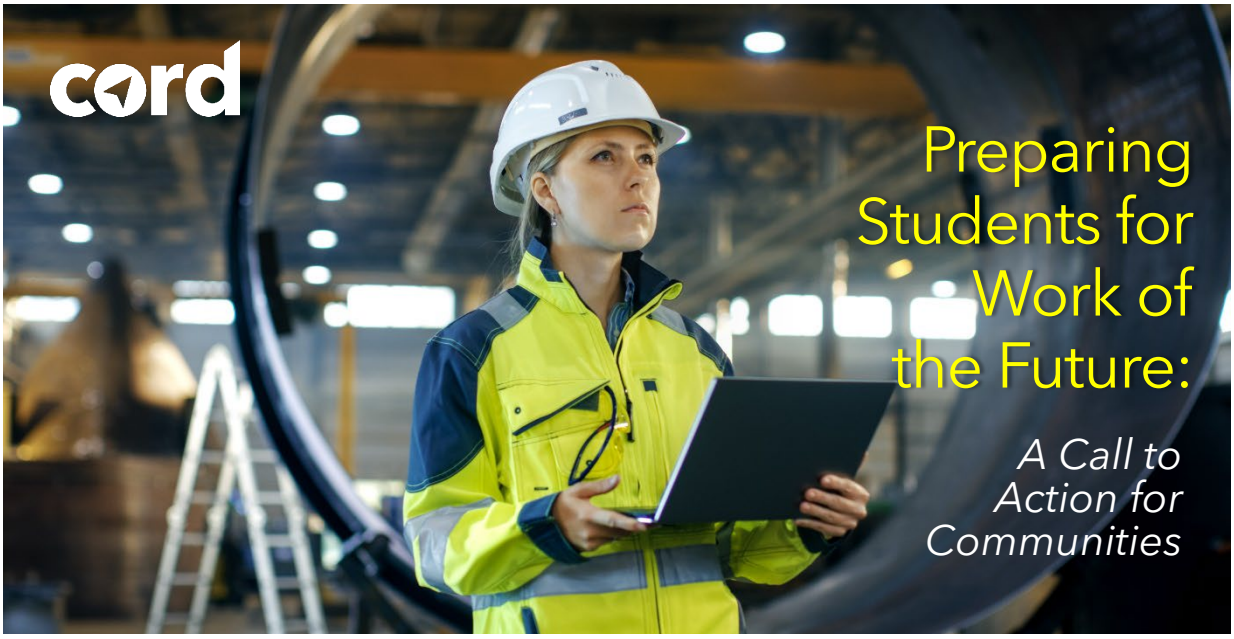


The world of work is evolving like never before. Rapid technological advancement and an accelerating rate of technology adoption are transforming the workplace. Some jobs are disappearing, others are converging, while entirely new ones are emerging. All sectors are experiencing challenges in upskilling and talent retention. As workforce demands continually change, so must the pathways that prepare learners for careers.

CORD's **Framework for Career Pathways Alignment** offers a holistic approach to career pathways development that features an industry-informed ecosystem with a continuous feedback loop, offering communities an organizing structure for talent development initiatives and roles for every stakeholder. The ecosystem comprises partners from K-16 education, business and industry, workforce agencies, and community organizations. Partners are committed to creating seamless pathways from grades 9–16 that support the workforce development needs of the region's employers, economic mobility for students, and a culture of lifelong learning for its citizens. Across the region, partners adopt a collective vision for an ecosystem that removes barriers and prepares all learners for fulfilling careers.

The Framework emerged from best practices identified through CORD-led technical assistance initiatives for the National Science Foundation's Advanced Technological Education program and the US Department of Education's Office of Career, Technical and Adult Education over the past decade. CORD engages communities with tools, best practices, and coaching to facilitate local adoption of the Framework's four components:

1. **Fostering an Ecosystem** of industry, education, workforce agencies, and community organizations that places the evolving skill and personal support needs of a community's learners front and center
2. **Engaging Employers** through a co-leadership approach that yields workforce intelligence at a depth and with a frequency to facilitate continuous program improvement and innovation

3. **Designing Seamless Career Pathways** supporting learners of all ages and skill levels, built on stackable credentials aligned to postsecondary and employment opportunities, and collaboratively developed by educators and employers

4. **Supporting Credential Completion** that recognizes "all learners as learners" by providing credit for prior learning, course schedules, delivery modes and wrap-around services that support working adults, and efficient program design that accelerates credential attainment

Strategic Employer Engagement

Employer engagement is central to career pathway design. Local companies inform program development by sharing specific workforce needs, including skill gaps they are currently facing and anticipated skills the sector will need in the future. The Business & Industry Leadership Team (BILT) model is a proven method for strategic employer engagement created and nurtured by Dr. Ann Beheler during her leadership of the National Science Foundation's (NSF) Convergence Technology Center. The BILT model represents a structured, repeatable business process that allows employers to identify and prioritize the Knowledge, Skills, and Abilities (KSA) program graduates will need 12 to 36 months in the future. The frequency, specificity, and depth of employer input combined with an industry-led governance structure distinguishes BILT from traditional advisory committees. BILTs leverage the subject matter expertise of employers and the teaching expertise of faculty to ensure students graduate workforce ready. In addition to annually prioritizing KSAs, BILT members provide quarterly insights into industry trends, enabling colleges to prepare for changes rather than react to them. Implemented at more than 150 colleges in multiple disciplines, BILT is recognized nationally as a leading model for strategic employer engagement. Through the NSF-supported Pathways to Innovation project, CORD delivers the BILT Academy® training program to support implementation of the BILT model at colleges nationwide.

The benefits of the BILT model to colleges are demonstrated through its outcomes. For example, Forsyth Technical Community College in Winston-Salem, NC adopted the BILT model for its advanced manufacturing programs in 2017. The BILT is guided by a chair and committee members from industry who co-lead initiatives that support program improvement, recruitment, and community engagement. Forsyth Tech's *Learn and Earn Apprenticeship Program* (LEAP) was born with BILT member companies as official partners. LEAP apprentices from diverse backgrounds and experience levels are afforded full-time employment as they enter advanced manufacturing programs at Forsyth Tech. Program enrollment has grown exponentially since the establishment of the BILT. At Miami

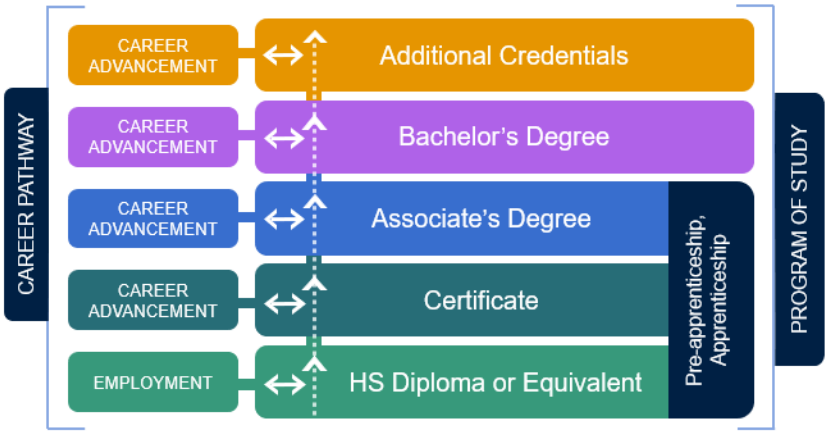
Dade College in Miami, FL, the BILT model has played a critical role in helping to develop programs for emerging technologies like cloud and applied artificial intelligence, as well as to retool the college's cybersecurity program. Demand for these programs has exploded and BILT members continue to provide industry insights that are helping Miami Dade College innovate and evolve to meet workforce demands.

Seamless Career Pathways

An ideal ecosystem is one in which employers and educators collaborate on the design of career pathway programs that efficiently stack credentials from high school to community college to university, as appropriate for a given field. Armed with workforce insights obtained through BILT's structured business processes, local partners can build career pathways curriculum that prepares learners for work of the near future and beyond. The frequency of engagements with employers enables faculty to make incremental updates that help programs keep pace with industry trends.

This holistic approach to pathway design ensures that as learners complete credentials aligned to in-demand employment opportunities, they can secure entry-level employment in their chosen career fields while continuing their education part-time. Or they can secure full-time employment and resume the program when they are ready to pursue the next level of credential or degree attainment. The goal is to facilitate student progress on a pathway, resulting in corresponding career advancement and wage progression.

By bringing together regional partners to develop community-level career pathways with stackable credentials, the ecosystem provides a foundation for continuous learning that promotes workforce readiness and economic mobility. These outcomes are made possible by a system that facilitates credit accumulation and credential attainment by reducing course redundancy and awarding stackable credentials to accelerate a learner's employment opportunities and time to degree. By organizing programs into a sequence of progressive credentials that build on each other, colleges can offer a series of shorter milestones on the way to degree completion. Consider stackable credentials as building blocks for industry-informed career pathways that maximize learners' skill acquisition, investment of



Adapted from *Introduction to Stackable Credentials*, ED-OCTAE

A career pathway system embedded with stackable credentials:

- Provides flexibility for students balancing work and family demands.
- Meets the evolving workforce needs of local industry.
- Helps colleges and communities increase postsecondary credential attainment.

time and financial resources, and employability. But seamless pathways can only be achieved if collaboration happens at the instructional as well as institutional level. As skill demands continue to shift toward increasingly automated workplaces, high schools and colleges will depend on academic and career-technical faculty to build partnerships that support cross-disciplinary connections, employ contextual teaching methods that instruct through real-world problems, and support the development of durable skills such as complex problem solving, teamwork, and adaptability.

Support for Credential Completion
At the core of the Framework for Career Pathways Alignment is the goal of supporting students as they work toward credential completion. Through CORD's technical assistance efforts supporting a stackable credentials approach to career pathways, key strategies have been documented for facilitating student completion:

1. **Scheduling to support earn-and-learn opportunities.** Adopting a range of approaches to scheduling and course sequencing such as offering courses in morning, afternoon and evening shifts, delivering programs one course at a time in a compressed format, offering self-paced learning environments, leveraging online instruction, and working with employers to design apprenticeships and paid internship programs that provide learners the opportunity to graduate with minimal debt and valuable hands-on experience.

2. **Awarding credit for prior learning** (CPL), a proven strategy for increasing credit attainment and degree completion, especially for students facing multiple barriers. Military service, work experience, third-party industry certifications, and internal articulation of noncredit courses to credit are some of the experiences for which students may be awarded CPL.
3. **Making college more affordable.** Working with community partners to leverage federal, state, local, and philanthropic funding, making all program costs (such as tools) eligible for financial aid, and underwriting the cost of industry certification exam fees, are creative, yet impactful ways to lessen the financial burden many learners experience.
4. **Providing holistic student support services.** This involves providing wrap-around support services both in and outside of the classroom to remove barriers that stand in the way of persistence and completion.

Leveraging the Ecosystem:
An employer-informed, student-focused career pathways ecosystem:

- Aligns programs to employer-identified skill needs and technology advancements
- Builds career pathways around stackable credentials aligned to in-demand skills and high-quality jobs with family-sustaining wages
- Guides students through their pathway journey with resources and support that promote success.

As technology continues to advance and local workforce needs evolve, we must rely on and strengthen community partnerships to prepare all learners for work of the future. By leveraging our collective resources, knowledge, and expertise, we can assure more resilient communities for the uncertainties of tomorrow.