

Pathways to Good and Promising Jobs in Metro Indianapolis



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Research Overview



Creating pathways for Hoosiers to “good and promising jobs”?



Following the 2018 Brookings Institution report “Advancing Opportunity in Central Indiana” we set out to answer the following questions¹:

1. Which occupations and career pathways warrant further investment?
2. How can individuals advance in their careers based on transferability of skills and projected demand?
3. How are education and training programs and providers in Central Indiana positioned to meet current employer demand for “good and promising jobs”?

¹Advancing Opportunity in Central Indiana. 2018. https://www.brookings.edu/wp-content/uploads/2018/12/2018.15_BrookingsMetro_Indy-Opportunity-Industries_Report_Shearer-Shah-Muro.pdf

Research Goals

1

Identify the jobs most beneficial to Indianapolis area residents, businesses, and the regional economy.

2

Indicate proficiencies that workers should have upon completion of an appropriate training program.

3

Identify the existing pathways available in the Indianapolis Metropolitan area.

4

Identify education and training that lead to good and promising jobs.

Research Scope

- This project focuses on the opportunities for workers in the Indianapolis metropolitan area.
- This region is defined by the Department of Workforce Development (DWD) as regions 5 and 12.
- In the case of education and certification requirements, we used national level data to predict job requirement trends.
- Postsecondary institutions were analyzed on a statewide basis



Research Audiences

Workforce Development Partners

Workforce development organizations can leverage this research to guide decision-making around training programs and employer-education partnerships.

Workforce Case Managers + Career Navigators

Workforce case managers and career navigators can leverage this research to better understand good and promising jobs in order to provide real-time guidance to clients around the in-demand career paths in Central Indiana.

Job Seekers

Job seekers can leverage this research to find out which occupations offer the best opportunities for career growth in Central Indiana.

Research Methodology

1 Define “Good and Promising Jobs”

Burning Glass started by defining measurable criteria in order to rank/order of all jobs in the Central Indiana area, balancing the value of the job to the job seeker, employers, and the community.

2 Identify Good and Promising Jobs

Next, we identified 40 occupations as good or promising: we selected 20 that require less than a Bachelor’s degree (“Sub-BA occupations”) and 20 that require a Bachelor’s degree or more (“BA occupations”). See End Notes for additional detail.

3 Analyze Good and Promising Jobs

For each occupation, we identified the skills, education, and certification requirements. Finally, in order to ensure a career ladder is available and target occupations are not dead-ends, we assessed what jobs a worker might transition to following success in the targeted occupations.

Good and Promising Jobs in Metro Indianapolis



Good and Promising Jobs Criteria¹



Value to Job Seekers

Burning Glass measured the value to the job seeker based on items such as stability, ability to earn a living wage, long-term career opportunities, and other criteria to ensure workers are well-positioned at present and in the future.



Value to Employers

Burning Glass measured the value to employers based on the time it takes to fill a job, the return to training a worker, attrition, and the value placed on skills and competencies.



Value to Community

Burning Glass measured the value to community based on the transferability of skills across occupations and industries, projected growth, and the multiplier effect these jobs have on the local economy.

¹See Appendix for additional detail about the Good and Promising Jobs criteria used in this analysis.

Good and Promising Jobs in Metro Indianapolis

Sub-BA Occupations

- HVAC Mechanic / Installer
- Production Worker
- Laborer / Warehouse Worker
- Production Supervisor
- Forklift / Pallet Jack Operator
- Diesel Mechanic
- Repair / Service Technician
- Insurance Sales Agent
- Janitor / Cleaner
- Maintenance / Service Supervisor
- Tractor-Trailer Truck Driver
- Registered Nurse
- Restaurant / Food Service Supervisor
- Building and General Maintenance Technician
- Manufacturing Machine Operator
- Shipping / Receiving Clerk
- Field Service Technician
- Scheduler / Operations Coordinator
- Automotive Service Technician / Mechanic
- Quality Inspector / Technician

BA Occupations

- Civil Engineer
- Engineering Manager
- Software Developer / Engineer
- Operations Manager / Supervisor
- Computer Systems Engineer / Architect
- Cyber / Information Security Engineer / Analyst
- Business / Management Analyst
- General Manager
- Account Executive
- Marketing Specialist
- Business Development / Sales Manager
- Financial Manager
- Researcher / Research Associate
- Mechanical Engineer
- Quality Control Systems Manager
- Production Plant Manager
- Financial Analyst
- Product Manager
- Validation Engineer
- Electrical Engineer

Good and Promising Jobs in Metro Indianapolis

Growth + Salary

Industry

Qualifications

Skills + Next Step Occupations

Training Programs + Providers

BA Jobs: Open Roles + Avg. Salary

● Recent Job Postings (Local, 2019) ● Projected Job Growth (10 Year) ● Average Market Salary (National)



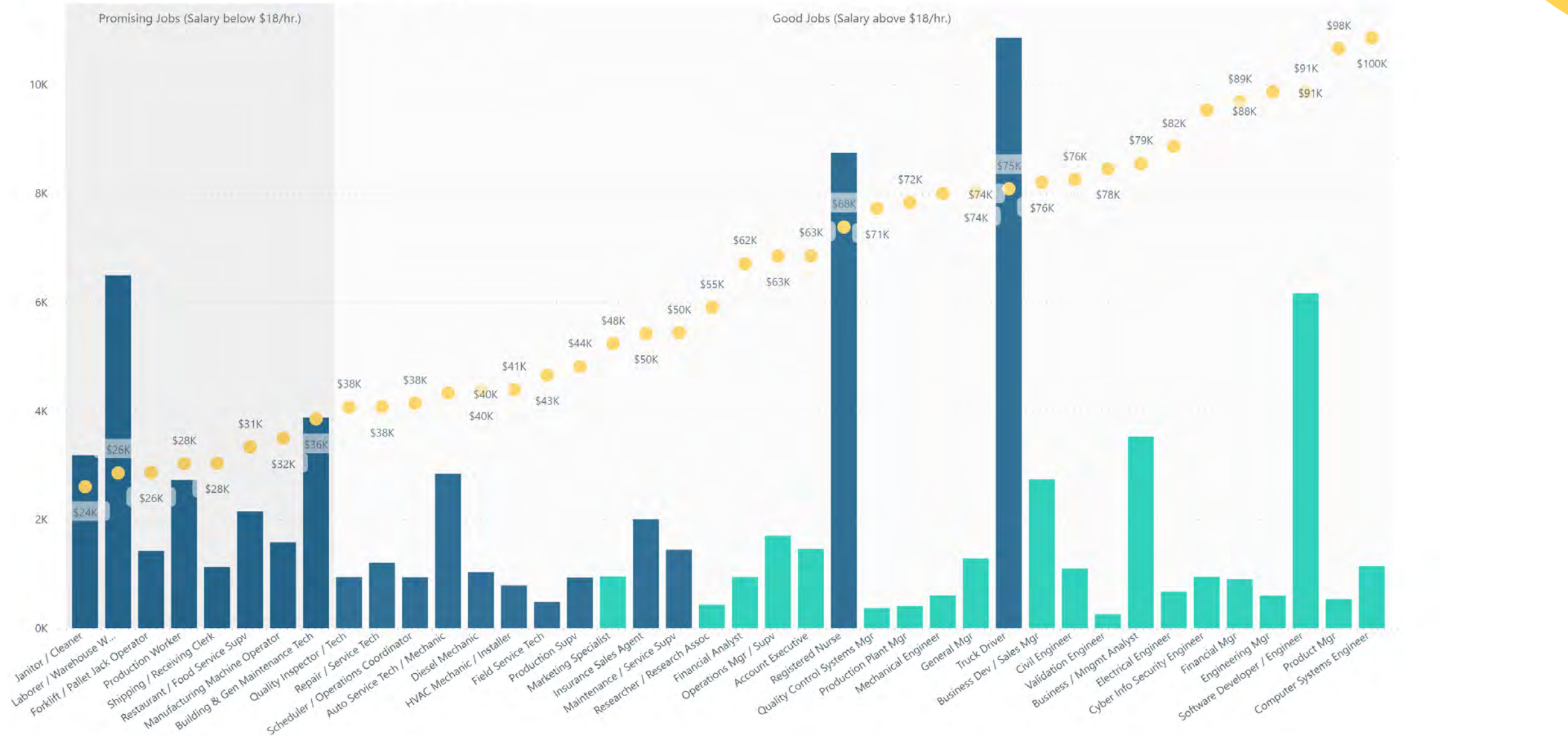
Sub-BA Jobs: Open Roles + Avg. Salary

● Recent Job Postings (Local, 2019) ● Projected Job Growth (5 Year) ● Average Market Salary (National)



All Jobs: Open Roles + Avg. Salary

● Bachelor's Jobs ● Sub-Bachelor's Jobs ● Average Market Salary (National)



Key Takeaways

Good and promising jobs anticipate steady to strong future growth. 5- and 10-year employment growth projections reach upwards of 10 and 41 percent, respectively, in Metro Indianapolis.

Annual job postings for Sub-BA jobs were two times greater than BA jobs. There were 81,471 postings for good and promising jobs in 2019, 54,752 of which were for Sub-BA jobs and 26,719 for BA jobs.

In general, BA jobs provide higher average market salaries than Sub-BA jobs. Salaries of computer, software, and engineering related occupations are on average higher than other Bachelor's jobs. Registered Nurses and Truck Drivers are noteworthy exceptions that command BA-level market salaries. However, projected job growth for both occupations are well below average (Truck Driver at 2% and Registered Nurse at 4%).

Cyber Info Security Engineers (see End Notes) are projected to grow the most among BA jobs at 41% (387 new jobs). HVAC Mechanic / Installers have the highest projected job growth rate among sub-BA jobs at 10% (786 new jobs).

Good and Promising Jobs in Metro Indianapolis

Growth + Salary

Industry

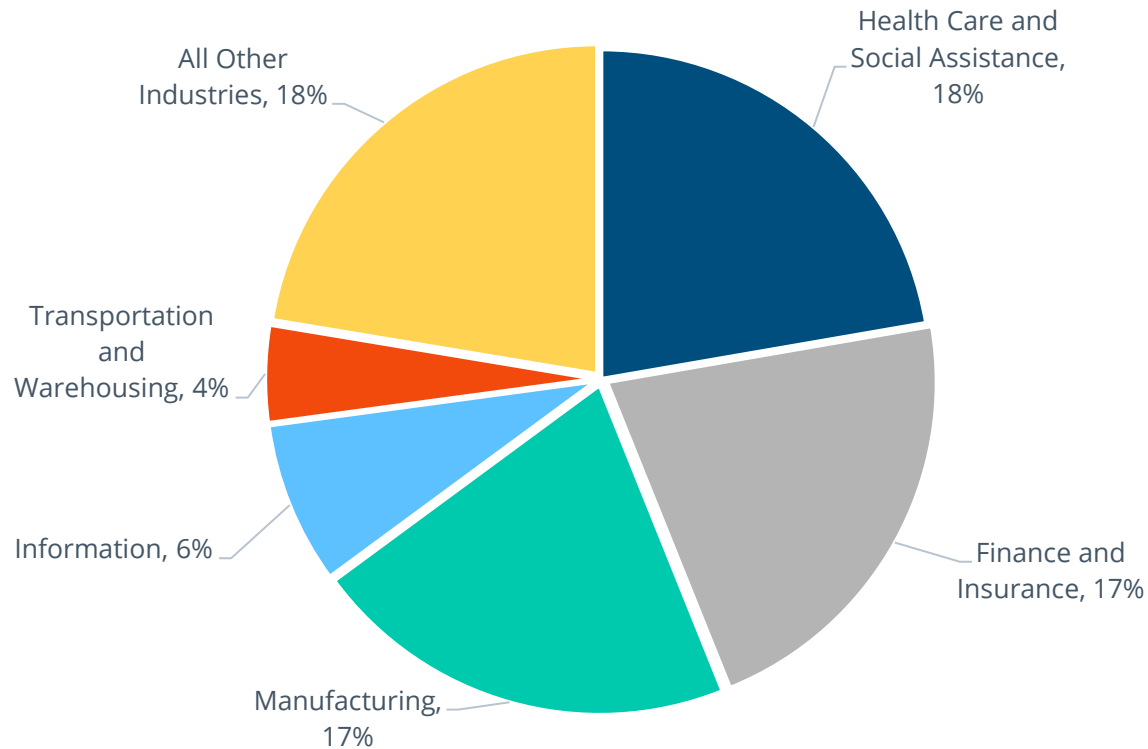
Qualifications

Skills + Next Step Occupations

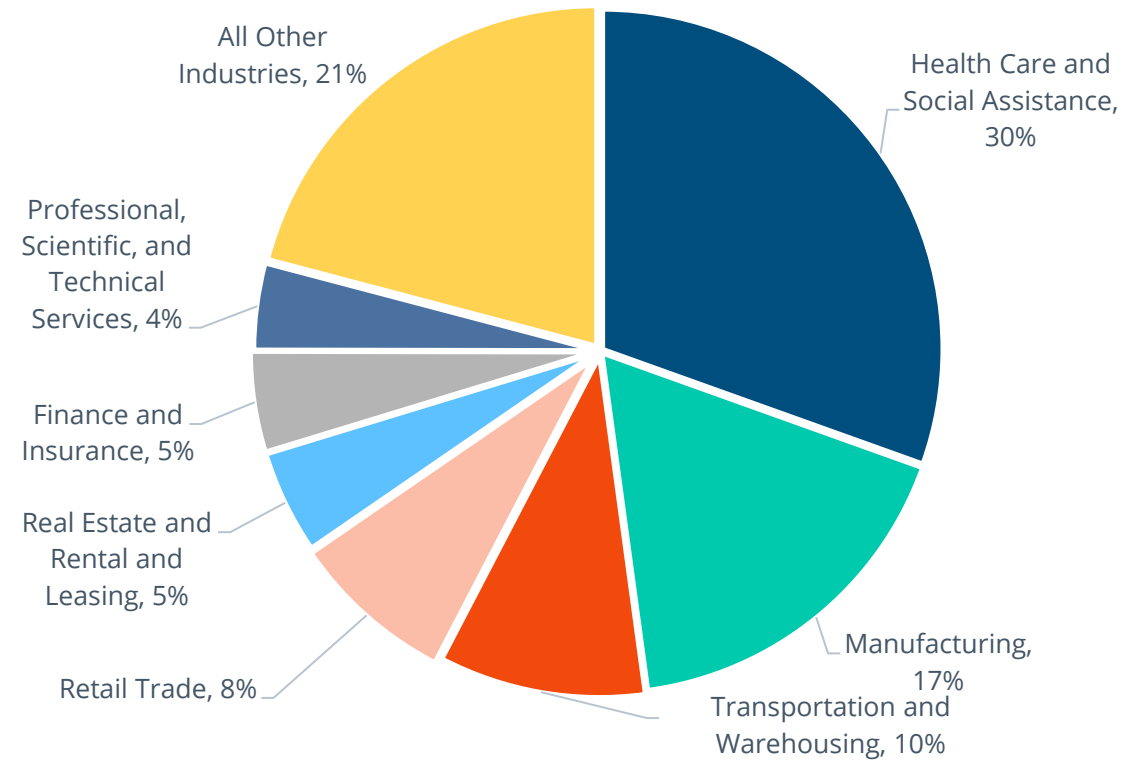
Training Programs + Providers

All Jobs: Job Postings by Industry

BA Jobs



Sub-BA Jobs



Highest Concentration of Jobs by Sub-Industry

A comparable rank/order of sub-industry job postings at both BA and Sub BA levels may signal opportunities for interested parties to create learning pathway partnerships. The sub-industries provided below demonstrate greatest parity between BA and Sub-BA job postings, of the forty jobs analyzed.

NAICS2 Name	Job Postings - BA	Job Postings - Sub BA
Accommodation and Food Services		
Accommodation	489	992
Food Services and Drinking Place	571	1,454
Administrative and Support and Waste Management and Remediation Services		
Administrative and Support Services	1,515	2,082
Waste Management and Remediation Services	113	143
Finance and Insurance		
Credit Intermediation and Related Activities	1,744	967
Funds, Trusts, and Other Financial Vehicles	6	1
Insurance Carriers and Related Activities	5,118	1,370
Securities, Commodity Contracts, and Other Financial Investments and Related Activities	643	47
Health Care and Social Assistance		
Ambulatory Health Care Services	1,457	2,148
Hospitals	2,908	3,838
Manufacturing		
Chemical Manufacturing	1,990	426
Transportation and Warehouse		
Couriers and Messengers	322	313
Truck Transportation	571	693

Key Takeaways

The highest concentration of jobs, both BA and sub-BA, is in Health Care and Social Assistance, making up 18% of BA jobs postings and 30% of sub-BA jobs postings.

Additional industries with the highest concentration of jobs postings are Accommodations and Food Service, Administrative and Support (see End Notes), Finance and Insurance, Manufacturing, and Transportation and Warehouse.

For some jobs, there is broad demand across industries. Two such jobs with the broadest applicability across industries are Account Executive and Maintenance/Service Supervisor.

Good and Promising Jobs in Metro Indianapolis

Growth + Salary

Industry

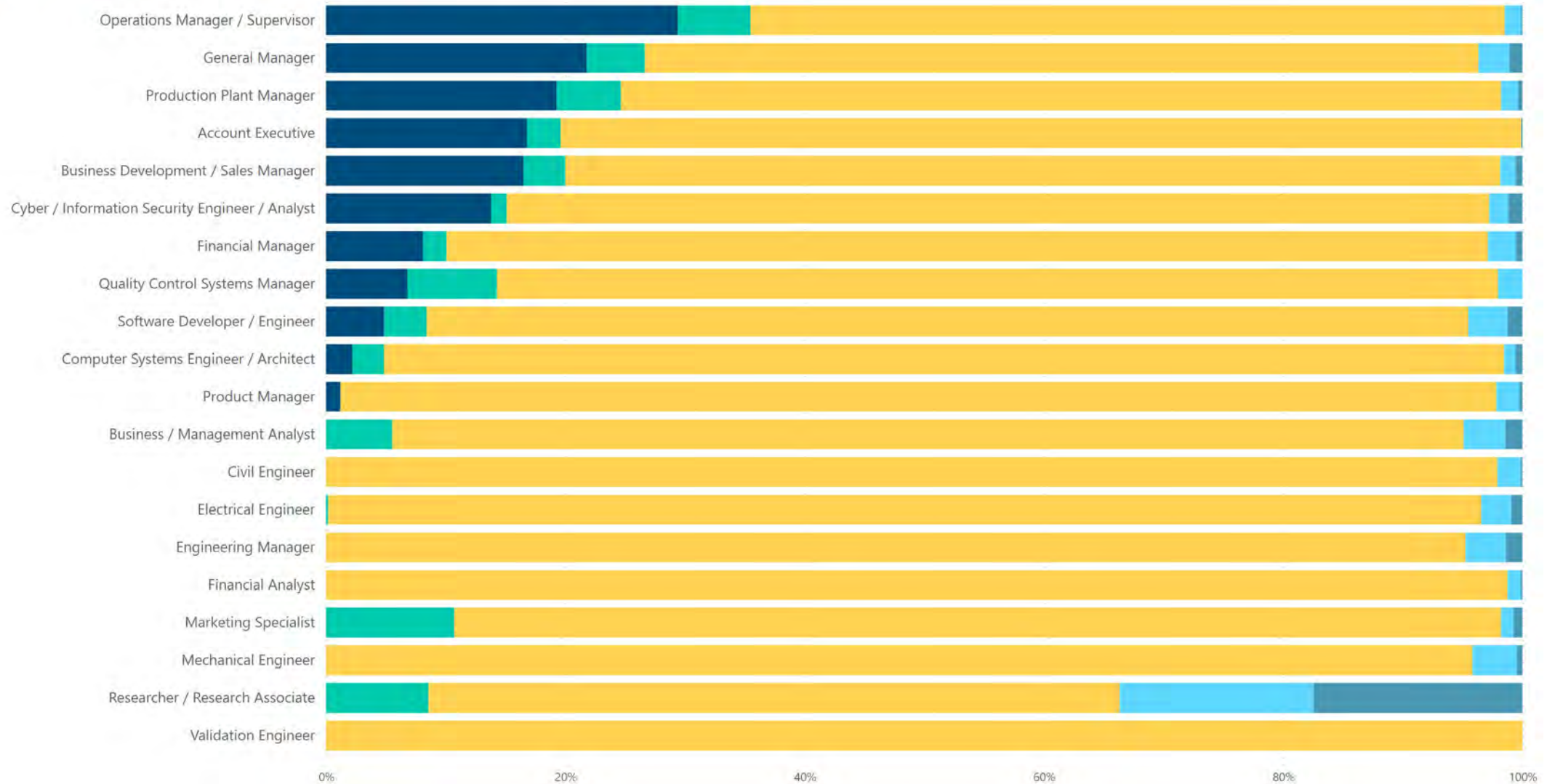
Qualifications

Skills + Next Step Occupations

Training Programs + Providers

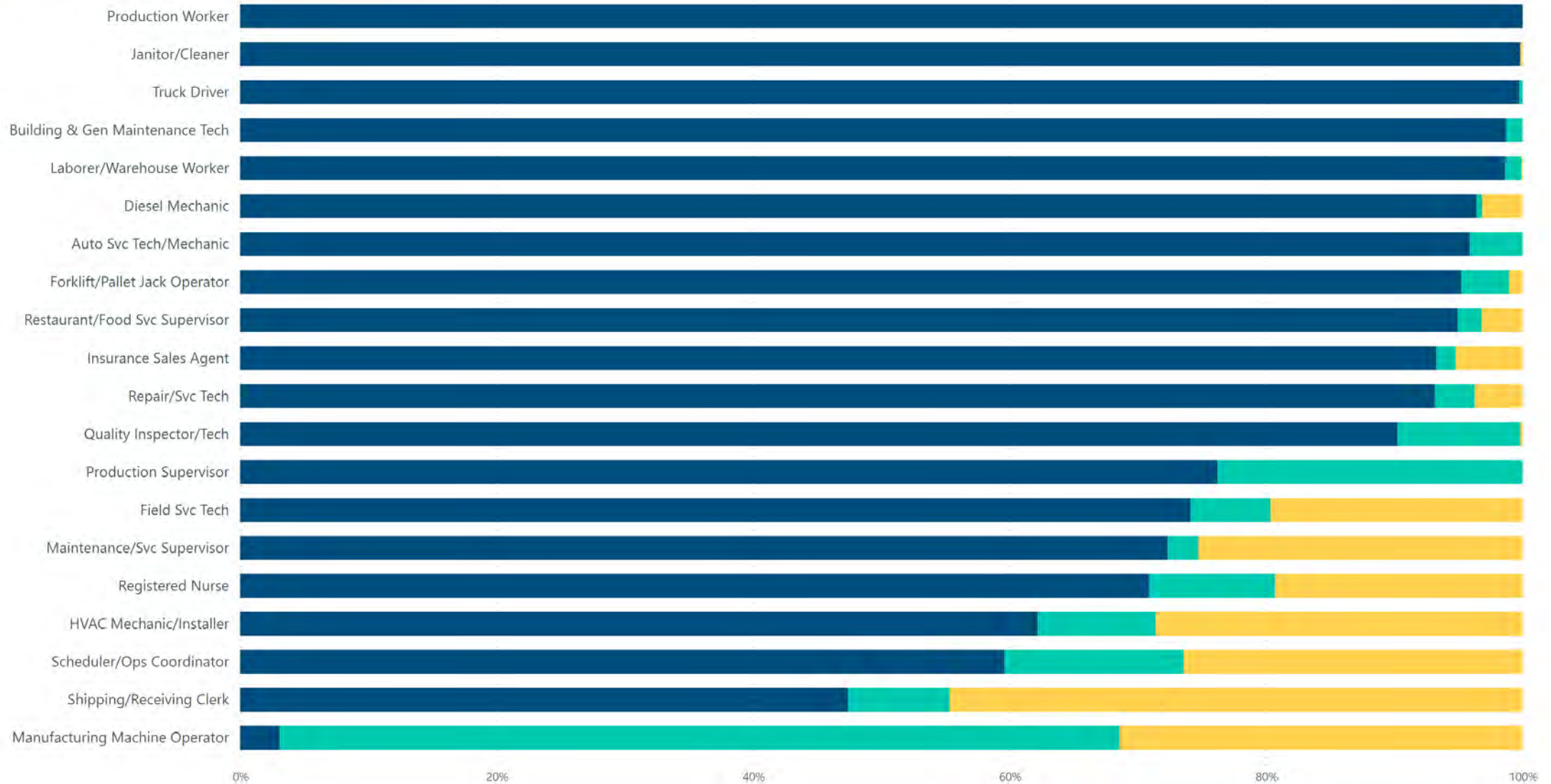
BA Jobs: Education Level Requirements

● High School ● Associate Degree ● Bachelor's Degree ● Master's Degree ● Doctoral Degree



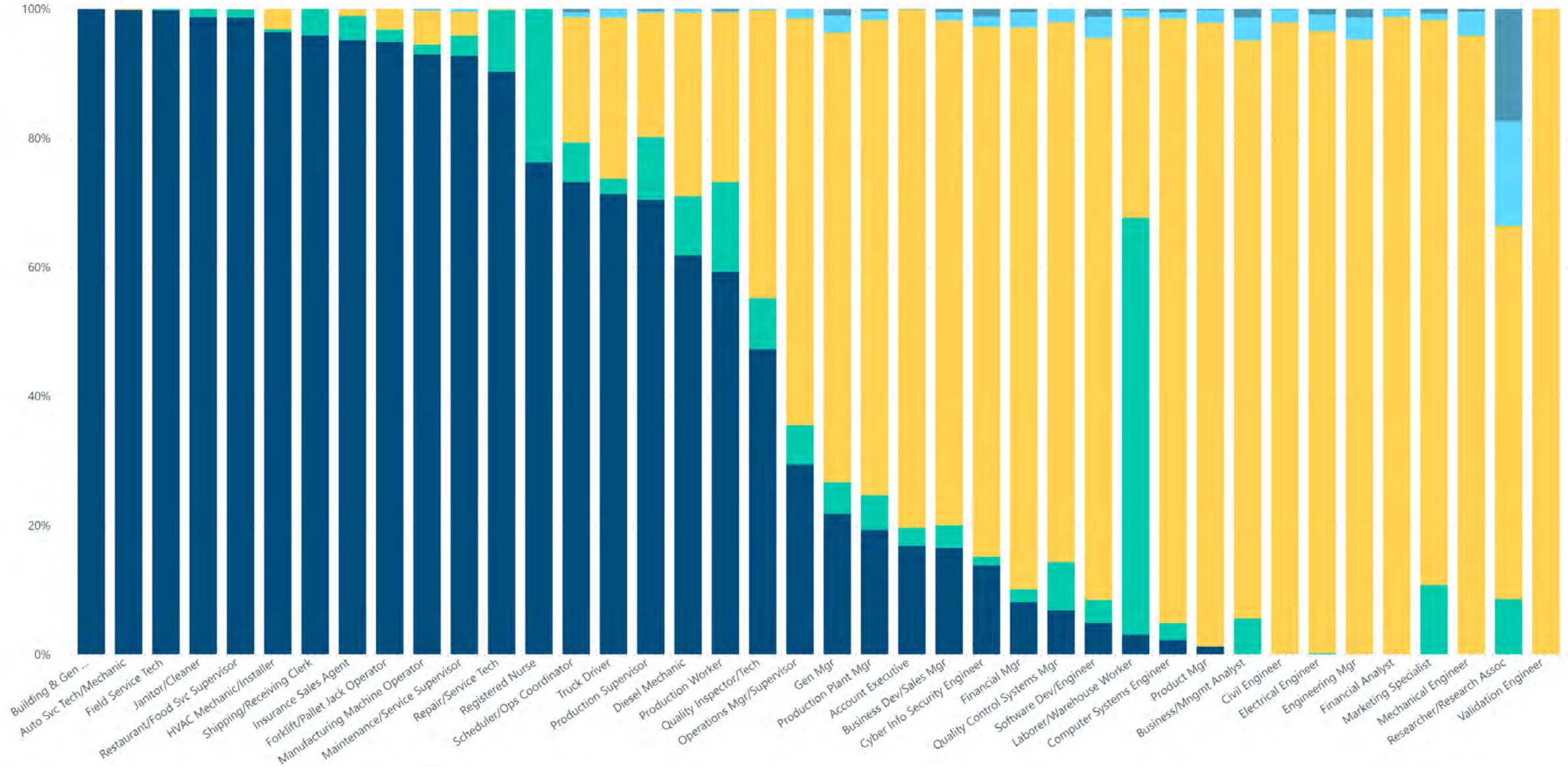
Sub-BA Jobs: Education Level Requirements

● High School ● Associate Degree ● Bachelor's Degree

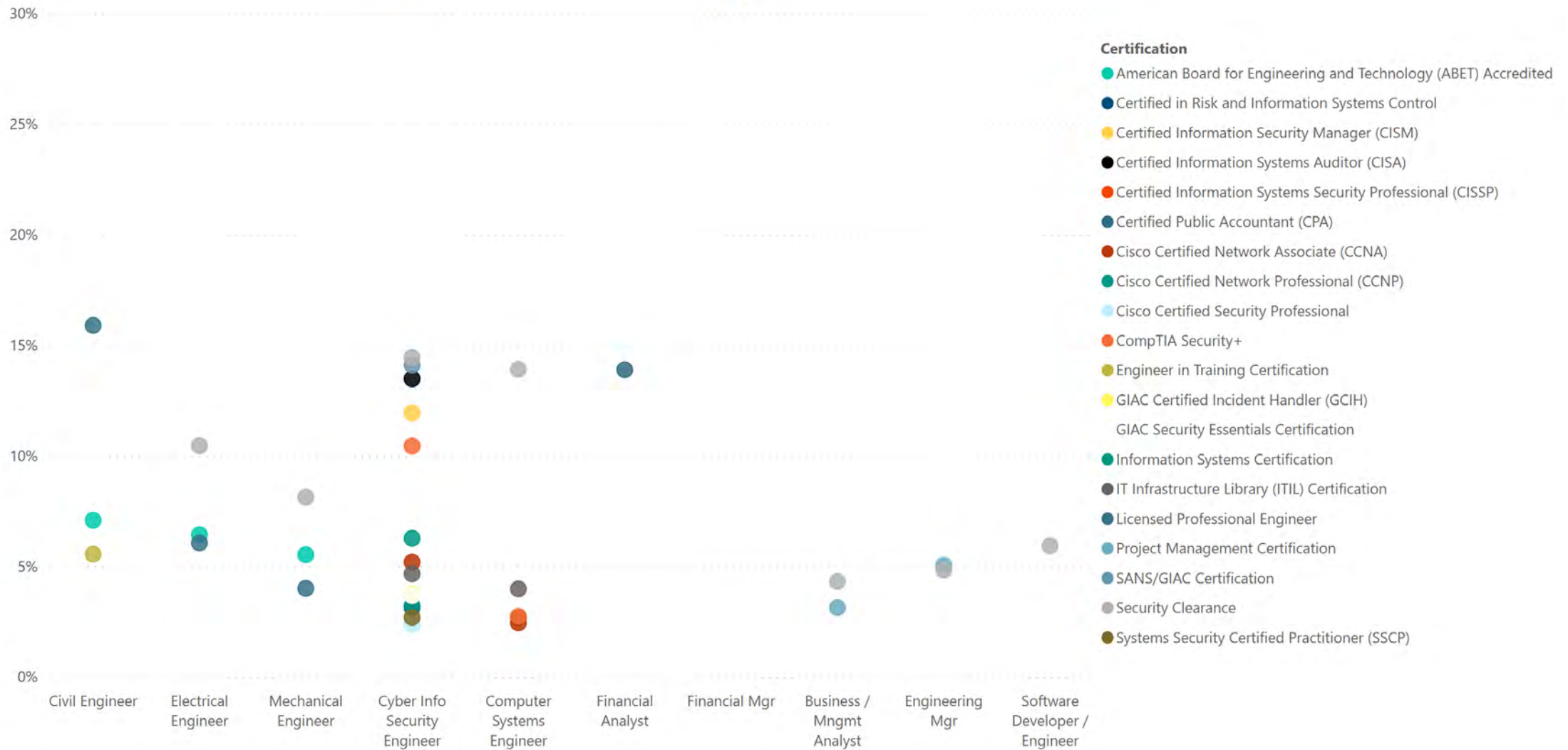


All Jobs: Education Level Requirements

● High School Diploma
 ● Associate's Degree
 ● Bachelor's Degree
 ● Master's Degree
 ● Doctoral Degree

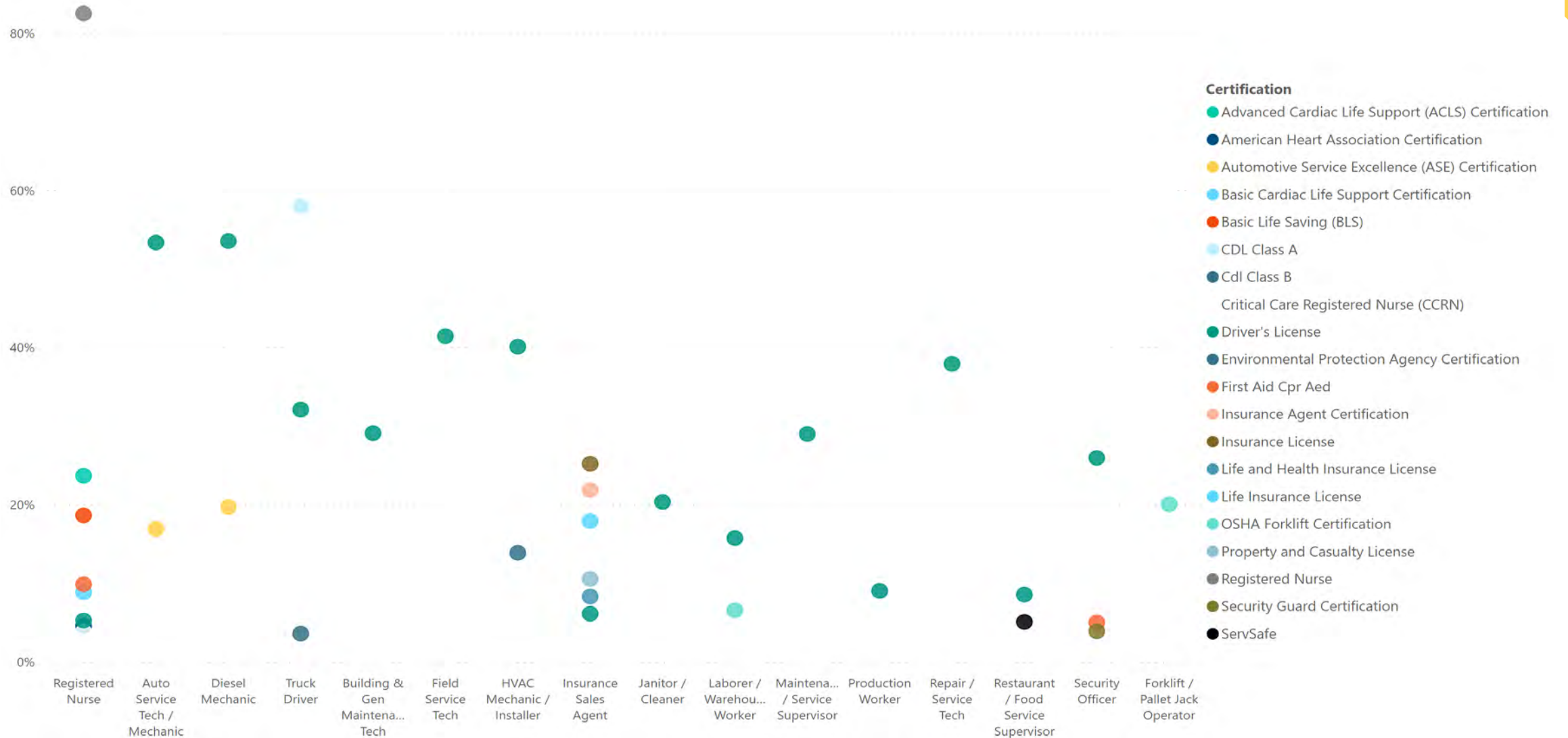


BA Jobs: Certification Requirements¹



¹Certification requirements were calculated at the national level. See End Notes.

Sub-BA Jobs: Certification Requirements¹



¹Certification requirements were calculated at the national level. See End Notes.

Key Takeaways

Education Requirements

Some jobs have postings that consistently require a certain education level. Examples include Validation Engineer, Financial Analyst, and Mechanical Engineer (BA), as well as Building and General Maintenance Technician, Automotive Service Technician/Mechanic (Sub-BA).

Other jobs have less consistent minimum education requirements, which may provide applicants additional opportunities to qualify through prior work experience or enrollment in an employer-sponsored work-study program. Examples include Operations Manager/Supervisor, General Manager, Production Plan Manager, Account Executive, and Business Development/Sales Manager (BA), as well as Quality Inspector/Technician, Production Worker, Diesel Mechanic, and Production Supervisor (sub-BA).

With the exception of Manufacturing Machine Operators, few occupations explicitly request an Associate's Degree (see End Notes). For Sub-BA jobs, critical skills may be acquired through numerous combinations of associates degree study, attainment of certifications, and non-academic training at Ivy Tech or elsewhere.

Key Takeaways

Certification Requirements

Among BA jobs, the two most requested certifications are the **Certified Information Systems Security Professional (CISSP)** for Cyber / Information Security Engineer / Analyst (32% of postings) and **Certified Public Accountant (CPA)** for Financial Managers (31% of postings) (see End Notes).

Certifications requested in job postings are more prevalent in Sub-BA occupations than BA occupations. Among Sub-BA jobs, the most requested certification after a Drivers License is a Registered Nurse, with CDL A/CDL B (see End Notes) and other medical certifications following closely behind.

Good and Promising Jobs in Metro Indianapolis

Growth + Salary

Industry

Qualifications

Skills + Next Step Occupations

Training Programs + Providers

Methodology: Skills and Next Step Occupations

1 Define Skills¹

Utilizing their proprietary taxonomy of skills, Burning Glass identified the **necessary and defining skills** for every good or promising job. These skills are imperative for education and training programs and providers to cover. **Common skills** are a significant determining factor in defining likely career transitions, either laterally or in next step occupations.

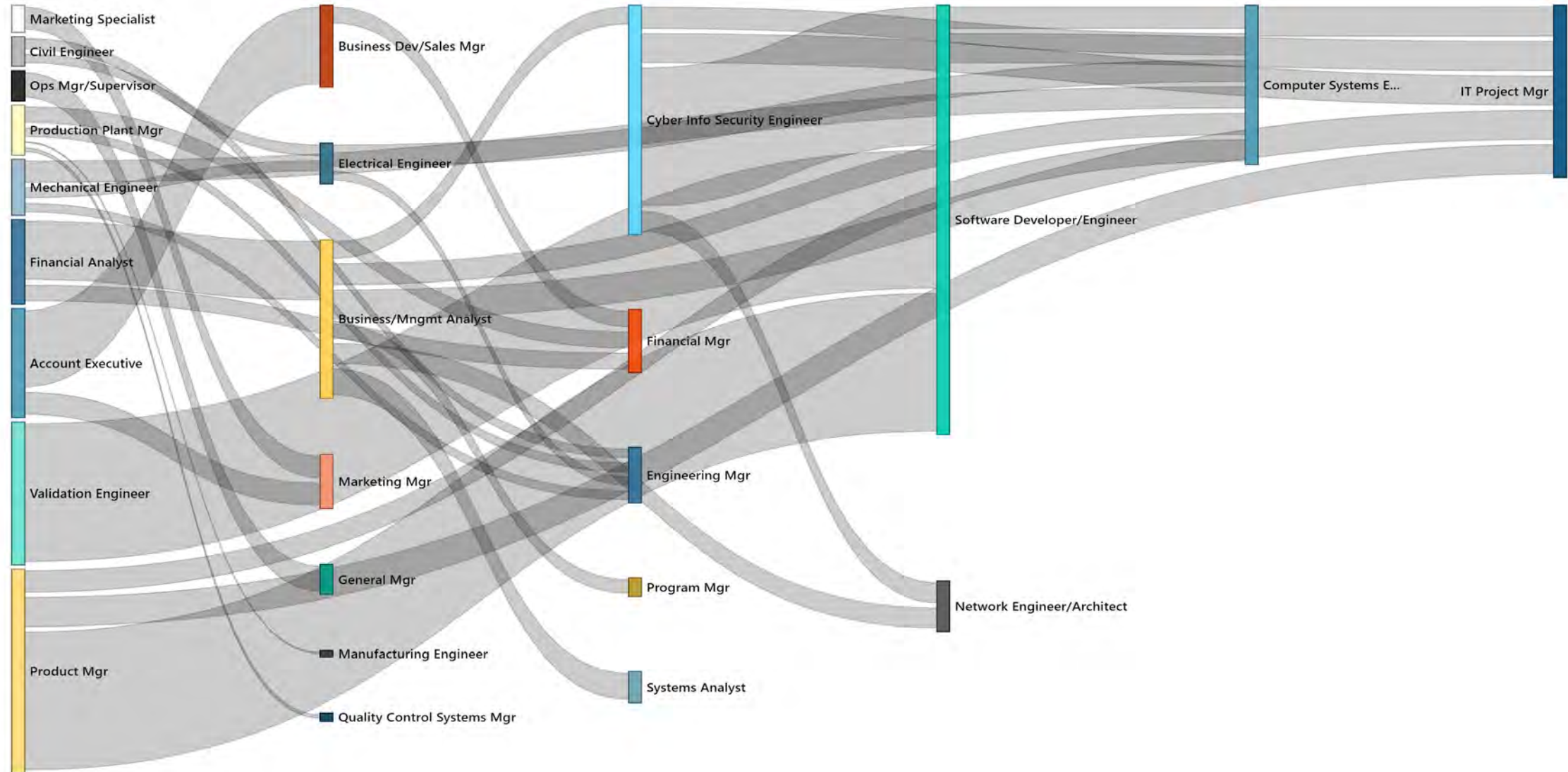
2 Identify Career Pathways

For each occupation, Burning Glass identified **next step occupations** that show a possible career pathway that a Hoosier might take based on transferability of skills.

¹See Appendix for additional detail about the necessary, defining, and distinguishing skills definitions used in this analysis.

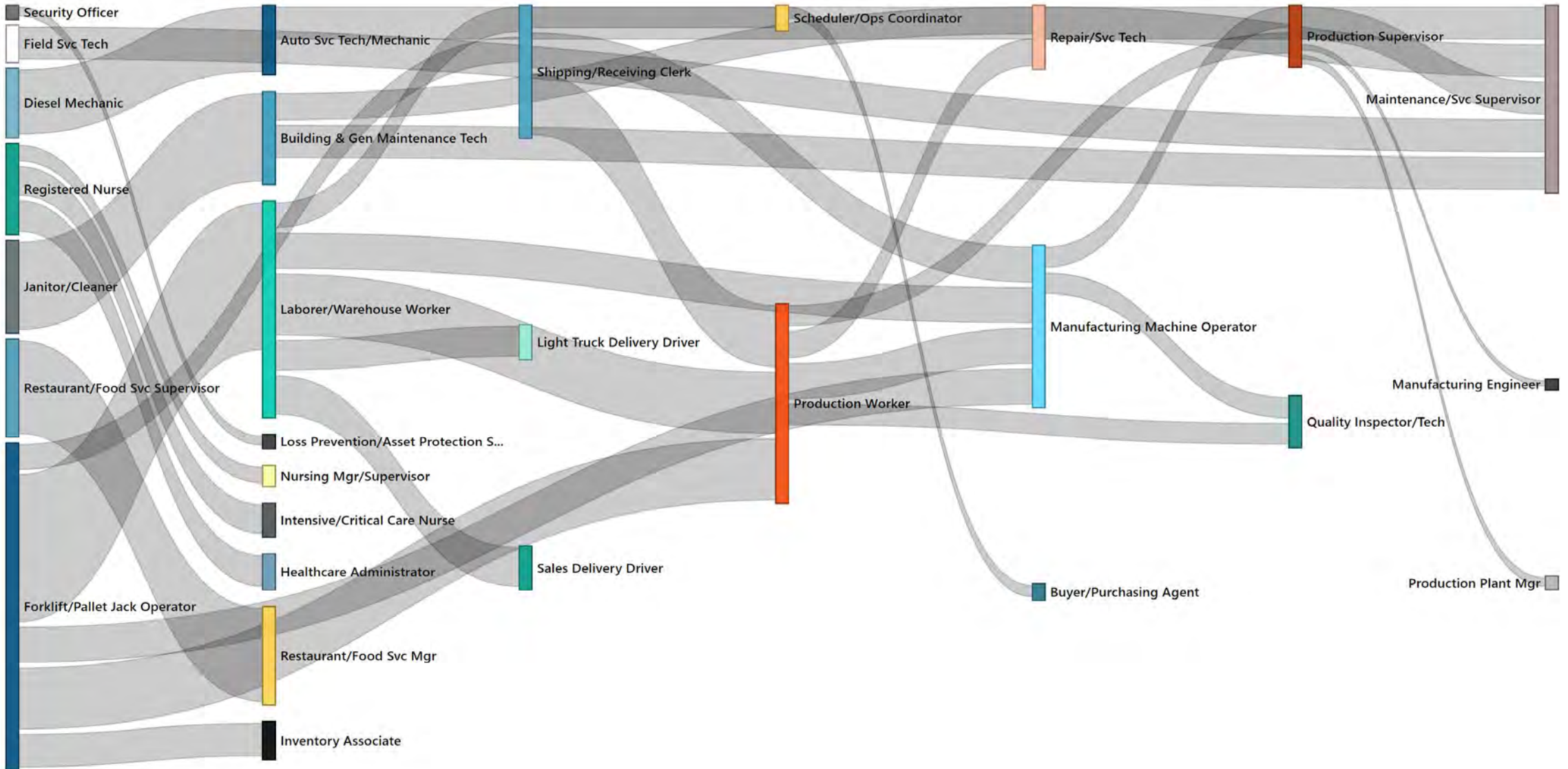
BA Jobs: Next Step Occupations

This visual maps the job-to-job flow between similar Bachelor's jobs. Each job connection represents a transition from a source job (left) to a destination job (right). Size of grey ribbon flows between any two jobs is scaled to the number of 2019 job postings at the destination job (see End Notes).



Sub-BA Jobs: Next Step Occupations

This visual maps the job-to-job flow between similar Sub-Bachelor's jobs. Each job connection represents a transition from a source job (left) to a destination job (right). Size of grey ribbon flows between any two jobs is scaled to the number of 2019 job postings at the destination job (see End Notes).



Key Takeaways

A greater number of inbound transitions potentially indicates more hiring flexibility or broader job skill requirements. Examples of BA jobs with more inbound transitions include Software Developer/Engineer, Computer Systems Engineer, and IT Project Manager. Examples of Sub-BA jobs with more inbound transitions include Maintenance/Svc Supervisor, and Manufacturing Machine Operator.

A greater number of outbound transitions potentially indicates that those job skills are valued in many other occupations. Examples of BA jobs with more outbound transitions include Product Manager, Business/Management Analyst, and Cyber Info Security Engineer. Sub-BA jobs with more outbound transitions include Laborer/Warehouse Worker, and Production Worker.

Good and Promising Jobs in Metro Indianapolis

Growth + Salary

Industry

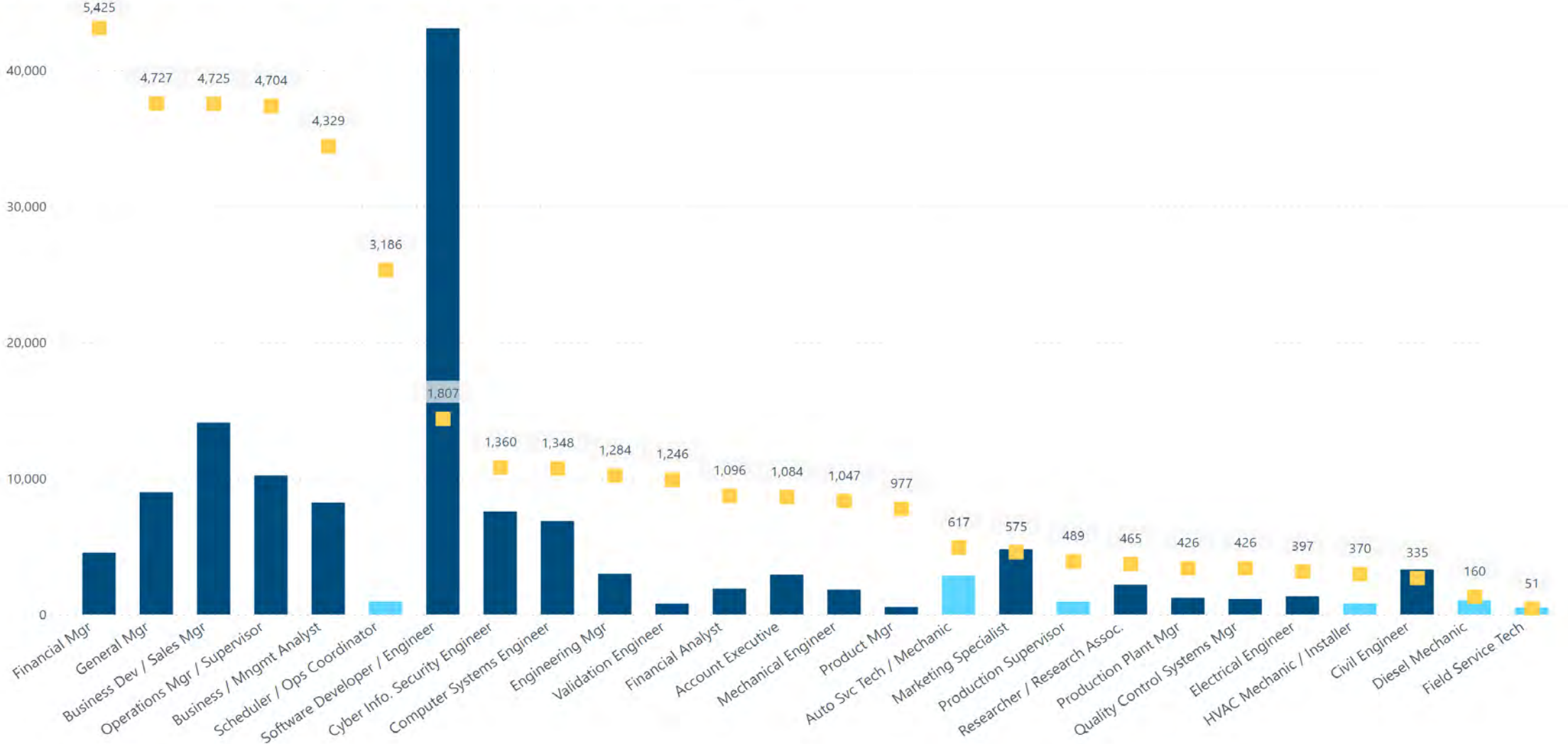
Qualifications

Skills + Next Step Occupations

Training Programs + Providers

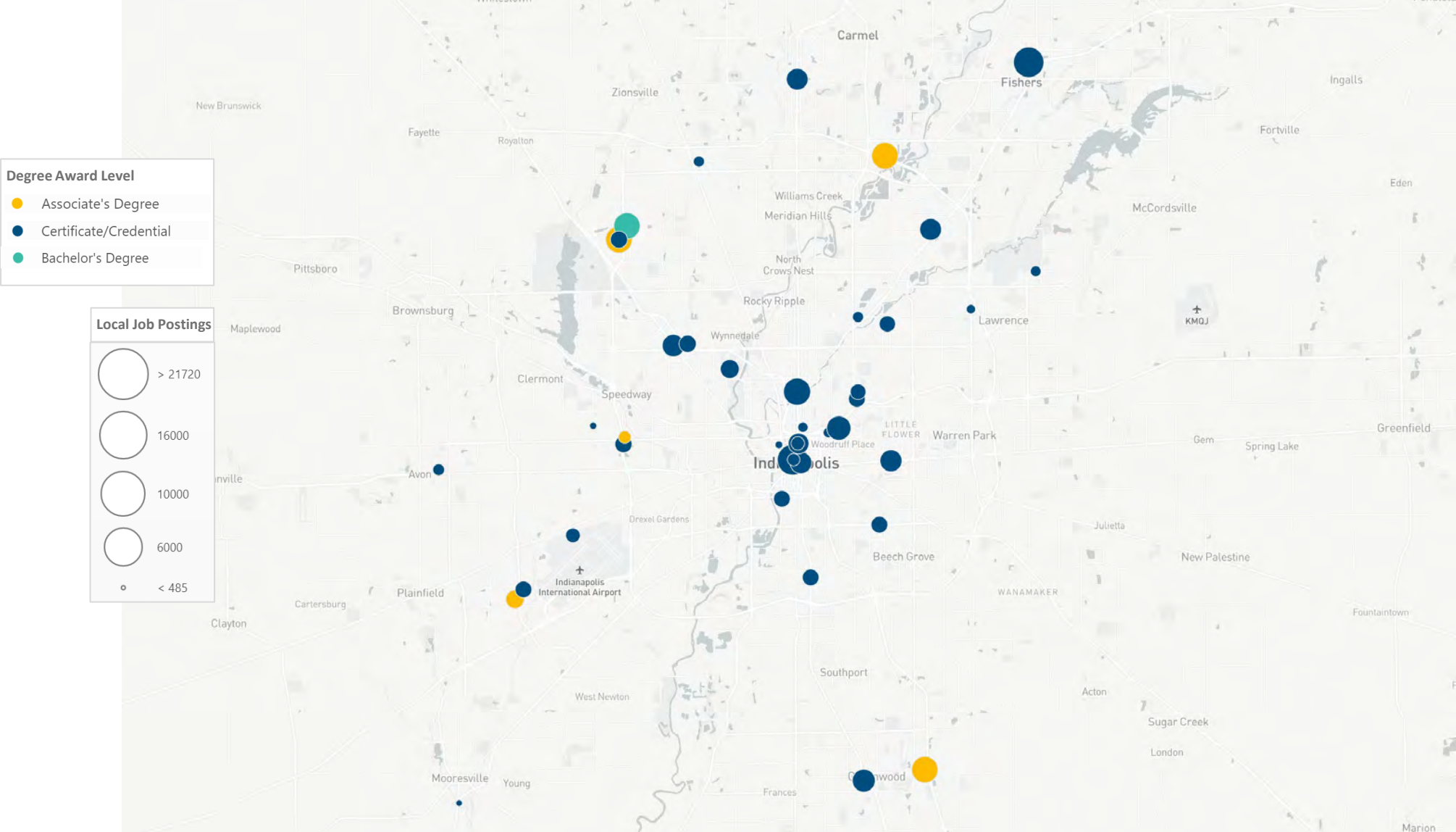
All Jobs: Production of Aligned Degrees in Indiana¹

● Bachelor's Jobs ● Sub-Bachelor's Jobs ■ Annual Degree Completions throughout Indiana (3 Year Avg)

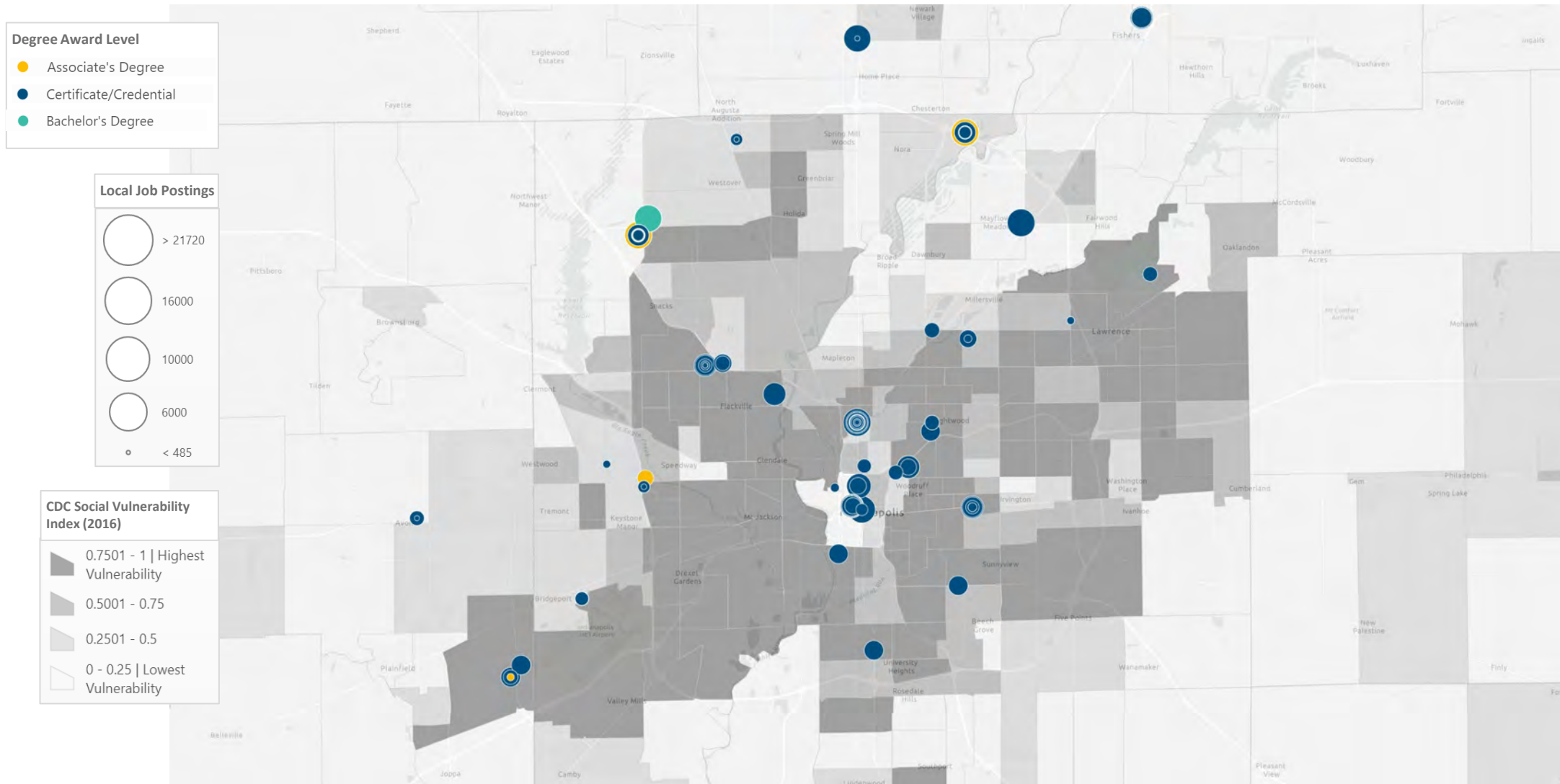


¹See Appendix for additional detail about degree and certification program identification and mapping, including a list of degree providers.

Central IN's Aligned Education and Training Providers



Central IN Education + Training Providers Compared with Socio-economic Vulnerability



Key Takeaways

There is some misalignment between completion of occupation-aligned degrees and annual job postings.

For some jobs, degree production substantially exceeds annual job postings. For occupations in less specialized fields, this may be caused by a larger range of degree programs acceptable for qualified applicants (e.g. Financial Manager, General Manager, Business Development/Sales Manager, Operations Manager/Supervisor). However, for more specialized occupations (which more frequently hire from traditionally aligned degree programs), this disproportionality can frustrate qualified graduates in search of degree-aligned jobs.

Several jobs post significantly more jobs than degree-aligned graduates. Examples include Software Developer/Engineer, Cyber Info. Security Engineer, and Auto Svc Tech/Mechanic. Graduates of these degree programs should have comparatively less difficulty finding a degree-aligned job, depending on the experience requirements of the occupation.

Strategic Recommendations



Strategic Recommendations

Workforce Development Organizations

Consider the following recommendations when investing in career programs and pathways:

Comprehensive Jobs Strategy

- A holistic workforce development strategy should prioritize and invest in jobs that are good for job seekers, employers, and the community at large, beyond wage level and number of job postings.

Education and Training

- Invest in education and training programs that align with employer need for good and promising jobs. Identify gaps between enrollments and job demand and prioritize these areas for recruitment and outreach.

Pipeline Opportunities

- Identify career ladders from sub-BA to BA good and promising jobs to emphasize opportunities for upward mobility and career growth.

Strategic Recommendations

Workforce Case Managers + Career Navigators

Consider the following recommendations when advising job seekers:

Education/Certification Requirements

- Some jobs have less strict education requirements, providing applicants opportunities to qualify through prior work experience or enrollment in an employer-sponsored work-based learning program. Consider all of a candidate's prior experiences when determining suitability for a job.

Geographic Considerations

- Before advising job seekers to pursue a given education/training pathway, consider any geographic limitations, including travel time/distance, access to vehicle or public transportation, and remote learning capacity.

Job Transitions

- When guiding job seekers into a new position, it is important to consider a broader career pathway. Understand how prior work experience can prepare the candidate for the next step, and where further advancement may be possible in the future.

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Appendix



Good and Promising Jobs Criteria Detail

Category	Value to Job Seekers	Value to Employers	Value to Community
Metric	Criterion	Metric	Criterion
Long-term growth rate (2015-19)	Stability/Growth of Industry	Demand for Skills Across Industries	Demand for Skills Across Jobs
COVID-19 Occupation Growth Rate		Demand for Skills Across Industries	Economic Multiplier
Comparison to Living Wage		Demand for Skills Across Industries	Industry Turnover
Job Posting % Requesting 0-2 Yrs. Experience	Job Access to New Workers	Demand for Skills Across Industries	Projected Occupation Growth
Skill Transfer Capability	Benefits to Workers	Demand for Skills Across Industries	Projected Occupation Growth
Skills Requested in Next Step Occupations		Demand for Skills Across Industries	Projected Occupation Growth
Availability of Benefits		Demand for Skills Across Industries	Projected Occupation Growth
Time to Fill Posting	Difficulty Filling Opening	Demand for Skills Across Industries	Projected Occupation Growth
Number of Postings in Next Step Occupations	Career Ladder	Demand for Skills Across Industries	Projected Occupation Growth
Career Ladder within Same Industry		Demand for Skills Across Industries	Projected Occupation Growth
Employer Size (Large)		Demand for Skills Across Industries	Projected Occupation Growth
Salary Increase Over Time	Salary Change Over Time	Demand for Skills Across Industries	Projected Occupation Growth
Total Postings Over Time	Firm Growth	Demand for Skills Across Industries	Projected Occupation Growth
Job Separations	Tenure	Demand for Skills Across Industries	Projected Occupation Growth
Percent of Industries Requesting Skills	Demand for Skills Across Industries	Demand for Skills Across Industries	Projected Occupation Growth
Percent of Occupations Requesting Skill	Demand for Skills Across Industries	Demand for Skills Across Industries	Projected Occupation Growth
RIMS II Multiplier	Economic Multiplier	Demand for Skills Across Industries	Projected Occupation Growth
Employment to Separations Ratio (By Major Industry)	Industry Turnover	Demand for Skills Across Industries	Projected Occupation Growth
Burning Glass Occupations Growth Projections	Projected Occupation Growth	Demand for Skills Across Industries	Projected Occupation Growth

Necessary, Defining and Distinguishing Skills Detail



For the purposes of this project, we **focus on Necessary and Defining skills**, as it is the Necessary and Defining Skills that are critical for job seekers and education and training providers to understand as they prepare Hoosiers for jobs that are important to the region, its employers and its residents. **Distinguishing Skills are beyond what is required for successful employment.** Stakeholders are encouraged to consider developing Distinguishing Skills to make applicants even more competitive and gain salary but are not required as a part of this analysis.¹ NOTE: Skill gaps were also provided to bridge the gaps between the original job and the next step occupation. Information available upon request.

¹<https://www.burning-glass.com/changing-the-way-we-think-about-skills/>

Degree and Certification Program Identification Detail

Data Sources

- ✓ **IPEDS:** From IPEDS we are able to ascertain
 1. Degrees and Certificates Awarded
 2. Enrollment
 3. Retention Rates
- ✓ **EmployIndy:** EmployIndy has provided us a list of approved programs in the local Indianapolis area that provide training at various levels

IPEDS Data Methodology

- Identify all educational programs and providers reporting to IPEDS in the Metro Indy area as we have defined it
- Take a three school-year average (2016-2019) for all summary metrics of program performance

Mapping Programs to Good and Promising Jobs

Detail

- Local Education Training Programs
 - There are many paths to an occupation; one program may be enough in some cases, and not enough in others.
 - We do not know completion information for each program nor program capacity, so a supply and demand comparison is not available
- Completions Information from IPEDS
 - Programs offered by accredited postsecondary institutions at both the BA and Sub-BA level (and thus BA and some sub-BA pathways) can be identified through IPEDS
 - Compare realized completions (3 school-year average, 2016-2018) to available jobs in 2019
 - Note that there are many paths to an occupation

IPEDS BA Degree Provider Summary

Institution Name	Average Completions	Average Enrollment	Average Full-time Retention Rate	Average Part-time Retention Rate
Indiana University-Bloomington	7,522	35,305	91%	65%
Purdue University-Main Campus	7,040	32,324	91%	67%
Indiana University-Purdue University-Indianapolis	4,197	21,535	74%	47%
Vincennes University	167	18,431	54%	63%
Ball State University	3,352	16,725	79%	44%
Indiana State University	1,934	11,245	65%	45%
Purdue University Fort Wayne	1,396	10,358	58%	45%
Purdue University Northwest	2,027	10,354	69%	45%
University of Southern Indiana	1,559	9,600	71%	42%
University of Notre Dame	2,151	8,574	98%	
Indiana University-South Bend	782	5,412	64%	38%
Indiana Institute of Technology	471	5,282	60%	25%
Indiana University-Southeast	856	4,989	60%	44%
Indiana Institute of Technology-College of Professional Studies	444	4,714	60%	36%
University of Indianapolis	850	4,447	75%	36%

Note: Institutions do not differentiate between completions and enrollments for Associates and Bachelor's Degrees, so these numbers include both. Any institution that services both education levels is denoted with an asterisk.

IPEDS Sub-BA Degree Provider Summary

Institution Name	Average Completions	Average Enrollment	Average Full-time Retention Rate	Average Part-time Retention Rate
College of Biblical Studies	18	198	47.67%	58.50%
Fortis College-Indianapolis	98	319	62.33%	
Indiana University-Purdue University-Indianapolis	717	21,535	73.67%	47.33%
Indiana Wesleyan University-Marion	13	2,811	79.67%	67.00%
International Business College-Indianapolis	155	308	84.33%	
Ivy Tech Community College	22,077	75,467	50.00%	41.67%
Lincoln College of Technology-Indianapolis	426	894	65.00%	
Marian University	22	2,293	77.33%	71.00%
MyComputerCareer.com	158	229		
National American University-Indianapolis	10	169		0.00%
Purdue University Global	36	754		44.50%
University of Indianapolis	29	4447	75.33%	36.33%
Vincennes University	2,975	18,431	54.00%	62.50%

Note: Institutions do not differentiate between completions and enrollments for Associates and Bachelor's Degrees, so these numbers include both. Any institution that services both education levels is denoted with an asterisk.

End Notes



End Notes

Slide 8

- Brookings' Advancing Opportunity in Central Indiana defines "good jobs" as those earning more than \$18/hour.
- Bachelor's occupations were categorized by share of job postings having a simple majority requiring a Bachelor's Degree. Sub-Bachelor's occupations were categorized by share of job postings having a simple majority requiring less than a Bachelor's Degree (High School, or Associates degree).

Slide 13

- A ten-year projection timeframe was used (Sub-BA projection is 5 years) to account for the significant time and financial investments required to obtain a bachelor's degree.

Slide 14

- A five-year projection timeframe was used.

Slide 15

- Good Jobs earn more than \$18 per hour and Promising Jobs earn less than \$18 per hour (\$37,440 per year) but possessing other attractive characteristics.

Slide 16

- Cyber Info Security Engineers = "Cyber / Information Security Engineer / Analyst"

Slide 18

- Any industry that showed up in fewer than 4 percent of postings is grouped into the "all other" category.
- A breakdown of all sub-industries can be found in the Appendix

Slide 20

- Administrative and Support = "Administrative and Support and Waste Management and Remediation Services"

Slide 22

- Education requirements are captured at the national, rather than local level.

Slide 23

- Education requirements are captured at the national, rather than local level.

End Notes

Slide 25

- Visual includes top 20 aggregate certifications requested in Bachelor's job postings. For that reason, some Bachelor's-level occupations were not included in the visual.
- Certifications requested in job postings are captured at the national, rather than local level.
- Drivers license certification excluded in visualization.
- These visuals can be viewed and manipulated in PowerBI at this link (slides 9-10):
<https://app.powerbi.com/view?r=eyJrljoiY2QzMWVmOTctYTZiNy00Y2Q0LTgxNjltYWRmNTdjNTE1MmMxliwidCI6Ijc3OGY3NmE1LTUwOTktNDA3MS05NjNhLTA3NmY1ZDY1Mzg3NyIsImMiOjN9>

Slide 26

- Visual includes top 20 aggregate certifications requested in Sub-Bachelor's job postings. For that reason, some Sub-Bachelor's-level occupations were not included in the visual.
- Certifications requested in job postings are captured at the national, rather than local level.
- These visuals can be viewed and manipulated in PowerBI at this link (slides 9-10):
<https://app.powerbi.com/view?r=eyJrljoiY2QzMWVmOTctYTZiNy00Y2Q0LTgxNjltYWRmNTdjNTE1MmMxliwidCI6Ijc3OGY3NmE1LTUwOTktNDA3MS05NjNhLTA3NmY1ZDY1Mzg3NyIsImMiOjN9>

Slide 27

- This should not dissuade job seekers from seeking two-year degrees, but rather to consider (1) the content of their degree as that may prove more important, and (2) the intention and likelihood that the Associates degree will lead directly to a four-year program.

Slide 28

- For jobs with diverse certification requirements, job posting certificate data can provide valuable evidence of structured career ladder pathways or diverse specialization opportunities. Engineer certifications in general demonstrate stage-based advancement within the profession (Engineer in Training, Licensed Professional Engineer, and American Board for Engineering and Technology). Alternatively, certifications requested in Cyber Info Security Engineer job postings are diverse and may provide evidence of additional specialization/areas of focus within the profession.
- In cases where a given certification is requested with significantly more frequency than other certifications in an occupation, the certification may serve a gatekeeper function for the profession. Examples include Registered Nurse (82% of Registered Nurse postings) and CDL Class A (58% of Truck Driver postings).

End Notes

Slide 28, continued

- Consistent rank order of sub-industries at both educational levels suggests potential opportunities for education and employer stakeholders to cooperate and partner in educational pipeline initiatives that streamline workforce educational attainment within the sub-industry. These include sub-industries under Finance and Insurance, Health Care and Social Assistance, Manufacturing, Administrative and Support (see note), Accommodation and Food Services, and Transportation and Warehousing.

Slide 31

- This visual maps the job-to-job flow between similar Bachelor's jobs. Each job connection represents a transition from the source job (left) to a destination job (right).
- Job to job relationships displayed in this visual contain a similarity score of at least 40%
- Size of grey ribbon flows between any two jobs is scaled to the number of 2019 job postings at the destination job.
- These visuals can be viewed and manipulated in PowerBI at this link (slides 11-12):
<https://app.powerbi.com/view?r=eyJrljoiY2QzMWVmOTctYTZiNy00Y2Q0LTgxNjltYWRmNTdjNTE1MmMxliwidCI6Ijc3OGY3NmE1LTUwOTktNDA3MS05NjNhLTA3NmY1ZDY1Mzg3NyIsImMiOjN9>

Slide 32

- This visual maps the job-to-job flow between similar Bachelor's jobs. Each job connection represents a transition from the source job (left) to a destination job (right).
- Job to job relationships displayed in this visual contain a similarity score of at least 40%
- Size of grey ribbon flows between any occupations jobs is scaled to the number of 2019 job postings at the destination occupation.
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<https://app.powerbi.com/view?r=eyJrljoiY2QzMWVmOTctYTZiNy00Y2Q0LTgxNjltYWRmNTdjNTE1MmMxliwidCI6Ijc3OGY3NmE1LTUwOTktNDA3MS05NjNhLTA3NmY1ZDY1Mzg3NyIsImMiOjN9>

Slide 35

- Average Yearly Completions represent a three-year average of occupation-aligned degrees.
- Degree completion totals include both bachelor's and sub-bachelor's academic award levels.
- Completion data represents institutions throughout the state of Indiana.

Slide 36

- Each education provider is scaled to three-year average production of job-aligned degrees.

End Notes

Slide 37

- Each education provider is scaled to three-year average production of job-aligned degrees.
- Background layer utilizes CDC's Social Vulnerability Index. The CDC/ATSDR SVI uses U.S. Census data to determine the social vulnerability of every census tract. Census tracts are subdivisions of counties for which the Census collects statistical data. The CDC/ATSDR SVI ranks each tract on 15 social factors, including poverty, lack of vehicle access, and crowded housing, and groups them into four related themes. Maps of the four themes are shown in the figure below. Each tract receives a separate ranking for each of the four themes, as well as an overall ranking. For additional information see: <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>

Slide 52

- Job postings are captured at the industry level and by sub-industries that make up the larger industry category. When sub-industry job postings are broken out by educational requirements it is possible to compare job posting levels within each sub-industry, including Bachelor's and Sub-Bachelor's educational requirements. In some cases, sub-industries are aligned in job posting volume (sub-industry rank of job postings by education requirements within a given industry category) between Bachelor's and Sub-Bachelor's postings.

Slide 54

- Skill gaps were also provided to bridge the gaps between the original job and the next step occupation. Information available upon request.

Slide 57

- Note: Institutions do not differentiate between completions and enrollments for Associates and Bachelor's Degrees, so these numbers include both. Any institution that services both education levels is denoted with an asterisk.

Slide 58

- Note: Institutions do not differentiate between Associates and Bachelor's Degrees, so these numbers include both. Any institution that services both education levels is denoted with an asterisk.