

Client Scope Change

The C4 is considering a potential scope change to the original RFP to include a “luxury model” canoe option. Prior to implementing this modification, C4 seeks to understand how the proposed changes may influence the project’s cost and timeline by requesting a high-level overview from each competing team discussing the impacts.

Client Scope Change Overview

The scope of the original RFP is focused on production of an efficient, reliable “base model” canoe suitable for most applications. This scope change explores adding a “luxury model” option that is geared towards providing a relaxing and rejuvenating experience on the water for concrete canoe teams following a long day of hard-fought competition. The new features and structural changes are summarized as follows:

- **Passenger Capacity Increase:** Expanding from a maximum of four (4) passengers to eight (8) to accommodate larger groups.
- **Luxury Additions:** Teams are tasked with incorporating at least one feature that enhances comfort and entertainment, transforming the canoe into a “Tailgating Barge.” Examples include, but are not limited to, cup-holders, an integrated audio system, or decorative lighting. These features must align with the canoe's size and the manufacturing approach.
- **Marketing Name:** Propose a name for the “luxury model” canoe option that can be used to market it to the target consumer. These can be in concert with the team’s current theme.

The base model design will remain unchanged as it pertains the prototype delivery for the conference and society-wide final competition. Instead, the focus will be on assessing the impact of the luxury features on the existing design, project costs, and schedule should C4 choose to include it as an option.

Key Assessment Areas

1. **Physical Modifications:** To accommodate eight passengers, structural reinforcements and modifications to the hull are necessary for construction, but detailed hull redesigns are not part of this client scope change. Instead, discuss what changes would be needed and how those changes may affect the schedule and cost of production.
2. **Project Management Considerations:**
 - **Redesign Effort:** Additional time and resources will be needed for feature development, prototype adjustments, and testing. Consider what will differ from the team’s process and how the team plans to tackle these changes using their current quality measures and project manager plan.
 - **Cost Implications:** Additional material costs, feature integration expenses, and labor time for the modifications is expected. Consider this in terms of the delta from the base model for production costs. Include specific tasks/materials/labor that are affected.
 - **Schedule Adjustments:** Teams should consider the research, prototyping, and testing phases affected by this scope change.

NOTE: C4 requires that the mix design not differ from the base model teams are currently producing. Teams should focus their energies on hull analysis, construction methods, and other areas that may be affected.

Submittal Requirements

1. **Scope Change Memo (1-page max):** A written narrative detailing the additional effort needed for the luxury model, referencing specific items from the Key Assessment Areas presented above. Be sure to reference each of the main topics in as much detail as necessary. Images, charts, graphs, and graphics are encouraged.
2. **Schedule and Cost Impact (½-page max):** A brief narrative outlining how the luxury features will alter the project timeline and budget. Teams may submit an updated research and development schedule based on the team's existing Research and Development Schedule submitted on November 1st. However, it is more important to consider the specific tasks that are affected.
3. **Proposed Fee (½-page max):** A cost comparison table illustrating the original scope versus the proposed luxury option, specifying the additional costs associated with new features. This should be a comparison of the production cost, not the research and development cost.

In short, C4 wishes to see the team's opinion on what areas of the design process will change, how they will change, and how those changes affect the overall cost to C4.

Please note that while the maximum canoe dimensions may be 'modified' for this thought experiment, this exercise is conceptual and should not interfere with the completion of the base model prototype which shall remain fully compliant with the RFP. The Client Scope Change deliverable will be compiled in Appendix C of the Proposal, following formatting requirements in section 5.1 of the RFP.

Contextual Comment: In the engineering industry, professionals often face requests from clients to modify deliverables, frequently leading to change orders and scope adjustments. These changes require engineers to be adaptable, critically evaluating the impact on project timelines, costs, and technical specifications, while ensuring the updated design continues to meet all requirements.

This exercise is designed to give teams the opportunity to demonstrate their critical thinking skills and high-level understanding of the project, while also showcasing their creativity. We hope teams embrace the challenge and have fun! A detailed hull design, structural analysis and mix design for the proposed "luxury model" is not expected as part of the requested scope change option.