

Creating Purposeful Partnerships

BUSINESS AND HIGHER EDUCATION WORKING TOGETHER TO BUILD DIVERSE TALENT ECOSYSTEMS FOR THE DIGITAL ECONOMY

One of BHEF’s top priorities is building partnerships between business and higher education to create diverse talent ecosystems. Recent efforts are explained in [Creating Purposeful Partnerships](#). Highlights are summarized below.

The Digital Skills Mismatch

There is a mismatch between the digital skills and capabilities demanded by employers and the postsecondary education being provided. The result is a significant gap in what employers are demanding and what higher education is supplying.

Growing Demand	Shortage of Supply
<ul style="list-style-type: none"> 2.7M positions for data science and analytics in the U.S. (by 2020) 69 percent of employers believe candidates with data science & analytics skills will get preference for jobs (by 2021) Data-driven decision makers will compose one-third of the data-savvy professional job market 	<ul style="list-style-type: none"> Cybersecurity and data science & analytics are the two hardest skills to hire Only 23 percent of college and university leaders say their graduates will have data science and analytics skills (by 2021) 209,000 cybersecurity positions went unfilled (in 2015)

BHEF’s Playbook for Purposeful Partnerships

Supported by a five-year grant from the National Science Foundation, BHEF has led efforts to develop, replicate, and evaluate partnership models between businesses and higher education to improve STEM student persistence, graduation, and community college transfer, particularly among veterans, women, and underrepresented minorities.

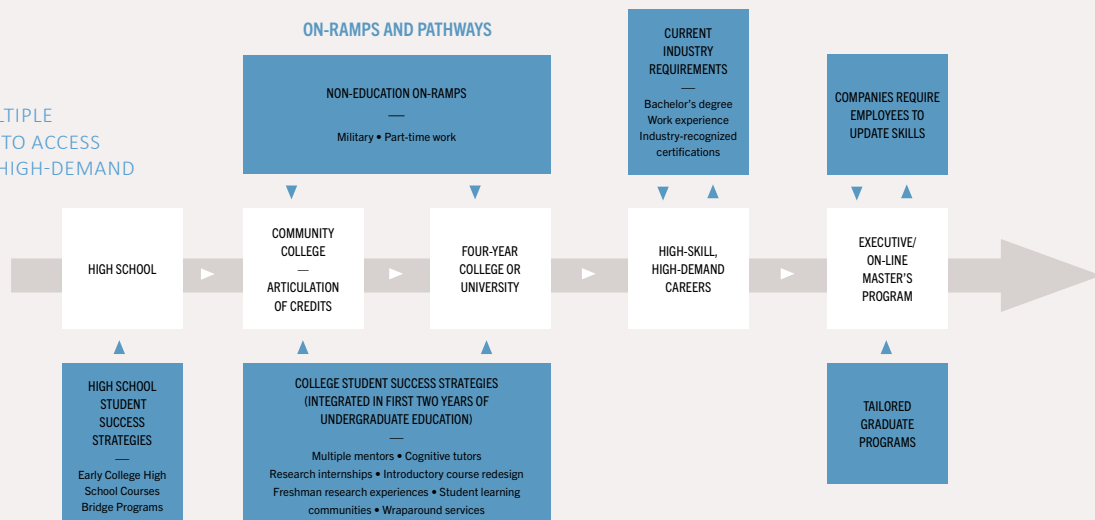
Case Examples of BHEF-Led Partnerships Between Higher Education and Business

- University of Maryland, College Park and Northrop Grumman Corporation**
Created relevant educational programs at five University System of Maryland campuses to meet the needs of the cybersecurity industry.
- The City University of New York and IBM**
Capitalized on existing infrastructure to support transfer students from community colleges to complete four-year degrees in data science & analytics and urban sustainability.
- Miami Dade College and NextEra Energy**
Developed stackable credentials in data science & analytics.
- Northeastern University, Raytheon, IBM, and others**
Integrated work and learning in an industry-informed IT and cybersecurity curriculum.
- University of Wisconsin-Milwaukee and The Water Council**
Pioneered a new work-based learning model in water science. The program helps students transfer from a technical college to a four-year STEM program, gaining academic and industry experience.
- Washington University in St. Louis and Boeing**
Provided alternative engineering pathways for nontraditional students and changed a company’s approach to cultivating local talent.

Through partnerships between higher education and industry, these programs created pathways from community colleges to four-year universities with significant work-based learning experiences.

ANATOMY OF A REGIONAL TALENT ECOSYSTEM

THIS DIAGRAM SHOWS MULTIPLE ON-RAMPS AND PATHWAYS TO ACCESS EDUCATION AND DEVELOP HIGH-DEMAND SKILLS.



Findings from these partnerships and from others in which BHEF has been involved provide a playbook for business leaders. This playbook highlights best practices in establishing purposeful strategic partnerships and building regional talent ecosystems to address the digital skills mismatch.

Guiding Themes

Among the guiding themes for creating a diverse talent ecosystem are:

- Forming strategic business-higher education **partnerships** that establish seamless pathways for students into high-demand careers.
- Having a **third-party intermediary** facilitate the ecosystem development effort.
- Engaging a **lead employer**, a **lead academic institution**, community colleges, and other stakeholders.
- For each organization, having **C-level involvement and sponsorship**.
- Enabling employers to clearly **signal workforce skill needs**.
- Incorporating **work-based learning** experiences for students where companies offer apprenticeships, internships, mentoring, co-ops, and more.

Eight Essential Steps

Companies and higher education institutions interested in forming a strategic partnership should be aware of these steps.

Essential Step	Description
1. Analyze	Analyze the workforce requirements in the selected field and geographic region.
2. Profile	Through collaboration between the business and higher education partners, profile the competencies and skills required and design a competency map.
3. Map	Map available course offerings and degree programs to identify any gaps and opportunities for new offerings and/or programs.
4. Select	Based on the needs of employers and the gap analysis, select the best academic vehicles that lead to industry-recognized credentials . These may be majors or minors, stackable credentials, or recognition of work-based learning or on-the-job training.
5. Integrate	Integrate high-impact practices by building in ongoing applied learning for students and engagement opportunities for businesses. This includes work-based learning and research.
6. Develop	Develop industry-engaged programs that produce well-rounded professionals for the 21st-century workforce. Once programs are launched by higher education, business partners need strategies for ongoing involvement.
7. Update	Continuously update the curriculum , since digital fields are evolving so rapidly.
8. Change	Once higher education builds programmatic offerings in response to employer needs, business partners should change their talent development and recruitment models .

Recommendations

Based on experiences facilitating and analyzing the success of business-higher education partnerships, BHEF offers the following recommendations:

- Focus partnerships on developing sustainable and diverse talent ecosystems.
- Engage C-suite business and academic leaders to drive change.
- Develop a common language among partners.
- Translate employer-led partnerships into transformative metrics-driven change.
- Create work-based learning programs that align with talent and recruiting strategies.
- Consider the four-year institution to be an intermediary between community colleges and businesses.
- Review company human resource strategies and human capital planning to effectively signal and recruit diverse STEM and digital-skills talent.

Through BHEF’s experience, research findings, and recommendations, BHEF hopes to inspire business and higher education leaders to take action—to develop and scale partnerships to create sustainable talent ecosystems. Partnerships and creation of these ecosystems will help produce the diverse, highly skilled 21st-century workforce the nation needs.

Additional Resources

See the full report on [Creating Purposeful Partnerships: Business and Higher Education Working Together to Build Diverse Talent Ecosystems for the Digital Economy](#)

Also, see the [BHEF website](#) and [BHEF’s many publications](#).

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