

## **Proposals, Presentations, and Paddling: Tips from the 2022-2023 Society Wide Concrete Canoe Competition Judges.**

### **Proposals:**

#### **1. A RFP is a Request for *Proposals*. C4 is *not* asking for a technical paper.**

A technical paper presents the process and results of a technical or research project with great detail. These are mainly targeted to other technical professionals; be they engineers or scientists. In short, folks who speak the same technical language. A proposal is a response to an RFP that asks for you to **propose** your strategy to address the problem statement based on certain criteria so that a selection panel (in this case, the judges), can do an apples-to-apples evaluation of your product versus another. It's closer to a sales pitch and is written to an audience that may include other engineers but will always include non-technical professionals as well.

#### **2. Communicate your concepts using plain language!**

Even though C4 is asking for a proposal and not a technical paper, technical content is still required! A large portion of the subjects asked for (hull design, structural analysis, and mix design for example) are inherently technical subjects. A good engineer is someone who can whittle these topics down into plain language so that the non-technical folk reading your proposal can have a good understanding of your processes.

#### **3. Use *meaningful* figures where appropriate.**

More importantly though, a well written proposal takes this plain language a step further. While a technical paper will drill down on what you did with a heavy emphasis on process and results, a proposal will shift focus to *why* you did something a certain way and *how* your results add value to the customer or otherwise benefit the project in a tangible way. Meaningful graphs, figures, tables, etc. are your friend here. A well-thought and well-placed figure can tell us much more about your project in an easy to digest way than a wall of text!

#### **4. Have you addressed what the RFP wants you to address?**

As you write your proposals, we suggest you consider the following: What is the customer looking for? What benefits are they seeking? What questions will they have? What will impact their decisions? And then, what are the actual requirements?

To that end, we suggest you break down each section into checklists to make sure that all the things the customer (C4) is asking you for, you ultimately end up providing! Charge a team member with conducting this review before you submit your proposal. Leaving points on the table because you forgot to include a shear diagram, your layout got messed up when you printed as a PDF, or because you didn't include the correct number of significant figures is something that can be easily avoided!

#### **5. It's kind of like a sales pitch.**

Be clear. Be concise. Be confident! *Show us* why your product is the best suited to be selected and include the details needed to guide the customer towards that decision.

## **Presentations:**

### **1. Confidence is key!**

It can be challenging for team members to find the time to practice those technical presentations, but this is essential to be competitive. While a fancy power point with cool animations can be impressive, presenters who appear nervous, speak softly, and are unsure when answering questions will amount to costly point losses. Practice will eventually enable the presenter to focus less on what they are saying and more on **how** they are saying it. The presenters who appear confident, speak loud enough for all to hear, and make eye contact with the judges are the ones who win the most points here. Presenters can practice on their own and with each other. We recommended having someone record you to find any fidgets you can address, and any excessive filler words you can avoid.

It isn't over when the presentation ends! Time for questions from the judges! This is where a team can really separate themselves from the pack. The key here once again is preparation.

### **2. Test yourselves. And divide the content up!**

Find a professor, alumni, or team member who is willing to dig deep and really grill you with hard questions. The point here is for them to go hard on you and not give you softball questions. Your presenters should be intimately familiar with the content they are presenting. Create a library of potential questions and study the responses! It also might make sense to have someone jot down some of the Q&A during the regional symposium and society-wide competitions to build out the library a bit more. Given that there is a lot of material, sometimes it is easier to divide the content up so that no one person on stage needs to be the technical expert answering everything!

### **3. We've read your proposals cover to cover, multiple times.**

Keep in mind that the judges have had your proposals for over a month by the time you get on stage (at the society-wide level at least). We've combed through it with a fine-tooth comb and each of us has at least 2 or 3 questions that we're thinking of asking you. So, if you emphasize an innovation in your proposal, you should expect us to probe you on it. Another secret: we usually already know the answer we want to hear. That leads into the next bit...

### **4. It's okay to say you don't know.**

You won't get a perfect score doing this, but we'll tell you something important: if all of your presenters are stumped on a question, it is far more professional for you to tell us "that's a great question, and we don't have that information right now, but we'll be happy to get back to you" than it would be for you to word vomit at us in the hopes that you stumble upon something that works.

### **5. Time Your Presentation!**

This year's technical presentation rules gave each team 5 minutes for their presentation, with no deduction unless the time exceeded 5:05. Teams should design their presentation to take as much time as possible but include a small buffer to avoid going over. For example, teams could target 4:45 to 4:55. Finishing past the 5:05 is costly, but finishing way ahead of time can also cost you points with judges. You should easily have enough to say to fill 5 minutes, so time those practices and get it dialed in.

## **Paddling:**

### **1. There are a lot of points to be earned (or lost) with races!**

The performance demonstration is an equally important part of the project, but usually lacks attention compared to the other competition categories. Techniques for how to competitively race a canoe are well documented online. Understand the different techniques employed and the type of water craft they're used for.

### **2. Pick a paddling strategy and stick to it!**

Olympic canoe racing has the paddler on their knees and can get tremendous speed. This approach also requires good technique as it may be inherently unstable as you sit high out of the canoe. Outrigger canoe racing is a sitting technique and may be inherently more stable due to sitting lower into the canoe. Both approaches have completely different paddling techniques, different types of preferred paddles, and potentially different design considerations for how your canoe is designed and built. Both styles can very successfully and swiftly navigate your canoe through these races, but they require proper technique to produce these results. The canoes built for this competition don't match the style of boats used for either of these styles in competitive races. Adaptations may be required to the techniques to accommodate a concrete canoe, and this is ok. The important part is to understand how the professionals paddle, why they paddle in that fashion, and use that to inspire how you race your canoe.

The technique used by your team can vary on many factors including past experience or success with one style. There is no one technique though that's better for competition. The top racing teams at the Society-Wide event each year include a mix of both techniques. The most important factor to determine success on race day is to pick a style that fits your team, research the proper technique, and practice!

### **3. Practice! Practice! Practice!**

In all seriousness, you can have the best hull design, the lightest canoe, the best paddling techniques, and the fittest paddlers, but if they never get in a canoe to practice it will show on race day. Some teams due to climate may have more opportunities to practice than other schools, but finding a route for your team to get on the water in any fashion prior to race day is a part of the competition.

### **4. Check what resources your school may have.**

Where you practice is a major hurdle for many teams. Does your school have resources or any water-based sports teams you can tap for resources or facilities? Are there any lakes or other water bodies in your region suitable for practice? If you're in a colder climate, does your school have any indoor pool facilities you may be able to use? Are you able to practice in the morning when there's usually less wind and waves, or are you restricted to afternoons when it's harder to practice? Does your school schedule accommodate practices during the week, or are you restricted to weekends? If you have to drive to the practice site, is there an opportunity to leave your canoe at the facility, or do you have to tow a trailer for each practice? Does the entire team need to be present to run a practice session, or can the paddlers conduct the practice on their own? Can you leave buoys in the water between practices, or does the planned facility require you to remove all buoys after each practice? All of these questions impact the quality and frequency of your practice sessions, and planning a successful practice campaign can be just as challenging as physically paddling.

### **5. Try to find a way to practice in a similarly shaped canoe.**

If you're able to use a previous year's concrete canoe or a full-size practice concrete canoe, these are the best to simulate the actual size/weight/hull design of the canoe you will bring to competition. If you do utilize one of these options, one recommendation may be to epoxy fiberglass mesh to the outside of the hull to harden it against the trials of practice. This can allow the canoe to survive crashes, swamping, and repeated handling in or out of the water while still staying in one piece with minimal impact to the hull design or weight. This is not allowed on your actual canoe!!! But it can allow your team to extend the life of past canoes to the benefit of your current team and future years practice sessions.

If you don't have access to one of these options, a commercially available fiberglass canoe is a good alternative. You can add weight to simulate a concrete canoe. Used canoes available second hand in your region might be an excellent option as well. Typical canoes have seats attached at the gunwales that may need to be removed to better simulate your concrete canoe. The hull design may not perfectly reflect the canoe you bring to competition, but this is all relative. The weight and length of the canoe alone are major components of its feel in the water. Hopefully your concrete canoe is a welcome improvement on race day, or you may get some lessons learned on race day regarding how it differs from the practice canoe. Either way, you will be racing at a level far beyond if you never practiced.

#### **6. Set out some buoys (if you can)!**

How you practice may be more important than the boat used during practice. If available, set out buoys and make a mock layout for the real races. Practice turns, practice starts, practice the slalom. Practice at full speed, and also go for endurance rides to help build your stamina in preparation for race day. Try bringing a stopwatch and timing yourself during practice.

Regardless of the type of practice canoe you use or paddling technique implemented, the most important element is to practice frequently. The more you practice, the better you race. This simple formula is usually the main factor behind the teams that win the race events.

#### **Bonus Tips:**

1. Make sure you have ALL the required items on your product display and ALL the required MTDS!
2. Protect the finish of your canoe during races by taping down gunwale protection with blue painters tape. At the very least, **don't use duct tape!**