



Advanced Transportation
and Logistics

San Diego and Imperial Counties

Workforce Development Council

December 11, 2020

Jon Kropp, 2020



COMMUNITY COLLEGES

SAN DIEGO & IMPERIAL COUNTIES

CAREER EDUCATION

TODAY'S AGENDA

- What is Supply Chain & Logistics (Jon)
- Methodology (Jon)
- Trends (Tina)
- Recommendations (Jon)



WHAT IS SUPPLY CHAIN & LOGISTICS?

CALIFORNIA CAREERS Supply Chain & LOGISTICS



90% of the World's Commodities are Carried by the International Maritime Industry³



The bar code was invented in the sand in Miami beach and based off Morse code. Today, barcodes are used by virtually every industry to track inventory, materials, or shipments.

Did you know that the supply chain & logistics sector makes up over one third of California's economy, creating millions of direct and indirect employment opportunities?

What is Supply Chain & Logistics?

Logistics main focus is the coordination and movement of goods, whereas Supply Chain is concerned with the much bigger process of **sourcing, processing, and delivering goods** to the end user or customer.

(One of the early examples of Supply Chain Management (SCM) was Ford who implemented SCM to ensure he had the required materials at hand to facilitate their revolutionary assembly line of the Model T!)

THE LOGISTICS INDUSTRY IS MADE UP OF SIX DIFFERENT SECTORS

1. Road Transport
2. Rail
3. Aviation
4. Maritime
5. Warehousing
6. Storage



NEW TECHNOLOGIES AT PLAY

Drones

Automated Vehicles*

Warehouse Robotics

Augmented Reality Picking

Integrated Warehouse Management Software

1,000,000,000,000

Shipping is a trillion dollar industry⁶

California Freight System Quick Facts

- 5,800** Commercial Miles of High Traffic Volume Interstate & Highways
- 11** Public Deep Sea Ports
- 12** Airports with Major Cargo Operations
- 2 Class 1** Railroads (Biggest in The Nation)
- 5,000,000** Employed
- 3** Existing & 1 Future Land Border Ports with Mexico⁷

Companies with Supply Chain & Logistics Careers:

- FedEX
- UPS
- Amazon
- AMS Fulfillment
- DHL
- TESLA
- BAE Systems
- Sharp Healthcare
- XPO Logistics
- June Shine
- Northrup Grumman
- Bumble Bee
- General Atomics
- General Dynamics
- Temco Logistics

amazon

Amazon is the now the 4th largest US delivery service and growing.⁸

Amazon has 19 Fulfillment centers in California alone.

Amazon will have 70 of its own cargo planes operating by 2021.

Amazon made the largest order of electric delivery vehicles ever, ordering 100,000 Rivians to be delivered in 2021.

SHIPPING FACTS

2021 will see over 2.14 billion online shoppers.⁴

90% of Fortune 500 companies utilized a third party logistics company.⁵

Trucks make up 63% of all freight shipping.⁷

In 2020, The U.S. E-Commerce Market is expected to grow by 20% - despite a global pandemic!⁹

Advanced Transportation and Logistics

www.atleducation.org

POWERED BY California Community Colleges

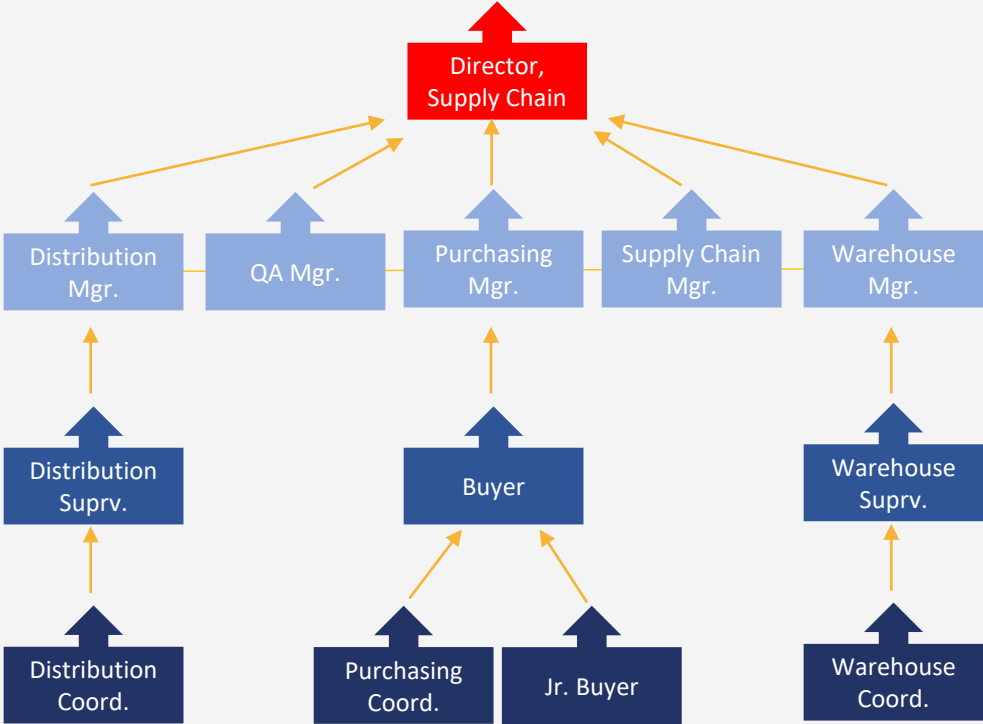
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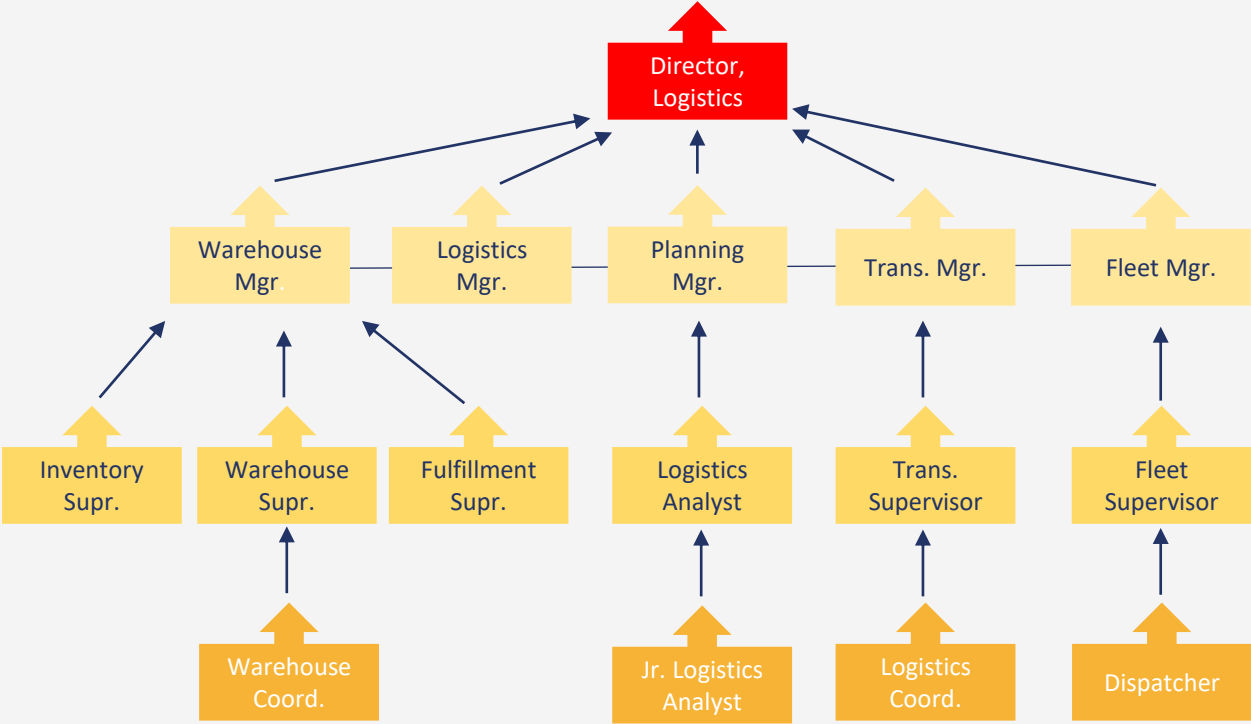
CAREER EDUCATION

SUPPLY CHAIN & LOGISTICS CAREER LATTICE

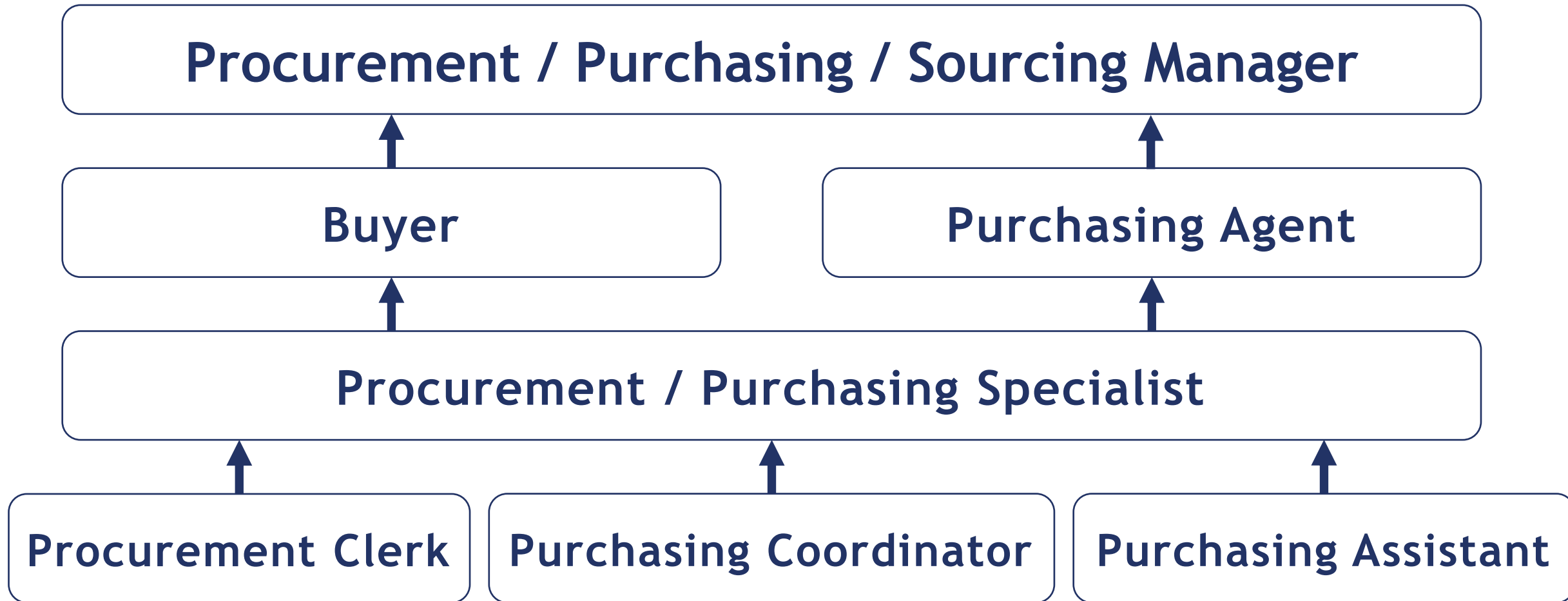
SUPPLY CHAIN



LOGISTICS



SUPPLY CHAIN & LOGISTICS CAREER LADDER



High Skill- Management

Education: BA, MA, Certs
Experience: 7+ Years

L4




\$ **AVG Pay: \$52.94/HR (\$110,115.20)**

Sample Job Titles: Distribution Mngr., Quality Assurance Mngr., Supply Chain Mngr., Logistics Mngr., Operations Mngr., Warehouse Mngr., Purchasing Mngr., & Transportation Mngr.
Sample KSAs: Business Planning, Account Mgmt., Business Development, & Administration

High Skill

Education: BA, AA, Certs
Experience: 5 + Years

L3



\$ **AVG Pay: \$29.13/HR (\$60,590.40)**

Sample Job Titles: Warehouse Supvr., Fleet Supvr., Order Fulfillment Supvr., Logistics Analyst, Logistics-Supply Chain Specialist, Cost Estimators, Logics Supvr. Shipping Supvr., Transportation Supvr., & Buyer.
Sample KSAs: Logistics Management, Contract Management, Logistics Supply Chain Management, Employee Management, & Quality Assurance & Control.

Middle Skill

Education: AA, Certs
Experience: 1-3 Years

L2




\$ **AVG Pay: \$21.64/HR (\$45,011.20)**

Sample Job Titles: Production Planning & Expediting Clerk, Traffic Coord., Dock Coord., Import/Export Coord., Logistician, Dispatcher, Logistics Coord., Warehouse Coord., Jr. Buyer, Purchasing Coord., Distribution Coord.
Sample KSAs: Inventory Maintenance, Warehousing, Resource Planning, Administration, Logistics & Supply Chain Knowledge, General Business & Productivity.

Entry Level

Education: NA
Experience: 0-1 Years

L1



\$ **AVG Pay: \$15.83/HR (\$32,926)**

Sample Job Titles: Production Worker, Freight/Stock Handlers, Warehouse Workers, Order Pickers, Fork-Lift Operators, Operations Coord., Shipping/Receiving Clerk
Sample KSAs: Forklift Operation, Data Entry, Sales, Sorting & Packaging, Hand Truck Operation, & Service.

WHAT DOES *SUPPLY CHAIN & LOGISTICS* LOOK LIKE FOR EMPLOYERS



METHODOLOGY

- COE LMI & Analysis
- Secondary research (industry/association reports)
- Primary research (interviews & focus Groups)
- Surveys & employer interactions

FOCUS GROUP



LOCAL EMPLOYERS

- Amazon
- General Atomics
- GKN Aerospace
- SAIC
- Port of San Diego
- Teledyne RD
- BAE Systems
- Northrup Grumman
- Scrips Health
- Kite Pharma
- Bumble Bee
- WD-40
- Sharp healthcare
- TESLA
- June Shine
- Clipper Oil
- Helms Brewing
- Oceaneering
- US Navy
- UPS
- XPO Logistics
- TEMCO Logistics

LATEST RESEARCH & NEWS

- Logistics Labor 2020: Filling the void (ScMR, 2020)
- 2020: The Year of Supply Chain Labor (ScMR, 2020)
- Special Edition: Ecommerce State of the Third-Party Logistics Industry Report (3PL Central, 2020)
- The Future of Warehouse Work: Technological Change in The U.S. Logistics Industry (Berkeley, 2019)
- Labor Shortage Hurts Logistics Industry (MH&L, 2018)
- The Supply Chain Economy and the Future of Good Jobs in America (HBR, 2018)

Logistics and Supply Chain Management Occupations

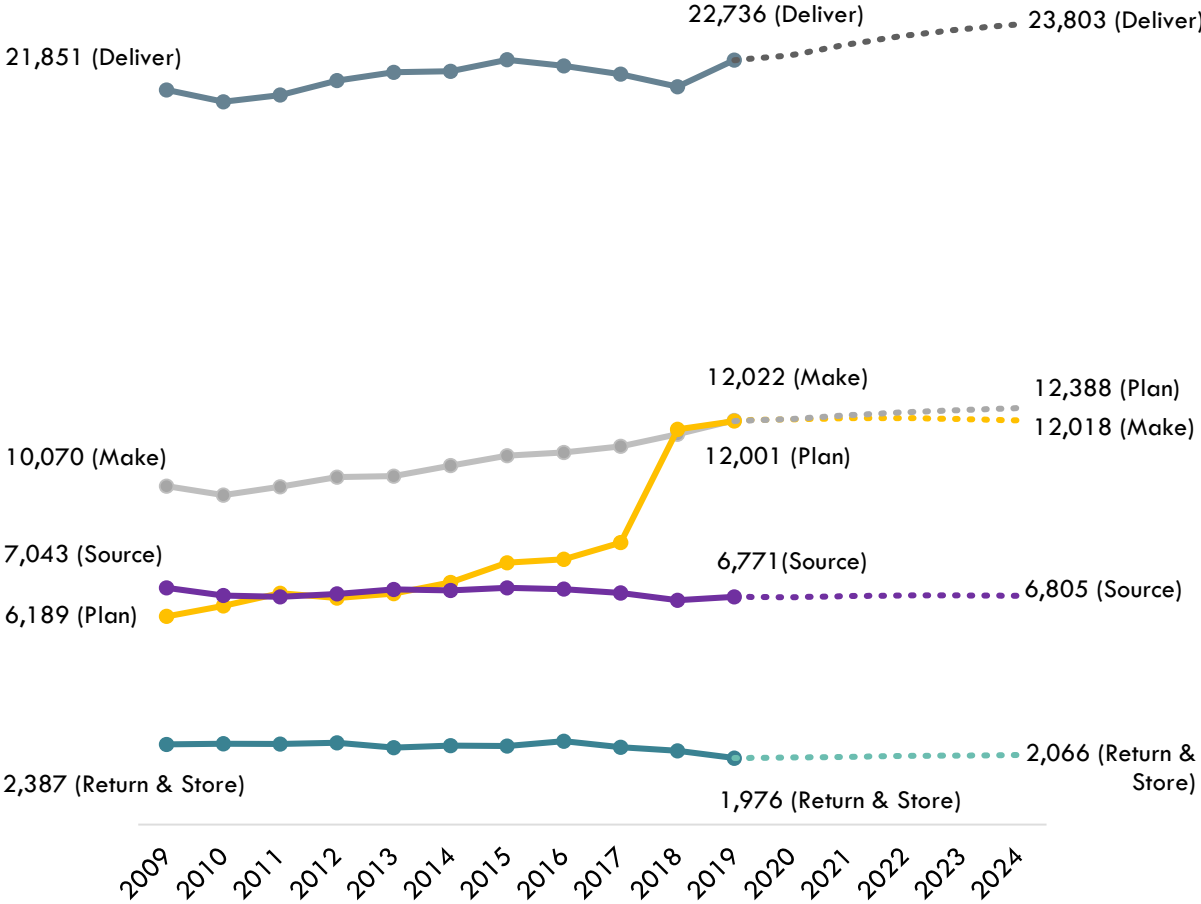
October 2020
San Diego County



Category	Description
Plan	Planning, scheduling and enabling
Source	Sourcing and purchasing
Make	Manufacturing operations, production and automation
Deliver	Transportation and logistics
Return & Store	Storage and warehousing

TRENDS: SAN DIEGO

**Exhibit 1: Number of Jobs (Employment) for Logistics and Supply Chain Management Occupations
San Diego County, 2009-2024⁶**



DEMAND VS. SUPPLY

Exhibit 7: Demand (Annual Openings) vs. Supply (Average Annual Awards)¹⁵

	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or Oversupply
San Diego	6,521	1,976	4,545
California	85,659	6,733	78,926

STUDENT OUTCOMES

Exhibit 5: Proportion of Students Who Earned a Living Wage, PY2017-18¹¹

- Business and Commerce, General (0501.00)
- E-Commerce (Business Emphasis) (0509.70)
- International Business and Trade (0508.00)
- Logistics and Materials Transportation (0510.00)

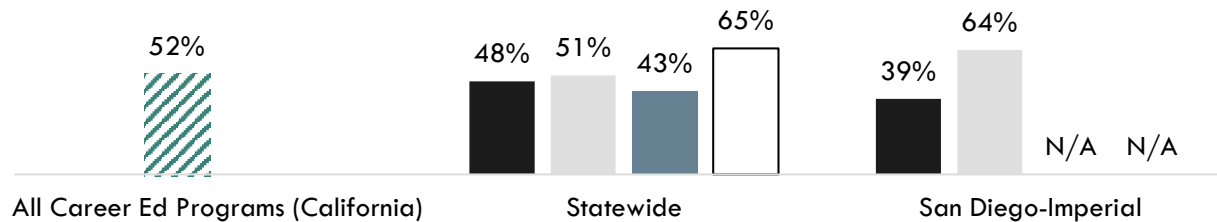
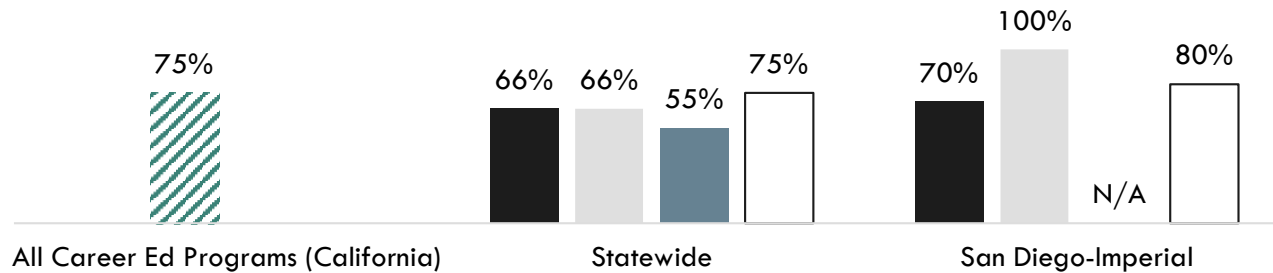


Exhibit 6: Percentage of Students in a Job Closely Related to Field of Study, PY2016-17¹³

- Business and Commerce, General (0501.00)
- E-Commerce (Business Emphasis) (0509.70)
- International Business and Trade (0508.00)
- Logistics and Materials Transportation (0510.00)



“ While not many programs specific to Logistics and Supply Chain Management Occupations exist at the community colleges, the few programs that colleges do offer tend to have good student employment and wage outcomes. ”

VARYING JOB TITLES FOR EACH FUNCTION

Keyword for “Plan”

- Logistics
- Logistics Resource
- Planning (Planner)
- Resource
- Scheduling (Scheduler)
- Supply Chain

+

Levels

- Agent
- Analyst
- Assistant
- Associate
- Clerk
- Consultant
- Coordinator
- Director
- Lead
- Manager
- Operative
- Planner
- Specialist
- Technician

Keyword
Plan
<ul style="list-style-type: none"> • Logistics • Logistics Resource • Planning (Planner) • Resource • Scheduling (Scheduler) • Supply Chain
Source
<ul style="list-style-type: none"> • Buyer • Procurement • Purchasing • Capacity • Commodities • Demand • Strategic Sourcing • Sourcing
Make
<ul style="list-style-type: none"> • Automation • Lean Operations • Maintenance • Materials • Operations • Production • Quality • Quality Control
Deliver
<ul style="list-style-type: none"> • Distribution • Inventory Moving • Material Moving • Moving • Transportation
Return & Store
<ul style="list-style-type: none"> • Inventory • Storage • Warehouse • Warehousing

+

Level
Supervisory or Management
<ul style="list-style-type: none"> • Administrator • Director • Lead • Manager • Supervisor
Non-Supervisory or Non-Management
<ul style="list-style-type: none"> • Agent • Analyst • Assistant • Associate • Clerk • Consultant • Coordinator • Operative • Planner • Specialist • Technician

TOP CERTS IN ONLINE JOB POSTINGS

- American Production and Inventory Control Society (APICS)
- American Society of Quality (ASQ) Certification
- Certified in Production and Inventory Management (CPIM)
- Certified Professional in Supply Chain Management (CPSM)
- Certified Purchasing Manager (CPM)
- Certified Quality Auditor (CQA)
- Certified Quality Engineer (CQE)
- Certified Supply Chain Professional (CSCP)
- IPC Certification
- OSHA Forklift Certification
- PMI Scheduling Professional (PMI-SP)
- Project Management Certification
- Project Mgt Professional (PMP)
- Security Clearance
- Six Sigma (Black Belt) Certification

WHAT OCCUPATIONS ARE A GOOD FIT?

Occupations in “Plan” Category	Associate or less	Bachelor’s degree+
Scheduler / Operations Coordinator	X	
Logistics Coordinator	X	
Production Clerk / Scheduler / Planner	X	
Supply Chain Specialist	X	X
Logistics Specialist	X	X
Supply Chain Analyst		X
Supply Chain / Logistics Manager		X
Planning Manager		X

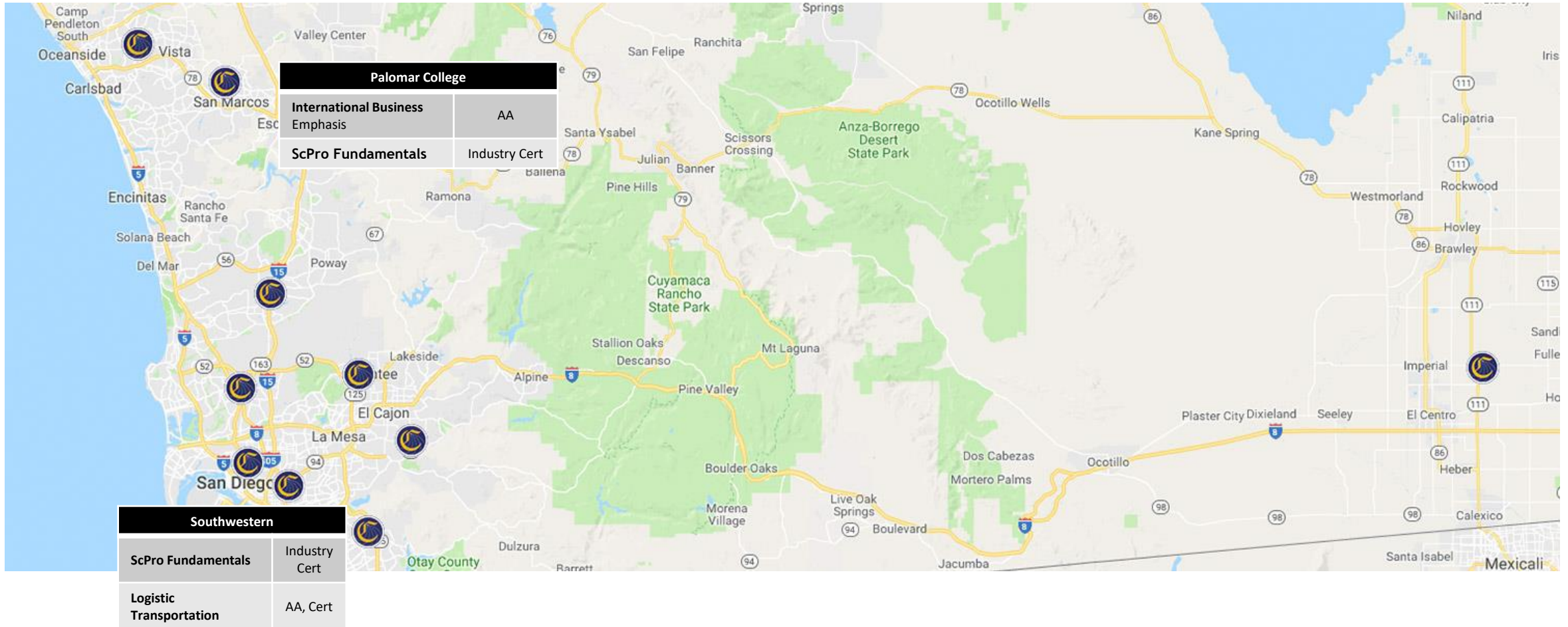
WHAT OCCUPATIONS ARE A GOOD FIT?

Occupations in “Source” Category	Associate or less	Bachelor’s degree+
Purchasing Assistant	X	
Procurement Clerk	X	
Procurement / Purchasing Associate	X	
Procurement / Purchasing Specialist	X	X
Buyer / Purchasing Agent		X
Procurement / Sourcing Manager		X
Purchasing Manager		X

SUPPLY CHAIN & LOGISTICS

	North County		East County			Central		South County	Imperial County
	Palomar	MiraCosta	Grossmont	Cuyamaca	SD City	Miramar	Mesa	Southwestern	Imperial Valley College
Colleges with Proposed Program	Y*							Y*	
Colleges with Potential	Y	Y	Y	Y	Y	Y	Y	Y	Y

CURRENT LOCATION OF PROGRAMS



CURRENT PROGRAMS

Palomar:

- General Business with an emphasis in International Business. (Bus. core, 2 International bus. courses, 1 ScM, and 1 Logistics course)
- Grant Funded: CSCMP ScPro Fundamentals (8 industry mini Certs)

Southwestern College:

- AA & AS (Transfer) Logistics Transportation & International Logistics & Transportation (includes bus. core + 4 work experience)
- Certs: International Logistics & Transportation (Bus. classes plus 4 specific)
- Grant Funded: CSCMP ScPro Fundamentals (8 industry mini certs)

RECOMMENDATIONS

- North County (Ramp-up)
- Central or East?
- South County (Ramp-up)
- K-12 Pipeline



RECOMMENDATIONS

- Repackaging courses
- Add Industry Recognized Certs
 - CAPM, PMP, CSCMP, APICS, SIX SIGMA
- Create new program(s)
- Marketing!



WHAT WOULD A NEW PROGRAM LOOK LIKE?

1: Robust program made up of mini certificates in Supply Chain + Logistics (certs between 3 & 10 courses) (60 units)

Example Certs

- Leadership in global logistics
- Logistics Fundamentals
- Logistics Material Handling
- Logistics Clerk
- Purchasing (Clerk, Assistant, etc.)
- Ecommerce
- International Trade
- Supply Chain Specialist

RECOMMENDATIONS CONT.

- Cross Sector Collaboration: Industrial Automation & Maintenance- (Skills Boss Equipment) can also be used for Certified Technician-Supply Chain Automation (newer title and cert being created in industry in partnership with Amatrol)
- Repackaging: Utilize existing courses to create a new certificate better aligned to industry. This could still require the addition of new courses or industry recognized certification integration.

RECOMMENDATIONS CONT.

- Equipment (Skills Boss)
- Curriculum Development (faculty time, curriculum development, SME's)
- Association Partnerships (APICS, CSCMP, PMI)
- Professional Development
- Contract Education
- Marketing (Targeted Marketing: The sector and populations such as veterans)

QUESTIONS?

Q&A

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