KENTUCKY DEPARTMENT OF EDUCATION

SUPPLY CHAIN MANAGEMENT AND LOGISTICS

FUTURING PANEL

MAY 23, 2022

REPORT PULL-OUT SECTIONS

TRENDS, RELATED SKILLS, & CURRICULUM RESOURCES

BUSINESS ETHICS/ETHICAL LEADERSHIP

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Increase in global economic uncertainty and the need for geopolitical awareness ...................... 7
Changes in organizational communication and an increase in employee-focused leadership and initiatives ........................................................................................................................................................................ 8
Building flexibility and security into the network to adapt to rapid change ....................................... 9
Being able to source, digest, analyze, and communicate multiple streams of data and tie it back to the business strategy ......................................................................................................................... 10
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Project Overview

On May 23, 2023, the Kentucky Department of Education (KDE) partnered with MBA Research & Curriculum Center to convene a Futuring Panel with supply chain management (SCM) and logistics executives and professionals from areas across Kentucky. The panel was conducted in Frankfort at the department’s Office of Career and Technical Education. This Futuring Panel was assembled to support the development of a supply chain management pathway for KDE, including four courses and possible certifications, and to initiate business and industry partnerships for KDE in this career area. It was facilitated to provide insight into SCM trends and issues that are impacting workforce needs today and in the years to come.

The supply chain management and logistics panelists represented one or more of the following areas:

- Planning
- Sourcing
- Making/Manufacturing
- Delivering
- Returns/Reverse logistics
- Enablement
Trends Discussion

Panelists were asked to identify trends that are affecting or changing the way they do business or how they plan for the future. Group facilitators stressed the importance of identifying trends evident in the supply chain management and logistics industry, specifically in Kentucky.

We encouraged executives to think about trends from a business perspective rather than from an educational/teaching perspective. Participants were given six general categories to consider as they identified trends.

Trend Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CULTURAL:</strong></td>
<td>The major elements of culture, including material culture, language, aesthetics, education, religion, attitudes, values, and social organization</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL:</strong></td>
<td>Any forces that impact how businesses interact with the environment and use their natural resources (e.g., fresh water, air, living organisms, metal ores, oil, most forms of energy)</td>
</tr>
<tr>
<td><strong>GLOBAL/POLITICAL:</strong></td>
<td>The impact of a political ideology (e.g., capitalism, socialism, communism, nationalism), stability, and international relations on business</td>
</tr>
<tr>
<td><strong>GOVERNANCE:</strong></td>
<td>Factors that impact the principles and standards that govern business decision-making and business oversight. Governance refers to all processes and decisions that seek to define actions, grant power, and verify performance</td>
</tr>
<tr>
<td><strong>REGULATORY/LEGAL:</strong></td>
<td>The full breadth of laws, rules, and regulations that businesses are subjected to by governing bodies, whether through civil or common code, domestic or international law, or governmental entities, agencies, or jurisdictions</td>
</tr>
<tr>
<td><strong>TECHNOLOGICAL:</strong></td>
<td>The direct and indirect impact of technology on any aspect of business, from strategy to operations to tactics</td>
</tr>
</tbody>
</table>
Top Trends List

- Automation’s ability to help businesses deliver quality products and services to customers on time, at a low cost
- Increase in global economic uncertainty and the need for geopolitical awareness
- Changes in organizational communication and an increase in employee-focused leadership and initiatives
- Building flexibility and security into the network to adapt to rapid change – mesh network
- Being able to source, digest, analyze, and communicate multiple streams of data and tie it back to business strategy
- Rebranding supply chain management to obtain, retain, and promote supply chain talent
Top Trends, Related Skills, and Curriculum Resources

In addition to identifying the top trends, we asked business participants to share the skills needed in the workplace to successfully address the trends. Immediately following each trend and its related skills, teachers will find curriculum resources that are applicable to teaching the skills.

As a reminder, Kentucky teachers have free access to all MBA Research LAP modules via their MBA Learning Center account (login required). Simply search in Commons for the LAP titles that you would like to use. Don’t have an account set up? Contact MBA Research to get started.

Automation's ability to help businesses deliver quality products and services to customers on time, at a low cost

### Related skills and technology needs:

- Computer background and skills (material requirements planning (MRP) and enterprise resource planning (ERP) systems; SAP, JDE, advanced Excel skills)
- MS Excel based is needed for all resource processing and automotive
- SharePoint, SQL needed
- Microsoft Suite
- Business Objects—data management system
- PowerBI—“fancier Excel” being taught at NKU in lieu of Business Objects
- Basic computer understanding includes ability to use a computer, not just ability to use apps
- Mechanical background—knowing how to relate to and work with automation (repair/maintenance/cross-checking)
- Systems integration: ERP/MRP/etc. and critical thinking about systems and how they interrelate; knowing how to cross-check and test the automation functionality
- Communication skills—knowing where to go to ask questions

### Curriculum Resources

Resources to facilitate learning about this trend are available in the following LAP modules:

- LAP-NF-003 TECH-tastic (Technology's Impact on Business)
- LAP-NF-110 In the Know (Nature of Information Management)
- LAP-OP-443 Deliver the Goods (Concept of Supply Chain)
## Increase in global economic uncertainty and the need for geopolitical awareness

### Related skills:

- Low-cost counter sourcing
- Ability to recognize price vs. value
- Risk assessment/risk management
- Understanding how to calculate total cost (total-cost model)
- Microsoft Suite
- Determining readiness to market
- Facility/Ability to adapt to change
- Cost analysis and market benchmarks for negotiations to determine if it’s time to purchase
- Training for cross-functionality in accounts payable and receivable and how departments work together to maximize outcomes

### Curriculum Resources

Resources to facilitate learning about this trend are available in the following LAP modules:

- LAP-SM-075 Prepare for the Worst; Expect the Best (Nature of Risk Management)
- LAP-EC-903 Be Resourceful (Economic Resources)
- LAP-EC-104 Stretch Your Boundaries (The Global Business Environment)
Changes in organizational communication and an increase in employee-focused leadership and initiatives

**Related skills:**
- Leadership
- Employee retention
- Creating a flexible workplace
- Diversity, Equity, and Inclusion knowledge and understanding
- HR changes
- Pay-per-shift app

**Curriculum Resources**

Resources to facilitate learning about this trend are available in the following LAP modules:

- LAP-EI-140  More Than Just Talk (Effective Communication)
- LAP-EI-909  Lead the Way (Concept of Leadership)
- LAP-EI-064  Culture Club (The Nature of Organizational Culture)
- LAP-HR-493  Take the Lead! (Leadership in Organizations)
Building flexibility and security into the network to adapt to rapid change

**Related skills:**

- Analytic skills
- Ability to see the big picture and connect dots
- Information technology: basic understanding of sourcing data (knowledge of SQL, light coding)
- Base knowledge of ERP/MRP systems
- Understanding how information flows between companies
- Forecasting/Demand analyst

**Curriculum Resources**

Resources to facilitate learning about this trend are available in the following LAP modules:

- LAP-SM-075  Prepare for the Worst; Expect the Best (Nature of Risk Management)
- LAP-EI-062  Make It a Win-Win (Negotiation in Business)
- LAP-MP-013  Futurecast (The Nature of Sales Forecasts)
- LAP-OP-443  Deliver the Goods (Concept of Supply Chain)
Being able to source, digest, analyze, and communicate multiple streams of data and tie it back to the business strategy

“Obviously, this is data analytics, but there are two big pieces: relate it back to a business strategy. You can get people who can analyze data, but being able to tie it back to something relative from a business perspective is important. The other piece is sourcing. It’s important to be able to source data from multiple sources and tie it into one source and be able to communicate that out.”

Eric Rossi, Valvoline Global

Related skills:
- Data analytics
- Communication and soft skills
- Storytelling with data
- Adaptability with ambiguity
- End-to-end business knowledge

Curriculum Resources
Resources to facilitate learning about this trend are available in the following LAP modules:
- LAP-EI-140 More Than Just Talk (Effective Communication)
- LAP-EI-006 Go With the Flow (Demonstrating Adaptability)
- LAP-EI-092 Embrace the Unknown (Developing a Tolerance for Ambiguity)
Rebranding supply chain management to obtain, retain, and promote supply chain talent

<table>
<thead>
<tr>
<th>Related skills:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Leadership skills</td>
</tr>
<tr>
<td>• Coaching</td>
</tr>
<tr>
<td>• Ability to provide and receive feedback</td>
</tr>
<tr>
<td>• Work with and attract diverse populations</td>
</tr>
<tr>
<td>• Ability to be visionary</td>
</tr>
</tbody>
</table>

**Curriculum Resources**

Resources to facilitate learning about this trend are available in the following LAP modules:

<table>
<thead>
<tr>
<th>LAP module</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAP-EI-060</td>
<td>Vision Quest (Enlisting Others in Vision)</td>
</tr>
<tr>
<td>LAP-EI-909</td>
<td>Lead the Way (Concept of Leadership)</td>
</tr>
<tr>
<td>LAP-EI-041</td>
<td>Bring Out the Best (Coaching Others)</td>
</tr>
<tr>
<td>LAP-EI-903</td>
<td>Grin and Bear It (Using Feedback for Personal Growth)</td>
</tr>
<tr>
<td>LAP-OP-443</td>
<td>Deliver the Goods (Concept of Supply Chain)</td>
</tr>
<tr>
<td>LAP-OP-303</td>
<td>Top of the (Supply) Chain (Nature of Supply Chain Management)</td>
</tr>
</tbody>
</table>
Business Ethics/Ethical Leadership

MBA Research & Curriculum Center and the Daniels Fund have formed a partnership to promote the teaching and learning of business ethics at the high school level. As part of our research to help strengthen our curricula and instructional materials in the business-ethics realm, and to learn firsthand about issues in business ethics within workplaces, we asked Kentucky supply chain management panelists to review and rank the importance of ethical leadership traits, suggest additional ethical leadership traits, and talk about ethics generally within their career area.

Ethical Leadership Traits Validation

The traits are listed in the order that panelists reviewed and validated them.

<table>
<thead>
<tr>
<th>Ethical Leadership Traits</th>
<th>Critical</th>
<th>Recommended</th>
<th>Not Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe the nature of emotional intelligence</td>
<td>87.5%</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>2. Recognize and overcome personal biases and stereotypes</td>
<td>81%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>3. Assess personal strengths and weaknesses</td>
<td>69%</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>4. Assess personal behavior and values</td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>5. Demonstrate honesty and integrity</td>
<td>94%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>6. Demonstrate responsible behavior</td>
<td>94%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>7. Demonstrate fairness</td>
<td>87.5%</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>8. Assess risks of personal decisions</td>
<td>69%</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>9. Take responsibility for decisions and actions</td>
<td>75%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>10. Build trust in relationships</td>
<td>80%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>11. Describe the nature of ethics</td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>12. Explain reasons for ethical dilemmas</td>
<td>75%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>13. Recognize and respond to ethical dilemmas</td>
<td>87.5%</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>14. Explain the use of feedback for personal growth</td>
<td>69%</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>15. Show empathy for others</td>
<td>81%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>16. Exhibit cultural sensitivity</td>
<td>75%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>17. Explain the nature of effective communications</td>
<td>69%</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>18. Foster open, honest communication</td>
<td>87.5%</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>19. Participate as a team member</td>
<td>75%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>20. Explain the concept of leadership</td>
<td>62%</td>
<td>38%</td>
<td></td>
</tr>
<tr>
<td>21. Explain the nature of ethical leadership</td>
<td>75%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>22. Model ethical behavior</td>
<td>87.5%</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>23. Determine personal vision</td>
<td>44%</td>
<td>50%</td>
<td>6%</td>
</tr>
<tr>
<td>24. Inspire others</td>
<td>50%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>25. Develop an achievement orientation</td>
<td>31%</td>
<td>69%</td>
<td></td>
</tr>
<tr>
<td>26. Enlist others in working toward a shared vision</td>
<td>69%</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>27. Treat others with dignity and respect</td>
<td>87.5%</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>28. Foster positive working relationships</td>
<td>81%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>29. Assess long-term value and impact of actions on others</td>
<td>69%</td>
<td>31%</td>
<td></td>
</tr>
</tbody>
</table>
Additional Recommended Leadership Traits

- Decision-making skills
- Ability to overcome bad decisions, to move on to a better decision
- Understand your audience
- Communication skills and teamwork—don't work in a silo
- When managing a team, work with your team members to help them set their own goals; follow up on their progress

Additional Comments

- How do we communicate in a more efficient manner?
- Give and seek feedback to continuously improve as an individual and as an organization.

Discussion on Ethical Leadership

Participants were asked what ethical principles are especially important in SCM and why.

Continuously give and seek feedback.

- Have regular meetings and talk about specifics. Speak with direct-reports daily and do annual performance reviews. Going into a performance review should not be a time for surprise. This is critical for employee retention today.
- Give details when someone meets or exceeds expectations. Being specific is important to young people, not just, “You’re doing great.”
- Create employee coaching and mentoring opportunities.

Have empathy; recognize contributions and successes before asking for modifications.

“Empathy and recognition are key for this generation of employees.”

Bill Cox, Clark Material Handling Company

Knowing the right thing to do and being able to properly advise on what to do.

Teach how to have difficult conversations. Example: If a worker takes longer breaks than allowed; having that discussion followed by disciplinary action is necessary. Be respectful and take the emotion out of the discussion.
## Credentials and Certifications Worksheet

**Are credentials/certifications necessary in your career area?**

- **Yes:** 37.5% (6/16 participants)
- **No:** 62.5% (10/16 participants)

**Identified credentials and certifications relevant in the SCM field:**

<table>
<thead>
<tr>
<th>Certification / Credential</th>
<th>Required?</th>
<th>If required, at what stage?</th>
<th>Does your company provide support for employees to obtain credentials?</th>
<th>What type of support is offered?</th>
</tr>
</thead>
<tbody>
<tr>
<td>APICS /CPIM</td>
<td>1 Just nice to have 1 No</td>
<td>1 No defined time frame</td>
<td>2 Yes</td>
<td>2 Pay differential 1 Advancement</td>
</tr>
<tr>
<td>APICS/CSCMP</td>
<td>1 No</td>
<td>1 No defined time frame</td>
<td>1 Yes</td>
<td>1 Pay differential 1 Advancement</td>
</tr>
<tr>
<td>ASCM (APICS Material Positions)</td>
<td>1 No 1 Recommended for advancement</td>
<td>1 No defined time frame</td>
<td>1 Yes</td>
<td>1 Time away from work for class/study 1 Other: Pay materials/lump-sum payment</td>
</tr>
<tr>
<td>Bachelor’s Degree (SCM concentration preferred)</td>
<td>3 Yes 1 No 1 Recommended for advancement</td>
<td>3 Before employment</td>
<td>3 Yes 1 No</td>
<td>2 Pay differential 2 Advancement 3 Other: Lump-sum payment; 5k yearly paid school; Pay for college education</td>
</tr>
<tr>
<td>Certified Management Accountant</td>
<td>1 Just nice to have 1 No</td>
<td>1 No defined time frame</td>
<td>1 Yes</td>
<td>1 Advancement 1 Time away from work for class/study 1 Other: Cover costs of classes, study materials, and tests</td>
</tr>
<tr>
<td>CPF (Certified Professional Forecaster)</td>
<td>1 Recommended for advancement</td>
<td>1 First 2 yr of employment</td>
<td>1 Yes</td>
<td>1 Advancement 1 Time away from work for class/study 1 Costs of classes, study materials, and tests</td>
</tr>
<tr>
<td>CSCP</td>
<td>1 Recommended for advancement</td>
<td>1 Before advancement</td>
<td>1 No</td>
<td></td>
</tr>
<tr>
<td>Credentials/Certifications</td>
<td>Requirement 1</td>
<td>Requirement 2</td>
<td>Requirement 3</td>
<td>Requirement 4</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>---------------</td>
<td>-----------------------------------</td>
<td>---------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>HS Diploma</td>
<td>Yes</td>
<td>Before employment</td>
<td>Yes</td>
<td>Time away from work for class/study</td>
</tr>
<tr>
<td>ISM-CPSM Certified Professional in Supply Chain Management</td>
<td>Yes 1 No 1 Recommended for advancement</td>
<td>Within 4 yr</td>
<td>Yes 1 Recommended for advancement</td>
<td>Other: Lump-sum payment</td>
</tr>
<tr>
<td>Lean Six Sigma Certifications</td>
<td>No 1 Recommended for advancement 2 Nice to have</td>
<td>First 1–2 yr of employment 3 No defined time frame</td>
<td>Yes 3 Yes 1 No</td>
<td>Pay differential 2 Advancement 2 Time away from work for class/study 2 Other: internal mentors; costs of classes, study materials, and tests</td>
</tr>
<tr>
<td>MBA</td>
<td>No 1 Recommended for advancement</td>
<td>No defined time frame 2 Yes 1 No</td>
<td>Pay differential 1 Other: $/semester</td>
<td></td>
</tr>
<tr>
<td>Microsoft Office (Excel)</td>
<td>Yes 1 Recommended for advancement</td>
<td>Before advancement 1 No defined time frame</td>
<td>Yes 2 Yes 2 No</td>
<td>Time away from work for class/study</td>
</tr>
<tr>
<td>PMP (Project Management Professional)</td>
<td>No 1 Recommended for advancement</td>
<td>No defined time frame 1 No</td>
<td>Pay differential 1 Advancement</td>
<td></td>
</tr>
<tr>
<td>SHRM/PHR</td>
<td>Recommended for advancement</td>
<td>Before advancement 1 Yes</td>
<td>Pay differential 1 Advancement 1 Time away from work for class/study</td>
<td></td>
</tr>
</tbody>
</table>
Thank You and Recognition of Contributors

Futuring Panel Participants

MBA Research and the Kentucky Department of Education would like to thank the participants of the Supply Chain Management Futuring Panel who spent the day sharing their expertise with us. Panel participants presented their own views based on their professional experiences, and not necessarily those of their companies.

We are always grateful to meet with and hear directly from business and industry professionals about what’s going on in the workplace. Thank you for your time and commitment to KY workforce development and business administration education.

Mindy Antonchak, Director, Supply Chain, Catalent Winchester
Andrew Brown, Director of Operations, Team Modern
Greg Breyer, Director, Supply Chain, East Kentucky Power
Bill Cox, Procurement Supervisor, Clark Material Handling Company
Heather Embry, Human Resources Office Manager, Walmart Supply Chain
Shane Grayson, Technical Supply Chain Specialist, Stober Drives, Inc.
Chris Hill, Director, Eastern Distribution, Rocky Mountain ATV/MC
Kristen Kaelin-Campbell, Director, Talent & Culture, HJI Supply Chain Solutions

Tyler T. Marcum, Area Supply Chain Manager, Sherwin Williams
Blake Meade, Senior Customer Fulfillment Manager, GE Appliances, a Haier Company
Troy Roberts, Assistant Sales Manager, Toyota Tsusho America, Inc.
Eric Rossi, Senior Director of Supply Chain North America, Valvoline Global
Charles Simpson II, E-Commerce Area Manager, Walmart Supply Chain
Logan Smith, Forecast Analyst, Valvoline Global
Logan Williams, Director, Operations, J.B. Hunt
Abigale Wilson, Analyst—Indirect Purchasing, Toyota
Kentucky Partnership

MBA Research & Curriculum Center would like to acknowledge our strong partnership with and support from the Kentucky Department of Education, a member of the MBA Research & Curriculum Center consortium. Cathy Hoehn, representative to the MBA consortium, is our business and marketing consultant with KDE, and Beth Engle, the academic program manager with KDE, made this opportunity possible and collaborated with MBA Research staff every step of the way. In addition, our sincere appreciation goes out to all the KDE staff who supported the day’s events.

Kentucky Department of Education

- Tina Brogli, Work-Based Learning Coordinator
- Sherri Craig, Systems Consultant, End of Program Assessment Coordinator
- Beth Engle, Academic Program Manager, CTE Programs & Pathways Branch
- Cathy Hoehn, Business & Marketing Program Consultant, CTE Programs & Pathways Branch
- Morgan Lovitt, Program Consultant
- Lisa Oakes, Chartered Association Advisor for Kentucky DECA
- Erica Settelen, Program Consultant
- Mary Taylor, Industry Training Specialist, TRACK Apprenticeship Program
- Tom Thompson, Director, Division of Student Transition and Career Readiness
- Connie Witt, FBLA State Adviser

Special Guests

MBA Research would also like to thank the following special guests of the Kentucky Department of Education who attended the Futuring Panel as observers. A special thank-you to Dr. Kirby Easterling (EKU), who provided extensive support with business participant recruitment, and to Mark Thackeray (NKU), who provided additional feedback and resources related to curriculum development. Thank you also to Callie Miracle at the Kentucky Chamber of Commerce, Cassie Grigsby at the Kentucky Retail Federation, and Dr. Bruce Manley at the Bluegrass Community & Technical College.

Postsecondary Observers:

- Dr. James Kirby Easterling, Program Director and Assistant Professor, Global Supply Chain Management, College of Business, Eastern Kentucky University
- Theresa Smith, Teacher, Global Supply Chain Management, Eastern Kentucky University
- Mark Thackeray, Professor of Practice and Program Director, Northern Kentucky University

Kentucky Association Observers:

- Cassie Grigsby, Senior Vice President, Operations and Development, Kentucky Retail Federation
- Callie Miracle, Talent Pipeline Management Project Manager, Kentucky Chamber of Commerce
MBA Research & Curriculum Center

- Holly Atha, President/CEO
- Stephanie King, Director of Business Engagement
- Rick Mangini, Executive Vice President