



Achieving Excellence in Workforce Education

Community College and Industry Partnerships: A Strategic Workforce Collaboration

CCPI-CAST

APRIL 21, 2023

1:00 – 1:45 PM ET

ccpi-stem.org/webcasts-podcasts/



PRINCE GEORGE'S
COMMUNITY COLLEGE

Welcome and Introductions

Today's Speaker

- Dr. Ed Massey, CCPI-STEM [Southeast Regional Network Chair](#),
President Emeritus, Indian River State College, FL

Today's Moderator

- Dr. Elizabeth K. Hawthorne, [Co-PI CCPI-STEM](#), Senior Professor Emerita
Computer Science and Cybersecurity, Union College, NJ



Today's Topics

- The role that ATE funding can play in meeting workforce training needs
- Role of community colleges in training the 21st century workforce
- Challenges for community colleges
- Use of ATE funding to support business/industry partnerships
- Key elements for a strong college / industry partnership
 - *Not an event but a process...*



STEM Workforce Needs

- STEM technical job openings in the US are projected to exceed the skilled technical labor force by 3.4 million
- 16 million of skilled technical jobs require an Associates Degree or similar industry certification / license
- The number of jobs requiring STEM expertise has grown 34% over the past decade
- Coming out of COVID, the labor shortage problem is more serious in industries that rely on workers with adequate talent in STEM.



Role of Community Colleges

- Community colleges have always been very nimble and entrepreneurial and primed to fill the growing needs in the technical workforce
- Geographically positioned across the country to partner with Business and Industry
- 90% of the US population live within 25 miles of a community college
- The diverse populations that we serve puts us in a unique position to diversify the STEM workforce.



Challenges to Community Colleges

- In many cases the degree and certification production does not align with employer needs
- Colleges, Trustees, Presidents, Vice Presidents, Deans and highly motivated faculty need to lead and support change within the college to strengthen the curriculum & teaching methodologies to re-design and re-invent workforce programs
- Be more proactive not reactive to build successful partnerships with school systems (Pathways), other community colleges, universities, business / industry and economic development organizations
- Designate a high-level staff member to lead partnership development
- Adequate funding to start new programs or upgrade existing programs.



ATE Financial Benefits

- CCPI-ATE is a four- year project funded by NSF-ATE
- The end goal is to assist colleges in transforming and implementing technical program in community colleges to meet the national demand for a highly skilled STEM workforce
- The ATE program was created by congress in 1992 to help community colleges to reach their goals
- NSF-ATE has a \$76M annual budget
- NSF-ATE has distributed \$1.2B since 1993



ATE Financial Benefits cont.

- Funds can be used to support faculty time, purchase equipment / instrumentation, travel and other critical needs
- Only 22% of eligible community colleges have taken advantage of the opportunity
- Securing NSF-ATE grants add prestige to your college and attract philanthropists
- Funding model – leverage state funds with grant fund and private funds (business / industry, private foundations, individuals).



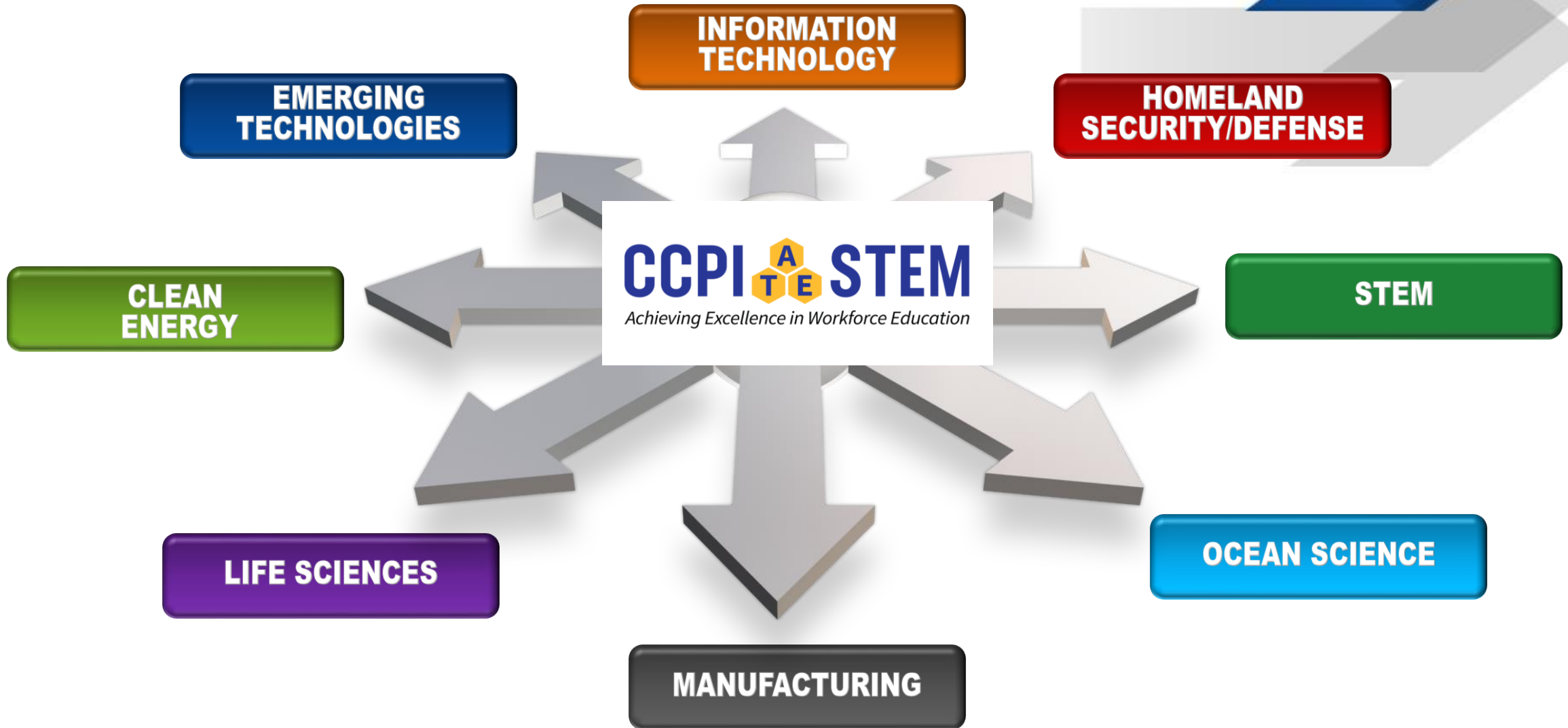
Elements of a Strong College / Industry Partnership

Background and Research

- Review College's Strategic Plan
- Survey your service district and surrounding region to identify industry that needs STEM trained employees
- Review the economic development plan for the state and have conversations with local EDO's and community leaders and policy makers
- Be proactive and approach industries that ensure that the college can meet local/regional needs for skilled technical employees – one page position paper
- Conversations should lead to the development of a Memorandum of Understanding between the college and industry addressing responsibilities of each party. Public signing.



Industry Connections



Strategies for Colleges

- A checklist for ATE proposals includes:
 - Engaging with business and industry in meaningful ways. Reviewers expect you to actively involve business and industry people committed to supporting the work of the project and associated technician education programs
- Co-create and regularly update relevant technical skills that can be shared with other colleges
- Leverage the knowledge of employees by engaging SMEs in curriculum design



Strategies for Colleges cont.

- Contextualize foundation skill courses in the curriculum (Math, Science, workplace writing skills).
- Enlist industry practitioners to serve as adjunct faculty members and provide continuing education to faculty members
- Engage employees to serve on industry advisory boards
- Offer training in industry recognized certifications
- Develop measurable learning outcomes for technical courses – competency based



Strategies for Colleges cont.

- Participate with industry to recruit and screen candidates for the program
- Provide career counseling services for candidates and incumbent workers
- Produce high quality workforce ready graduates
- Work with industry to create state of the art laboratory facilities that provide experiential learning opportunities.



Strategies for Industry – Provide:

- SMEs to engage in curriculum design
- Industry employees to serve as adjunct faculty members
- Employees to serve on industry advisory boards
- Candidate screening criteria
- Opportunities for participants to interact with company representatives
- Employees to visit classrooms to discuss industry organization, culture, internal communications and policies



Strategies for Industry cont.

- Participate in recruiting and screening of candidates
- After students have successfully completed the first-year program requirements, the industry will provide 30 paid internships during the summer
- Industry commits to hiring 20 (if positions are available) candidates per year who have successfully completed the entire two-year program
- Work with college to provide real-world laboratory facilities.



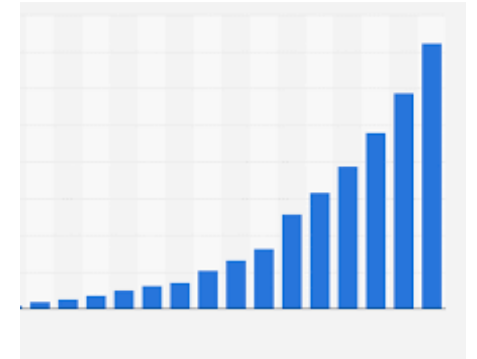
Strategies for College & Industry

- Ensure open communications committed to building trust and respect
- Develop program schedule that work for the employees and learners (late afternoon, night classes, weekend classes).
- Employees and college-funded scholarships
- Embrace job shadowing, externships, return to industry opportunities for faculty



Strategies for College & Industry cont.

- Participate in preparation of marketing materials to recruit participants
- Collect and share appropriate data and make data-based decisions
- If disruptive technologies or market changes cause industries to operate outside the scope of the partnership, the college can contact the NSF-ATE program officer to adjust the budget or request supplemental funding to expand or sustain the grant.



ATE Mentoring Opportunities for October 2024

- Mentor Up: atementorup.org
- FORCCE-ATE: forcce-ate.org
- Mentor-Connect: mentor-connect.org
- Pathways to Innovation: pathwaystoinnovation.org
- Project Vision: projectvis.org



Questions / Comments



Next CCPI-Cast

**May 12, 2023: CCPI-STEM Fellows Program:
1:00 pm ET A Unique Opportunity**

[Register online here](#)

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