



LoDI and Starboard Logistics Case Competition

OVERVIEW

Apple continues to struggle with supply chain disruptions with the new iPhone 13. Apple's CEO said the company lost as much as \$6 billion in revenue as a result of constrained supplies, primarily driven by silicon chip shortages and manufacturing disruptions. The newly launched iPhone 13 phones are already on back order. While trying to resolve supply issues, Apple would like to streamline shipping so that their phone can be in the hands of customers as quickly as possible. Apple currently receives the iPhone 13 from overseas in a port in Long Beach, CA. It then transports them to 2 warehouses in New Mexico and California. Apple is considering moving one or both locations to optimize delivery timeline and minimize cost. The baseline scenario costs \$13.28M. Students will work together to decrease shipping costs and shipping time for optimal delivery time from the port. Teams are encouraged to research strategies and explore the Starboard software to come up with an optimal solution.

ELIGIBILITY

- A. Teams of at most three (3) individuals may participate; individual entries are permitted.
- B. Interested teams should contact Claire.Arnold@louisville.edu via email to register their intent to participate by Fri. Jan. 28th.

RULES

- A. Teams in the Louisville region should submit the documentation portfolio and scientific poster components of the team's entry via the Internet by **11:59 p.m. ET on February 23** to be considered for regional competition.
- B. Teams outside of the Louisville region that plan to participate in the state competition, should submit the documentation portfolio and scientific poster components of the team's entry via the internet by **11:59 p.m. ET on April 1** to be considered for state competition.
- C. Teams outside of the Louisville region may choose to submit their documentation portfolio and scientific components by **11:59 p.m. on February 23 (early submission)** if they like to receive feedback on their solution from the judges prior to state competition. **This interim feedback seeking is optional.**

ATTIRE

Competition attire is required for this event.

PROCEDURE

PRE-CONFERENCE

- A. Teams create an account on

www.starboardcorp.com

- B. Participants identify an optimal solution and collect or compile data from various sources. Participants create their documentation and scientific poster according to the regulations.
- C. Submission information will be provided on the LoDI website under Competition Updates.

LOUISVILLE REGIONAL CONFERENCE

- A. **Six** teams will be selected and notified by **Feb. 28th** to participate in an on-site presentation with a poster display of their solution at the regional conference on March 2. The presentation is limited to ten (10) minutes, broken down as follows:
 1. One (1) minute to set-up
 2. Six (6) minutes to present
 3. Three (3) minutes to respond to Q &A.
- B. The contestants report at the time and place stated in the conference program and will be assigned a presentation time.
- C. Participants report at the assigned time and place with their scientific poster.
- D. Participants are allowed ten (10) minutes to present their scientific poster and respond to questions.
- E. Judges will evaluate entries based on the Documentation Portfolio, scientific poster, and presentation. The winner will be announced.

STATE CONFERENCE

- A. **Ten** teams will be selected and notified by **April 18th** to advance to the final round by attending the full day of conference on **April 25-26th**.
- B. The contestants report at the time and place stated in the conference materials and will be assigned a presentation time.
- C. Participants report at the assigned time and place with their scientific poster.
- D. Participants are allowed ten (10) minutes to present their scientific poster and respond to questions.
- E. Participants will enter the presentation session at the assigned time and may stay after their presentation.
- F. Judges will evaluate entries based on the Documentation Portfolio, scientific poster and presentation. The winner will be announced.

REGULATIONS AND REQUIREMENTS

Students will work to develop their 21st century leadership skills in the process of preparing for and participating in this competitive event. The development and application of those skills must be evident in their submission, demonstration, and/or communication pertaining to the entry.

PRE-CONFERENCE

A. Participants must create an account with Starboard:

1. Create an account at www.starboardcorp.com
2. Go to account management and enter the promotion code: academic_uofl
3. Log off and back on

B. View training videos by clicking on the training icon



C. Documentation Portfolio:

1. The documentation portfolio must be saved as a multi-page PDF document with the pages presented in the following order:
 - a. Title page with the event title, the conference city and state, the year, and the team name; one (1) page
 - b. Table of contents; pages as needed
 - c. Introduction
 - d. Purpose- an explanation of the importance of the issue including problems and possible solutions (if applicable); one (1) page
 - e. Methods - the methods used to obtain your data; one (1) page
 - f. Results; pages as needed:
 - g. Analysis of data collected and/or intermediate results displayed on Starboard.
 - h. Support materials such as graphs and any pertinent data collected
 - i. Conclusions - synthesis of the data collected; pages as needed
 - j. Next Steps - next steps to further analyze the data, collect more data, or minimize the impact of the issue; one (1) page
 - k. Bibliography/references - A list of references and credible resources in a professional citation-style of your choice. Failure to use a professional citation style will result in a

rules violation of 20% (twenty percent). Some examples of professional citation styles include MLA, APA, Chicago, and IEEE; a minimum of three (3) different types of resources must be used; work must be original or cited; pages as needed

2. Scientific Poster:

- a. Participants must use the scientific poster template. An editable, downloadable document is available on the LoDI website under Competitions/Forms: www.uofllogistics.org
- b. Participants shall incorporate visuals to the scientific poster.
- c. Copyright: Citation of all ideas, fonts, and images from sources other than the designer, and/or that are copyrighted (most fonts and images found on the web are copyrighted material unless purchased or offered as free domain). Clip art must be documented; failure to do so results in disqualification.

CONFERENCE

A. Participants must have the following computer hardware:

1. One (1) laptop
2. Extra charged laptop battery or extra charged laptop as backup
3. One (1) computer mouse, optional

EVALUATION

CONFERENCE

- A. The documentation portfolio
- B. The scientific poster
- C. The presentation

Refer to the official rating form for more information.

STEM INTEGRATION

This event has connections with the STEM (Science, Technology, Engineering, and Mathematics) educational standards.

LEADERSHIP AND 21st CENTURY SKILLS DEVELOPMENT

This event provides an opportunity for students to build and develop 21st century leadership skills including but not limited to:

- Communication

- Collaboration/Social Skills
- Initiative
- Problem Solving/Risk Taking
- Critical Thinking
- Perseverance/Grit
- Creativity
- Relationship Building/Teamwork
- Dependability/Integrity
- Flexibility/Adaptability

CAREERS RELATED TO THIS EVENT

This competition has connections to one (1) or more of the careers below:

- Data scientist
- Data analyst
- Industrial engineer
- Inventory manager
- Transportation manager
- Operations manager
- Global operations specialist / manager
- Supply chain analyst
- Supply chain manager
- Operations research analyst
- Quality engineer

LoDI AND STARBOARD LOGISTICS CASE COMPETITION

2022 OFFICIAL RATING FORM

HIGH SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.

If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.

If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- ☐ Documentation portfolio was submitted pre-conference and scored
- ☐ Scientific poster is present
- ☐ Computer hardware is present
- ☐ ENTRY NOT EVALUATED

DOCUMENTATION PORTFOLIO (70 points)			
CRITERIA	Minimal performance	Adequate performance	Exemplary performance
	1-4 points	5-8 points	9-10 points
Portfolio (X1)	Portfolio is unorganized and/or missing three (3) or more components.	Portfolio has most components and it is somewhat organized.	One (1) or no components are missing in the portfolio; content and organization are clearly evident.
Definition and Explanation of Issue (X1)	Definition and explanation of the issue are unclear.	Issue is somewhat defined and explained.	Clear and concise definition and explanation of the issue are evident.
Research Base (X1)	Research is inadequate, and/or very few credible sources are referenced.	Research has been conducted appropriately, with some credible sources included.	Research indicates evidence of a comprehensive assortment of materials that are credible sources.
Support Materials (X1)	Support materials do not help clarify the documentation or are of little significance to the issue.	Support materials are appropriate and help supplement documentation by providing clarity to the issue.	Support materials are of excellent quality; if not original, they are cited; support materials clarify the issue.
Data Charts and Graphs (X2)	The data is not represented in charts and graphs.	The data is represented in charts and graphs and somewhat supports the analysis of the team.	The data is represented in charts and graphs and supports the analysis of the team.
Quality, Effectiveness, and Mechanics (X1)	Portfolio appears to have been thrown together; distracting errors in punctuation, grammar, and spelling are evident in the documentation.	Portfolio is generally organized; punctuation, grammar, and spelling are generally correct, with few errors.	Work is of exceptional quality and well organized; punctuation, grammar, and spelling are correct, with no errors.
DOCUMENTATION PORTFOLIO SUBTOTAL (70 points)			

Record scores
in the column
spaces below.

SCIENTIFIC POSTER PRESENTATION (90 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Definition and Explanation of the Issue (X1)	An unclear definition and explanation of the issue is presented.	Issue is defined and explained adequately.	The portfolio is clearly organized and has either one or no missing components.	
Explanation of Impacts (X1)	Explanation is missing a discussion of the issue's relevance to environmental, economic, social, and/or ethical considerations.	Explanation addresses some of the issues relevant to environmental, economic, social, and /or ethical considerations.	Explanation includes a full discussion of the issue's relevance to environmental, economic, social, and/or ethical considerations.	
Supporting Information (X2)	Support information is not represented in graphs/charts and does not help to clarify documentation, and/or it is of little significance to the issue.	Support information is represented in graphs/charts, is somewhat appropriate and helps supplement the documentation by providing some clarity to the issue.	Support information is represented in graphs/charts, is highly effective and of excellent quality.	
Research, References , and Resources (X1)	Documentation lacks an adequate research base, and d/or very few credible sources are referenced.	Research is conducted appropriately, with adequate credible sources.	Comprehensive research base that includes credible sources is evident.	
Communication of the project (X2)	It is difficult to understand the project being communicated; an illogical explanation presented; leadership and/or 21 st century skills are not evident.	The project is communicated to some degree although some illogical inconsistencies exist; leadership and/o r 21 st century skills are somewhat evident.	The issue is communicated in an organized, clear, and concise manner; leadership and/or 21 st century skills are evident.	
Creativity (X1)	The display lacks creativity; no, or very few, design principles are integrated in the display.	Some elements of creativity exist in the display, and essential design principles are generally evident.	The display exudes creativity; essential design principles and elements are well integrated.	
Aesthetics and Artisanship (X1)	Work is unorganized and sloppy; display seems to be an afterthought or thrown together.	Display shows an organized presentation of the issue.	Display is exemplary in logically communicating important data.	
SCIENTIFIC POSTER PRESENTATION SUBTOTAL (90 points)				
Rule violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.				
Indicate the rule violated: _____				
PRELIMINARY SUBTOTAL (160 points)				

VISUALIZATION (80 points)				Record scores in the column spaces below.
CRITERIA	Minimal performance	Adequate performance	Exemplary performance	
	1-4 points	5-8 points	9-10 points	
Conceptualization (X2)	It is difficult to understand the concept being communicated in the visualization.	The concept is somewhat communicated, but many aspects remain unclear.	The concept is communicated in an organized, clear, and concise manner.	
Creativity (X2)	The visualization lacks creativity; no, or very few, design principles are integrated in the visualization.	Some elements of creativity are expressed, with most design principles integrated.	The visualization exudes creativity; essential design principles and elements are integrated.	
Aesthetics and Artisananship (X1)	Unorganized, sloppy work is evident; the visualization seems to be an afterthought and/or thrown together.	A largely organized presentation of layout and design principles is evident.	An exemplary use of layout and design principles to logically communicate important data is evident.	
Graphical Representations (X2)	Graphical representations do not help to clarify visualization, or they are of little significance to the project.	Graphical representations are appropriate and help supplement the visualization by providing clarity to the project.	Graphical representations are of excellent quality; and clarify abstract concepts.	
Originality (X1)	The visualization lacks imagination, originality, and artistic detail.	The visualization is somewhat effective, inventive, and inspiring.	The visualization is inspiring, inventive, resourceful, and motivating.	
VISUALIZATION SUBTOTAL (80 points)				
Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right. Indicate the rule violated: _____				
SEMIFINAL SUBTOTAL (80 points)				
To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary. TOTAL (240 points)				