

**SECTOR
ANALYSIS &
STRATEGY**



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**CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH**

TIMELINE

Dates	Activities
Feb-Mar 2021	Region votes on industry & occupational metrics
Mar 2021	COE conducts analysis basis on metrics selected by the region
Apr-May 2021	COE presents the analysis to the region (e.g., WDC, ROC, Deans Council) for feedback COE revises analysis based on feedback
Jun 4, 2021	Regional Consortium and COE host a townhall to discuss community colleges' role in each sector
Jun 30, 2021	COE captures recommendations in final report

TODAY'S PURPOSE

- Introduce the report, approach, and methodology
- Provide preliminary findings
- Discuss information to be presented at the June 4 townhall

WE ARE NOT DECIDING ANYTHING TODAY

11 SECTORS - CHANCELLOR'S OFFICE

- 1. Advanced Manufacturing**
- 2. Advanced Transportation, and Logistics**
- 3. Agriculture, Water, and Environmental Tech**
- 4. Business and Entrepreneurship**
- 5. Education and Human Development**
- 6. Energy, Construction, and Utilities**
- 7. Health**
- 8. ICT and Digital Media**
- 9. Life Sciences and Biotechnology**
- 10. Public Safety and Government**
- 11. Retail, Hospitality, and Tourism**

TWO WAYS TO DEFINE SECTORS

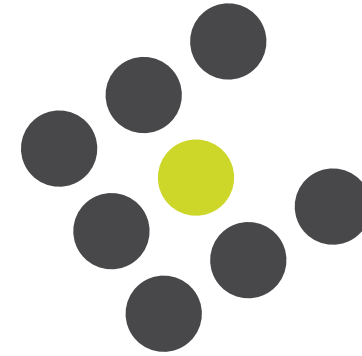
**Manufacturing
(NAICS 31-33)**

**Health
(NAICS 62)**

Business and Financial Occupations (SOC 13-0000)



**METRICS
ANALYZED**

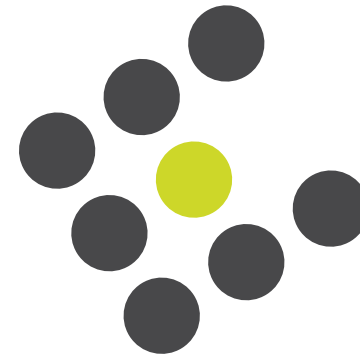


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- A. Entry-level wages at or above the living wage**
- B. Median wages at or above the living wage**
- C. Annual job openings (labor market demand)**
- D. # of businesses/establishments in the region**
- E. # of jobs in 2020**
- F. % and # jobs change (2010-2020)**
- G. Jobs multiplier**
- H. % of job concentration compared to nation**
- I. Earnings across the whole sector**
- J. % of workers nearing retirement age**
- K. Automation index**

**15 EXHIBITS FOR
EACH AVAILABLE
METRIC**



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REPORT HAS 3 PARTS

- 1. Analysis by NAICS codes**
- 2. Analysis by SOC codes**
- 3. Sector Rankings**

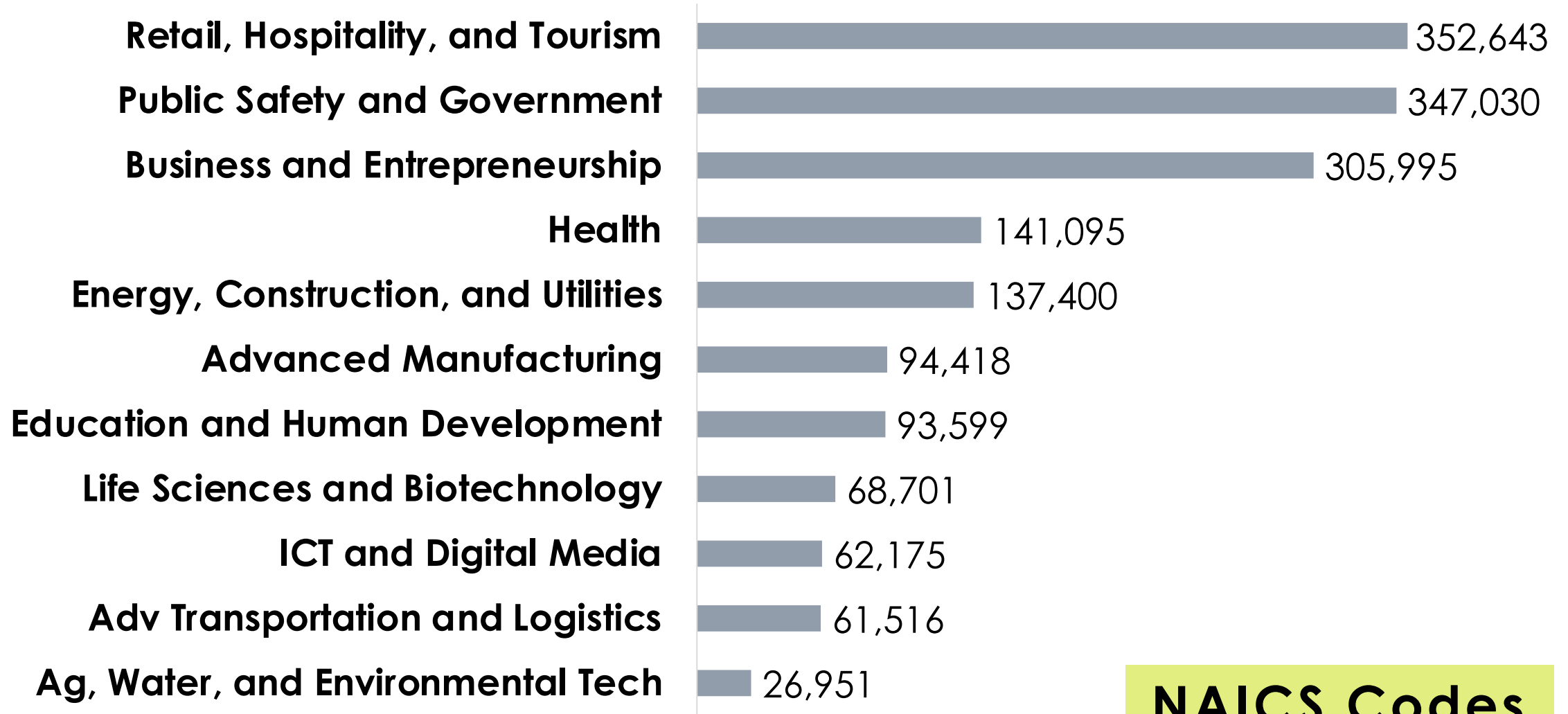
**ASSIGNED
POINTS BASED
ON RANKING**



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EXAMPLE: # JOBS BY SECTOR (2020)



NAICS Codes

RANKING METHOD #1 (TOP 5 SECTORS)

# Points	Sector
1	Retail, Hospitality, and Tourism
1	Public Safety and Government
1	Business and Entrepreneurship
1	Health
1	Energy, Construction, and Utilities
0	Advanced Manufacturing
0	Education and Human Development
0	Life Sciences and Biotechnology
0	ICT and Digital Media
0	Advanced Transportation and Logistics
0	Agriculture, Water, and Environmental Technologies

RANKING METHOD #2 (# POINTS BY ORDER)

# Points	Sector
11	Retail, Hospitality, and Tourism
10	Public Safety and Government
9	Business and Entrepreneurship
8	Health
7	Energy, Construction, and Utilities
6	Advanced Manufacturing
5	Education and Human Development
4	Life Sciences and Biotechnology
3	ICT and Digital Media
2	Advanced Transportation and Logistics
1	Agriculture, Water, and Environmental Technologies

RANKING BASED ON TOP 5 SECTORS PER METRIC

Exhibit #	Metric	AM	ATL	AWET	BE	EHD	ECU	H	ICT	LS	PS	RHT
Part I: NAICS Analysis	1. # of Jobs (2020)				•		•	•			•	•
	2. % Job Change (2010-2020)		•			•	•	•				•
	3. Average Earnings by Job (2020)	•					•		•	•	•	
	4. % Change in Average Earnings by Job (2010-2020)			•	•				•	•	•	
	5. # of Establishments (2020)				•	•	•	•				•
	6. % Change in Establishments (2013-2020)					•	•		•	•	•	
	7. % Workers Age 55+ (2020)	•		•	•	•	•					
	8. Jobs Multipliers (2020)	•			•		•	•	•			
Part II: SOC Analysis	9. # of Jobs (2020)		•		•	•		•				•
	10. % Job Change (2010-2020)		•				•	•	•	•		
	11. Average Entry-Level Hourly Earnings (2020)				•	•		•		•	•	
	12. Average Median Hourly Earnings (2020)				•			•	•	•	•	
	13. % of Workers 55+ (2020)	•		•	•	•		•				
	14. Location Quotient				•	•			•	•		•
	15. Average Automation Index				•	•		•	•	•		
# Points		4	3	3	11	9	8	10	8	8	6	5

RANKING BASED ON ORDER IN METRIC

Exhibit #	Metric	AM	ATL	AWET	BE	EHD	ECU	H	ICT	LS	PS	RHT
Part I: NAICS Analysis	1. # of Jobs (2020)	6	2	1	9	5	7	8	3	4	10	11
	2. % Job Change (2010-2020)	5	8	6	4	11	10	9	2	3	1	7
	3. Average Earnings by Job (2020)	9	4	3	5	1	7	6	10	11	8	2
	4. % Change in Average Earnings by Job (2010-2020)	3	4	9	8	1	6	2	10	11	7	5
	5. # of Establishments (2020)	4	6	1	11	10	8	7	5	3	2	9
	6. % Change in Establishments (2013-2020)	3	4	2	6	10	8	5	9	7	11	1
	7. % Workers Age 55+ (2020)	10	6	9	7	11	8	5	3	4	1	2
	8. Jobs Multipliers (2020)	7	3	2	10	1	8	9	11	5	4	6
Part II: SOC Analysis	9. # of Jobs (2020)	6	8	2	11	7	3	9	4	1	5	10
	10. % Job Change (2010-2020)	5	9	2	3	6	10	11	8	7	1	4
	11. Average Entry-Level Hourly Earnings (2020)	2	5	3	8	7	4	11	6	10	9	1
	12. Average Median Hourly Earnings (2020)	2	5	3	7	6	4	11	8	10	9	1
	13. % of Workers 55+ (2020)	10	6	7	11	8	5	9	2	4	1	3
	14. Location Quotient	1	3	2	8	7	6	4	9	11	5	10
	15. Average Automation Index	2	4	5	7	11	1	10	8	9	6	3
# Points		75	77	57	115	102	95	116	98	100	80	75

Sector Rankings Based on Top 5 Sectors by Metric

Rank	Sector	Points
1.	Business and Entrepreneurship	11
2.	Health	10
3.	Education and Human Development	9
4.	Energy, Construction, and Utilities	8
4.	ICT and Digital Media	8
4.	Life Sciences and Biotechnology	8
5.	Public Safety and Government	6
6.	Retail, Hospitality, and Tourism	5
7.	Advanced Manufacturing	4
8.	Advanced Transportation and Logistics	3
8.	Agriculture, Water, and Environmental Technologies	3

Sector Rankings Based on Order in Metric

Rank	Sector	Points
1.	Health	116
2.	Business and Entrepreneurship	115
3.	Education and Human Development	102
4.	Life Sciences and Biotechnology	100
5.	ICT and Digital Media	98
6.	Energy, Construction, and Utilities	95
7.	Public Safety and Government	80
8.	Advanced Manufacturing	75
8.	Retail, Hospitality, and Tourism	75
9.	Advanced Transportation and Logistics	77
10.	Agriculture, Water, and Environmental Technologies	57

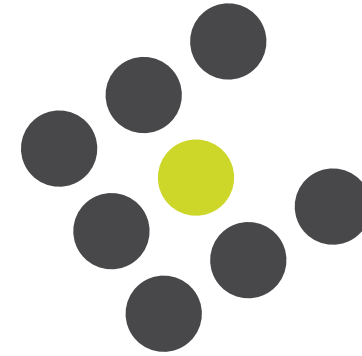
Sector Rankings Based on Top 5 Sectors by Metric

Rank	Sector	Points
1.	Advanced Transportation and Logistics	10
1.	Education and Human Development	10
2.	Health	9
3.	Business and Entrepreneurship	8
4.	Energy, Construction, and Utilities	6
4.	Ag, Water, and Environmental Tech	6
4.	Life Sciences and Biotechnology	6
4.	Public Safety and Government	6
5.	ICT and Digital Media	5
5.	Retail, Hospitality, and Tourism	5
6.	Advanced Manufacturing	4

Sector Rankings Based on Order in Metric

Rank	Sector	Points
1.	Health	110
2.	Education and Human Development	109
3.	Advanced Transportation and Logistics	106
4.	Public Safety and Government	100
5.	Business and Entrepreneurship	99
6.	Ag, Water, and Environmental Tech	90
7.	Energy, Construction, and Utilities	88
8.	Life Sciences and Biotechnology	80
9.	Retail, Hospitality, and Tourism	79
10.	ICT and Digital Media	70
11.	Advanced Manufacturing	59

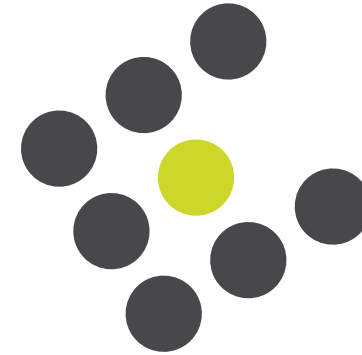
**THIS SHOULD *NOT*
BE THE SOLE BASIS
FOR DECISION
MAKING**



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**NO MATTER HOW
WE “SLICE AND
DICE” THE DATA,
WE *HAVE* TO HAVE
A CONVERSATION**



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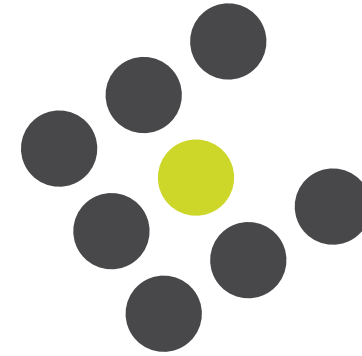
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Jun 4, 2021	Regional Consortium and COE host a townhall to discuss community colleges' role in each sector
Jun 30, 2021	COE captures recommendations in final report

ON JUNE 4...

We'll use the report to discuss strengths, weaknesses, and opportunities for the region's colleges (semi-SWOT analysis)

**WHAT WE KNOW
ABOUT OUR
CURRENT SECTORS**



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ADVANCED MANUFACTURING

- **Retiring workforce**
- **Pandemic resilient**
- **Disproportionately male**
- **Employers have difficulty hiring and retaining workers at entry-level positions**
- **We (the community colleges) have a growing relationship with employers**
- **A priority for Workforce Development Board and EDCs**
- **High automation risk**

ADVANCED TRANSPORTATION & LOGISTICS

- **Logistics positions were pandemic resilient**
- **Disproportionately male**
- **Positions trainable by the community colleges are listed with a minimum of a bachelor's degree (e.g., supply chain specialists, supply chain coordinators)**
- **High automation risk (e.g., employers have difficulty hiring for automation and diagnostics for newer vehicles)**
- **One of the top sectors in Imperial County**

BUSINESS AND ENTREPRENEURSHIP

- **95% of San Diego's companies have \leq 50 employees**
- **Small companies unaware of how to provide work-based learning opportunities (e.g., internships, mentorship) without straining business and resources**
- **Brick and mortar closures during the pandemic**
- **Entrepreneurial skills were useful during the pandemic (e.g., innovative businesses created)**
- **Significant # of programs exist**

HEALTH

- **Pandemic and recession resilient**
- **Clear career pathways**
- **High entry-level and median wages**
- **Limited clinical placements (can't fill registered nursing positions)**
- **Highest % job change in occupations**
- **3rd sector with workers 55+**
- **Disproportionately female**
- **Low automation risk**

ICT AND DIGITAL MEDIA

- **ICT positions pandemic resilient**
- **Significant # of programs make it confusing for students and employers (unclear career pathways)**
- **High entry-level and median wages**
- **Strong concentration compared to the rest of the nation**
- **Disproportionately male**
- **Low automation risk**

LIFE SCIENCES AND BIOTECH

- **Recession and pandemic resilient**
- **Small # of companies, but strong concentration compared to the rest of the nation**
- **Positions trainable by the community colleges are listed with a minimum of a bachelor's degree**
- **High entry-level and median wages**
- **Disproportionately male**
- **Companies interested in attracting youth and hiring for diversity**
- **Low automation risk**

**WHAT WE KNOW
ABOUT
“NON-PRIORITY”
SECTORS**



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AGRICULTURE, WATER & ENVIRON TECH

- **Retiring workforce**
- **Disproportionately male**
- **Small portion of San Diego's economy**
- **One of the top 5 or 6 sectors in Imperial County**
- **Employers have difficulty hiring and training for new technologies**

EDUCATION & HUMAN DEVELOPMENT

- **Significant # of (and % increase in) establishments**
- **Retiring workforce**
- **Low wages**
- **Several programs exist**
- **Childcare costs is regional concern**
- **Shortage of teachers**
- **Low automation risk**

ENERGY, CONSTRUCTION, & UTILITIES

- **Pandemic resilient**
- **Significant # of (and % increase in) establishments**
- **Retiring workforce**
- **Higher enrollments from older students**
- **Disproportionately male**
- **Apprenticeship programs have high retention, completion, and wages**
- **High automation risk**

PUBLIC SAFETY AND GOVERNMENT

- **Significant # of jobs but low % change (maintained employment)**
- **High entry-level and median earnings**
- **High % change in establishments**

RETAIL, HOSPITALITY & TOURISM

- **Was not recession or pandemic resilient**
- **Employers have difficulty hiring now that the economy is rebounding (similar to after the Great Recession)**
- **High # of jobs and establishments**
- **Strong concentration compared to the rest of the nation**
- **High turnover and low wages**
- **High automation risk**
- **Workforce Development Board exploring as “support service”**

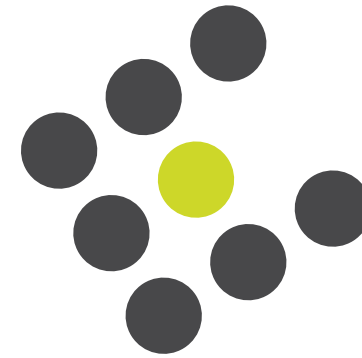
**WE SHOULD USE
THIS KNOWLEDGE &
TOWNHALL TO
PLAN OUR SECTOR
INVESTMENTS**



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**WHAT ELSE DO WE
WANT TO KNOW?**



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