

## **How has this experience enhanced your engineering skills/knowledge?**

Since this year's CQI was based on "the elements", we learned a great deal about different sources of energy, and more of the properties and systems of these elements such as water, earth and wind.

Quebec's Engineering Competition was an extremely rewarding experience because of the skills we've acquired through competing with other university teams. Having an eight-hour challenge helped us gain perspective on the work that needs to be done in a consulting case. In those eight hours, we learned of the many aspects that need to be considered when coming up with a solution to a particular case. For instance, determining a unique solution is important, but there are a lot of conditions that need to be satisfied in order for that solution to be feasible, such as availability of materials and budget. It also helped us open our minds and be more creative. We learned that in consulting, as well as in engineering, environment is crucial to take into consideration. The environment that the case takes place in can be a strength or a weakness; it can be used as a resource or can place limitations on potential solutions. Another skill we gained was being able to work in a team and being able to, harmoniously, arrive at a solution using the input of every member to develop it. The ability to communicate an idea is essential and having an open mind about criticism of an idea is even more important in order ensure that the final solution is the best solution the team could come up with. This competition has, no doubt, given us the opportunity to discover the practical world of consulting and allowed us to gain a deeper understanding of the skills needed to be a successful consultant.

## **What are the lessons learned and how can you improve upon these lessons?**

After getting the results we did, we learned that it is important to sometimes look at the problem from a different angle than what we first thought or trained to look at it from. This happened during our case study. we came in with the approach that this was a business problem, when it should have been looked at as a humanitarian project. we were trying to create a big budget for a project that was supposed to be more financially realistic, especially since the case involved a village in Africa.

Some of the lessons learned throughout the competition is overall team communication. In fact, all members in a team will bring in different experiences, skills and, knowledge. It is all about proper communication to harvest these different experiences, skills and, knowledge in order to succeed in the competition. Furthermore, practice makes perfect. All teams should have at least 1 practice session (the more, the merrier) before the actual competition to develop team chemistry and understand the breakdown of the competition. It is rare that a team wins a competition without any prior practice/trial as each member have a different role to play within the team. Taking the time to know your teammates is the most crucial part in order to properly break down tasks to be done during the competition. One of the lessons learned specific to our experience was the careful identification of the problem

statement. When given a challenge, be sure to know what needs to be solved. Deviation from this will most likely cost the competition. Do not mix a humanitarian case with a case aiming to make profit. In fact, the budget part of the competition is crucial. Even though it is only worth 5%, it weights in the overall feasibility of the design (hence the near totality of the grading scheme).

But to be honest, the only lesson that was truly learned in this competition is the fact that when in front of a panel of judges, the older ones are usually more conservative than the younger judges (those who have been participants at the competition), these are the judges that are most likely to have no pity in the judging process.

### **What does this competition mean to you? (each person's input)**

**Shan** : It means a chance to show your know-how and problem-solving skills and see how you compare with others from all over the province.

**Lafi** : The competition mean a great deal to me, it's a chance to prove what I'm worth and at the same time compete against other engineers in similar knowledge base competitions. I loved doing CQI and if I had the chance I will do it a third time. The competition for me is more of a personal challenge than anything else. This year competition we hit a small bump but hopefully next year the team will learn from our mistake and get the podium we were suppose to have gotten this year.

**Duke** : The competition is an opportunity to represent Concordia in front of the other engineering schools of Quebec. There is no family greater than the Concordia family. It allows one to applied both the technical and soft skills learned throughout their academic career in order to better prepare for life after graduation. The competition is also an opportunity to meet other engineering students from different schools around Quebec and expand one's network.

**Deven** : This competition meant a lot to me because I got to represent Concordia's engineering department and the university as a whole. To me, it was an amazing experience because of how much I learned in preparation for the competition, execution and through reflection after it was over. I also believe this competition has further fuelled my passion for engineering and my desire to get more involved in engineering events.

### **What would you like the ECA to improve upon next year?**

It would be great if the ECA can do the precomp as an official mcgill competition that way it we can attract more people. Also the ECA should budget for the entire registration fee so the students that are sent to represent Concordia don't have to pay for it. Beside that the ECA did a good job.