STACKABLE CREDENTIAL BLUEPRINT

Building Equitable Pathways Through Employer Talent Collaboratives

A Jefferson County Guide

COLORADO SUCCEEDS

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Executive Summary

This blueprint lays out a process for creating stackable credential pathways for in-demand jobs that **require education beyond high school but not necessarily a four-year degree** *(so-called "middle-skills jobs")*. Jobs in this category make up the largest part of the labor market in Jefferson County (Jeffco), a large suburb of 570,000 residents west of Denver. These are the construction workers who maintain infrastructure and repair our homes, healthcare technicians who care for our children, paramedics and wildland firefighters who protect us, and the machinists, electricians, and computer network specialists who keep our economy running.

According to the Education to Employment Alliance,[1] in Colorado, nearly half (49%) of the jobs require skills training beyond a high school diploma, but not a four-year degree. However, too few Coloradans of working age—only 15%—have middle-skill credentials, creating a huge opportunity divide. In Jeffco, this crippling skills gap is felt across construction and other skilled trades, advanced manufacturing, health care, and information technology, where the worker shortage is acute. To strategically address these gaps, well-designed stackable pathways provide modular bridges that link incrementally into higher-level degrees and credentials.

This blueprint outlines **five evidence-informed steps** for identifying, creating, and sustaining stackable pathways for Jeffco opportunity seekers. The steps leverage deep employer engagement, leading to long-term partnerships with local training providers, and offering clear, accessible on-ramps to high-quality jobs and economic mobility.

5-STEP BLUEPRINT

1. **Utilize Employer Talent Collaboratives**
2. **Conduct Critical Demand Planning**
3. **Clearly Communicate KSA & Credential Requirements**
4. **Map Quality, In-Demand Pathways**
5. **Measure Results, Scale and Replicate**

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Introduction

Workforce development continues to be a pressing issue across Colorado and Jeffco for businesses, educators, and opportunity seekers. According to Colorado's Talent Pipeline Report[2] in 2022, 91.4% of jobs that pay a wage sufficient to sustain a family require some postsecondary education past a high school diploma. However, 60-70% of Colorado high school graduates never complete a postsecondary credential.[3]

Stackable pathways offer a solution to this disconnect, meeting both the needs of employers and learners. Stackable Pathways are a series of shorter-term modular qualifications or certifications that individuals can earn and combine to progress in their education or career. These credentials can be issued by educational institutions, training centers, or industry associations and they provide a flexible way for learners to gain relevant skills and knowledge without committing to a full degree program. Stackable credentials can take various forms, such as certificates, badges, micro-credentials, or digital certifications. They exist as part of a sequence of credentials that learners can accumulate over time to build skills and advance their careers and earnings.

In an era marked by rapid technological advancements and dynamic shifts in the Colorado job market, traditional educational pathways are no longer sufficient for our changing workforce. Quality, affordable, and accessible stackable pathways are a viable solution. They provide adult learners the chance to accumulate a series of smaller credentials that may be stacked towards a larger degree or serve as standalone qualifications. Stackable pathways are critical bridges to eliminate opportunity gaps across Jeffco—connecting opportunity seekers and employers more holistically.

This Five-Step Stackable Pathway Blueprint is designed for workforce intermediaries and employers engaged in comprehensive end-to-end talent development. This includes creating inclusive pathways, upskilling current employees, and creating new work-based learning opportunities such as job shadows, internships, and apprenticeships. It provides systematic collaboration tools to coordinate with the entire spectrum of training providers to create on-ramps to jobs that provide family-sustaining wages for Jeffco adult learners.

KEY BLUEPRINT DEFINITIONS

Critical Occupations
Occupations identified by the industry as being necessary for economic growth and competitiveness. These are occupations for which the industry may be facing shortages, difficulties in hiring or retention, or are occupations needed for a comprehensive career pathway that may be supported through stackable pathways.

Employer Talent Collaborative
A dedicated partnership of employers organized to address shared workforce needs. An employer-facing workforce intermediary, endorsed by employers, supports the collaborative.

Equity
The creation of opportunities for historically underrepresented populations to ensure equal access to and participation in education/skills training programs that help eliminate gaps in learner success and completion.

Opportunity Gap
The term used in this blueprint to describe the lack of equitable access to education, employment opportunities and career advancement—directly connected to poverty, gender, and race.

Opportunity Seekers
Term used within this blueprint to refer to underrepresented and underemployed *adult learners/workers (18+)* in Jeffco currently making less than $40K/year.

Self-Sufficiency Standard
This measure describes how much income families of various sizes and compositions need to make ends meet without public or private assistance in Jeffco.[4]

Stackable Credential Pathways
Credentials that purposefully stack into other credentials, forming a credentialing pathway. These credentials can be non-credit, certificates, skills badges, licenses, certifications, degrees, and other types. In this report we will use the term "stackable pathways" to represent these incremental credentials.

Workforce Intermediary
The entity that houses and provides the staff and management support for one or more employer talent collaboratives. They are business-facing organizations (e.g., chambers of commerce, industry sector-based associations) or economic development organizations dedicated to business growth and competitiveness.

The Challenge

Today, too few Jeffco opportunity seekers have access to skills training that leads to a self-sufficiency wage for themselves and their families.[5] ***An analysis of regional occupational data demonstrates that the economic insecurity faced by many residents does not reflect a lack of work effort or lack of interest in skills training. There is not a talent gap in Jeffco as much as there is an opportunity gap.***

In 2021, only 55% of Jefferson County high-school students went on to higher education upon graduation. The county has seen a steady decline of more than 10 percentage points over the last decade.[6] Traditional linear pathways must make way for more flexible learning models, with stackable credentials at the forefront of this evolution. However, to create truly equitable stackable pathways, it is essential to center the voice of workers and learners in both the design and implementation of these pathways. Opportunity seekers need better access to short-term programs with clear information about costs, debt, and outcomes.

WHY THIS BLUEPRINT?

To fill growing gaps between talent needed and talent available, employers are increasingly seeking more direct partnerships with workers and education providers via earn-and-learn models like apprenticeships.[7] Jeffco's business leaders and training providers must unite with intermediaries, community partners, and government agencies to synchronize educational offerings with career-development pathways. Now is the time to be laser-focused on Jeffco's growing credential attainment and skills training equity gaps. And to identify and scale stackable pathway solutions that meet the unique needs and values of opportunity seekers who remain overlooked and underemployed. The foundational approaches to solving this are: lowering credential costs and decreasing the time to credential completion. This blueprint provides a five-step process to accomplish both.

BENEFITS OF STACKABLE PATHWAYS

1. Reduce susceptibility to economic disruption and displacement.
2. Credentials can serve as a path to economic mobility, when connected to labor market demand.
3. Earning potential is further magnified when students earn associate and bachelor's degrees.

Fast Facts

JEFFCO—ECONOMIC & DEMOGRAPHIC SNAPSHOT[8]

570K
Population

$44K
Income Per Capita

54.8%
Population with less than a bachelor's degree

9.43%
Population identified as People of Color

2.5%
Unemployment Rate

JEFFCO SELF-SUFFICIENCY WAGES[9]

$38K ($18+/hr)

$76K ($35+/hr)

$91K ($43+/hr)

$114K ($27+/hr x2)

JEFFCO OPPORTUNITY GAPS

31,154 individuals (ages 16+) live below the poverty line ($23,030)

50% of these individuals worked full- or part-time jobs in the last 12 months

Percentage of demographic below the poverty level

25.8% Black
9.1% Hispanic or Latine/o
5.7% White

Centering Equity & Learner Voice

To create truly inclusive and learner-centered pathways, it is essential to center equity and learners' voice in the design and implementation of stackable credentials. Equity in stackable pathways is not merely a moral imperative; it also has far-reaching societal and economic implications. According to the Greater Washington Partnership, *"data shows that more inclusive economies create a better economic future for everyone, helping to harness local potential, build resiliency, and attract talent and investment."*[10]

To center equity and learner voice, we partnered with Young Invincibles to engage more than four hundred adults ages 18–44, across Jeffco. Qualitative and quantitative data painted a vivid picture of these key barriers to accessing stackable pathways.

ADULT LEARNER INSIGHTS: SPOTLIGHTING THE REAL-WORLD IMPLICATIONS OF STACKABLE PATHWAYS

ADULT LEARNER #1

"I felt lost and at times like the degree I was going for was not quite what I wanted to develop my skills in. Experiential learning is something that I got very little of until I went to community college, but it was the most profound and impactful [experience] for me. I started with an esteemed 4-year private college and got my best education from a community college."

LIFE CONTEXT
This learner lost financial aid halfway through her 4-year college experience. She withdrew and was forced to re-evaluate options. She decided to return to community college and says that it was the best thing that could have happened—due to her positive work-based learning experiences.

ADULT LEARNER #2

"When I transferred schools, due to institutional policies I had to take 25% more classes than other students had to. This was about six more classes (18 credits) which is a financial burden as well as time burden. I felt it to be very inequitable to make students take additional classes because they have to transfer institutions when similar curriculum is being taught; to me it felt like only a way to take students' money and leave them in additional debt."

LIFE CONTEXT
When transferring universities, this social work student lost credit for most of the classes she had already completed. Stackable credentials, in an ideal world, could mitigate this by making credentials transferable and portable.

ADULT LEARNER #3

"When I graduated from high school, I wanted to be a civil engineer, and [went to] community college to start that path. When I had my son, I knew I needed to make money and find a career path that I could build on. The benefits, pay, learning opportunities, no debt, and building with my hands were the top factors for pursuing a skilled trades apprenticeship."

LIFE CONTEXT
This student was considering "pre-engineering" in high school. When she was introduced to the tuition-free electrical apprenticeship pathway, she elected to pursue this credential of value as a strategic alternative to a 4-year degree.

Barriers Faced by Adult Learners

Key takeaways from the learner interviews Young Invincibles conducted with adults across Jeffco highlighted specific barriers to accessing stackable pathways. Workforce intermediaries should consider how strategically designed stackable pathways can solve these. Additional learner-centered strategies include, clearly communicating stackable pathways directly to opportunity seekers, high-quality remote/hybrid training offerings and robust student-centered wrap around services.[11]

TOP IDENTIFIED BARRIERS

Financial

- Non-credit programs are not eligible for financial aid.
- The cost of higher education is out of reach.
- Not receiving college credits for prior knowledge and experience escalates costs.
- High cost of textbooks and other course materials.

Flexibility

- Insufficient evening and weekend classes for those with full-time jobs.
- Need more industry-validated hybrid program offerings, short-term boot camps, and apprenticeship opportunities.[12]

Quality of Programs/Services

- Lack of faculty engagement, especially in online classes.
- Ineffective Academic Advising (and sometimes misleading).

Career Relevant Guidance

- Access to short- and long-term professional networks.
- Direct connections to employers.
- Lack of internships and other high-impact work-based learning opportunities.
- Lack of effective career guidance and post-graduation placement assistance.

Many of these barriers may be addressed by utilizing this Five-Step Stackable Pathways Blueprint to deepen and expand employer partnerships with industry-validated training providers, such as ActivateWork, CrossPurpose, Master's Apprentice and Climb Hire (BetterOffer.org). Additionally, Red Rocks Community College, Front Range Community College, CU Denver and Metropolitan State University of Denver continue to offer high-value programs. However, it is critical that credentials from these training providers stack into each other, allowing learners to customize the pathway to their life circumstances. Higher education institutions and training providers must collaborate across systems to ensure that pathways become seamlessly integrated.

Jeffco Stackable Pathways Blueprint

To ensure that stackable credentials are valuable to adult learners in the job market, they must align closely with industry requirements. Consistent consultation with industry experts and stakeholders is crucial for maintaining relevance. Employers play a pivotal role in co-creation by shaping stackable pathway curation, curriculum, and market recognition.

This blueprint outlines a five-step process for deeply engaging employers and training providers to identify and scale stackable pathways alongside training providers that provide opportunity seekers self-sufficiency wages, resilience, and shared prosperity—a social and economic force multiplier for the region.

These steps include:

1. **Utilize Employer Talent Collaboratives**
2. **Conduct Critical Demand Planning**
3. **Clearly Communicate KSA & Credential Requirements**
4. **Map Quality, In-Demand Pathways**
5. **Measure Results, Scale and Replicate**

Step 1: Utilize Employer Talent Collaboratives

Employer Talent Collaboratives
Employer Talent Collaboratives (ETCs) are partnerships organized to collectively address shared workforce needs. Sector-based industry associations, chambers, and other organizations dedicated to business growth and transparent learner pathways are strongly positioned to serve in this "backbone" role.

In addition to being a business-facing intermediary, ETC hosts must have strong relationships with training providers across the spectrum—from K12 to postsecondary and traditional to nontraditional. They need the expertise and relationships to connect employers with training providers, to co-create and validate stackable pathways.

Finally, workforce intermediaries must understand the critical role equity and access play in creating and sustaining a balanced and robust workforce ecosystem in their region. They need to create deep community partnerships, with organizations such as the Edgewater Collective, Red Rocks Community College and Jeffco Public Schools, to connect ETCs directly with potential learners and families on the ground.

Determine Sustainable Financing
Workforce intermediaries must be sustainably staffed and financed. Multiple financing models can be explored, including employer dues, seed money from philanthropy and the state, or a combination of all of these. Workforce Intermediary ETC Financing models include business member dues, business donations and seed funding from government, foundations, or business associations.

The most significant up-front cost and commitment is staff time. Whether a region is starting its first ETC as a new initiative or building from an existing initiative, the selected workforce intermediary (chosen/endorsed by employers) should provide the necessary staff time (with or without seed funding) to run the collaborative. To create and sustain viable stackable pathways that are mutually beneficial to employers and learners, adequately staffing a workforce intermediary to coordinate ETCs effectively is critical.

For instance, an industry association could hire a dedicated "Director of Talent Pathways," to lead/manage this work. Dedicated staff time, focus, and project management are required to develop long-term trust, collect, and analyze data for in-depth demand planning, and broker relationships and connections between multiple training providers. It is imperative for an ETC workforce intermediary to budget for staff time needed to establish and facilitate ETCs, as well as the ongoing capacity to support them as they mature.

Focus & Scope: What problem are you solving?
Identifying the ***critical occupations*** in Jeffco that offer ***equitable stackable*** pathways to self-sufficiency wages must be grounded in data. Data from the labor market information tools, such as the Talent Pipeline Report, TalentFound Dashboard, and LMI Gateway should be collected and analyzed to determine the initial career pathways to focus an ETC on.

Employer Workforce Collaborative members can be organized through various frameworks such as industry (construction, healthcare, manufacturing) or by cross-cutting pathways that span multiple industries (Marketing, Accounting, IT, CleanTech, Quantum Computing, etc.).

CORE QUESTIONS

These are the core questions that an ETC will work through in the Five-Step Stackable Pathways Blueprint process.

- **How Many:** How many job openings do we have?
- **Where:** Where are these job openings?
- **When:** When do we need these jobs filled?
- **KSAs:** What Knowledge, Skills, and Attitudes are required to perform these jobs?
- **Credentials:** What credentials are needed, and from which training provider(s)?

Recommendations

- Ensure that workforce development and stackable pathways align with the workforce intermediary's organizational mission.
- Develop a sustainable funding model for workforce intermediary to adequately staff and manage ETCs.
- Create an "Application to Participate" to curate employer champions prepared to "do the work."
- Align ETCs around shared pain points, e.g., unfilled jobs, onboarding/training costs, upskilling/retention, Diversity, Equity and inclusion, etc.

Step 2: Engage in Critical Demand Planning

In Step 2, ETCs will answer these questions by integrating publically available workforce data with primary data directly from employers. This data-driven approach will ensure the employer's most critical business functions are prioritized, and the exact roles required to address them are identified and agreed upon.

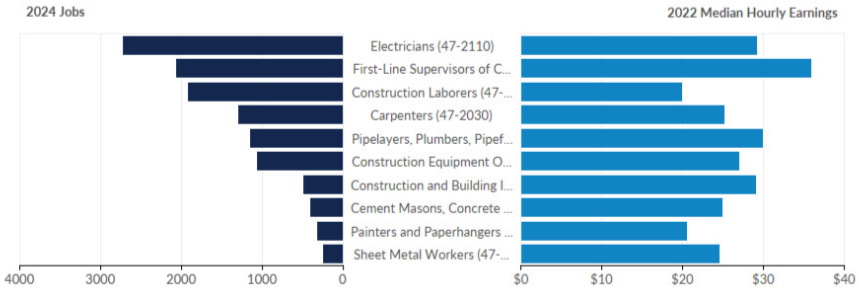
Demand Planning: Key Questions

- Have you collected, analyzed and validated regional labor market data?
- Which jobs/roles are most critical for your business success right now?
- Do you use "skills-based" hiring to increase access to opportunity seekers and improve diversity?
- Do these jobs provide strong career opportunities?
- Are these jobs difficult to fill, and/or is competition for these jobs problematic?
- Can we do a better job in filling critical jobs by upskilling current employees and providing stronger career pathway opportunities from entry-level jobs?

Jeffco Labor Market Data

Across Construction/Trades, Healthcare, Advanced Manufacturing, and IT, these are the largest occupations in Jeffco (2023–2030), most of which do not require a bachelor's degree.

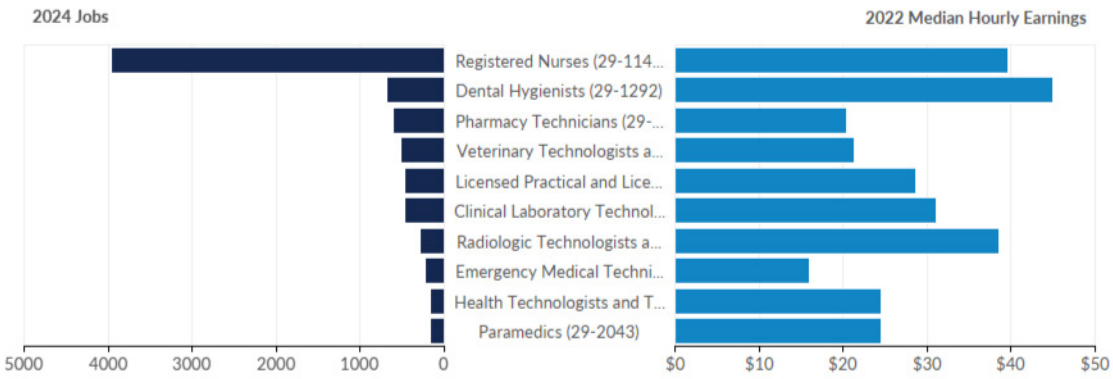
CONSTRUCTION/TRADES



Occupation	2024 Jobs	2030 Jobs	Change in Jobs (2024-2030)	% Change	2022 Median Hourly Earnings
Electricians	2,734	3,000	266	10%	$29.26
First-Line Supervisors of Construction Trades and Extraction Workers	2,071	2,151	80	4%	$36.00
Construction Laborers	1,923	2,042	119	6%	$20.01
Carpenters	1,306	1,344	38	3%	$25.29
Pipelayers, Plumbers, Pipefitters, and Steamfitters	1,164	1,270	106	9%	$30.00
Construction Equipment Operators	1,070	1,106	36	3%	$27.09
Construction and Building Inspectors	505	520	15	3%	$29.09
Cement Masons, Concrete Finishers, and Terrazzo Workers	415	380	-35	-8%	$25.00
Painters and Paperhangers	331	313	-18	-5%	$20.63
Sheet Metal Workers	257	263	6	2%	$24.68

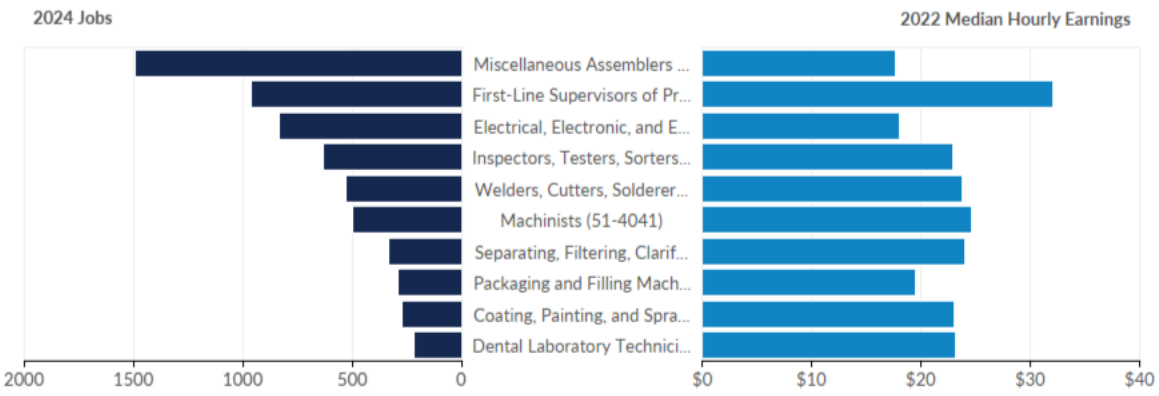
Analyze Occupational Projections (secondary labor data). Source: Lightcast Q4 2023 Data Set, Nov. 2023

HEALTHCARE



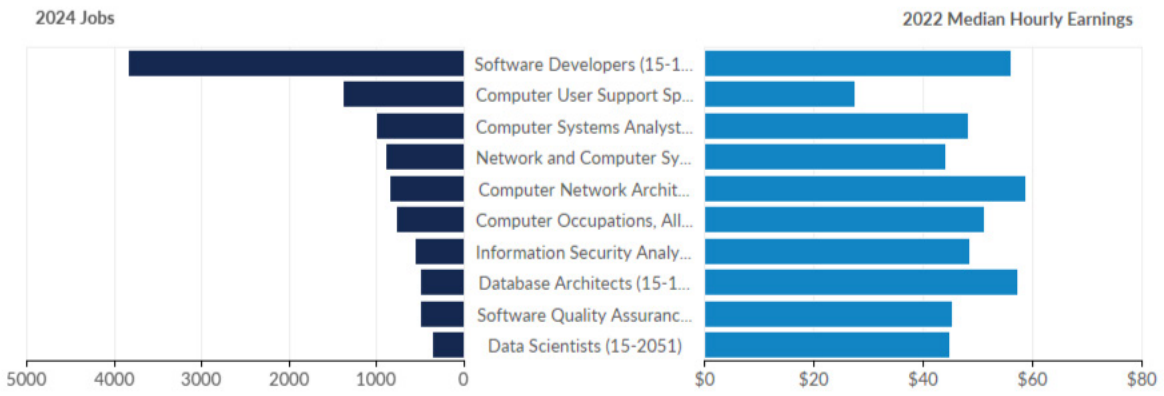
Occupation	2024 Jobs	2030 Jobs	Change in Jobs (2024-2030)	% Change	2022 Median Hourly Earnings
Registered Nurses	3,968	4,168	200	5%	$39.68
Dental Hygienists	693	693	0	0%	$44.96
Pharmacy Technicians	612	678	66	11%	$20.35
Veterinary Technologists and Technicians	515	576	61	12%	$21.41
Licensed Practical and Licensed Vocational Nurses	477	507	30	6%	$28.65
Clinical Laboratory Technologists and Technicians	468	500	32	7%	$31.09
Radiologic Technologists and Technicians	282	301	19	7%	$38.61
Emergency Medical Technicians	233	252	19	8%	$16.05
Health Technologists and Technicians, All Other	168	178	10	6%	$24.57
Paramedics	162	173	11	7%	$24.55

ADVANCED MANUFACTURING



Occupation	2024 Jobs	2030 Jobs	Change in Jobs (2024-2030)	% Change	2022 Median Hourly Earnings
Miscellaneous Assemblers and Fabricators	1,496	1,481	-15	-1%	$17.63
First-Line Supervisors of Production and Operating Workers	961	969	8	1%	$32.05
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	835	890	55	7%	$18.06
Inspectors, Testers, Sorters, Samplers, and Weighers	632	637	5	1%	$22.97
Welders, Cutters, Solderers, and Brazers	528	548	20	4%	$23.73
Machinists	501	510	9	2%	$24.65
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	337	305	-32	-9%	$24.04
Packaging and Filling Machine Operators and Tenders	294	296	2	1%	$19.52
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	272	271	-1	0%	$23.00
Dental Laboratory Technicians	221	200	-21	-10%	$23.16

INFORMATION TECHNOLOGY



Occupation	2024 Jobs	2030 Jobs	Change in Jobs (2024-2030)	% Change	2022 Median Hourly Earnings
Software Developers	3,834	4,435	601	16%	$56.06
Computer User Support Specialists	1,385	1,495	110	8%	$27.48
Computer Systems Analysts	1,011	1,106	95	9%	$48.24
Network and Computer Systems Administrators	899	931	32	4%	$44.23
Computer Network Architects	852	869	17	2%	$58.80
Computer Occupations, All Other	777	843	66	8%	$51.10
Information Security Analysts	559	642	83	15%	$48.46
Database Architects	501	518	17	3%	$57.28
Software Quality Assurance Analysts and Testers	501	565	64	13%	$45.36
Data Scientists	363	429	66	18%	$44.94

Recommendations

- Compare primary labor data directly from ETC member Human Resource Information Systems to a). validate secondary labor market data (LMI Gateway, Talent Pipeline Report, etc.) b). achieve initial consensus the pathways (jobs) to prioritize.
- Ensure that stackable pathways provide opportunity seekers permeable movement up a career ladder and/or across existing academic and training programs (within or across training providers), without loss of credit.
- Utilize this Five-Step Blueprint to create a regional approach to forming and supporting ETCs to create stackable pathways in Healthcare and IT in 2024.

Step 3: Clearly Communicate KSA/Credential Requirements

KSA Analysis
ETC employers must first establish a common language in describing work tasks, knowledge, skills, and attitudes (KSAs) for the top 3–4 critical jobs. KSAs are simply a cluster of competencies essential for performing a particular job's daily tasks.

Common agreement on Core KSAs
ETCs may use this Blueprint to create a shared language and clearly articulate KSA requirements for specific jobs. According to the World Economic Forum , "traditional degree-based hiring practices can potentially exclude diverse and relevant talent from the workforce. Aligning on a common language for skills will enable employers to better understand workforce needs and hire based on skills acquisition, rather than on social factors such as networks and access to recognized institutions."

When employers drop degrees, they become more specific about skills in job postings, spelling out the soft skills that may have been assumed to come with a college education, such as writing, communication, and being detail oriented.

According to the Harvard Project on Workforce[15], *"this reset could have major implications for how employers find talent and open opportunities for the two-thirds of Americans without a college education. Based on these trends, we project that an additional 1.4 million jobs could open to workers without college degrees over the next five years."*

Competencies
Collection of Knowledge, Skills, and Attitudes (KSAs) that enable an individual to perform job roles.

Knowledge & Skills
Skills are the capabilities needed to complete a task, and therefore a job.

- Industry/Discipline Knowledge (signaled through credentials of value)
- Reading/Writing/Speaking/Number Facility
- Creative Thinking
- Data Analysis & Math

Attitudes
Learned behaviors, emotional intelligence traits and beliefs that individuals exhibit that influence their approach to ideas, persons, and situations.

- Self-Awareness
- Initiative
- Working Independently
- Attention to Detail
- Time Management

Recommendations

- Eliminate degree requirements and other credentials that are not necessary for the job; focus on applicant KSAs instead.
- Shorten and simplify job applications.
- Tap into training to become a “Skill-Based” hiring employer.
- Remove candidate identifiers from applications before review to minimize bias.
- Use drug testing only when required.
- Use standard questions, rubrics, and assessments that aim to minimize bias and identify specific work styles and skills needed for the job.

Step 4: Map Quality, In-Demand Pathways

Before creating new programs, ETCs should partner with existing outcomes-driven training programs that are being underutilized and determine the reason(s) for their underutilization. Is it awareness, cost, location, time? These programs can then be refined, stacked and scaled by synchronizing the demand-side (employers) with the supply-side (learners) to achieve maximum pathway efficiency and equilibrium. To better understand the design and implementation of stackable pathways, it is useful to examine these existing programs in Jeffco—each primed to become quality stackable pathways.

Stackable Pathway Maps

- Construction (stacking in progress)
- Information Technology (example only)
- Healthcare (example only)
- Advanced Manufacturing (example only)

Each of these pathways has strong employment outcomes that lead to family-sustaining wages for opportunity seekers. Adult learners who work full-time require ETCs to not only introduce them to these opportunities but also provide internships and apprenticeships, enabling earning and learning simultaneously. Many Jeffco adult learners interested in these programs will have to do so while working 40+ hours per week—a huge lift. By communicating the promise of these existing high-quality pathways and intentionally constructing additional stackable pathways, ETCs can begin to source more homegrown talent, eager to fill in-demand positions via affordable, modular training programs.

Identify Aligned & Agile Training Providers

Jeffco is fortunate to have multiple high-quality, in-demand, industry-aligned programs from Red Rocks Community College, Front Range Community College, Metropolitan State University of Denver, and many others. Additionally, training providers such as CrossPurpose are expanding their footprint into Jeffco, and ActivateWork programs are accessible to opportunity seekers from across the metro region.

By leveraging this blueprint, ETCs can clearly communicate their workforce needs and future job opening projections to training providers—along with their KSA and credential requirements. Without this clear, unified detail on what employers need "on the ground," training providers will be unable to make nimble programmatic and curricular upgrades. ETCs provide a data-driven process and place for local training providers to plug in and co-create seamless stackable pathways—marrying industry KSA needs to training providers, curriculum, and opportunity seekers in real time.

Internal Company Career Mapping
Once adult learners have clear access to high-quality, entry-level employment, it is imperative that they also have advancement opportunities within the organization (or externally across the industry). Jeffco employers can utilize ETCs to transparently map out career pathways for their organization, detailing the experience, skills, and credentials needed for mobility across the organizational chart.

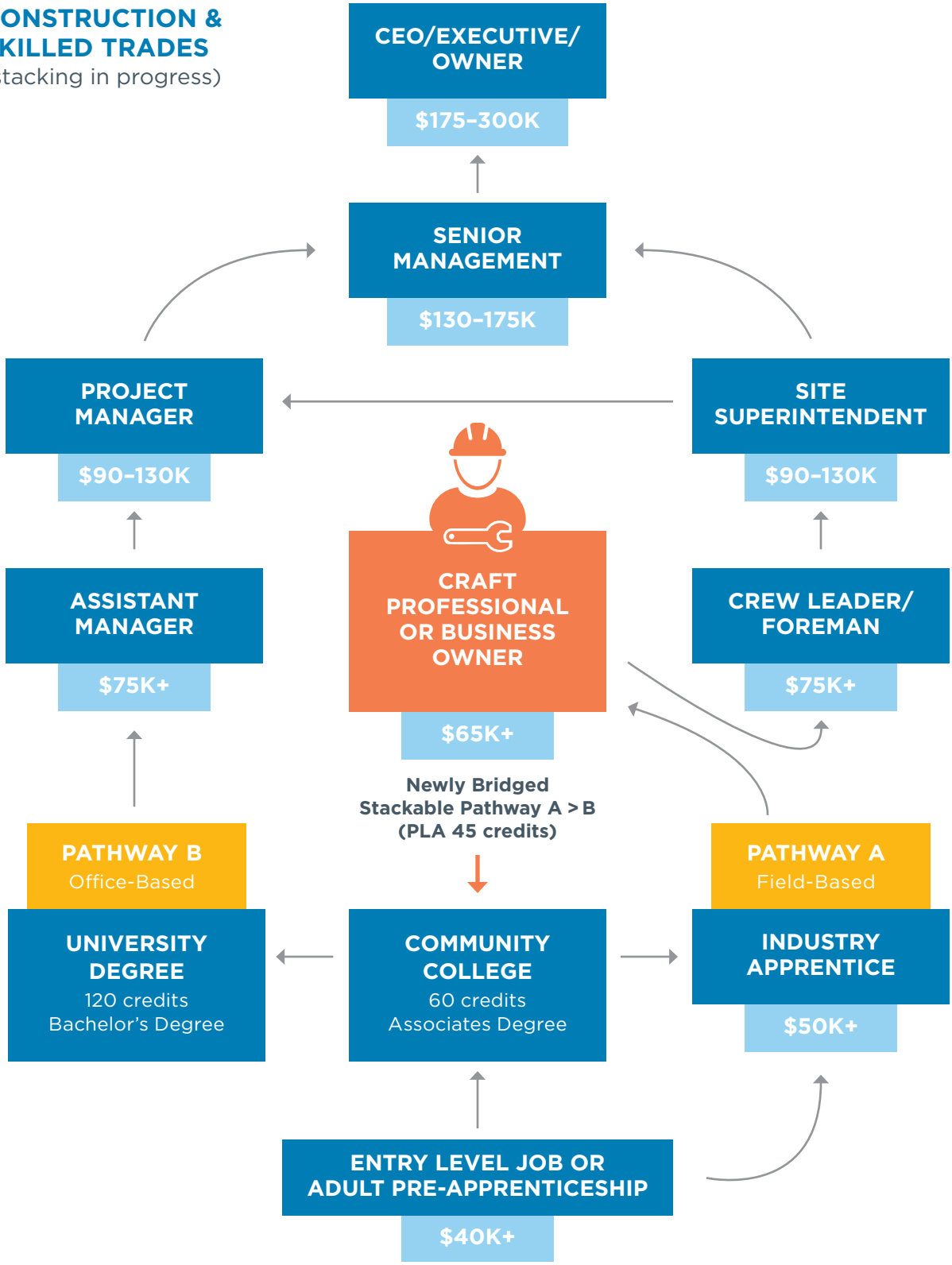
Recommendations

- Create a one-year project plan—outlining roles and activities for all partners—including when and how you will integrate training providers into the process, to collaborative on each step.
- Share data with preferred providers hear from preferred providers on their aligned needs and opportunities to partner more closely
- Establish employer-led partnerships and agree on next steps and commitments for co- designing stackable pathways. Develop a scorecard and decide who is responsible for which measures.
- Closely partner with community-based organizations to provide additional on-ramps for opportunity seekers and map their training programs into higher-level degrees when possible.

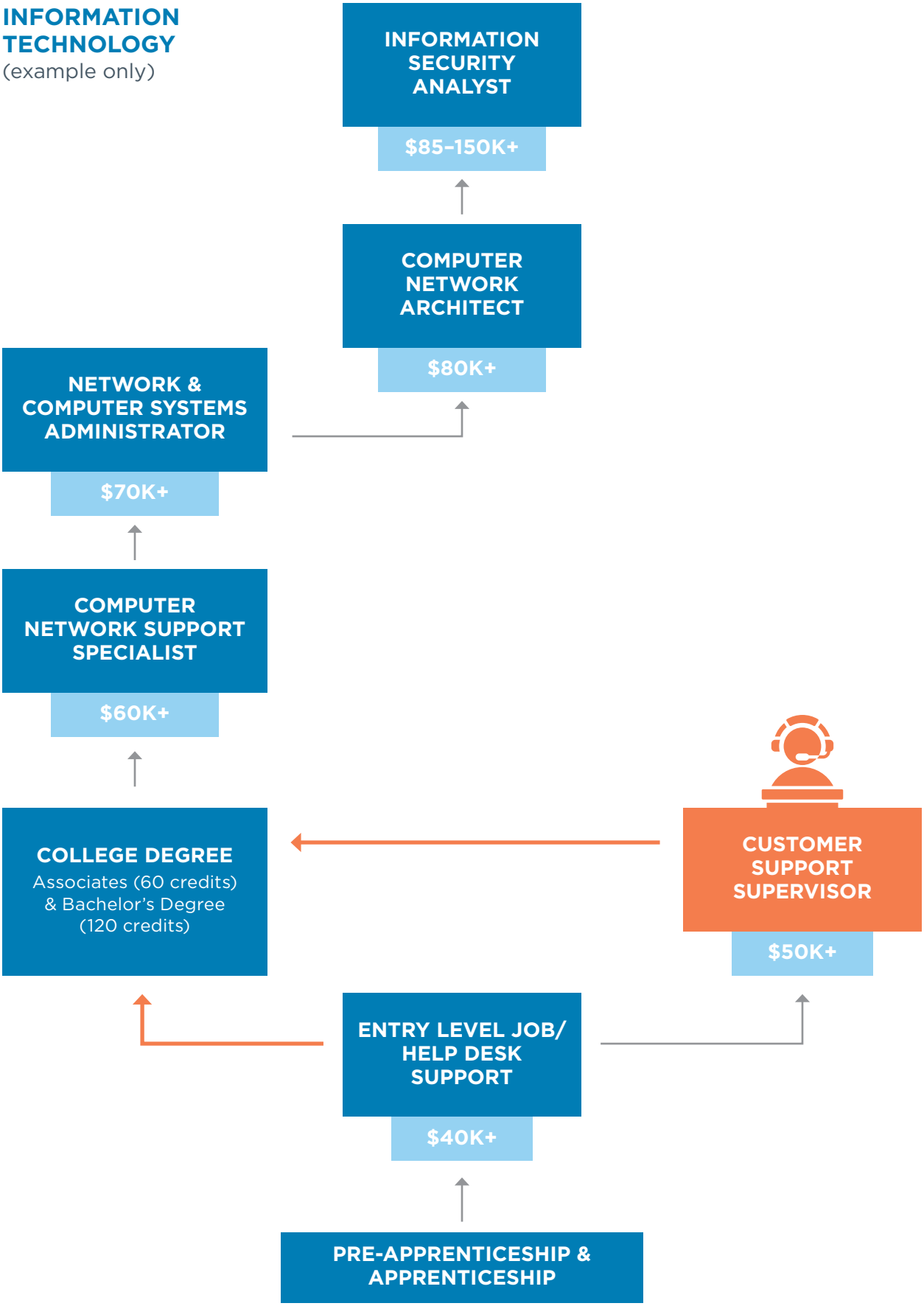
Jeffco Stackable Pathway Maps

This new stackable credential pathway affords more bridging options to select the route/ position that fulfills opportunity seekers' goals and interests.

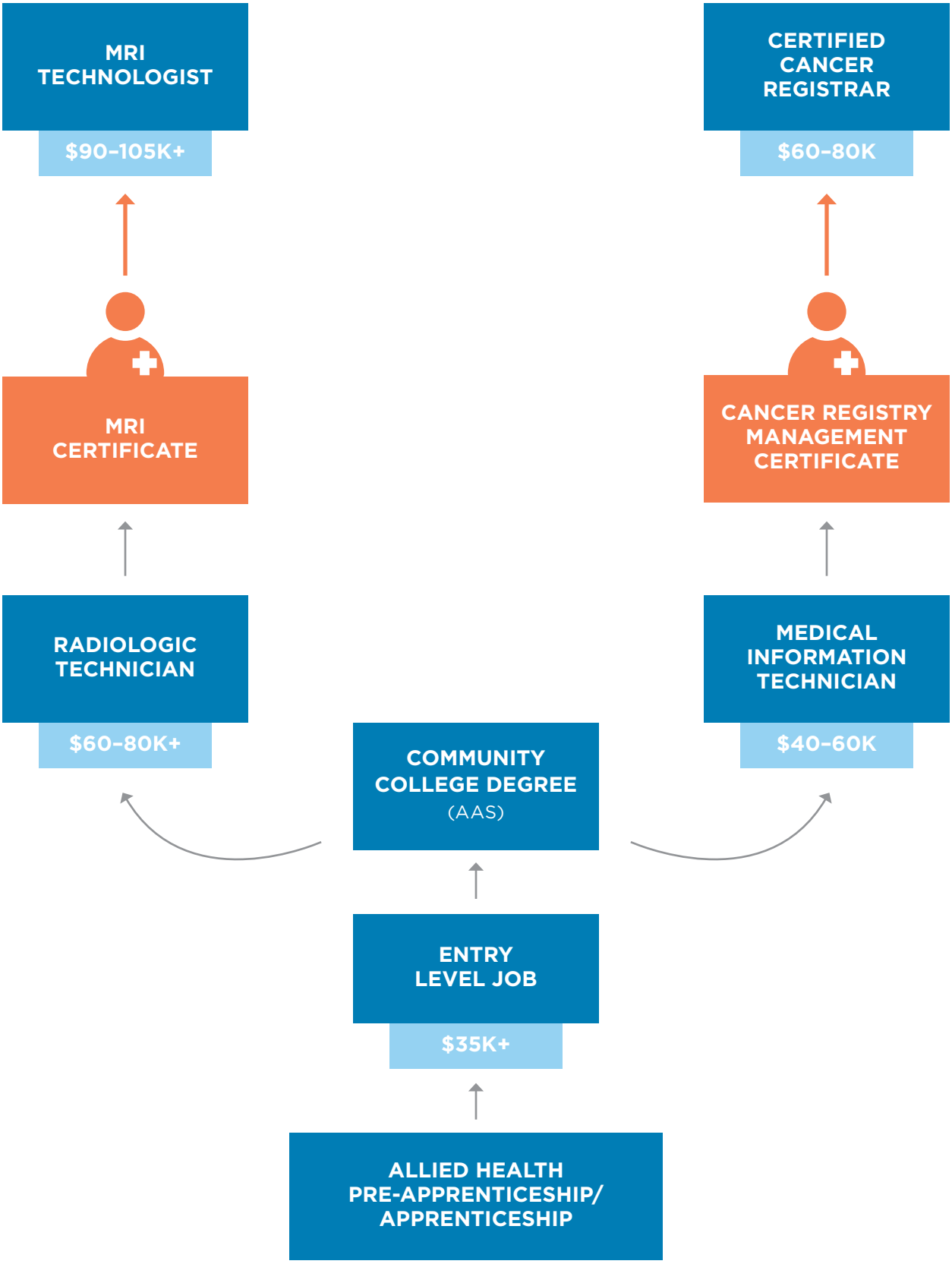
CONSTRUCTION & SKILLED TRADES
(stacking in progress)



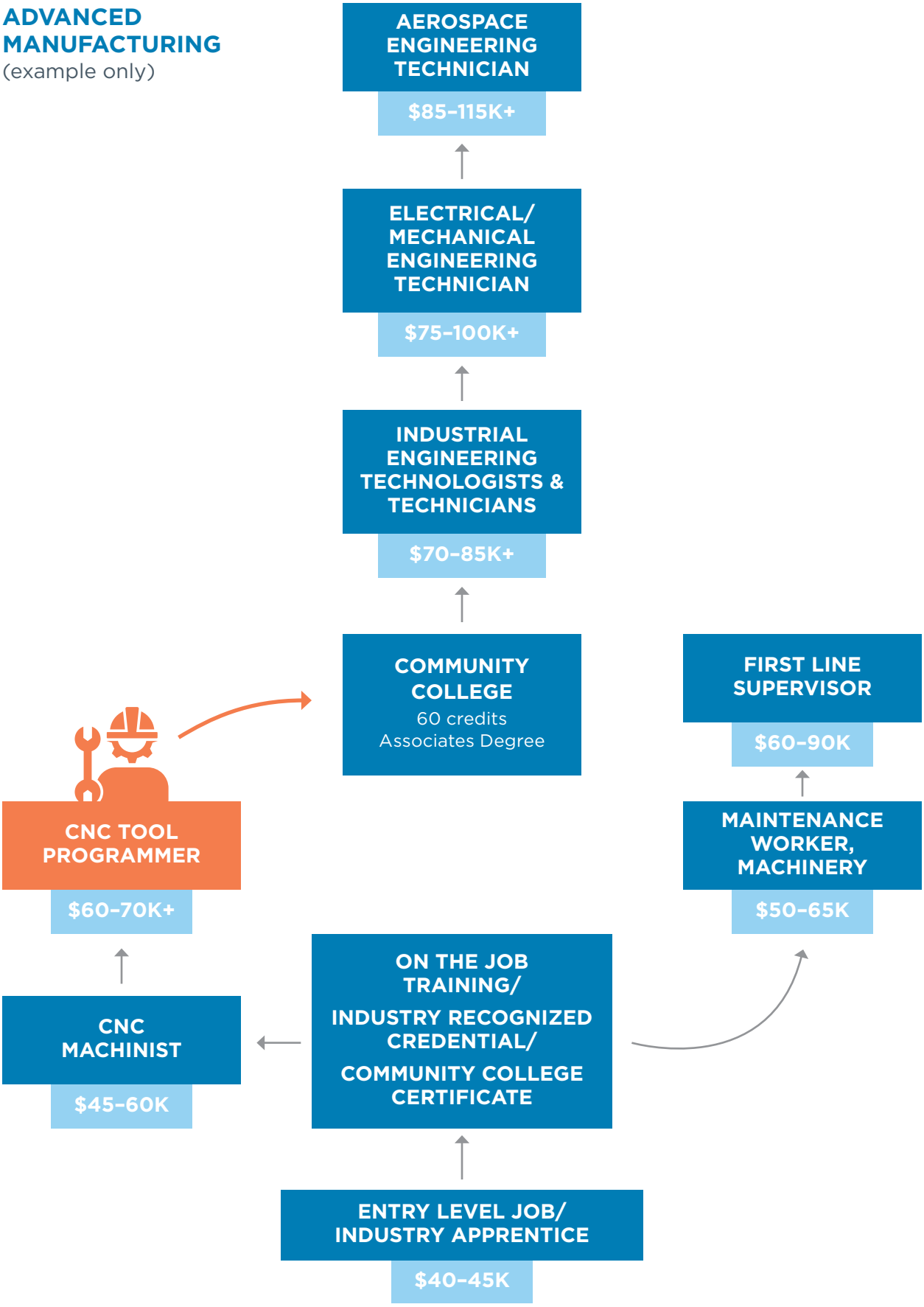
INFORMATION TECHNOLOGY
(example only)



HEALTHCARE
(example only)



ADVANCED MANUFACTURING
(example only)



Step 5: Measure Results, Scale, and Replicate

Key to stackable pathways success is determining which performance measures are most important to track. These measures create a clear map between opportunity seeker access to stackable pathways and the relationship to business performance metrics over time. Tracking longitudinal performance metrics will be conducted by the ETC, which will provide critical data points on where stackable pathways can be improved and scaled. Example metrics for employers include:

Equity & Access

- Percentage of existing employees that represent local, under-utilized populations.
- Percentage of recent hires and/or qualified applicants from local, under-utilized populations.
- Percentage of employees advancing in careers from local, under-sourced populations.
- Percentage of employees retained from local, under-sourced populations (> 9 months)

Unfilled Openings

- Cost per hire.
- Average number of days between initial job posting and hire.
- Percentage of specific training providers' referred applicants meeting hiring requirements.

Onboarding Costs

- Percentage of hires meeting employer performance goals within 6 months of hire.
- Costs of onboarding to meet performance goals.
- Costs of supplemental training to upgrade current and/or new workers.

Upskilling & Retention Costs

- Percentage of workers from feeder jobs moved into critical jobs after a defined time (e.g., 6-12 months)
- Percentage of new hires retained in employment after defined time (e.g., 9-12 months)
- Cost of turnover within a defined time (e.g., > 9 months)

Skills-Based Hiring: Maximizing Stackable Pathways

Additionally, skills-based hiring provides a mechanism for companies to close important skill gaps and compete in a tight labor market by expanding the pool of candidates and the aperture of their recruitment lens.

Scale & Replicate
To create long-term, learner-centered stackable pathways, it is essential to utilize these tools to replicate and scale. This Five-Step Blueprint may be used across multiple industries (IT, healthcare, cleantech, aerospace, etc.) both in Jeffco and statewide using these tools:

- **Articulation Agreements**—Institutional partnerships or articulation agreements can facilitate the seamless transfer of credits between different educational providers. These agreements need to be system-wide (across 2 and 4-year public colleges) to enhance the portability of stackable credentials, allowing learners to stack credits obtained from various sources.
- **Prior Learning Assessment**—Support statewide efforts in counting non-degree credentials and explore opportunities for Prior Learning Assessment (PLA) connected to work-based learning experiences. Increase the use of Prior Learning Assessment (PLA) among the CCCS colleges to crosswalk pre-apprenticeship and apprenticeship, Department of Regulatory Agencies licensing, and military experiences relevant to construction, manufacturing, technology and healthcare fields at Red Rocks Community College and Front Range Community College. (see resources below).

Replicate and Scale Stackable Pathways across Industries
Currently, Advanced Manufacturing and Construction groups, led by the Arvada Chamber and Jeffco Business & Workforce Center, are gaining momentum to complete both the **Critical Demand Planning** and **KSA requirement steps**. Moving into 2024, these productive ETCs are poised to complete the remaining three blueprint steps—continuing to identify and streamline innovative stackable pathways throughout the process.

WHAT MAKES THIS 5-STEP BLUEPRINT DIFFERENT?

- Produces mutually beneficial outcomes for Opportunity Seekers and Employers
- Authentically Employer Driven
- Clarifies Actionable Supply/Demand Data
- Links high-quality traditional and nontraditional training providers—**creating seamless stackable pathways leading to family-sustaining wage jobs.**

Conclusion

This Stackable Pathways Blueprint is an implementation guide designed for workforce intermediaries and employers to close the opportunity gap for Jeffco adult learners. Jeffco stakeholders are primed to execute this blueprint process, empowering learners, employers, training providers, school districts, public agencies, and community partners to close opportunity gaps—by creating clear and accessible credential pathways for adult learners.

Stackable pathways represent a crucial shift in the world of education and workforce development. With the right deployment strategies and investments, this blueprint can drive economic self-sufficiency for residents, reduce inequalities, and create a more inclusive and prosperous future for the entire region.

A Caveat & Note of Thanks

Colorado Gives Foundation (CGF) continues to be a champion dedicated to building resilient, connected, and thriving communities in Jeffco and across the state. Colorado Succeeds also believes strongly that creating clear, aligned, and accessible stackable pathways, by deeply engaging industry, can empower learners to advance in their educational journey, and both enter and advance in their careers more seamlessly.

We offer our deep thanks to the stakeholders that shared their experience, business insights, labor market data, local landscape analysis and learnings for case studies and innovative training providers in this blueprint.

The case studies highlighted throughout this blueprint are not intended to be representative of all opportunities in which credentials are or may be stacked. Instead, these exemplars offer insight into effective approaches currently being used in Jeffco. There are multiple ways in which partners are examining, designing, and stacking credentials and these examples are not intended to be exhaustive. Special thanks to Nazia Hasan, Kami Welch, Kylie Parks, David Carroll, Bryan Cook, Madison Knapp, Melanie Kesner, Joel Newton and each business representative and educator who offered their expertise and guidance. This blueprint was created with resources from the generous support of the Colorado Gives Foundation.

ABOUT COLORADO SUCCEEDS

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Colorado Succeeds brings business, government, and education leaders together to create, invest in, and scale what is working to ensure all learners have access to high-quality experiences that are relevant, rigorous, and result in multiple pathways to success. Colorado Succeeds' mission is to ensure all of Colorado's learners are educated to their greatest potential and that businesses have the homegrown workforce needed to thrive.

Appendix A: Additional Tools & Resources

- The Self-Sufficiency Standard for Colorado 2022, Colorado Center on Law & Policy
- Lightcast, Labor Market Analytics
- Stackability Guide, Building Credential Connections Within Institutions, Education Strategy Group
- Incremental Credentialing Framework, Credential As You Go
- KSA Taxonomy, World Economic Forum
- Employer Toolkit—Skills Based Hiring, Markle
- Opportunity Navigator—Employer Assessment and Roadmap Tool
- Postsecondary Employment Outcomes Explorer: The Postsecondary Employment Outcomes (PSEO)
- Pathways to Prosperity, CDHE, 2021 Updates
- The Roadmap for Racial Equity, National Skills Coalition
- Connecting Opportunity Population Talent to Better Career Pathways, US Chamber Foundation
- Credential to Careers Maps: YouthForce NOLA
- The American Opportunity Index, Burning Glass Institute
- Job Quality Toolkit, US Department of Commerce
- Worklife Partnership: Wrap-a-round Employee Support Services
- Crosswalking industry-recognized credentials as the starting point for systemwide stackable credentials, SHEEO

Appendix B: Stakeholder Engagement

ActivateWork	Kathryn Harris
Arvada Chamber of Commerce	Kami Welch
Arvada Chamber of Commerce	Kylie Parks
Arvada Economic Development Association	Iza Petrykowska
Associated General Contractors	Jeff Barratt
BuildStrong	Allison Stepnitz
Careers in Construction Colorado	Glenn Hard
Colorado Gives Foundation	Nazia Hasan
Colorado Community College System	Mike Macklin
Construction Education Foundation	Bryan Cook
CrossPurpose	Bryce Lopez
Colorado State University Pueblo	Husam Alshareef
Front Range Community College	Chris Heuston
Front Range Community College	Janel Highfill
Gary Community Ventures	Julie Stone
Hensel Phelps	Erika Anderson
Housing & Building Association of Colorado Springs	Renee Zentz
JE Dunn Construction	Joel Pennick
Jefferson County Economic Development Corporation	David Carroll
Jeffco Public Schools	Marna Messner
Jeffco Public Schools	Shayley Levensalor
Jeffco Schools Foundation	Courtney Jensen
Jefferson County Business & Workforce Center	Michelle Foley
Master's Apprentice	Luis Villarreal
Master's Apprentice	Scott Flores
PCL Construction	Michelle Curry
Pinkard Construction Co.	Jeff Kessler
Red Rocks Community College	Matthew Sweeney
Red Rocks Community College	Evan Kravitz
Retired Jeffco Board of Education & Attorney	Brad Rupert
RK Industries	Jon Kinning
Saunders Construction	Jody Cole
SMACNA Colorado	Nathan Cooper
Social Finance	Joe Bateman
Spark Mindset	Lawrence Wagner
University of Colorado Denver	Chris Puckett
Visible Network Labs	Danielle Varda
Weifield Group	Karla Nugent

End Notes

[1] "Maximizing Human Potential and Economic Mobility for Coloradans, Education to Employment Alliance, https://coloradosucceeds.org/resource/new-business-alliance-aims-to-transform-colorados-workforce-and-boost-economic-mobility-for-learners/

[2] "2023 Colorado Talent Pipeline Report," Colorado Workforce Development Council, https://drive.google.com/file/d/1pH0aGwQWVeC7ylmnfOiTCV0uMxZUQE_-/view

[3] "Maximizing Human Potential and Economic Mobility for Coloradans," Education to Employment Alliance, https://coloradosucceeds.org/resource/new-business-alliance-aims-to-transform-colorados-workforce-and-boost-economic-mobility-for-learners/

[4] "2022 Colorado Self-Sufficiency Standard," Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington, http://selfsufficiencystandard.org/Colorado.

[5] "2022 Colorado Self-Sufficiency Standard," Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington, http://selfsufficiencystandard.org/Colorado.

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[10] "Regional Blueprint for Inclusive Growth," Greater Washington Partnership, https://igblueprint.greaterwashingtonpartnership.com/wp-content/uploads/2022/08/Blueprint_vFINAL.pdf

[11] "Eliminating Dead Ends: Learner Centered Approaches to Stackable Pathways," Education Strategy Group, https://edstrategy.org/eliminating-dead-ends-learner-centered-approaches-to-stackable-pathways/

[12] https://betterofferco.org/