



## Cool:SLICE

### Interface for Sustainable Supply Chain Management

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**Team Meeting Location:** REU Area in VRAC

Iowa State has collaborated with Wayne State, Penn State, and Oregon State to create Cool:SLICE (Constructionism in Learning: Sustainable Life Cycle Engineering), a web-based engineering education platform. Cool:SLICE is designed to support a holistic sustainable product life cycle engineering experience by demonstrating the effects of changes in product designs on manufacturing and supply chain lead time, costs, and environmental impacts. This novel technology integrates engineering design tools with core educational concepts in manufacturing and sustainable supply chain management.

Version 1 of the software has been developed. The REU team will 1) investigate whether the Cool:SLICE manufacturing analysis and sustainable product architecture and supplier selection (SPASS) modules engage students in active learning, and 2) determine the most appropriate methods for improving the flexibility of the existing Cool:SLICE manufacturing analysis and SPASS modules. The team will use a drone as an example product platform to prototype a user-friendly, web-based Version 2 GUI to facilitate education of undergraduate students about manufacturing process analysis and sustainable supply chain management.

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