Next Generation Workforce Certification: Innovative Tools for Educating and Upskilling Supply Chain Automation Technicians

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Presentation Overview

- SCA: Intro, History, Context
- MSSC: CT–SCA Overview
- Amatrol: Skill Boss Logistics
- Q&A & Timing
- Post Webinar
Supply Chain Management
Connecting people to products and services across town and around the globe.

- Production and Inventory Control
- Master Scheduler
- Demand Planner
- Warehouse Ops Planner
- Packaging Engineering
- Clerk
- Material Handler

- Logistician
- Traffic, Dispatcher, Transportation Planning
- Warehouse Ops Planner
- Packaging Engineering
- Driver
- Clerk
- Material Handler

- Program Management
- Product Development
- Customer Support
- Supply Chain Executive
- Supply Chain Tech. Fellow

- Demand Planner
- Buyer
- Buyer/Planner
- Procurement Analysts
- Procurement Agent
- Supply Chain Planning
- Forecaster
- Master Scheduler
- Supplier Program Mgr.

Job role titles vary by company, industry and global region.
F & E: Supply Chain (Automation) Technicians
NSF Funded – STEM
Partner Schools Nationally
Develop Resources – No Cost
Industry Guided & Driven
No Student Education
The Tompkins Supply Chain Model

Supply Chain Strategy

Supply Chain Organization

Performance

SUPPLIERS

PLAN

BUY

MAKE

MOVE

STORE

SELL

CUSTOMERS

Materials & Goods

Information

Cash

Work
Norco Community College
2001 Third Street
Norco, CA 92860
951.739.7880

Tacoma Community College
6501 South 19th Street
Tacoma, WA 98466
253.566.5253

Sinclair Community College
444 West Third Street
Dayton, OH 45402-1460
937.512.2759

Oakton Community College
1600 East Golf Road
Des Plaines, IL 60016
847.635.1975

Jefferson Community & Technical College
1000 Community College Drive
Louisville, KY 40272
502.213.7280
Initial Advisory Team Members
The goal of the National Center for Supply Chain Automation is to **increase the supply of highly qualified supply chain automation technicians** to meet the growing national need across the private and public supply chains.

1. Implement model 2+2 supply chain automation career pathways through high school and community college partnerships nationally to meet the need for educated technicians.

2. Convene supply chain automation stakeholders via a National Symposium event to enhance collaboration and deliver professional development.

3. Disseminate information and product deliverables to audiences that include secondary and post-secondary educators, industry and current and potential Supply Chain Technicians.

4. Establish and promote stackable national industry certifications in Supply Chain Automation, which are validated and recognized by industry.
INDUSTRY OCCUPATIONAL DEFINITION OF SUPPLY CHAIN, AUTOMATION OR MULTI-CRAFT TECHNICIAN

A person who installs, maintains, supports, operates or upgrades the automated material handling equipment and systems which support the supply chain.

**Industrial Maintenance**
Mechanics, Hydraulics, Pneumatics, Troubleshooting

**Automated Material Handling Equipment**
Conveyor Systems, Automated Guided Vehicles, Automated Storage & Retrieval Systems, Shuttles, Robotics

**Communications**
Process Improvement, Critical Thinking, Teamwork

**Electronics**
AC/DC, Logic Controllers, Optics, Scanners, Sensors

**Data Management**
Networking, Radio Frequency, Inventory Control, Barcodes, CMMS, Data Analytics, HDMI
Organic Career Growth Opportunities

Automation Operations

Engineering (Maintenance, Systems, Projects)
Available in iBook and PDF

Download PDF by Chapter

Survey Course– HS or CC
Career Awareness Resource

Interactive Widgets
- Puzzles
- Games
- Videos

Instructor’s Manual
- Sample syllabi
- Textbook solutions
- Laboratory exercises

https://supplychainautomation.com/resources/etextbook/
Educational Collaboration

- Industrial Technologies
- Technician Education
- Training Labs a Must
- Champions, No RIP
- Find a College:
  https://supplychainautomation.com/resources/find-a-college/
Supply chain-related firms across US

Data Notes:
Data reflect absolute number of establishments with 50 or more employees in select NAICS codes.

*Data source:* InfoUSA through ESRI Business Analyst, 2015

*Cartography by:* Center of Excellence, Inland Empire & San Diego-Imperial Regions, California Community Colleges
Current Technology Available

PowerStore Pallet Shuttle
Vectura Pallet Crane
CycloneCarrier Case shuttle
Tornado Miniload Crane
ACPaQ Mixed Case Palletizing
QuickMove Case Conveyor
ProMove Pallet conveyor
ItemPiQ Robotic picking
AutoStore Storage & Picking
 CarryPick Storage & Picking
SCA’s Certification Development Role

- Research – Gap Identified
- Partnership MOU
- Convened ILT Focus Groups
- CG Retailers, Package Shippers
- Automated Systems Suppliers
Cert Development Continued

- Industry Research to MSSC
- ILT: Validation, SBL design
- E-Learning Review
- Future: Raise Awareness
eCommerce is the fastest growing segment of the retail sector, and as such, B2C shipping has accounted for over half of shipping volume since 2014.

### US eCommerce Revenue

$Billions, % of Retail Sales

<table>
<thead>
<tr>
<th>Year</th>
<th>eCommerce Revenue</th>
<th>% of Retail Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$170.2B</td>
<td>4%</td>
</tr>
<tr>
<td>2011</td>
<td>$199.7B</td>
<td>5%</td>
</tr>
<tr>
<td>2012</td>
<td>$229.4B</td>
<td>5%</td>
</tr>
<tr>
<td>2013</td>
<td>$260.7B</td>
<td>6%</td>
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<tr>
<td>2014</td>
<td>$298.3B</td>
<td>6%</td>
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<tr>
<td>2015</td>
<td>$343.0B</td>
<td>7%</td>
</tr>
<tr>
<td>2016</td>
<td>$398.3B</td>
<td>8%</td>
</tr>
<tr>
<td>2017</td>
<td>$460.1B</td>
<td>9%</td>
</tr>
<tr>
<td>2018</td>
<td>$529.6B</td>
<td>10%</td>
</tr>
<tr>
<td>2019</td>
<td>$607.4B</td>
<td>11%</td>
</tr>
<tr>
<td>2020</td>
<td>$692.4B</td>
<td>13%</td>
</tr>
</tbody>
</table>

### Trends Driving Online Sales Growth

- Increased returns
- Online grocery
- Online / mail-order prescriptions
- Ship-from-store growth
- Increased demand for small parts
- Increased B2B healthcare shipments
According to UBS:

.....25% of all U.S. retail spending will be online by 2025, a trend expected to force 100,000 physical stores to close......

Source: Wall Street Journal, 6/30/2020
RETAIL BANKRUPTCIES RAGE ON IN 2020

- **Papyrus**
  - SFP Franchise Corp
  - January 23

- **Art Van Furniture**
  - March 9

- **Roots**
  - Roots USA
  - April 29

- **Modell’s Sporting Goods**
  - March 11

- **Aldo**
  - May 7

- **Stage Stores**
  - May 11

- **Centric Brands**
  - May 18

- **Lucky Brand**
  - July 3

- **New York & Company**
  - RTW Retailwinds Inc.
  - July 13

- **Pier 1 Imports**
  - February 17

- **Bluestem**
  - March 9

- **True Religion**
  - April 13

- **J. Crew**
  - May 4

- **Neiman Marcus**
  - May 7

- **JCPenney**
  - May 15

- **Tuesday Morning**
  - May 27

- **GNC**
  - June 24

- **Brooks Brothers**
  - July 8

- **Paper Store**
  - July 14

Source: Retail Dive
HOW MUCH EXTRA WAREHOUSE SPACE DEMAND DOES E-COMMERCE GENERATE?

$1B
E-com Sales

1.25M
Distribution Space

150-175 MSF Annually
Driving Demand for Skilled Technicians

Source: CBRE
Interested in 8/12 ILT Meeting?

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www.supplychainautomation.com
Certification Pilot Programs

- Norco CC
- Sinclair CC
- Oakton CC
- Central Piedmont CC
- Chippewa Valley TC
- Columbus State CC
- Valencia CC

Many More to Come...

Industry Executive Interested in Connecting?
Steve@supplychainautomation.com
Survey Please!! & Webinar Data