awards. Second, new programming for the newly launched BusinessLink website will connect entrepreneurs anywhere in the state to other ecosystem actors and programming. Third, the project will help 100 veteran-owned businesses increase investment or sales by \$10 million.



**Figure 1. Resilient West Virginia Strategy:** Figure 1 shows the Resilient West Virginia Strategy to grow a NSES cluster, which is centered on promoting **Equitable and Inclusive Workforce Participation**. The Equity Working Group (EWG) will shepherd these efforts.

- Foundational Cluster
- Economic Opportunity Ethos
- Areas for Investment
- High-Growth, High-Wage Industries

The [top reported barriers](#) to attracting companies to the state and filling jobs in [advanced manufacturing](#), [cybersecurity](#), and [data analytics](#) are an undersupply of skilled labor, the lack of development-ready sites, and a fragmented innovation and entrepreneurial support system. To address these needs, the coalition will work collaboratively to target three **Areas of Investment** needed to attract companies and jobs in **High-Growth, High Wage industries**. These Areas of Investment are the pillars of the coalition’s economic development strategy. The **Advanced Manufacturing Workforce Development** and **Cybersecurity and Data Analytics** projects will focus on improving the size and quality of WV’s **Technical Workforce** by working together with community and technical colleges (CTCs) and universities to train and upskills workers for quality jobs. The **Site Readiness and Certification** project will ready sites for development tailored to needs of the companies that will support the cluster through the implementation of several construction projects. The **Advanced Manufacturing** and **Innovation and Entrepreneurial Support** projects will focus on providing prototyping and technical problem-solving services to innovative manufacturers, assisting tech-based entrepreneurs with launching new businesses, and expanding the pipeline of high-growth potential companies in WV, including by supporting longer-term growth opportunities in the **Advanced Air Mobility** sector under the guidance of the WAAMO Lab. The coalition and its partners will convene once a month as a group to strategize and coordinate the implementation of projects.

**CEDS Alignment:** The geographic footprint of the NSES growth cluster is 23 coal-impacted communities, which are served by the Regions I, II, III, IV, V, and VI PDCs. The projects are aligned with economic development needs outlined in the regional CEDs. The [Regions I, IV, and VI CEDs](#) encourage economic development projects that **focus on cluster development** in the manufacturing, technology-based, and information technology sectors, and support recovery, resiliency, and diversification efforts in response to COVID-19 and the downturn of the coal industry. In their CEDs, [Regions II, III, IV, V, and VI](#) stress the need to **strengthen the quality and size of WV’s labor force**, reach rural and non-traditional students, align workforce readiness

efforts with employer needs, and identify and address workforce barriers, including child care. A top priority for PDCs is also **the development of sites and buildings** to allow for new business locations and expansions and the creation of an inventory of ready, available sites (**Regions II, V, VI CEDS**). The CEDS for **Regions III and VI** encourages the promotion of an **ecosystem that cultivates entrepreneurship, innovation, and business growth**. The **Regions I and IV CEDS** also encourage the creation of **job opportunities for the unemployed and underemployed**.

**Complementary Initiatives Planned by the Coalition:** Several bills that have completed legislative action in the 2022 session directly align with the coalition’s efforts, including proposals that focus on [workforce development](#) (SB582), [improving access to child care](#) (SB656), and [investment in new technologies](#) (SB5), as well as providing for the creation of key councils with representation from coalition members. **Notably, the State of West Virginia is so committed to the Resilient West Virginia coalition’s efforts that it has passed [legislation](#) (SB720) with overwhelming support providing a 20% cash match for all component projects, resulting in a total commitment of up to \$20 million.** Also, the State has **unanimously passed legislation to create the [Certified Sites and Development Readiness Program](#) (HB4002),** accompanied by a \$10 million appropriation, which will be managed by the WVDED. **An EDA investment leveraged the creation of this program. The [January 2022 Report on Coal Communities in West Virginia](#), informed partially by the coalition, identified top priorities for the state’s coal-impacted communities that align with our efforts to grow a NSES cluster: (1) addressing basic infrastructure, (2) diversifying economies by supporting entrepreneurs and growing the manufacturing sector (3) expanding educational opportunities for a well-trained workforce, including by helping CTCs being responsive to training needs, and (4) helping vulnerable populations, including individuals with substance use disorders enter the workforce.**

**Specific Metrics of Success:** Based on an economic contribution analysis produced by a [WVU economist](#), the coalition’s activities will provide vital support for the state’s industries representing \$2.8 billion in economic output, 4,600 jobs, and a total GDP impact of \$738 million (≈0.98% of WV’s GDP). When factoring in secondary impacts, the total contribution to the state’s economy is estimated to be nearly \$3.9 billion, 10,500 jobs, and \$1.3 billion in total GDP impact (≈1.7% of WV’s GDP).

**Timeline for Completion:** The coalition has the capacity to execute proposed activities by 9/30/2026 as detailed in the timelines included in each project narrative and referenced in Table 1.

**Project Location, Regional Assets, Target Participants, and Stakeholders Engaged:** Resilient West Virginia prioritizes initiatives and investments that focus on **23 coal-impacted communities**, primarily located in southern and central WV—**PPC** are highlighted in bold: **Boone (54005)**, Cabell (54011), **Clay (54015)**, **Fayette (54019)**, Greenbrier (54025), Jackson (54035), Kanawha (54039), **Lincoln (54043)**, **Logan (54045)**, Marion (54049), **Mason (54053)**, **McDowell (54047)**, Mercer (54055), **Mingo (54059)**, Monroe (54063), Nicholas (54067), Pocahontas (54075), Putnam (54079), Raleigh (54081), **Summers (54089)**, **Wayne (54099)**, **Webster (54101)**, and **Wyoming (54109)**. These counties are in need of targeted investment due to the devastating effects of the decline of the **coal industry** in their economies. Between 2011 and 2022, 16,382 workers were either affected by a mass layoff or the closure of a coal mine, plant, or supporting business within the proposal’s primary service area (77% of [WV’s](#)

[Coal WARN Notices](#)). Infrastructure projects will directly benefit five coal-impacted communities and three of the projects will take place on reclaimed mine sites (See Table 3).

**Table 2. Economic Indicators for Select WV Coal-Impacted Communities**

	24-Month Unemployment <sup>1</sup>	Poverty Rate <sup>1</sup>	24-Month Average LFPR <sup>1</sup>	2019 Civilian Labor LFPR <sup>2</sup>	2019 Female LFPR <sup>2</sup>	Per Capita Income <sup>2</sup>
U.S. Average	6.7%	13.4%	57.8%	63.1%	58.8%	\$27,282 <sup>3</sup>
<b>Boone County<sup>3</sup></b>	<b>8.2%</b>	<b>23.1%</b>	<b>40.9%</b>	<b>40.3%</b>	<b>34.1%</b>	<b>\$21,751</b>
Jackson County	6.9%	17.7%	53.4%	49.1%	43.1%	\$25,341
Marion County	6.8%	16.4%	54.7%	56.8%	52.3%	\$26,380
Mercer County	7.6%	19.8%	42.5%	48.6%	45.9%	\$22,212
<b>Mingo County<sup>3</sup></b>	<b>11.2%</b>	<b>28.7%</b>	<b>34.3%</b>	<b>42.3%</b>	<b>37.5%</b>	<b>\$20,060</b>

<sup>1</sup>National Economic Resilience Data Explorer. <sup>2</sup>U.S. Census Bureau. <sup>3</sup>Threshold for distress. LFPR: Labor Force Participation Rate.

To equitably revitalize coal-impacted communities, the coalition will implement several strategies to connect **residents of underserved geographies, women, racial minorities, individuals with disabilities or in recovery from substance use disorders, veterans, and former coal miners** with training opportunities and jobs in the advanced manufacturing, cybersecurity, advanced air mobility (AAM), and data analytics sectors. These connections will be facilitated by [WVU Extension](#) and HBCU [WVSU Extension](#) who will lead our outreach efforts. The [RCBI](#), a **national Center of Excellence** for composite materials, has been working hand-in-hand with the [WVCTCS](#), which oversees WV’s Community and Technical Colleges, to develop training programs that are industry-driven, geographically focused, and accessible to our target populations. These programs will help participants quickly obtain credentials, so they can be placed into high-quality jobs—e.g., through industry certifications, short-term cybersecurity credential courses, and the 10-week [Step Up for Women](#) program. RCBI and WVCTCS will work together with universities (see cluster partners on page 2) to offer training and link participants to high-wage jobs. In WV, on average, those employed in manufacturing earn \$76,250/year and Information Security Analysts earn \$91,000/year.

The coalition will also establish the **WV CREATE Center**, an innovation center that will strengthen the advanced manufacturing industry in WV by clustering collaborative businesses, expertise, the private sector, and public economic development networks. The WV CREATE Center will be operated by coalition members [BEDA](#) with the technical assistance of [BSC](#), [USRIA](#), [CART](#), and the [WVU Energy Institute](#). West Virginia is a [global chemical and polymer hub](#) and home to several [automotive](#) and [aerospace](#) companies. These assets are critical to the growth of the NSES cluster, especially when considering the benefits of [economies of agglomeration](#), and provide an environment where high-value industries in related fields of business want to cluster together, such as manufacturers of green building products and battery manufacturing and recycling.

**West Virginia’s strategic location**—within an eight-hour drive of half of the U.S. population and one-third of the Canadian market—and robust connectivity to businesses, consumers, and ports through **1,900 miles of railroads, 420 miles of navigable rivers, and six major interstate highways** makes it a prime location for companies that will support the NSES growth cluster. Additionally, the **low population density and mountainous area surrounding KEBD**, provides the perfect setting for a test range for new drone and eVTOL technologies. Also, the WVDED offers [a number of incentives for the location and expansion of manufacturing facilities and high-technology businesses](#) and to address emerging skills needs of employers, including the **Manufacturing Investment Credit**, the **Workforce Innovation & Opportunity Act**, and the **High**

**Technology Valuation Act.** The WVDED will capitalize on these assets to attract companies to WV and market the sites that will be ready for development through the construction projects.

**Engagement with the Private Sector:** In refining the coalition’s vision and developing plans for Phase 2, the coalition met with business leaders from the defense, national security, manufacturing, cybersecurity, advanced air mobility, and data analytics sectors. It was through these conversations that the coalition identified the need to broaden the focus of our regional growth cluster to encompass factors that companies take into consideration in their business location and expansion decisions, critical gaps in local supply chains, and other unmet needs.

**Based on this feedback, the coalition committed to create the Resilient West Virginia Industry Council (RWVIC), which will include broad representation from industrial and technology firms with a presence in the state, to foster collaboration with the coalition, facilitate communication with the private sector, and identify needs and further opportunities to grow WV’s advanced manufacturing, technology, and related sectors.** The RWVIC will be led by a Cluster Manager who will be responsible for coordinating the activities of the council. Early council members include [Toyota](#), [American Electric Power](#), [Hino Motors Manufacturing](#), [AmeriCarbon](#), [Parthian Battery Solutions](#), and [Omnis Building Technologies](#). The RWVIC will be the main channel through which the coalition engages with the private sector, ensuring that companies are aware and taking advantage of the support and resources that will be available through the coalition’s work. For instance, the **WV CREATE Center** will strengthen WV’s manufacturing industry by providing an environment for small manufacturers to share facilities and infrastructure (X-MAT, Omnis, and Semplastics will base their operations in the center), exchange knowledge, build on information spillovers, and access prototyping expertise. As a result of the engagement of early council members, **the coalition secured commitments from private sector partners to hire 9,309 workers and invest \$3.215 billion (see attached ED-900Bs and letters of commitment).**

Since workforce development is such a core component of the coalition’s efforts, the Advanced Manufacturing Workforce Development project will establish an advisory council, which will operate in coordination with the RWVIC, to support the development of talent pipelines and industry-driven training programs and help the project continually align with the evolving needs of businesses. The advisory council will connect representatives from the private sector, workforce investment boards, government, and not-for-profits who will provide guidance in the development of curriculum and training modules, collaborate to remove workforce barriers, and serve as a resource to establish new sector partnerships.

**Sustainability Plan for the NSES Growth Cluster:** The coalition crafted a trifold sustainability plan based on **(1) Complementary Funding, (2) Governance and Mission Alignment, and (3) Stakeholder and Community Engagement** to ensure that the initiatives catalyzed by an EDA investment would continue after the end of the award period.

**1) Complementary Funding:** The NSES growth cluster will be self-sustained through two main sources of complementary funding: **private sector investment and existing state-funded programs.** Table 3 shows the short- and long-term aggregate economic impact of the coalition’s efforts. [Hecate Energy](#), for example, will develop **a solar manufacturing hub in WV to produce advanced green energy equipment, which will generate 5,000 direct jobs** (see attached ED-900B). The jobs span many functions, including engineering technicians and line workers, with training being provided by the RCBI and WVCTCS. **This and other transformational projects would not be possible but for an EDA investment and the work of the coalition and**

its partners. Also, programs like the [WV Invests Grant](#), [Learn and Earn](#), and the [Rapid Response Advance Grant](#) will be leveraged by the WVCTCS to support the coalition's efforts during and after the award period. Learn and Earn, for example, is WV's leading workforce development program, which allows students to take courses while getting paid on-the-job training. Additionally, the WVDED, through its [Governor Guaranteed Work Force Program](#), has committed \$100,000 annually to employers that are cluster partners.

**2) Mission Alignment and Governance:** As the lead institution, to ensure long-term sustainability, the WVDED used a gold standard in inviting entities to join the effort. The WVDED selected entities that would be at the nexus of the following areas as they relate to NSES: (1) mission alignment and the organization's strengths and priorities; (2) established partnerships with companies in the sectors prioritized for growth; and (3) commitment to economic growth in WV. By selecting members based on how closely their respective missions, partnerships, and most notable projects aligned with the coalition's vision, the WVDED ensured that members would continue to support and advance projects and related initiatives after the end of the funding period. Also, given its leadership and history of managing large scale economic development initiatives, WVDED has the capacity to sustain, maintain, and grow initiatives that will be jump started by an EDA investment, while the coalition's governance offers a solid structure for the long-term involvement of members in such activities.

**3) Stakeholder and Community Engagement:** Another key to the sustainability and success of the coalition's efforts is the adoption of a stakeholder- and community-centric approach. The coalition has created a [WV Community Advancement and Development \(WVCAD\)](#)-led Equity Working Group (EWG) to help promote more equitable and inclusive economic growth and effectively collaborate and communicate with key groups, including community leaders, resource providers, civic organizations, local governments and agencies, before, during, and after the award period. The WVCAD is an agency that manages state and federal programs designed to improve the quality of life in WV and resource distribution to low-income communities and minority populations. Through the EWG, the WVCAD will continue to facilitate the coalition's stakeholder and community engagement to ensure that we do not alienate groups from the decision-making process and the implementation of projects.

**Labor Standards and Economic Benefits for Local Residents:** To promote the effective and efficient delivery of high-quality construction projects that will **enhance WV's infrastructure, provide living wage jobs—equal or higher to union wages—and generate economic benefits for local residents**, the Resilient West Virginia coalition will collaborate with the [WV Regional PDCs](#) to ensure compliance with the labor standards of **The Davis-Bacon and Related Acts** and the **Contract Work Hours and Safety Standards Act**, including the federal prevailing wage rate requirements. **This will ensure fair and equitable labor standards across all projects.** As such, all construction contracts will include Davis-Bacon labor standards clauses, as outlined in 29 C.F.R. 5.5.(a), and contractors/subcontractors will submit weekly certified payroll records to the contracting agency. The [West Virginia Association of Regional Councils \(WVARC\)](#) has provided a letter of commitment, which details the role of the Regions [I](#), [II](#), [III](#), [V](#), and [VI](#) PDCs (EDDs) in the construction projects.

Resilient West Virginia will also broadly share bid solicitations by working with the coalition cluster partners to advertise construction contracts in local and statewide newspapers as well as the [Contractors Association of West Virginia](#) and other well-known Plan Rooms. Additionally, the coalition will share advertisements for bid solicitations with local labor unions, including the

[International Brotherhood of Electrical Workers \(IBEW\) Fourth District Office](#), the [West Virginia AFL-CIO](#), and the [Eastern Atlantic States Regional Council of Carpenters](#). The coalition will also work with the [U.S. Department of Commerce Minority Business Development Agency](#) and the WV SBDC in collaboration with the Small Business Administration to take affirmative steps to match small and women- and minority-owned businesses, and labor surplus area firms with contract opportunities. **The coalition has set a 10% participation goal in construction contracting for Minority, Women, Veteran-Owned, and Disadvantaged Business Enterprises.** The coalition will also hold a series of EWG-led public meetings to make local residents and communities aware of opportunities to provide products and services to successful contractors.

**Plan to Ensure that the Benefits of the Cluster Will be Equitably Shared:** The coalition's structure is built on a framework that **prioritizes equitable and inclusive workforce participation and economic opportunity**. That is, strategies to achieve equity—as it relates to populations and geographies—are embedded into all projects. As shown in Table 2, construction projects are located in [PPC](#) and/or [top-coal dependent communities](#)—as identified in the [Interagency Working Group](#) report. Non-construction projects encompass 23 coal-impacted communities, with a **combined average poverty rate of 20.8% compared to 13.4% for the U.S. average**.

To ensure that the benefits generated by the cluster will reach the communities that need the most, the coalition has established an **Equity Working Group (EWG)**. The EWG goals are to reach groups that have been systematically denied opportunities and address historic injustices that resulted in inequalities and imbalances. In the first meeting of the EWG, Resilient West Virginia (1) laid a foundation for a strategic approach for inclusive economic development, and (2) invited key groups to have a seat at the table to inform the coalition's work so **all** West Virginians can have equal access to cluster benefits. The work of the EWG catalyzed a partnership with [WVU Extension](#) and HBCU [WVSU Extension](#) to facilitate connections with historically underserved groups. WVU/WVSU Extension have joined the nationally awarded [Coming Together for Racial Understanding \(CTRU\)](#) initiative and will use its science-based approaches to engage and connect diverse populations with the opportunities generated by the NSES cluster. WVU/WVSU Extension have a **model to measure and report on equitable outcomes**, including the number of individuals trained and employed through the coalition's work divided by gender, race, first-generation college student, and rural county status, and will make recommendations to the coalition for a changed approach if needed. As a result of the first EWG meeting, the coalition has partnered with [Jobs & Hope WV](#), which helps West Virginians in recovery to secure employment, and the [WV Division of Rehabilitation Services \(WVDRS\)](#), which helps individuals with disabilities obtain or retain quality employment. These entities have committed to support participants with transportation to school and work and to work with employers to create inclusive work environments. The EWG will meet monthly and identify additional groups that need to be at the table.

The Cybersecurity and Data Analytics project has **partnered with the nationally recognized WV Health Sciences & Technology Academy (HSTA)** to create a Cyber and Data Analytics Track. HSTA helps high-school students facing social and financial challenges enter and succeed in undergraduate and graduate programs. **HSTA Scholars are 75% rural, 37% African American, 69% females, 68% first generation college attendees, and 46% financially disadvantaged.** On average, HSTA students earn \$30,000 per year more than their parents and 89% graduate from college. The coalition expects to engage 200 students in this highly successful program.

The Advanced Manufacturing Workforce Development project will launch a **Diversity, Equity, and Inclusion (DEI) Office to support DEI programs and recruit more women, minorities, veterans, first generation students, and other underrepresented groups into jobs in the manufacturing, technology, and related sectors.** For instance, in 2019, women in WV occupied only 21% of job positions in manufacturing. To launch more women into those careers, RCBI has partnered with WV Women Work’s [Step Up for Women](#), a free of charge training program designed to prepare women for apprenticeships and entry-level positions in advanced manufacturing—most graduates find jobs within six weeks. Also, [one of the biggest workforce barriers](#) for WV women [to fill these](#) and other roles is limited access to child care. To address this need, the WV SBDC has partnered up with WVU to produce [child care startup guides](#), which will be available in summer 2022, to help increase the supply of such businesses. An investment from the EDA, will also help to **fund a first-of-its-kind supply and demand data matching system**, in collaboration with the [ECE](#), which will connect families with available child care slots.

**Expected Outcome from the Joint Impact of the Coalition’s Work:** Table 3 shows the estimated total **annual economic contribution** of the firms that will be supported by the coalition’s workforce development, entrepreneurial, site readiness, and company recruitment efforts. Based on an economic contribution analysis produced by a WVU economist, **the coalition’s projects will provide vital support for the state’s advanced manufacturing, cybersecurity, advanced air mobility, and data analytics industries representing more than \$2.8 billion in economic output and 4,600 jobs in West Virginia.** The total annual contribution of these industries, including secondary impacts, is estimated to be nearly \$3.9 billion and 10,500 jobs in the state (see attached Economic Contribution Analysis). When considering **commitments from the private sector**, as a direct result of the coalition’s proposed scope of work, 9,309 jobs will be created and \$3.215 billion in private investment will be leveraged by this EDA investment (see attached ED-900B forms and letters of commitment).

**Table 3. Total Annual Economic Contribution from Supported Industries<sup>1</sup>**

	Direct Impact	Indirect & Induced Impact	Total Economic Impact
<b>Output (\$, billions)</b>	2.8	1.1	3.9
<b>GDP (\$, millions)</b>	738.6	565.6	1,304.2
<b>Employment (jobs)</b>	4,627	5,881	10,508
<b>Labor Income (\$, millions)</b>	441.0	320.4	761.3
<b>Total Taxes (\$, millions)<sup>2</sup></b>	45.2	33.5	78.7

<sup>1</sup>Analysis conducted using the IMPLAN modeling software. <sup>2</sup>Note: Tax Revenue impact includes sales, personal income, property, and corporation net income taxes.

As outlined in detail in the component narratives, the coalition’s activities will (1) catalyze the creation or retention of 3,000 jobs in a variety of manufacturing sites by 2026; (2) support the creation of 1,000 cybersecurity and data analytics jobs; (3) increase enrollment by 25% and graduation by 15% in Cybersecurity and Networking, Engineering, and Advanced Manufacturing Technology degrees by 2026; (4) reduce the average unemployment rate to pre-pandemic levels of 5.3%; (5) double the state’s SBIR/STTR applications and awards; (6) support the training of 2,500 West Virginians in advanced manufacturing with 2,000 attaining certifications; (7) generate a \$13.5 million increase in operating expenditures for 90 pre-revenue and \$9 million increase in sales for 90 companies; (8) promote the creation of 16 new products through the work of the WV CREATE Center; (9) engage 500 women in advanced manufacturing programs; and (10) support the graduation of 200 students facing social and financial challenges from cybersecurity and related programs. The coalition considered baseline data and the capacity of

coalition members and partners to collectively achieve these goals. The WVDED will engage a third party entity to evaluate expenditures, metrics, and advancement of outcomes.

**Phase 1 Activities and Changes to the Coalition’s Vision: In preparation of our Phase 2 application, the coalition advanced the proposal with new partners and produced strategies to create a runway to launch projects quickly.** The following is a summary of completed activities and changes in our focus: the **national security and economic security (NSES)** growth cluster replaced the defense and national security (DNS) cluster. The revamped strategy will support the growth of WV’s advanced manufacturing, cybersecurity, advanced air mobility, and data analytics sectors to grow a NSES cluster. Our new approach broadens the range of companies and customers we can attract and grow in WV, while also leveraging commercial opportunities in support of national security-related federal agencies and contractors. The Workforce Development project is now named **Advanced Manufacturing Workforce Development**. The RCBI joined the project to develop and deliver industry-driven training—in collaboration with the WVCTCS—to **prepare West Virginians for meaningful careers in advanced manufacturing**. The need for workforce training focused on advanced manufacturing emerged strongly through the coalition’s engagements with current and prospective employers.

The High Value Products from Carbon and Energy Materials Development, Reuse, and Recycling projects have been collapsed into one, and is now named **Advanced Manufacturing**. This project is now led by BEDA and co-led by USRIA and CART. **The need to create an overarching industry council (RWVIC) emerged from meetings with industry leaders.** Conversations were focused on the factors taken into consideration to make business location decisions such as site selection criteria, workforce needs, regulatory environment, innovation ecosystem, and access to capital, customers, and raw materials. Largely as a result of these meetings, the coalition was able to secure hiring and private sector investments commitments in the amount of 9,309 jobs created and \$3.215 billion, respectively.

In Phase 1, the coalition proposed the inclusion of Mingo County’s Appalachian Regional Airport (KEBD) in the [Evers Military Operating Area \(MOA\)](#) expansion plan. However, we have recently learned that the potential inclusion of the KEBD in the plan would not be completed within the award period. For this reason, **the coalition pivoted to the emerging drones and eVTOL industries in WV**. This focus is derived from recently passed legislation, input from new market entrants, and the availability of curriculum support through higher education institutions. In light of this change, the Southern West Virginia Defense and National Security Hub project is now named **WV Advanced Air Mobility Observatory Lab (WAAMO Lab)**. **The WVHTF, a founding member of the [WV Cybersecurity Workforce Development Working Group](#), is the new project lead of the Cybersecurity and Data Analytics (formerly Cyber, Big Data, and Data Analytics) project.** The project was previously led by a university—but to be more inclusive of all the educational offerings available in WV—the coalition has decided to select an eligible entity with connections with the state’s two- and four-year colleges as well as the private sector. Lastly, after careful consideration the coalition decided to rebrand its name to **“Resilient West Virginia,”** formerly called “Revitalizing Economic Security for Communities Utilizing Innovative Next Generation (RESCUING) Industries coalition.” **The new name better reflects the goals of the coalition, centered upon building equitable and resilient economies, while also alluding to the strong resilience of our populations and communities.**