FUTURE OF TALENT

GOOD MORNING

THANK YOU

SPEAKERS

Dale Brill Ph. D.
Senior Vice President,
Foundation for Orlando's Future

Mr. Paul J. Luna
President, CEO
Helios Education Foundation

Thad Seymour, Ph. D.
Interim President
University of Central Florida

Michael Preston Ed. D.
Executive Director
Florida Consortium of Metropolitan Research Universities

Mr. Doug Heckman
University Data Solutions
EMSI

Welcome

Dale Brill, Ph.D.

Senior Vice President, Foundation for Orlando's Future

FLORIDA CONSORTIUM OF METROPOLITAN RESEARCH UNIVERSITIES

Opening Remarks

Michael Preston, Ed.D.

Executive Director, Florida Consortium

FLORIDA CONSORTIUM OF METROPOLITAN RESEARCH UNIVERSITIES

Partnership and the Value of Education

Mr. Paul Luna

President/CEO, Helios Education Foundation

FLORIDA CONSORTIUM OF METROPOLITAN RESEARCH UNIVERSITIES

University of Central Florida Fueling the Talent Pipeline

Thad Seymour, Ph.D.

Interim President, University of Central Florida

Central Florida Talent Outlook

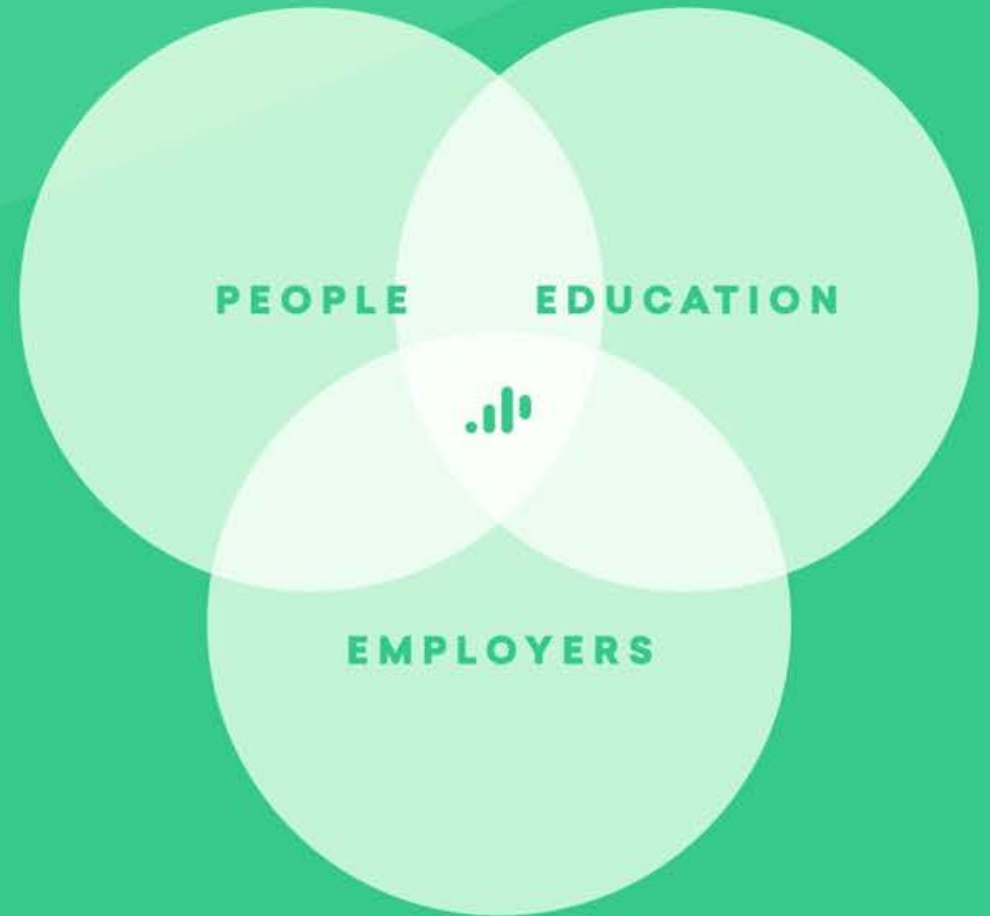Mr. Doug Heckman

University Data Solutions, EMSI

FLORIDA CONSORTIUM OF METROPOLITAN RESEARCH UNIVERSITIES

Emsi's mission is to use **labor market data** to inform and connect **people, education, and employers.**

Emsi Data

Labor market data

Data from government sources like US Census Bureau and the Department of Labor

Job postings

Data from job advertisements made by employers (aka real-time labor market data)

Résumés and profiles

Data from online profiles and résumés created by students and jobseekers

Delivery

Software

Access labor market data online and customize any variable at any point. Accessible anywhere.

Consulting

Our team of economists will tailor our data to address your needs in a customized study.

API

Pipe our data onto your own webpage for custom design and display.

Our Teams

Higher Education

Helping colleges meet the needs of their regional economy and drive student success.

Community Insights

Providing labor market & economic insights to help your community prosper.

Enterprise

Supplying key insight to help employers drive talent strategy and align recruiting efforts.
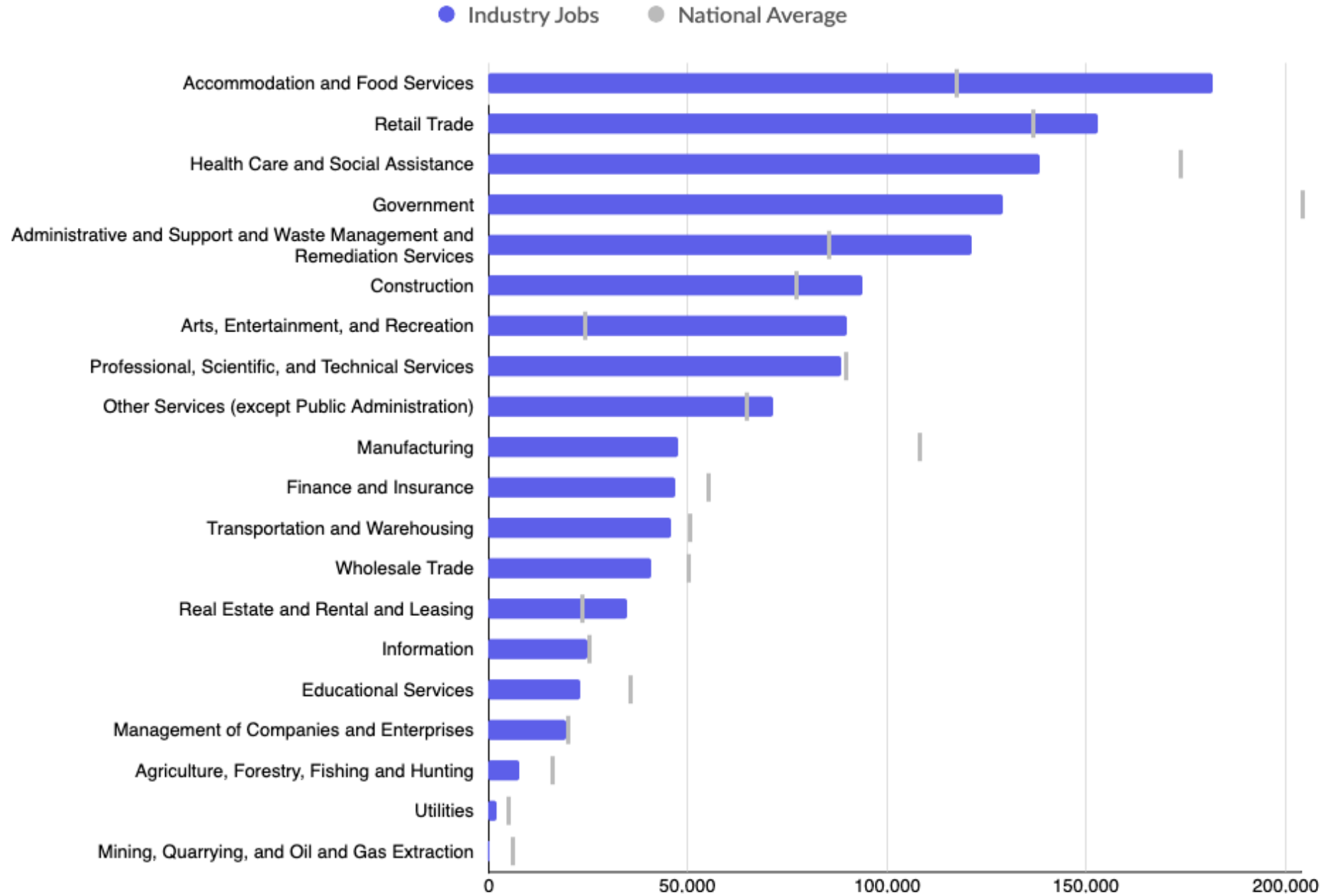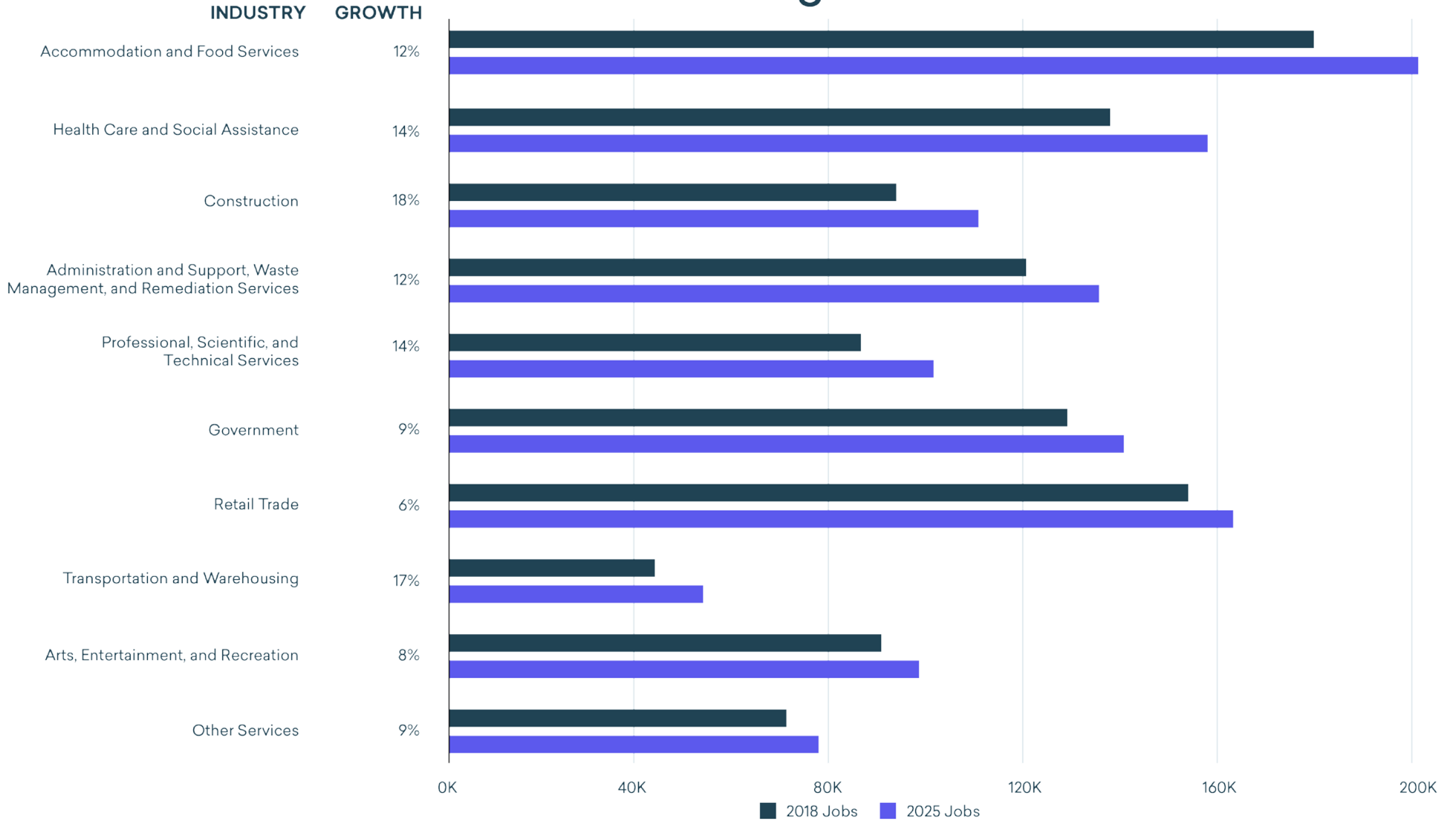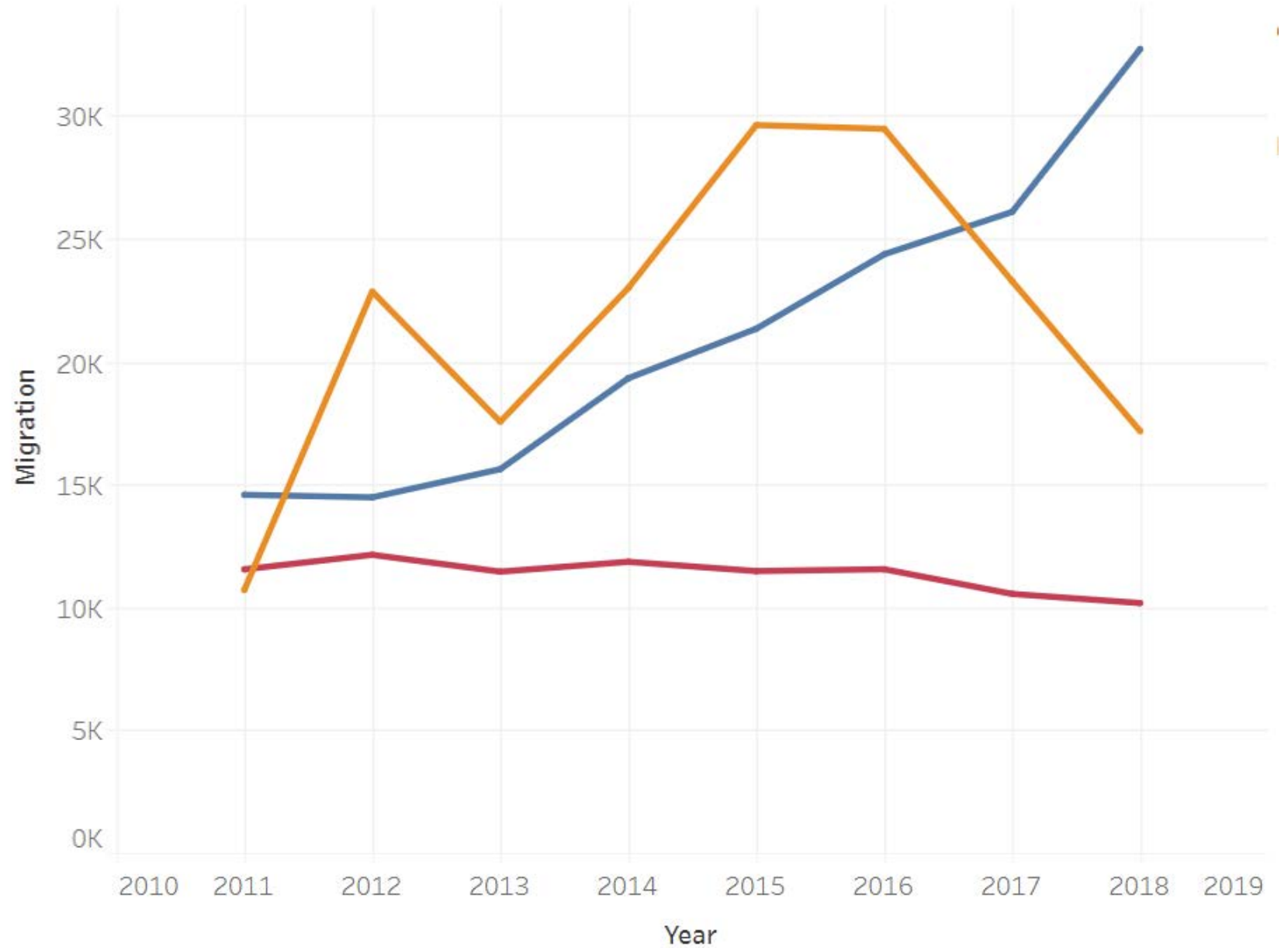
Largest Industries

● Industry Jobs   ● National Average

Industry	Industry Jobs
Accommodation and Food Services	~180,000
Retail Trade	~153,000
Health Care and Social Assistance	~138,000
Government	~128,000
Administrative and Support and Waste Management and Remediation Services	~120,000
Construction	~93,000
Arts, Entertainment, and Recreation	~89,000
Professional, Scientific, and Technical Services	~88,000
Other Services (except Public Administration)	~71,000
Manufacturing	~47,000
Finance and Insurance	~46,000
Transportation and Warehousing	~45,000
Wholesale Trade	~40,000
Real Estate and Rental and Leasing	~34,000
Information	~25,000
Educational Services	~23,000
Management of Companies and Enterprises	~20,000
Agriculture, Forestry, Fishing and Hunting	~7,000
Utilities	~1,500
Mining, Quarrying, and Oil and Gas Extraction	~500

0   50,000   100,000   150,000   200,000

Fastest Growing Industries

INDUSTRY	GROWTH
Accommodation and Food Services	12%
Health Care and Social Assistance	14%
Construction	18%
Administration and Support, Waste Management, and Remediation Services	12%
Professional, Scientific, and Technical Services	14%
Government	9%
Retail Trade	6%
Transportation and Warehousing	17%
Arts, Entertainment, and Recreation	8%
Other Services	9%

Legend: 2018 Jobs, 2025 Jobs

Axis: 0K, 40K, 80K, 120K, 160K, 200K

ORLANDO MSA

Source: Tableau Public, Dakota Mellish,
Census Pop. Estimates Migration Data

Orlando Overview

Educational Attainment

Concerning educational attainment, **19.5% of Orlando-Kissimmee-Sanford, FL residents possess a Bachelor's Degree** (0.6% above the national average), and **11.4% hold an Associate's Degree** (3.4% above the national average).

		% of Population	Population
🔵	Less Than 9th Grade	5.1%	93,262
🔵	9th Grade to 12th Grade	6.5%	116,891
🔵	High School Diploma	26.8%	484,878
🟣	Some College	20.9%	377,955
🟠	Associate's Degree	11.4%	207,424
🟡	Bachelor's Degree	19.5%	352,806
🟢	Graduate Degree and Higher	9.9%	178,793

In 2018, there were 53,041 graduates in Orlando-Kissimmee-Sanford, FL. This pipeline has shrunk by 4% over the last 5 years. The highest share of these graduates come from Liberal Arts and Sciences/Liberal Studies, "Business Administration and Management, General", and "Psychology, General".

School	Total Graduates (2018)		Graduate Trend (2014 - 2018)
University of Central Florida	16,616		
Valencia College	13,305		
Seminole State College of Florida	5,677		
Full Sail University	5,551		
Florida Technical College	1,726		
Universal Technical Institute-Auto Motorcycle & Marine Mechanics Institute Division-Orlando	1,078		
Rollins College	1,002		
Lake-Sumter State College	864		
Southern Technical College	720		
Orange Technical College-Mid Florida Campus	661		

● Certificate ● Associate's ● Bachelor's ● Master's or Higher

Colleges/ Universities Providing Talent

Top Schools

School	Profiles	Percent
University of Central Florida	114,919	8.72%
Valencia College	77,806	5.90%
Seminole State College of Florida	34,591	2.63%
University of Florida	22,506	1.71%
Florida State University	15,978	1.21%
University of Phoenix	13,914	1.06%
Full Sail University	13,779	1.05%
Rollins College	12,311	0.93%
University of South Florida	8,865	0.67%
University of Puerto Rico	6,170	0.47%
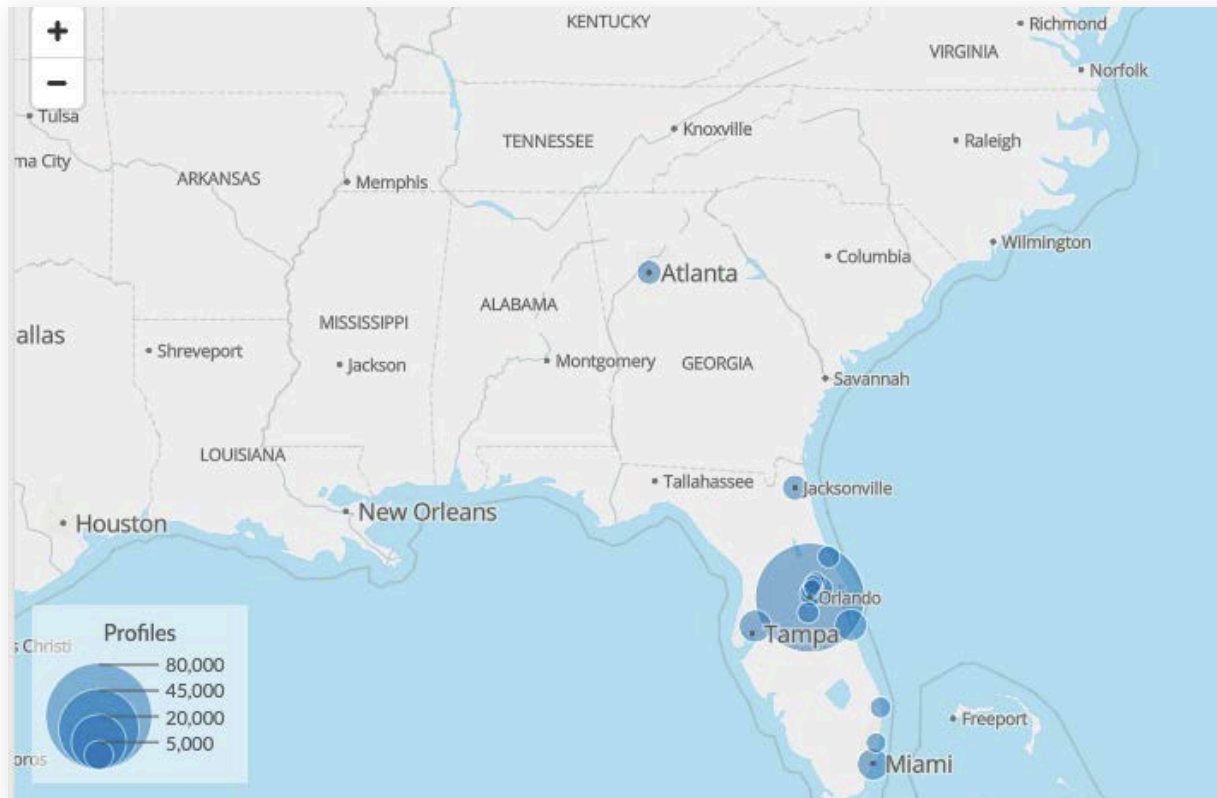
Top Cities
- Orlando, FL: 35%
- Tampa, FL: 3%
- Miami, FL: 3%
- Melbourne, FL: 3%
  Oviedo, FL: 2%
- Jacksonville, FL: 2%
- New York, NY: 2%
  Winter Park, FL: 1%
- Atlanta, GA: 1%
- Daytona Beach, FL: 1%

Migration of UCF Alumni
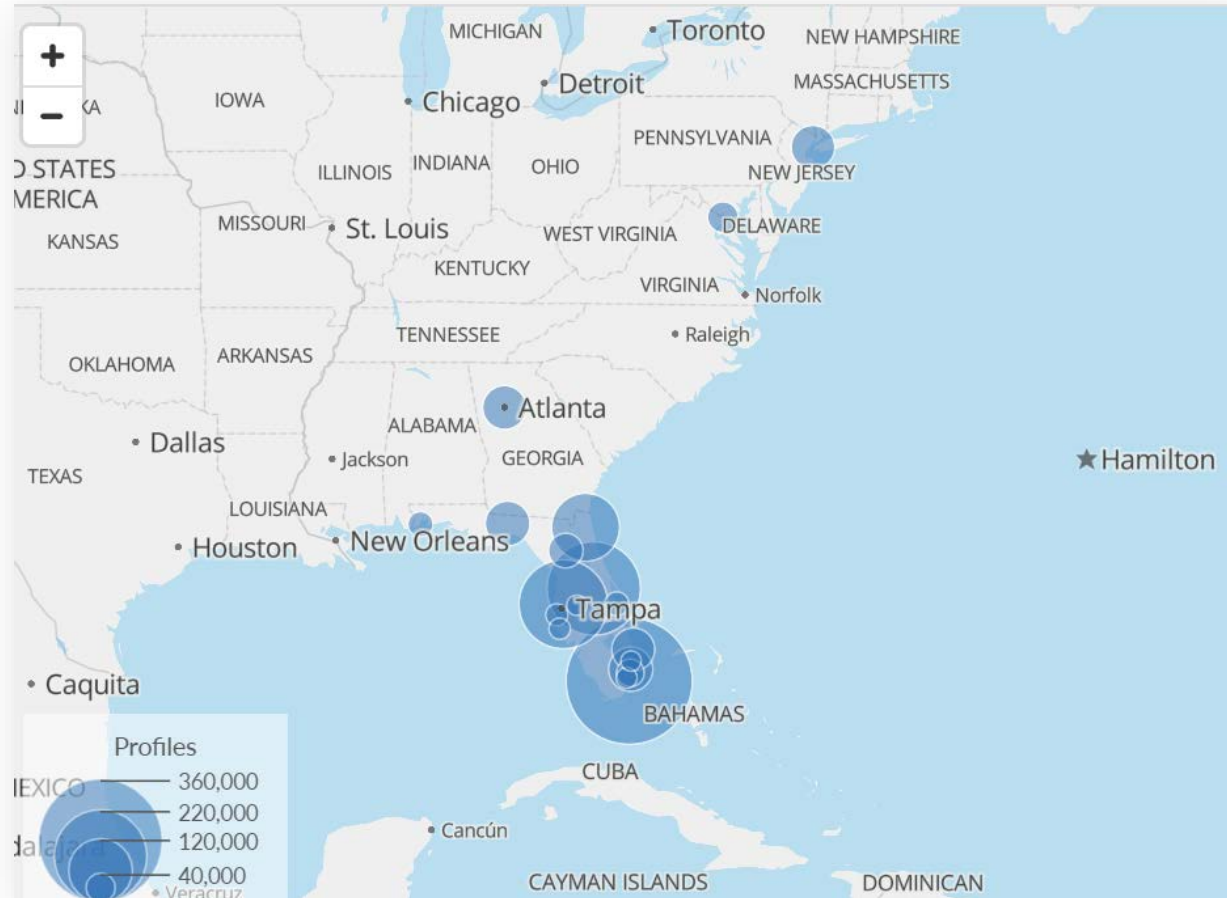
Top States
FL: 61%
GA: 4%
CA: 3.6%
NY: 3.3%
TX: 3.3%
NC: 2.1%
VA: 1.6%

Migration of Florida Graduates (2- and 4-year)

260,593 Companies Employ Your Workers

Top Companies	Profiles		Top Companies Posting	Unique Postings	
The Walt Disney Company	25,753		Lockheed Martin Corporation	8,393	
Florida Hospital	10,073		Orlando Health, Inc.	5,791	
Orange County Public Schools	9,548		The Walt Disney Company	3,913	
Universal Studios, Inc.	7,241		Adventist Health System	3,799	
University of Central Florida	7,077		Oracle Corporation	3,687	
Orlando Health, Inc.	6,612		Assurance	3,037	
Lockheed Martin Corporation	5,791		CRST International, Inc.	2,750	
Wal-Mart Stores, Inc.	5,500		Marriott International, Inc.	2,745	
Publix Super Markets, Inc.	3,907		HealthCare Employment Network	2,573	
Siemens AG	3,493		Anthem, Inc.	2,563	

Largest Occupations in Healthcare

Orlando

Occupation	Employed in Industry (2019)	Employed in Industry (2025)	% Change (2019-2025)	% of Total Jobs in Industry (2019)
Registered Nurses	17,405	19,606	13%	12.6%
Nursing, Psychiatric, and Home Health Aides	12,896	14,295	11%	9.3%
Miscellaneous Healthcare Support Occupations	11,911	13,997	18%	8.6%
Physicians and Surgeons	6,338	7,280	15%	4.6%
Receptionists and Information Clerks	4,910	5,650	15%	3.5%
Personal Care Aides	4,845	6,204	28%	3.5%
Secretaries and Administrative Assistants	4,750	5,450	15%	3.4%
Licensed Practical and Licensed Vocational Nurses	4,479	4,900	9%	3.2%
Childcare Workers	3,772	4,112	9%	2.7%

Highest Growth Occupations in Healthcare

Orlando

Occupation	Employed in Industry (2019)	Employed in Industry (2025)	% Change (2019-2025)
Physician Assistants	622	836	34%
Emergency Medical Technicians and Paramedics	256	340	33%
Nurse Practitioners	1,022	1,351	32%
Personal Care Aides	4,845	6,204	28%
Nurse Anesthetists	243	294	21%
Miscellaneous Health Practitioners and Technical Workers	163	196	20%
Medical Scientists	104	125	20%
Physical Therapist Assistants and Aides	627	746	19%
Massage Therapists	576	682	18%
Psychologists	458	540	18%

Orlando

Top Hard Skills

Skill	
Clinical Research	
Pharmaceuticals	
Oncology	
Clinical Trials	
Medical Science Liaison	
Biology	
Medical Affairs	
Hematology	
Translational Research	
Information Sciences	

40% 30% 20% 10% 0%

■ Frequency in Job Postings

Seattle

Top Hard Skills

Skill	
Biology	
Immunology	
Biochemical Assays	
Oncology	
Cell Biology	
Molecular Biology	
Flow Cytometry	
Clinical Trials	
Pharmaceuticals	
Cell Cultures	

40% 30% 20% 10% 0%

■ Frequency in Job Postings

The Challenge

- Employers struggle to articulate and communicate the skills they value most

- Higher ed reads the wrong information or old information

- States, regions, and organizations don't know the capabilities, aspirations, and potential of incumbent workers

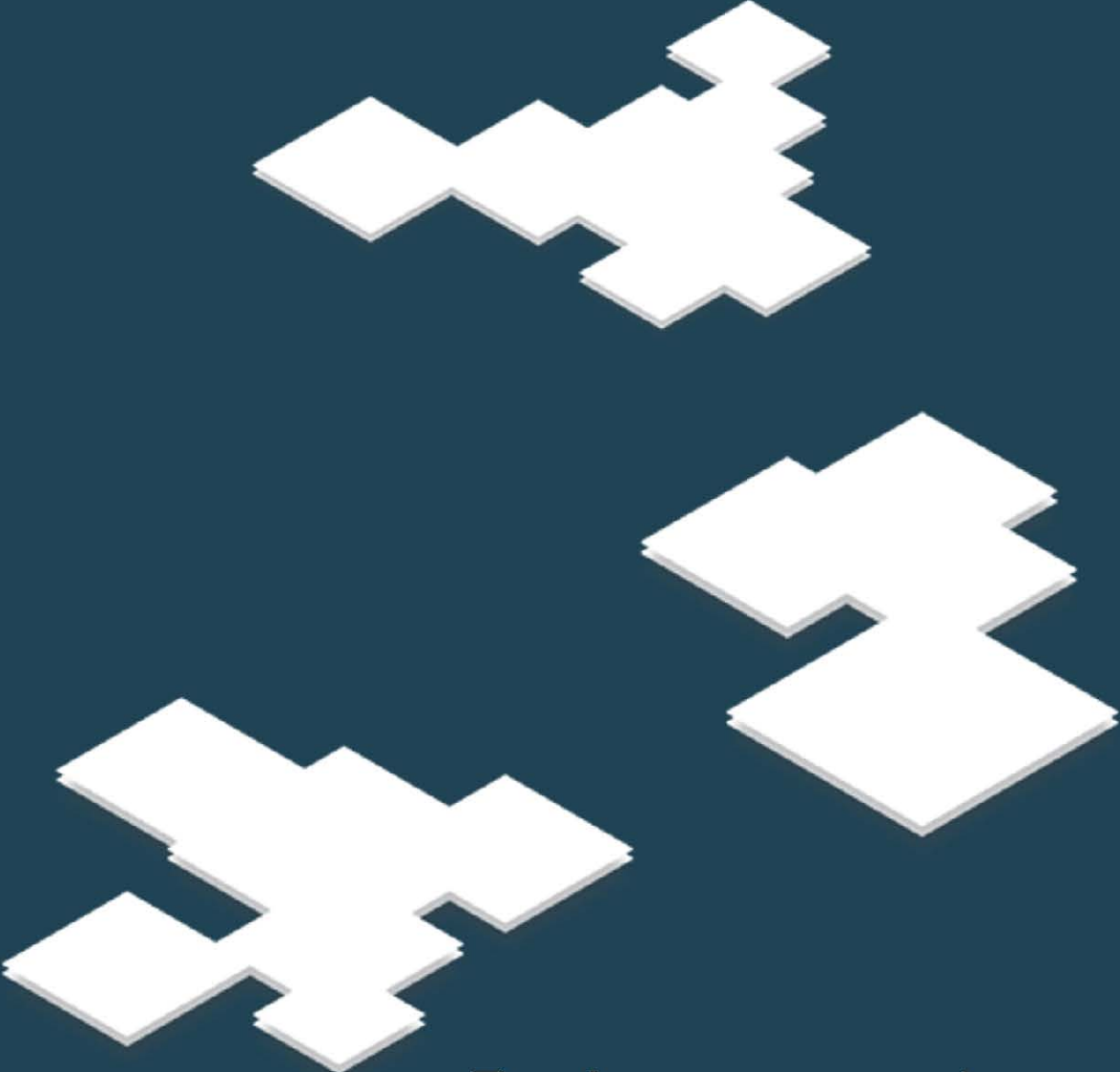- Learners are unable to demonstrate what they know and what they can do
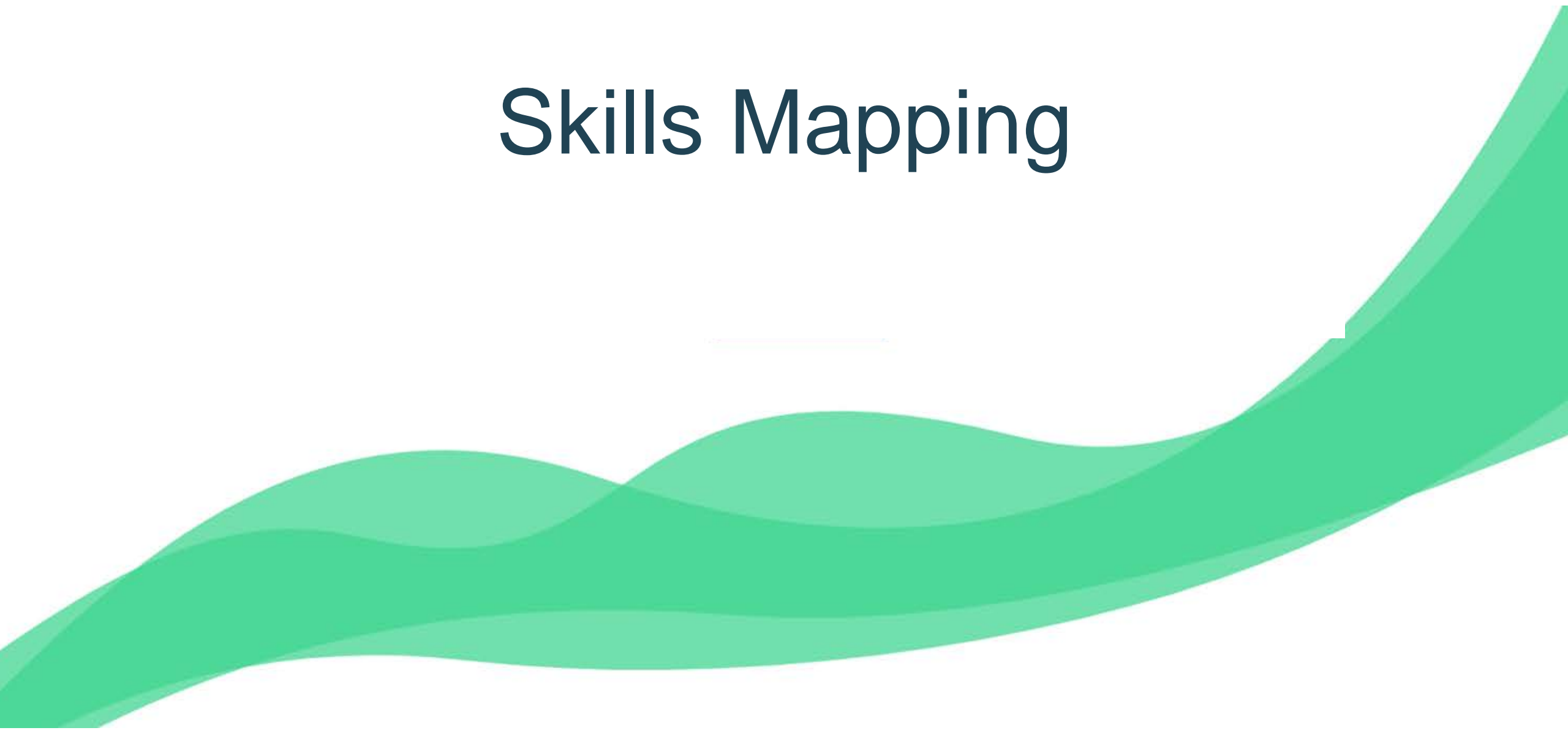
Traditional taxonomies are not detailed enough
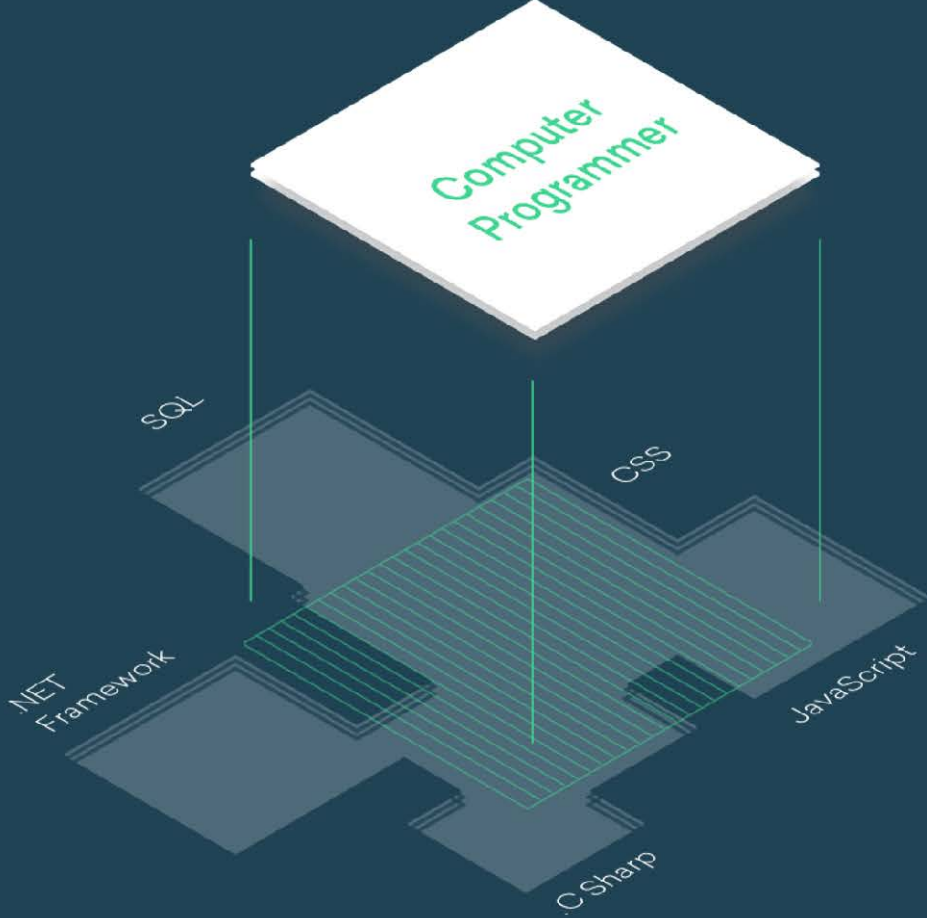
People have unique skill sets

Regions are made up of those people

Taxonomic Approach
Related by category

19-0000 Life, Physical, and Social Science Occupations

19-1000 Life Scientists
   19-1011 Animal Scientists
      19-1012 Food Scientists and Technologists
      19-1013 Soil and Plant Scientists
   19-1021 Biochemists and Biophysicists
      19-1022 Microbiologists
      19-1023 Zoologists and Wildlife Biologists
   19-1029 Biological Scientists, All Other

19-2000 Physical Scientists
   19-2011 Astronomers
      19-2012 Physicists
      19-2021 Atmospheric and Space Scientists

Skill Shape Approach
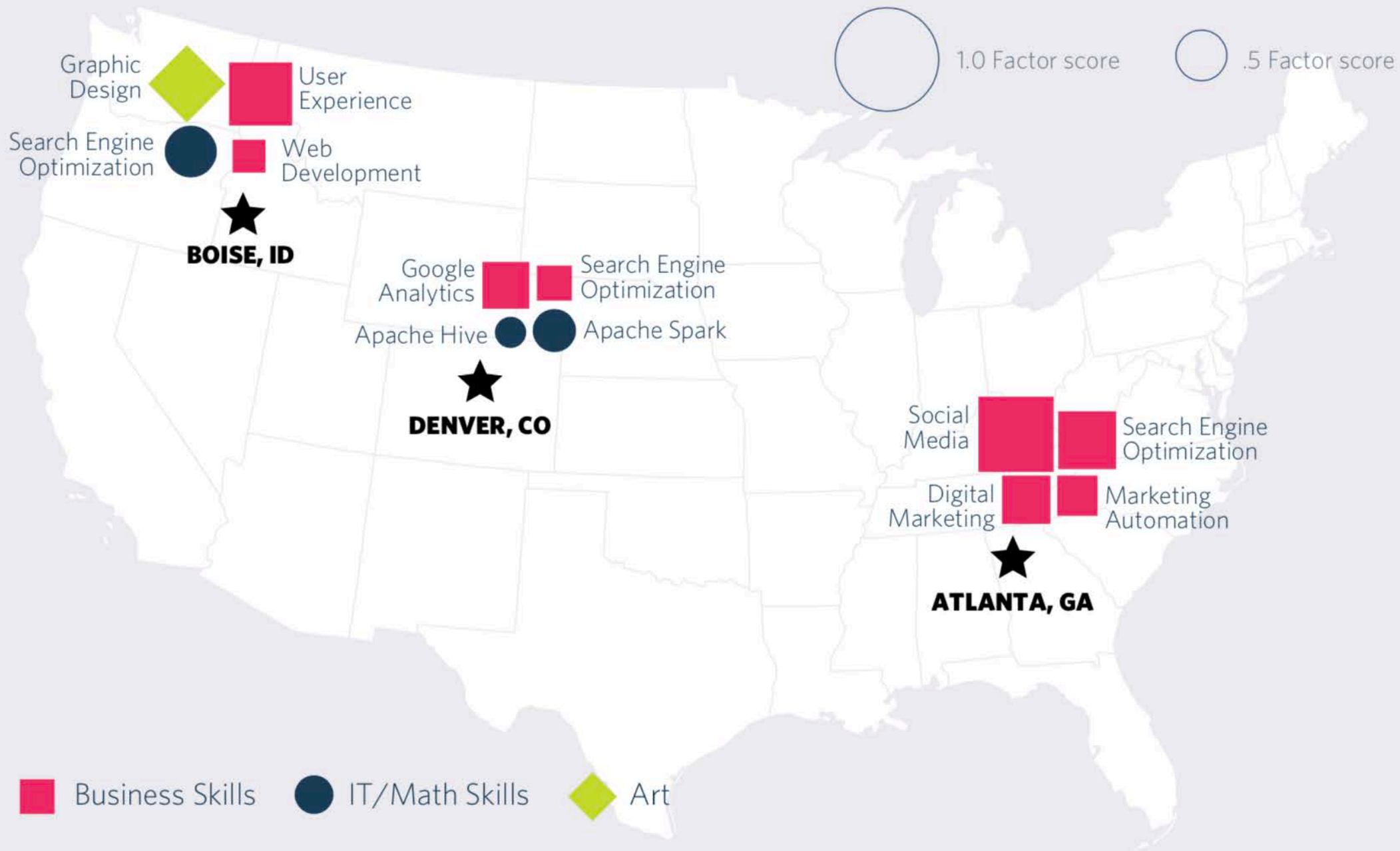## Categorized by relationship
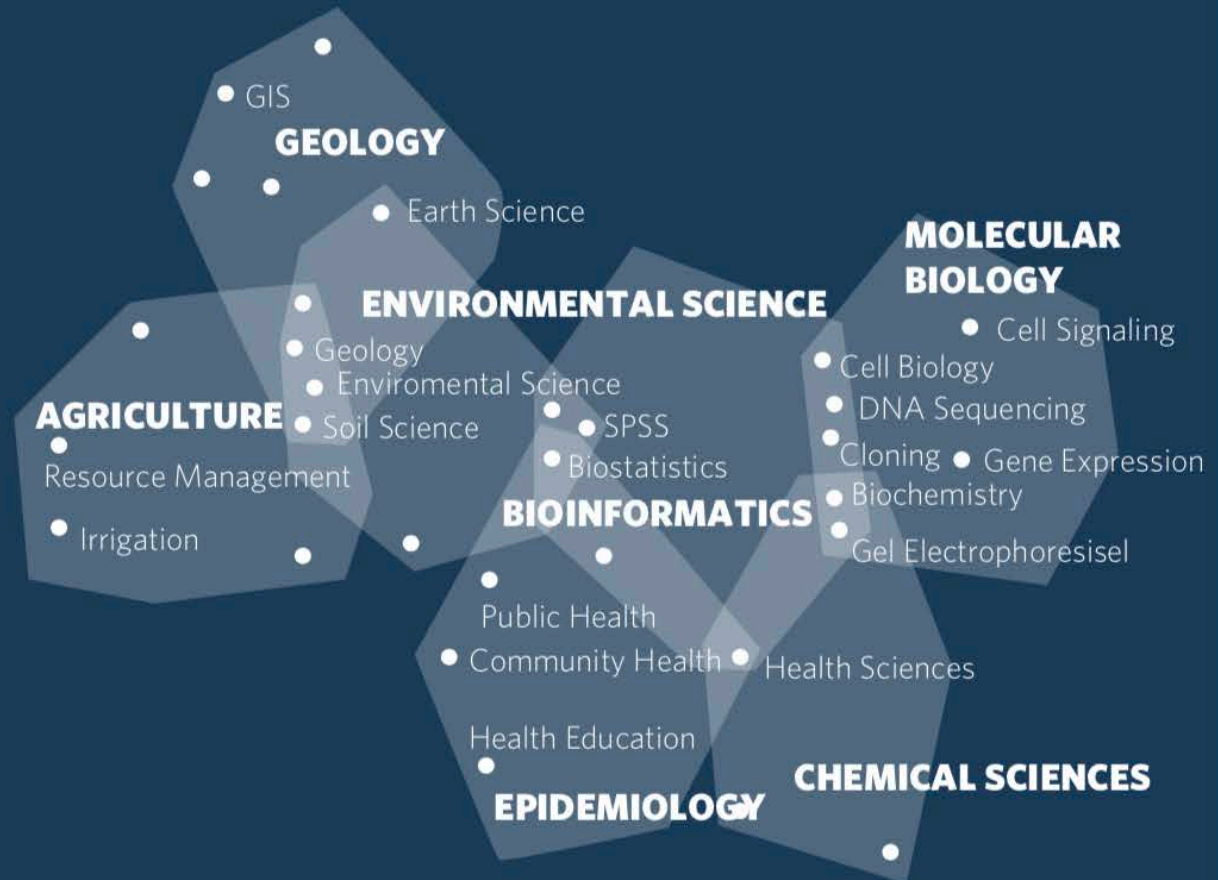
The Skills " Shape"

- Of a person
- Of a curriculum
- Of a job posting
- Of a region
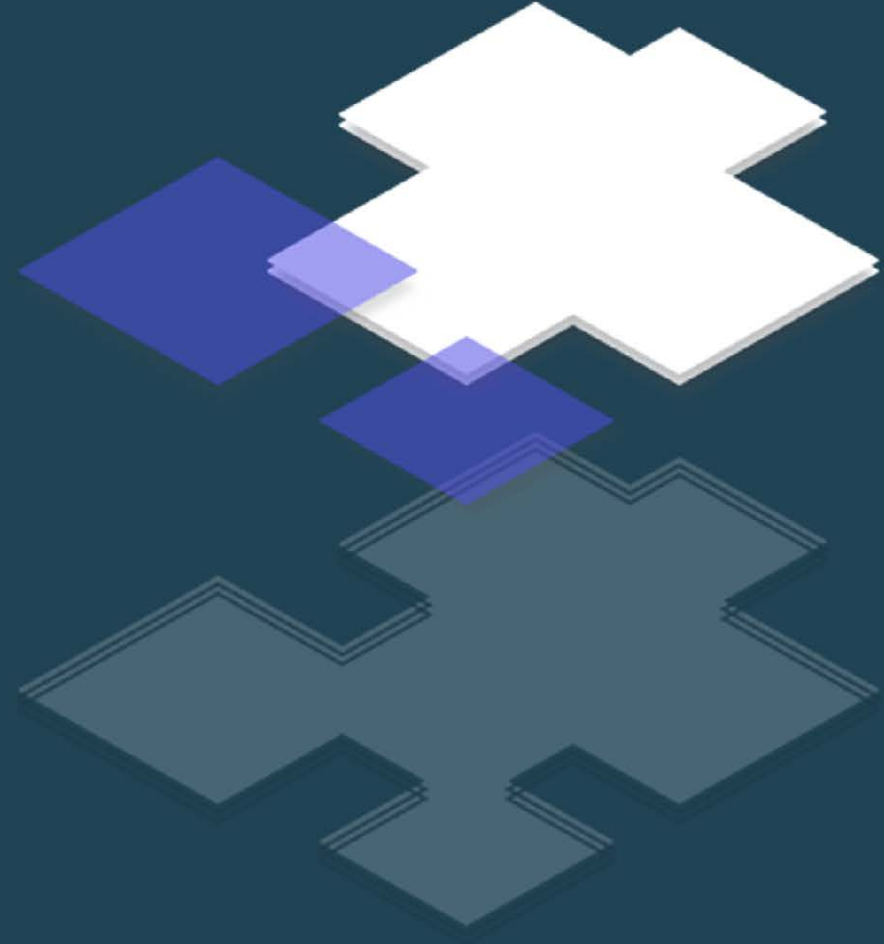
Skill Shape

Unique skills associated with a given career field, region, or individual.

Graphic Design

User Experience

Search Engine Optimization

Web Development

BOISE, ID

Google Analytics

Search Engine Optimization

Apache Hive   Apache Spark

DENVER, CO

1.0 Factor score   .5 Factor score

Social Media

Search Engine Optimization

Digital Marketing

Marketing Automation

ATLANTA, GA

Business Skills   IT/Math Skills   Art

Strada | INSTITUTE FOR THE FUTURE OF WORK   .ıl˙ Emsi

Market

Skillscape

Regionalized
skill clusters

Emsi Skills

Refine your dreams
Find your means

Skillify your syllabi

Skills Match

Skillabi

Emsi Skills

Market

Skillscape

Regionalized
skill clusters

SkillsForce

SkillSync

Optimize your
talent

Sync your taught skills
with sought skills

Skill Shape Early-adopters

- The **Business Higher Education Forum** is utilizing skill shapes to build partnerships between regional employers, higher education institutions, and workforce and economic development agencies to close those gaps.

- **United Healthcare** is one of several companies using skill shapes to understand the talents of its employees to inform its business strategy and talent-development initiatives.

- **Western Governors University** and **Southern New Hampshire University** have started using skill shapes

Skill Shape Vision: Employers

- When employers understand the talent supply in their region, they can target recruitment efforts and engage in upskilling and reskilling their incumbent workforce, as well as better communicate their skills needs to workers, learners, and learning providers.
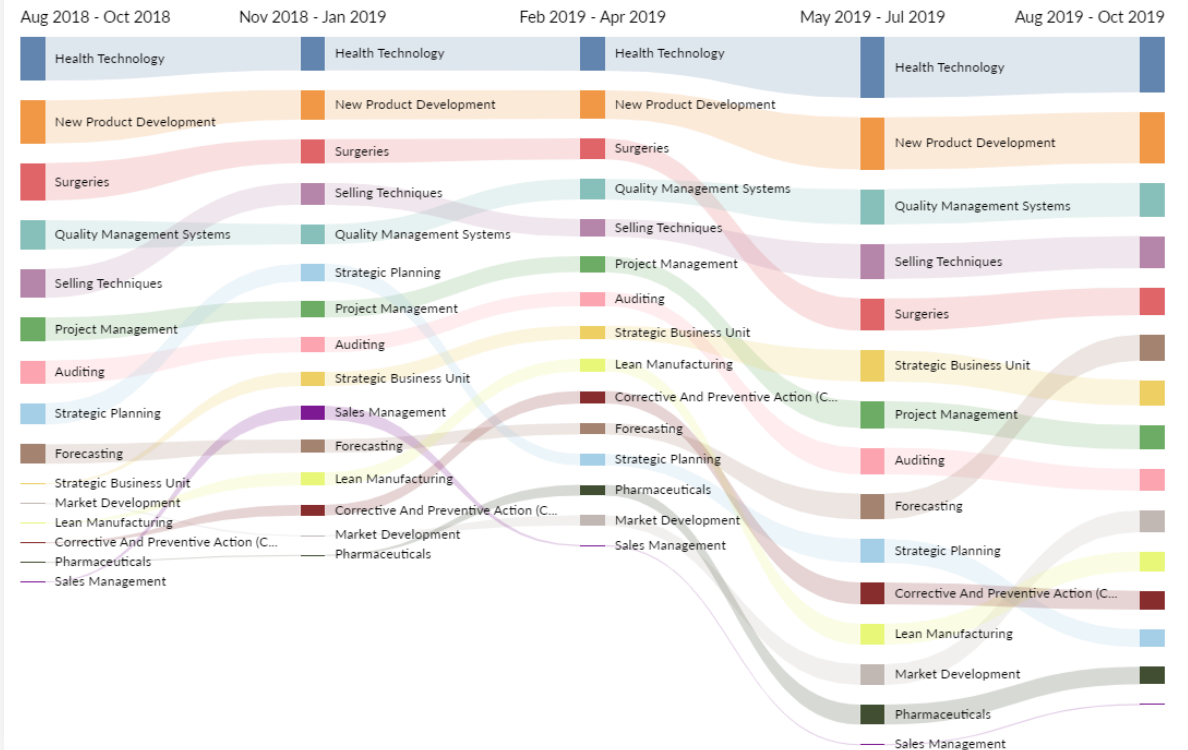
Case Study: **Medtronic**

- Medical device company
- MDT (NYSE) - $107.15
- US headquarters: Fridley, MN
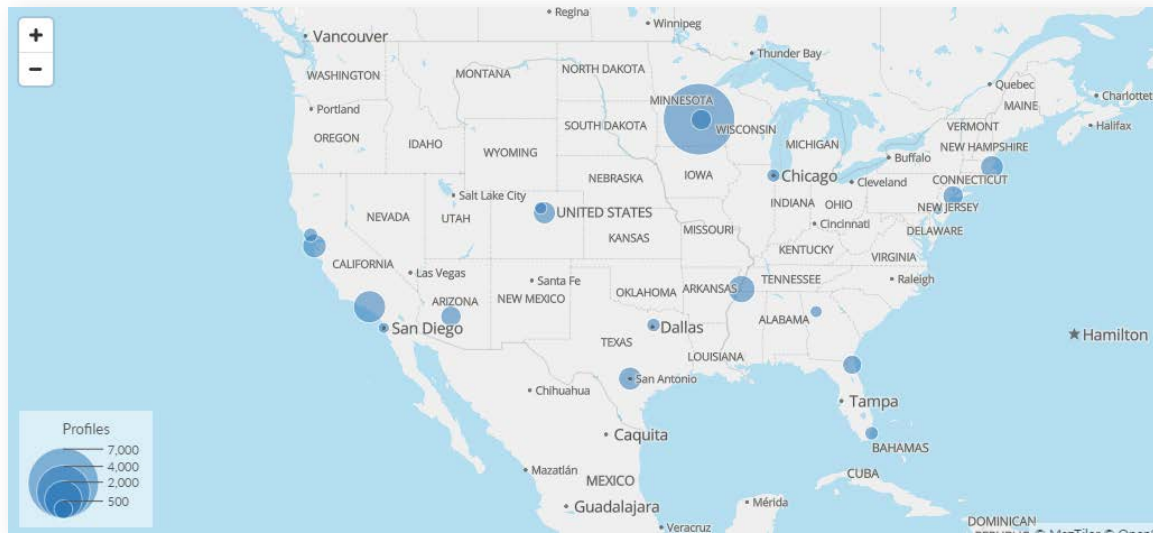
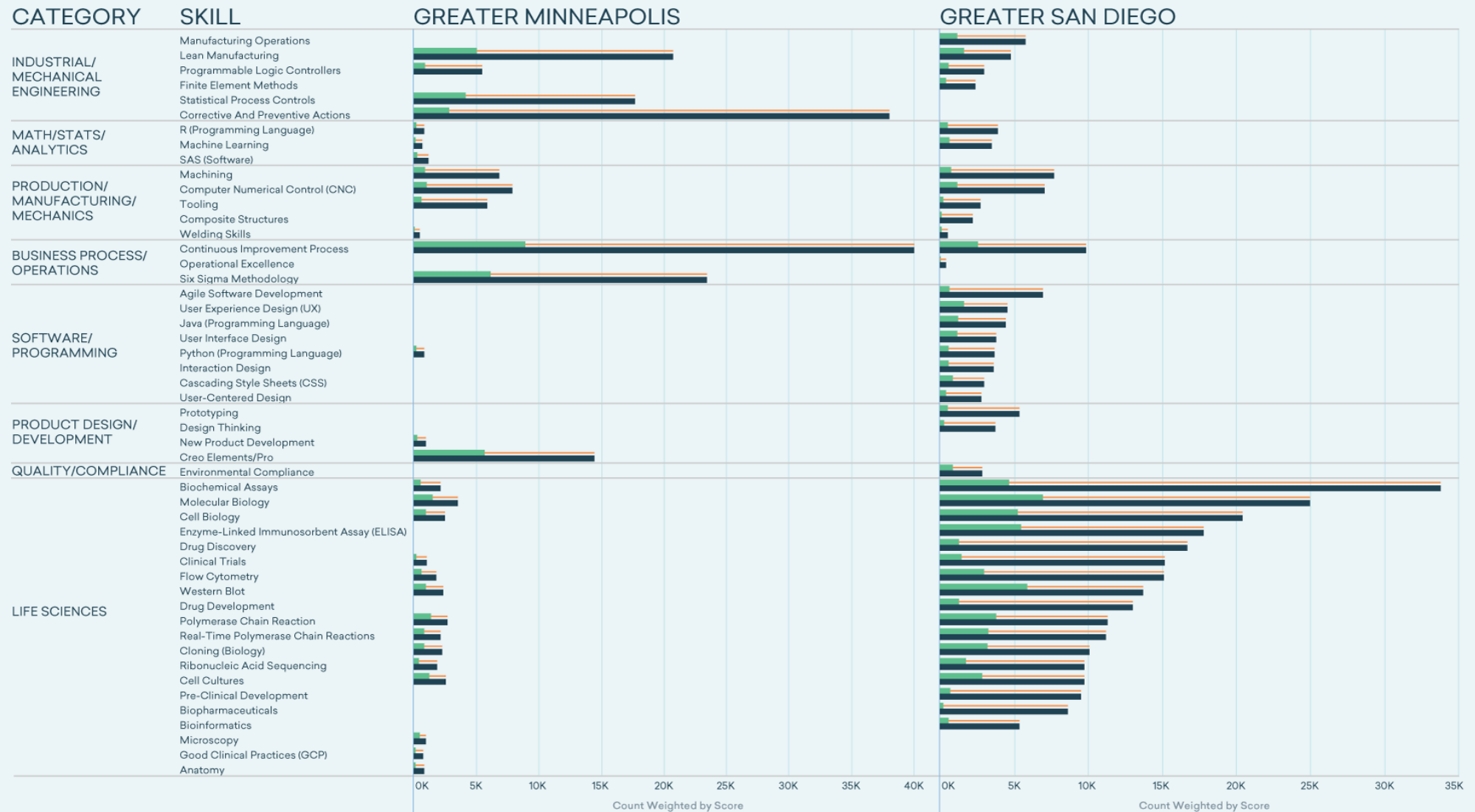## Top 15 Skills for All Job Types Sought by Medtronic, Inc. by Quarter

Skills help us understand not only where a company is trying to go, but how they intend to get there.

MEDICAL MANUFACTURING-RELATED SKILLS

for MINNEAPOLIS & SAN DIEGO

KEY: ■ Gap ■ Supply ■ Demand

CATEGORY	SKILL	GREATER MINNEAPOLIS	GREATER SAN DIEGO
INDUSTRIAL/ MECHANICAL ENGINEERING	Manufacturing Operations		
	Lean Manufacturing		
	Programmable Logic Controllers		
	Finite Element Methods		
	Statistical Process Controls		
	Corrective And Preventive Actions		
MATH/STATS/ ANALYTICS	R (Programming Language)		
	Machine Learning		
	SAS (Software)		
PRODUCTION/ MANUFACTURING/ MECHANICS	Machining		
	Computer Numerical Control (CNC)		
	Tooling		
	Composite Structures		
	Welding Skills		
BUSINESS PROCESS/ OPERATIONS	Continuous Improvement Process		
	Operational Excellence		
	Six Sigma Methodology		
SOFTWARE/ PROGRAMMING	Agile Software Development		
	User Experience Design (UX)		
	Java (Programming Language)		
	User Interface Design		
	Python (Programming Language)		
	Interaction Design		
	Cascading Style Sheets (CSS)		
	User-Centered Design		
PRODUCT DESIGN/ DEVELOPMENT	Prototyping		
	Design Thinking		
	New Product Development		
	Creo Elements/Pro		
QUALITY/COMPLIANCE	Environmental Compliance		
LIFE SCIENCES	Biochemical Assays		
	Molecular Biology		
	Cell Biology		
	Enzyme-Linked Immunosorbent Assay (ELISA)		
	Drug Discovery		
	Clinical Trials		
	Flow Cytometry		
	Western Blot		
	Drug Development		
	Polymerase Chain Reaction		
	Real-Time Polymerase Chain Reactions		
	Cloning (Biology)		
	Ribonucleic Acid Sequencing		
	Cell Cultures		
	Pre-Clinical Development		
	Biopharmaceuticals		
	Bioinformatics		
	Microscopy		
	Good Clinical Practices (GCP)		
	Anatomy		

Greater Minneapolis scale: 0K 5K 10K 15K 20K 25K 30K 35K 40K — Count Weighted by Score

Greater San Diego scale: 0K 5K 10K 15K 20K 25K 30K 35K — Count Weighted by Score

Skill Shape Vision: State and Regional Workforce

Enable policymakers, workforce investment boards, and economic developers to understand skill gaps and surpluses in specific regions and allocate scarce workforce development funds to the greatest labor market needs and opportunities for targeted workforce training.

HARD-TO-FIND SKILLS
FOR MINNEAPOLIS METROPOLITAN AREA

Category: Digital Skills

Occupation Types	Key, Hard-to-Find Skill Sets	Difficulty* of Finding Relevant Talent with These Skills
Accounting, Tax and Financial Services	Data Warehousing/Modeling	
Business and Financial Analysis	Data Warehousing/Modeling	
Data Management	Cloud / Information Security	
	Cloud Computing	
	Data Warehousing/Modeling	
Data Science/Analytics	Actuarial Science	
	Analytics & Data Science	
	Data Warehousing/Modeling	
Information Security	Cloud / Information Security	
	Cyber Security	
IT Networks and Systems	Cloud / Information Security	
	Cyber Security	
Logistics and Procurement	Data Warehousing/Modeling	
Software Development and Programming	Cloud Computing	
	Data Warehousing/Modeling	

HARD   **HARDER**   **HARDEST**

*Difficulty is calculated based on the degree of demand for a key skill to a given career (within a database of job listings) vs. the degree to which that skill appears in the resumés and professional profiles that are relevant to that career (within a database of professional profiles).

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Skill Shape Vision: Higher Education

- Learning Providers: As employers' needs come into focus with the use of skill shapes, learning providers can align curriculum development to real-time workforce needs.

- Learners: Understanding not only the kinds of jobs but also the specific skills that are in demand in a region, learners can identify the learning experiences they need to compete for better jobs

Project Objective

WGU Business education

vs

In-demand, marketable skills for WGU grads

Taught Skills

Sought Skills

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Thank You!

Doug Heckman – Data Solutions, University Team
doug.heckman@economicmodeling.com

Connecting the Talent Pipeline

Michael Preston, Ed.D.

Executive Director, Florida Consortium

FLORIDA CONSORTIUM OF METROPOLITAN RESEARCH UNIVERSITIES

Transforming **Learning** into **Talent** for Florida.

Vision

We leverage the unique assets of
Miami, Orlando, and Tampa Bay
to develop talent which enhances community well-being

Mission

We strengthen Florida's talent pipeline through the of sharing ideas and scalable solutions which accelerate learner achievement and access to economic opportunity

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2019-2023 Focus Areas
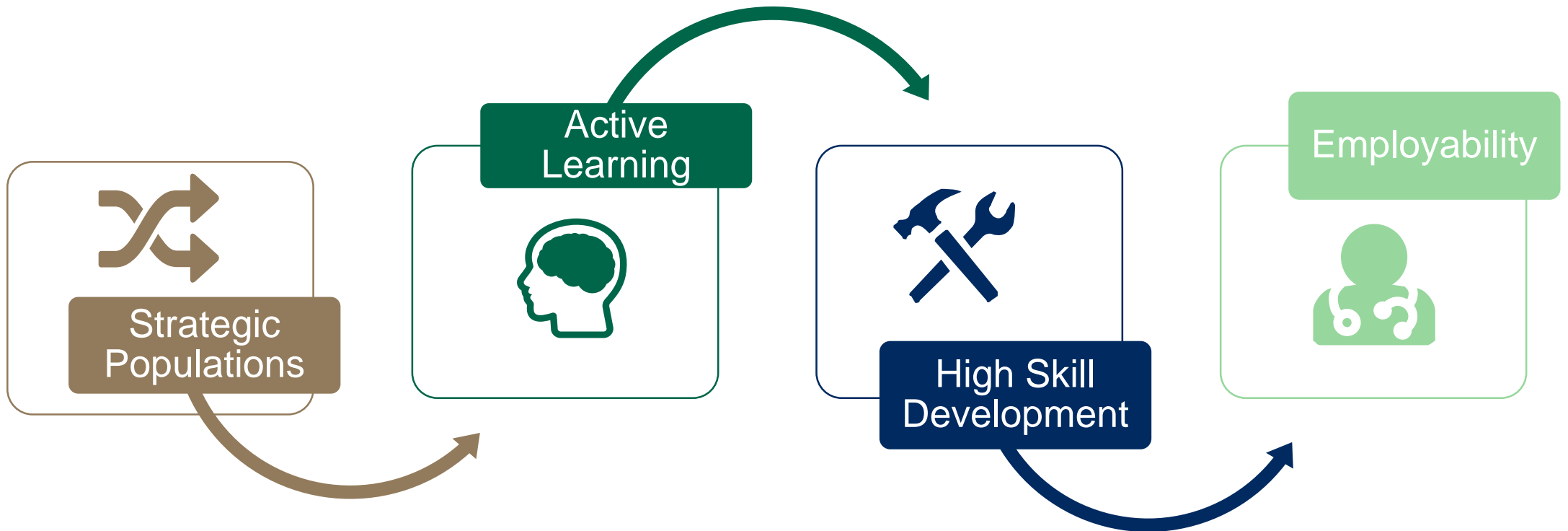
The Impact
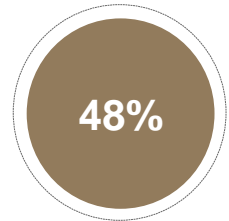
48%	55%	57%	61%	58%
Total SUS Enrollment	**Pell Eligible Students**	**SUS Minority Enrollment**	**State College Transfers**	**Degrees Earned By Minorities**
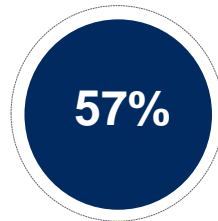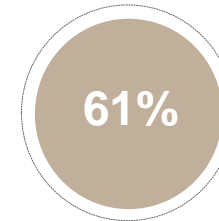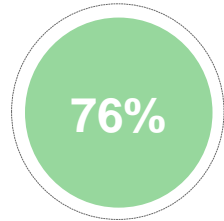
76%	68%	63%	38K	32K
Stay in Florida to work	**Employed within One Year**	**Six Year Minority Grad Rate**	**Average Starting Salary**	**Bachelors Degrees Awarded**
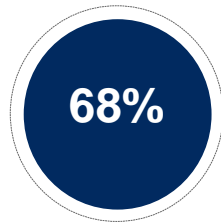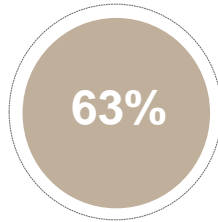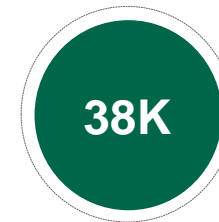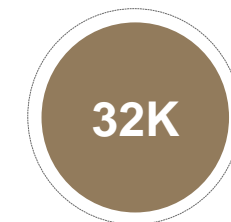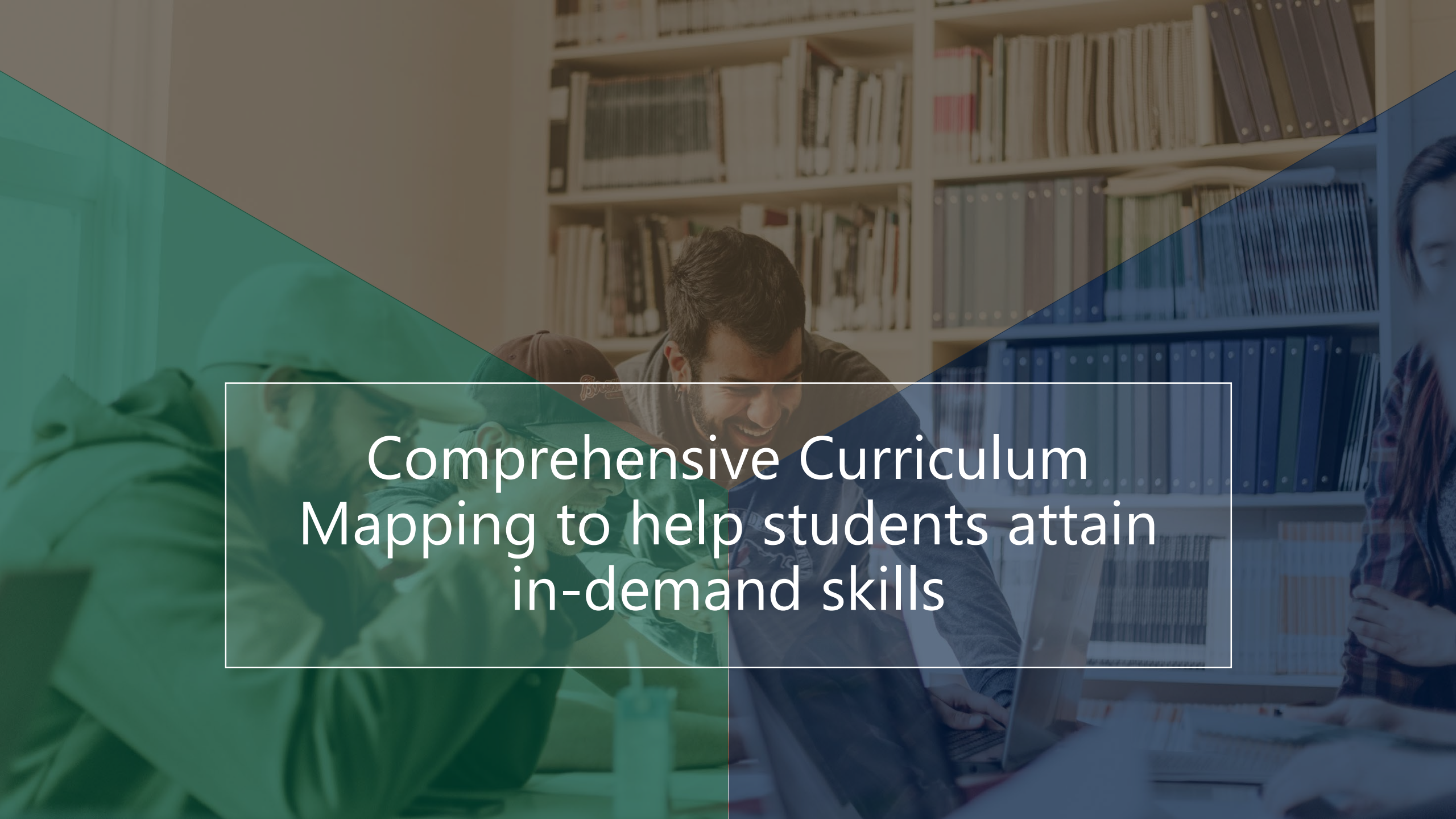
Source: 2018 SUS Accountability Report, 16-17 FETPIP Data, Payscale Report

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Here's what we're working on

Increase Talent Retention in Florida from 76% to 80%

Comprehensive Curriculum Mapping to help students attain in-demand skills

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