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Measuring Impact: Leveraging Data for Career Development in Institutions

JUNE 2022

Prepared by Maggie Ireri, CEO, TIFA Research

Employability Track

Session Outline

What's on the agenda?

Section 1: Introduction

Section 2: Employability outcome measurement

Section 3: Data to inform decisions

Section 4: Cautions for HEIs Accountability Targets

Section 1: Introduction

- Importance of employability data

Importance of employability data

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Employability data focuses on what skills - including technical, workplace and transferable skills - graduates possess that align to current job markets.

FOR LEARNERS/ GRADUATES

- Enables learners to understand the value of the time they spent learning and how it translates into real-world employment.

HIGHER EDUCATION INSTITUTIONS

- The data is used to drive changes so that higher education institutions can remain competitive and relevant

Section 2: Employability outcome measurement methods

- First destination surveys
- Alumni tracking
- Administrative Data - Big Data Analytics

Employability Outcomes Measurement Methods

When graduate employability surveys are conducted

- The most common stage at which higher education institutions start undertaking tracking is 12-18 months after study completion for quantitative surveys and immediately after study completion for qualitative surveys.
- **Qualitative -** used to gather insights on graduate perceptions of their course and plans for the future
- **Quantitative -** used to capture the destinations and early outcomes of a cohort of graduates.

Table 37. Stage at which graduate tracking is first collected

Period after completion when tracking information is collected	Higher education institutions that conduct quantitative surveys		Higher education institutions that conduct qualitative surveys	
	%	No.	%	No.
Immediately after completion	11%	56	18%	13
Within three months	7%	32	5%	4
After 3-6 months	11%	54	14%	10
After 6-12 months	17%	82	16%	12
After 12-18 months	21%	102	12%	9
After 18 – 24 months	8%	39	8%	6
After 2-3 years	10%	49	5%	4
After 3-5 years	7%	36	5%	4
After 5+ years	1%	5	3%	2
Other[83]	7%	33	14%	10
Total	100%	488	100%	74

[83] Reponses under "other" included: survey sent out to all graduates every three years and therefore initial time after graduating varies, five years after graduation, and on an ad hoc basis

Source: EU Commission, 2020; Mapping the state of graduate tracking policies and practices in the EU Member States and EEA countries

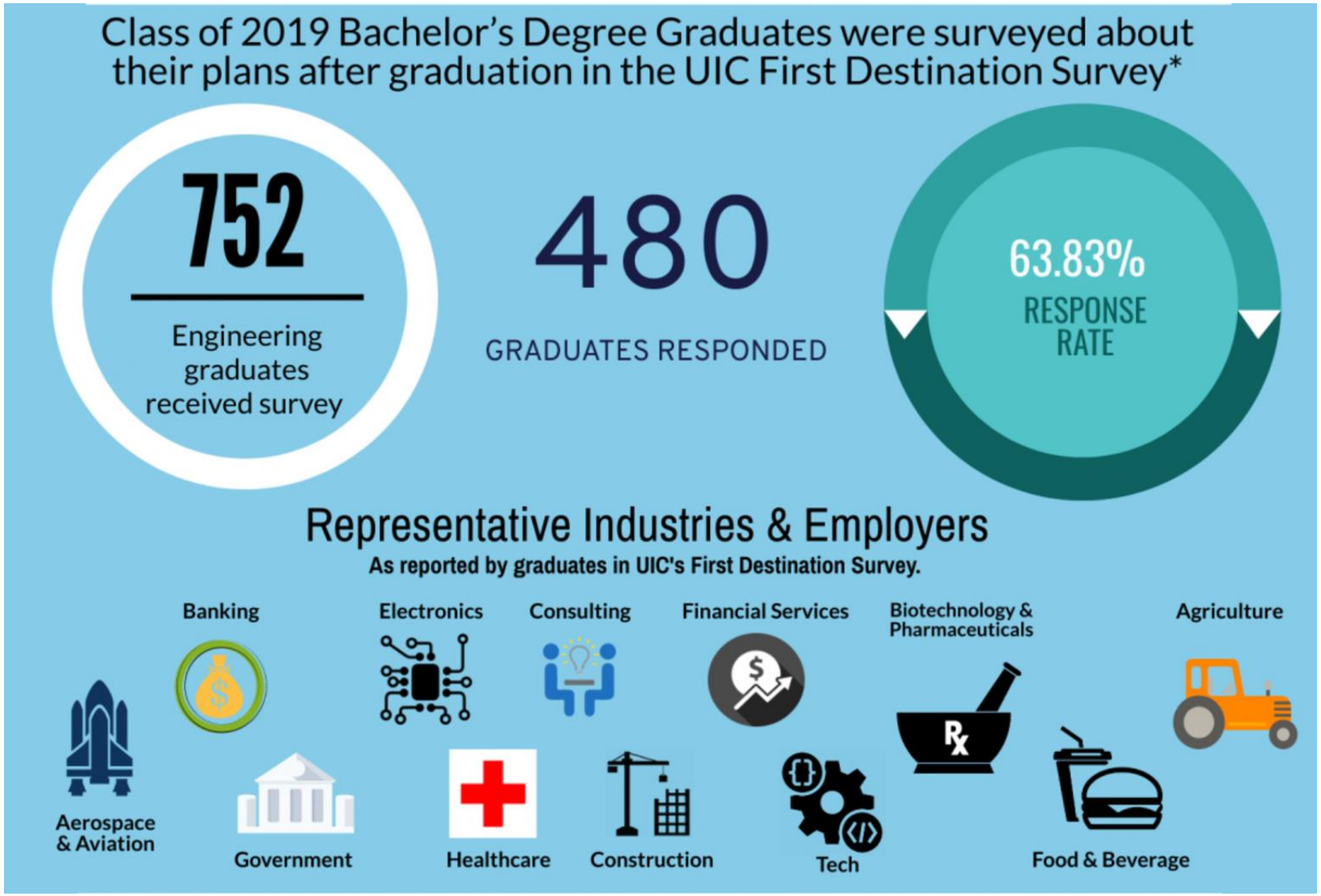
Employability Outcomes Measurement Methods

1. First Destination Survey

- ❑ Collection of information at the time of graduation.
- ❑ For those seeking employment:
  - ❑ Whether graduates obtained a job
  - ❑ Earnings
  - ❑ Employer & employment sector,
  - ❑ Job titles, and;
  - ❑ Geographic location
- ❑ For those NOT seeking employment
  - ❑ Future plans – studying or self employment
  - ❑ Rationale for not seeking employment

Employability Outcomes Measurement Methods

1. First Destination Survey



Source: University of Illinois, Chicago, 2019;

Employability Outcomes Measurement Methods

2. *Alumni Tracking*

- Measures collect a wide range of data, with the most common one being employment status

Indicators tracked by HEIs the European Union

Figure 1. Main indicators covered by the instrument

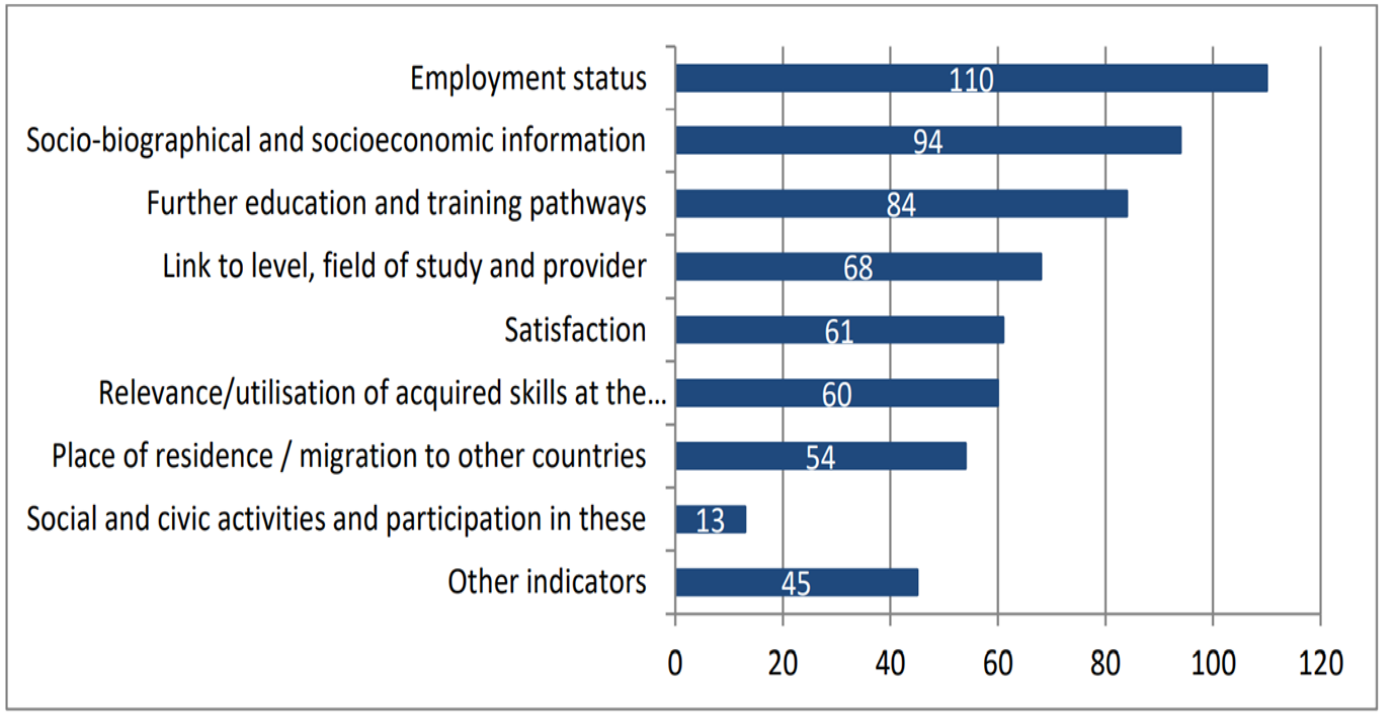


Figure 2.

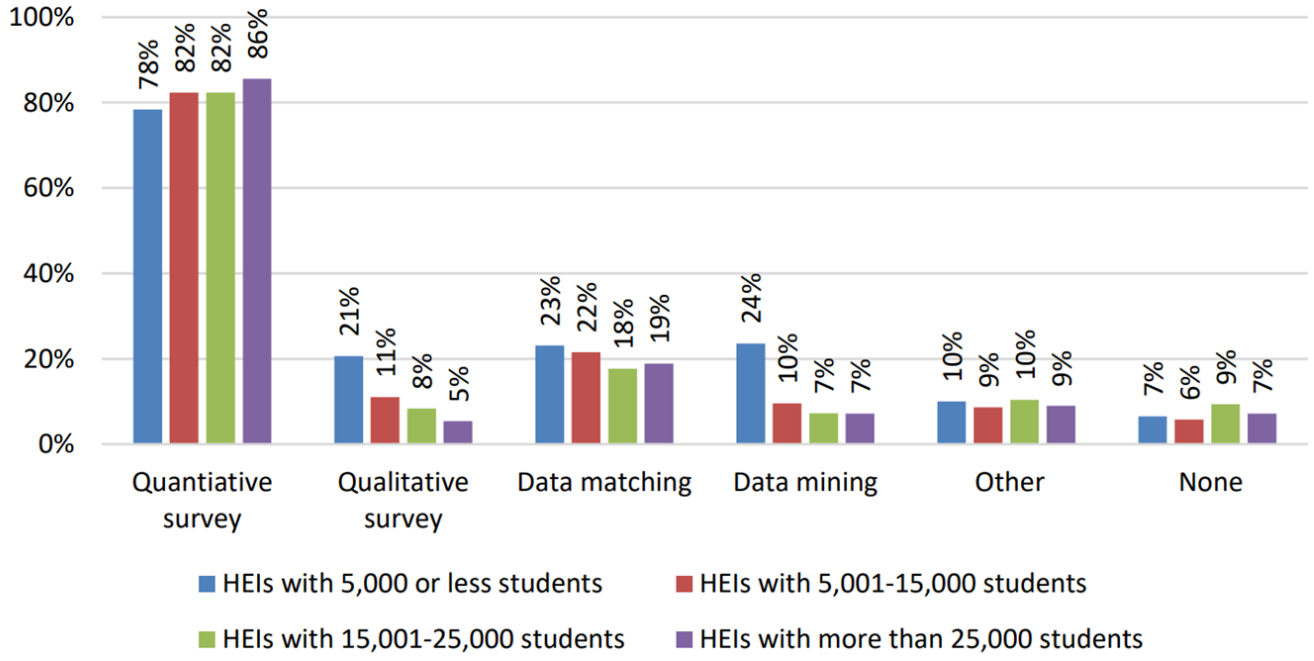
Source: EU Commission, 2020; Mapping the state of graduate tracking policies and practices in the EU Member States and EEA countries

Employability Outcomes Measurement Methods

2. *Alumni Tracking*

- Quantitative surveys are the most common form of graduate tracking and are used by more than four out of five higher education institutions undertaking tracking, typically administered online

Figure 3. Type of tracking measure(s) used by size of higher education institutions



Source: ICF graduate tracking higher education institution survey (5,000 or less: N=199, 5,001-15,000: N=209, 15,001-25,000: N=96, More than 25,000: N=111). Multiple choice question.

Source: EU Commission, 2020; Mapping the state of graduate tracking policies and practices in the EU Member States and EEA countries

Employability Outcomes Measurement Methods

2. *Alumni Tracking*

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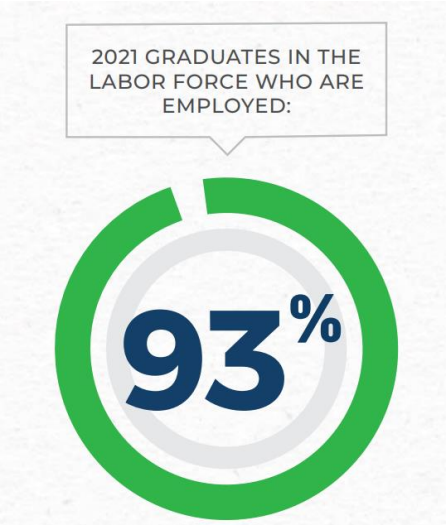
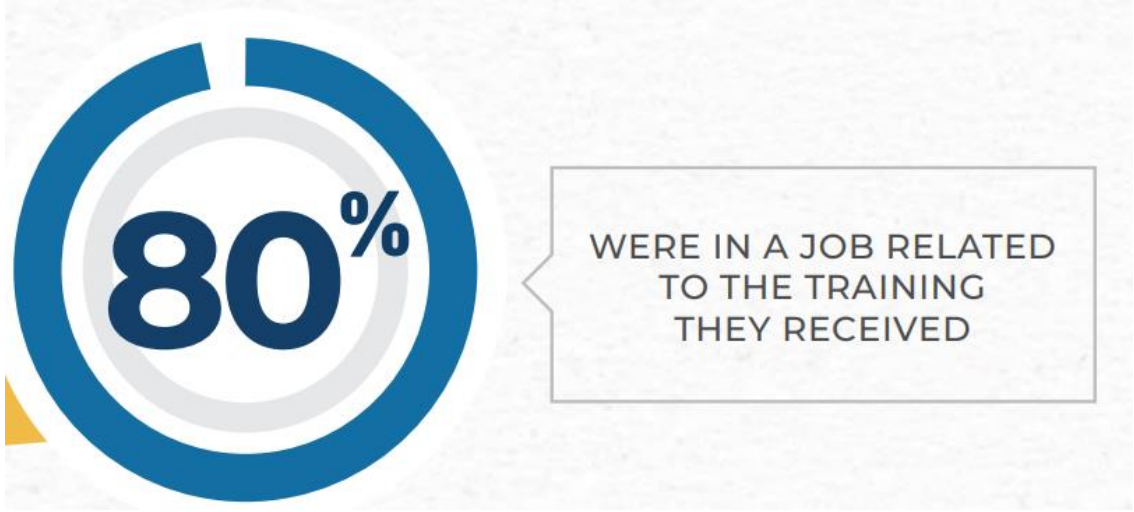
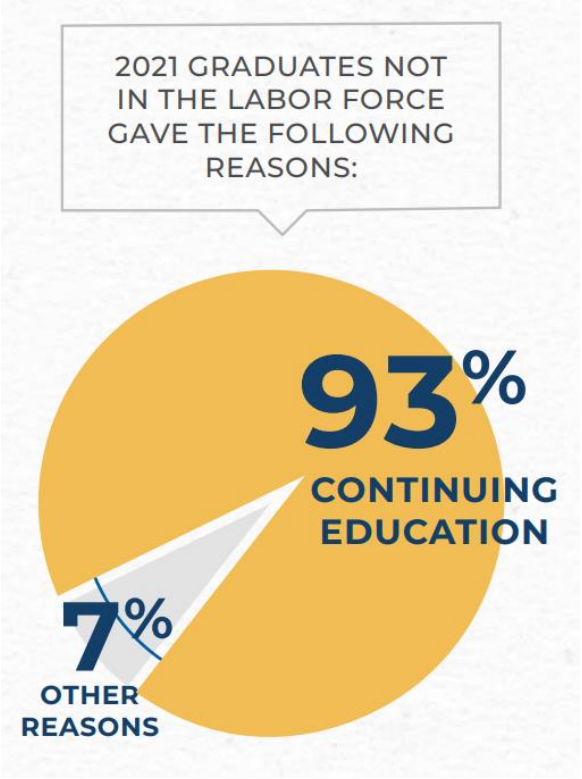
Source: Wisconsin Technical College
Job Placement And Employment Data For 2021 Graduates







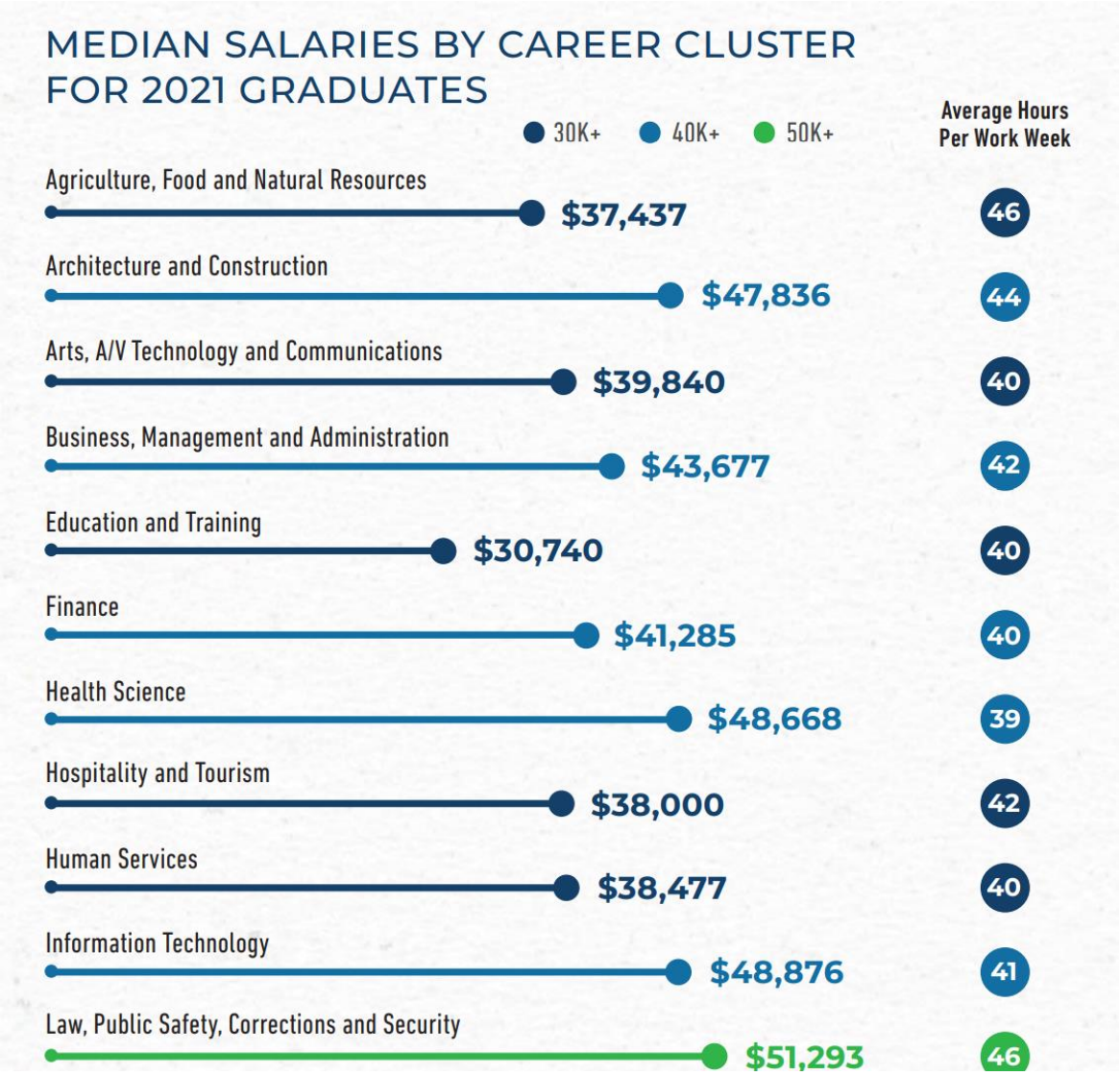
Employability Outcomes Measurement Methods

2. *Alumni Tracking*

WISCONSIN TECHNICAL COLLEGE SYSTEM

Source: Wisconsin Technical College
Job Placement And Employment Data For 2021 Graduates

- ❑ Analysis done for each course
- ❑ Done within 3-6 months of graduation



Employability Outcomes Measurement Methods

2. Alumni Tracking

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WISCONSIN TECHNICAL COLLEGE SYSTEM

- Analysis done for each course

AGRICULTURE, FOOD AND NATURAL RESOURCES

Production, processing, marketing, distribution, financing and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture and other plant and animal products and resources.

	Program Number	NUMBER OF GRADUATES	NUMBER OF RESPONSES	IN LABOR FORCE	EMPLOYED	EMPLOYED RELATED	UNEMPLOYED SEEKING	EMPLOYED RELATED MEDIAN WAGE		AVG HRS/WEEK
								HOURLY	ANNUALLY	
Horticulture	10-001-1	17	11	10	10 (100%)	8 (80%)	0	$17.00	$37,437	41
Landscape Horticulture	10-001-4	15	7	5	5 (100%)	4 (80%)	0	$20.00	$41,597	41
Arboriculture/Urban Forestry Technician	10-001-5	16	9	8	8 (100%)	7 (88%)	0	$19.50	$45,626	43
Greenhouse Operations	10-001-6	5	3	3	3 (100%)	2 (67%)	0	*	*	40
Agriculture Power Equipment	10-003-2	*	*	*	*	*	*	*	*	*
Agri-Business/Science Technology	10-006-2	22	18	16	16 (100%)	12 (75%)	0	$15.88	$33,019	49
Agri-Business	10-006-4	*	*	*	*	*	*	*	*	*
Agribusiness Science & Technology - Agronomy	10-006-5	14	9	8	8 (100%)	7 (88%)	0	$17.75	$53,036	56
Agribusiness Science & Technology - Animal Science	10-006-6	15	11	8	7 (88%)	6 (86%)	1	$18.23	$39,062	45
Agribusiness Science & Technology - AgBus Mgmt	10-006-7	*	*	*	*	*	*	*	*	*
Natural Resources Technician	10-057-1	13	8	6	5 (83%)	5 (100%)	1	$15.20	$31,599	40

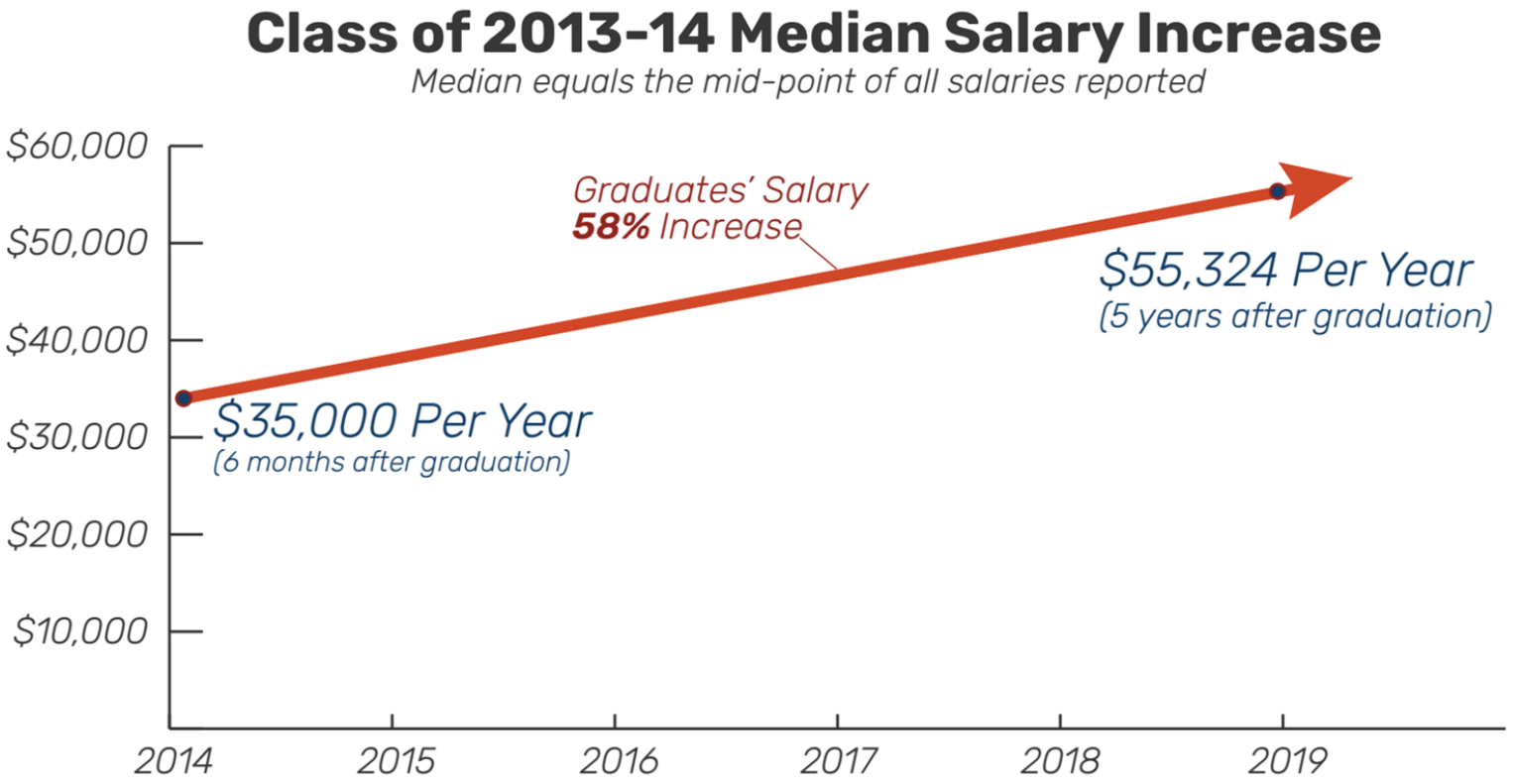
Employability Outcomes Measurement

2. *Alumni Tracking*

Source: Wisconsin Technical College
5-year Graduate Follow-up: 2013-14 Graduates

WISCONSIN TECHNICAL COLLEGE SYSTEM

- The 2018 report shows the median annual salary for responding 2013-14 graduates is $55,324, which represents a 58 percent increase from the initial median annual salary of $35,000 within six months of graduation.



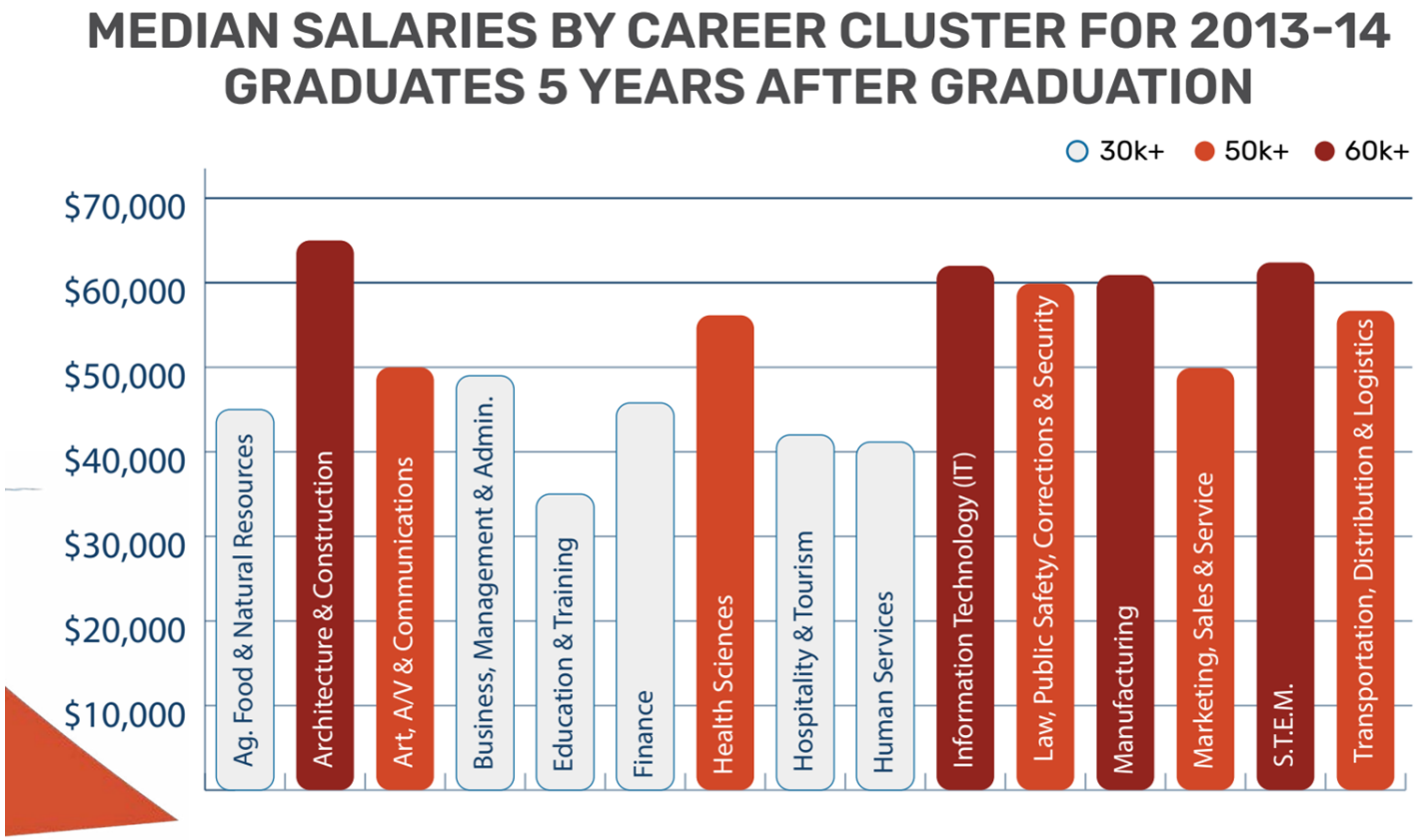
Employability Outcomes Measurement

2. *Alumni Tracking*

Source: Wisconsin Technical College
5-year Graduate Follow-up: 2013-14 Graduates

WISCONSIN TECHNICAL COLLEGE SYSTEM

75%
were employed in a field related to their training



Employability Outcomes Measurement

2. *Alumni Tracking*

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Source: Wisconsin Technical College
5-year Graduate Follow-up: 2013-14 Graduates

AGRICULTURE, FOOD & NATURAL RESOURCES Program Level	Number of Graduates	Number of Responses	In Labor Force	Employed	Employed Related	Unemployed Seeking	Employed Related Median Wage		Avg Hrs/ Week
							Hourly	Annually	
ALL ASSOCIATE DEGREE	256	83	81	81 (100%)	60 (74%)	0	$18.49	$41,596.80	45
ALL SHORT-TERM TECHNICAL DIPLOMA	49	6	6	6 (100%)	5 (83%)	0	$16.03	$47,836.32	52
ALL ONE-YEAR TECHNICAL DIPLOMA	101	40	30	30 (100%)	19 (63%)	0	$18.00	$49,916.16	55
ALL TWO-YEAR TECHNICAL DIPLOMA	28	8	7	7 (100%)	5 (71%)	0	$18.13	$44,521.58	57
All Programs Levels	**434**	**137**	**124**	**124 (100%)**	**89 (72%)**	**0**	**$18.00**	**$45,000.00**	**48**

Employability Outcomes Measurement

2. *Alumni Tracking*

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Lessons Learnt

Data protection

Adhere to the data protection protocols and determine best ways to keep data confidential.

Alumni data manager

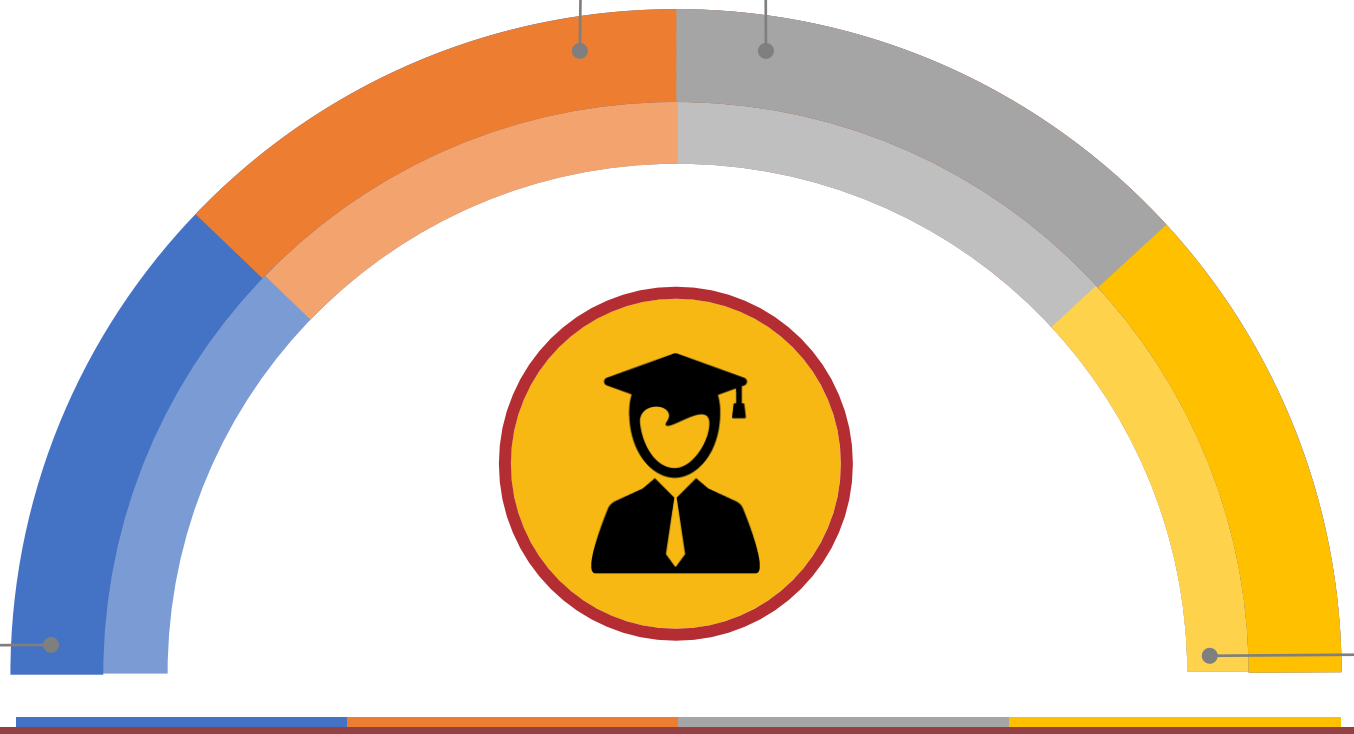
Dedicate staff preferably someone skilled in working with large datasets, knowledgeable about data cleaning, analysis, and results generation.

Ethical approvals

Obtain IRB approval if the data might ever be marketed or published

Update alumni contacts

Leverage appropriate institutional data available to ensure that you have the most current student contact information available



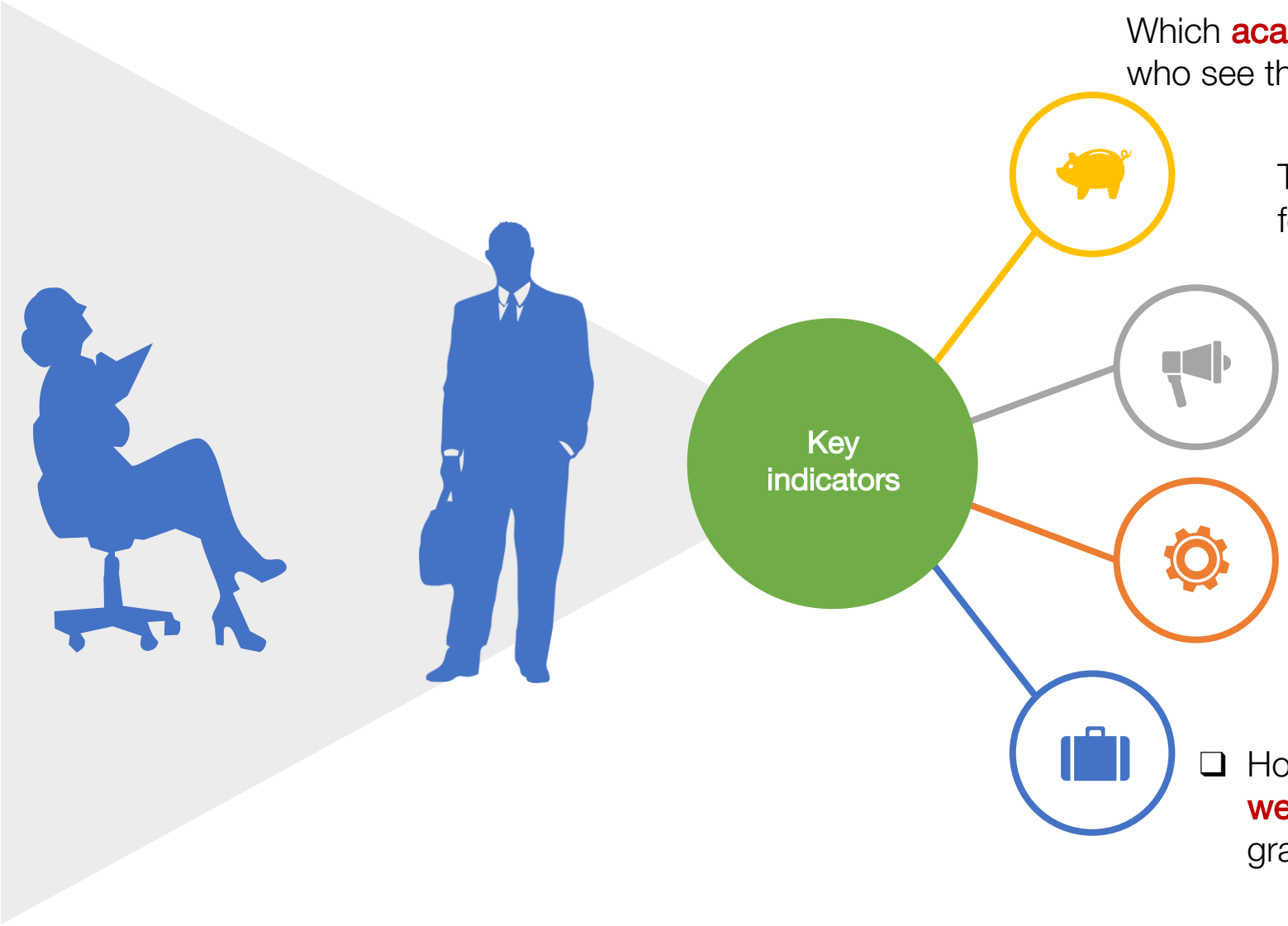
Employability Outcomes Measurement

3. Administrative Data – Case Study

- The Florida Education and Training Placement Information Program (FETPIP), a statewide data collection and reporting system that provides information about the outcomes of former students across most of the state's education and training institutions.
- The system includes longitudinal data on students from public school districts, colleges, public universities, etc.

Employability Outcomes Measurement

3. Administrative Data – Key Indicators



Which **academic program areas** graduate individuals who see the **highest full-time earnings;**

The **earning level** at which are most graduates are found;

The **industries** in which graduates are most often employed full time and their average annualized earnings;

Whether **outcomes are consistent** for each group one year after graduation; and;

- How many students **continued their education or were employed** full time one to four years after graduation

Employability Outcomes Measurement

3. Administrative Data – Sources

- ❑ Data is from secondary sources
- ❑ Data is from several sources
- ❑ Data integration is key through use of similar variables across data sets

Data Sources for the FETPIP System

Employment Data	Education Data	Corrections Data	Public Assistance Data
• Florida Department of Revenue • Federal Employment Data Exchange System: • U.S. Office of Personnel Management • U.S. Department of Defense • U.S. Postal Service	• District postsecondary • Adult education • Florida college system • State university system • Independent Colleges and Universities of Florida	• Florida Department of Corrections	• Florida Department of Children and Families: • Temporary Assistance for Needy Families • Food stamps

Section 3: Data to inform decisions

Employability Outcomes

How to use the data

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Academic program effectiveness

- Assess **program effectiveness** and this shows whether a college's programs provide the necessary skills, for students to succeed after they graduate

Employability Outcomes

How to use the data

LAKE AREA TECHNICAL COLLEGE

Developing programs tailored to specific job opportunities

- Frequently receives requests from state agencies, industry, and students to open new programs. In response to significant student inquiry in recent years, LATI looked into launching a veterinary technician program.

- A thorough **review of the labor market**, including examination of **data from the state employment agency** and **conversations with regional employers**:
  - demand was low for traditional small animal veterinary technicians, and
  - strong need for expertise with large animals.

- The college decided not to pursue a new veterinary technician program. Instead, LATI enhanced an existing agricultural program with an option to focus on working with large animals

Source: Aspen Institute

Employability Outcomes

How to use the data

Cabrillo College 1959

Resizing existing programmes

- Labor market data can also be extremely valuable to college administrators looking to evaluate the extent to which **existing programs are producing the appropriate number** of graduates for existing labor market opportunities.
- **High enrollment** but feedback from an annual survey of graduates of the program revealed that many **were not getting jobs** in the field.
- Because of this investigation, Cabrillo **reduced the size of its program**

Employability Outcomes

How to use the data

Monroe Community College
STATE UNIVERSITY OF NEW YORK

Closing programs with low returns

- Labor data to understand
  - which of their programs have the greatest positive returns on graduates' employment and earnings, and
  - which should be closed because those returns are too small.

- Monroe Community College uses a variety of data sources when evaluating the viability of its programs,
  - proprietary labor market database,
  - information from the Department of Labor
  - census data
  - feedback from industry advisory boards, and
  - survey responses from recent graduates.

Employability Outcomes

How to use the data

Analysis of the the skills gap at your institution with graduate outcomes data

- ❑ A university produces a volume of graduates with software development skills that exceed the volume at Google.
- ❑ Google will source candidates from this university available talent pool.
- ❑ The shortage of graduates who report the C++ programming language skill. Google may look elsewhere for these hires.

Section 4: Cautions on HEIs Accountability

Employability Outcomes Measurement

Cautionary note on methodology

- **Avoid an over reliance on one-year earnings outcomes.**
  - Longer term trends assessments are more accurate predictors of outcome
- **Specific degree programmes outcomes difficult to identify.**
  - Graduates end up in jobs not directly linked to their degree program and this makes it difficult to define the relationship between education and job outcomes.
- **More sources of data matter**
  - Try and use as many data sources possible to form a good basis for validation
- **Economy impact**
  - Economic performance impacts of jobs and this should be factored

Employability Outcomes Measurement

Cautionary note - impact assessments

Social benefits vs employment outcomes

- Some academic programs that have poor employment outcomes to make important contributions to a local community.
- Bachelor of Education programmes train teachers to work in the public sector earn consistently low wages, but those programs address a social need

Differing institutional missions.

- Academic programs may yield poor employment outcomes can fulfill other important roles for a college or university, such as advancing research and development (R&D), etc

Thank You