

OSU DEPARTMENT OF INTEGRATED SYSTEMS ENGINEERING

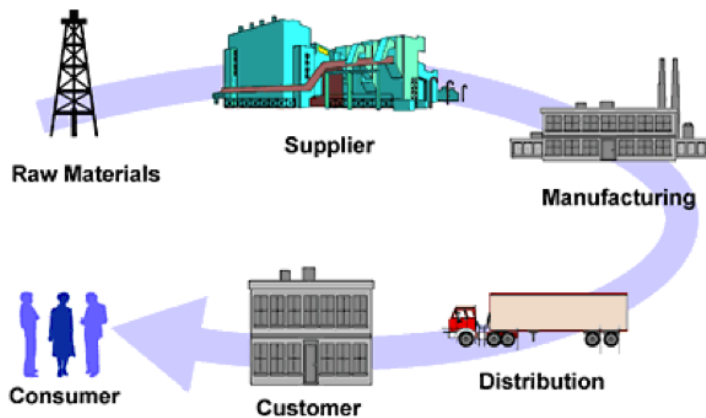
SUPPLY CHAIN MANAGEMENT AND LOGISTICS

Ohio State University hosts a comprehensive program in Supply Chain Management and Logistics. The Department of Integrated Systems Engineering has both undergraduate and graduate concentrations in this area. We conduct both theoretical and applied research. This dual approach enables our researchers to understand, analyze, and solve real-world problems effectively.

Scope: Supply Chain Management and Logistics at OSU provides an integrative perspective linking all parts of the supply chain. This includes planning, control, operations, production, storage and distribution. We examine both tactical and strategic problems, and study the effects of and remedies for system disruptions.

Approach: To accomplish this, we take an interdisciplinary approach that integrates technologies such as robust optimization, combinatorial optimization, stochastic programming, large-scale optimization, simulation, and forecasting.

Our contributions to the basic science of Supply Chain Management and Logistics are concerned with understanding the various components of the supply chain, and how these components interact. We have a particular focus on robust optimization and recovery from system failures. Our research is grounded in real world problems that help society operate more efficiently and effectively.



Tools

- Robust optimization
- Combinatorial optimization
- Large-scale optimization
- Dynamic programming
- Stochastic optimization
- Simulation

Research Focus Areas

- Scheduling
- Inventory
- Transportation
- Lean Production
- Material Requirements Planning
- Warehousing
- Sustainability and Resilience



Concentration Faculty: Antonio J. Conejo, Joseph Fiksel, and Marc Posner

Stochastic Modeling: Guzin Bayraksan, Cathy Xia

Data Analysis and Statistics: Theodore Allen, Sam Davanloo Tajbakhsh

Operations Management: Nicholas G. Hall (Decision Sciences)