Creating Impactful Presentations

Presentation Design

It is very difficult to write recommendations for something as highly subjective as Presentation Design and over time you will all develop your own style for it. Therefore, please don't take everything written here as prescriptive as to the only way to do things. With that being said though, there are some key dos and dont's for a successful presentation at the UKSDC:

What to include
- Page numbers. This is mandatory.
- RFP numbers (preferably not in the title so you can include many in the same page and it won't look messy)
- Sources. Not necessarily for each slide but you should include them. Bonus points for scientific papers with DOIs.
- Titles. Make sure we know what each slide is going to be about

What not to include
- Plain white backgrounds. Use off-white or darker backgrounds as these are nicer to look at for people who are prone to migraines
- Very dark backgrounds; some judges annotate your presentation, if they can't write on it it makes their job harder.
- Mixed fonts. This goes for font size, colour (some judges are colour blind and some projectors don't show colours well) and style. Otherwise it will distract the judges
- Any font below size 11. If the judges are to have any chance of appreciating your presentation, they have to be able to read it!

Recommendations
- An audience will only remember 10% of a presentation that you give. Try to identify and repeat your unique selling points throughout your presentation, and emphasise when these are with slide design choices
- Use bullet points, tables, flowcharts, images and diagrams
- Give hand drawings an inked outline for clarity
- Add dimensions using text boxes and arrows on your slide editor
- Consider using proper engineering dimensions
- Consider including a contents page with RFP numbers
- Don't waste slide space on slide design features like a company logo
- Consider animation carefully. Studies show that 2 or 3 animations per slide increases audience attention by up to 20% and keep audience attention where you want it to be, but it also takes time to implement and is more complicated when presenting, wasting your time.

Creating your own Design

With this competition including so many STEM students (this author being one of them), we often overlook the importance of a good slide design in favour of spending far longer looking at the science behind our designs. I have recently been enlightened as to why this is not necessarily the best option, and it all starts with 3 numbers; 104, 12, 88.

So what are these numbers, you might be wondering. Well, 104 million is the number of 10 player rounds of online poker which have been played, recorded and analysed in a big data online study. You may be wondering where this is going, but there is a point. Of the 104 million poker games, the statistically best hand in each game only won 12% of the time. What this means is that in the remaining 88% of the time, the person that won was not the person with the best hand (which corresponds to the best design at UKSDC), but rather the person who was able to present their hand as being the best! This is the same with the judging at UKSDC. Whilst the judges will try to be objective in their assessment, they are but mere humans (mostly), and good presentation is a deciding factor in which company will win!

So now that you know why presentation is important, what sort of design should you be going for? Companies should look to create their own slide design for this competition as online ones are all either too busy in terms of their design, or do not offer enough space for title, RFP number and page number on the slide. This task often falls to the Marketing Department at the start of a competition, but this is also one of the only things competitors can prepare before the competition if they would like. This is recommended, especially for people looking to run for leadership positions.

When making your design, you should look to maximise the available content space. To do this, ensure that any design features or logos are kept small and out of the way of where important content will be added. Even the best designed company logo will look awful if you cover half of it with an image! Ensure that you pick a sensible colour scheme (these can easily be found online if you need some inspiration) and that all of your design sticks to this scheme, be it table backgrounds, flow charts or any other type of image where possible. You should also look to have a nice image of your design (artistic or CAD render) as first impressions are important to the judges!

However, as with almost anything, presentation design is best illustrated using examples and for this purpose a good and a bad example have been analysed below.

Good example from the ISSDC
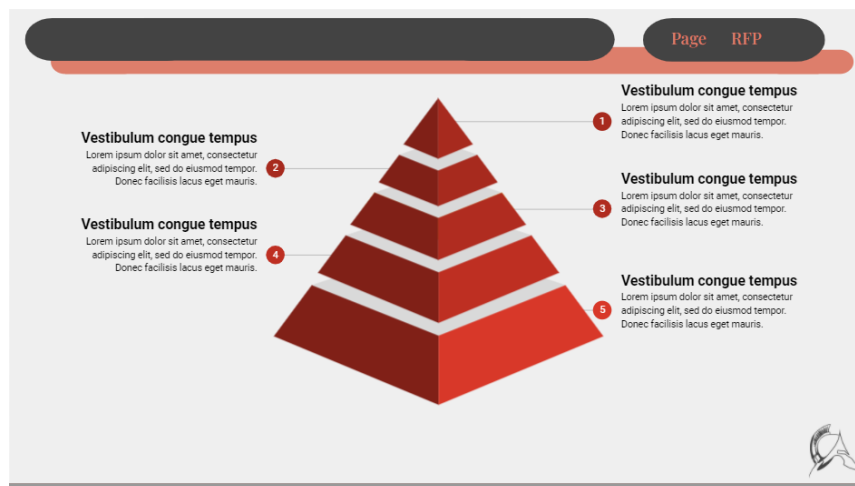
- This example uses a nice off-white background
- This example has clear space for a title, page number and RFP number
- The logo is nice and small
- The decoration only covers minimal space at the top an bottom of the page
- The design used a nice consistent colour scheme, including for the example content on the page

Bad example from the internet
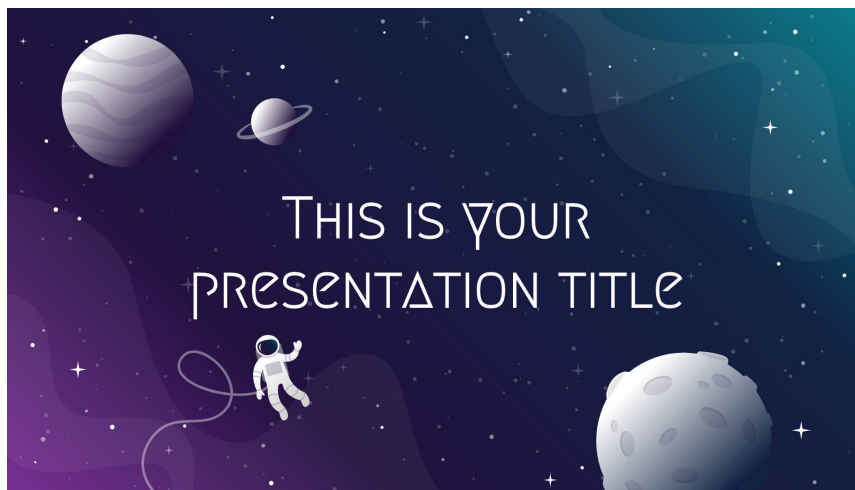
- This example looks very nice on the surface and is easy to get draw to
- Where will you put your RFP and page numbers?
- The moons and planets take up lots of the slide space reducing your useful available area to only half the slide
- Smaller white font (which is about the only colour you could go for) will blend in with the starry background
- No way to include large images without covering key parts of the background

Presentation Order (SPT vs NPF)

Standard Presentation Template (SPT)
How should you layout your presentation? The usual way is to just go Structural, Operations, Human, Automation and Business in that order as this is the order that the departments appear in the RFP. This is known as Standard Presentation Template (SPT). The advantage of this is that it reduces confusion within your company and it is easy to edit. It is also the format that judges are most used to seeing, which is often used as an argument for it.

The downside of this layout is that it can reduce cooperation and collaboration between departments. Due to the overlapping nature of RFP points, duplicate slides can appear with conflicting information and related information gets separated across the entirety of the presentation! This makes it far more difficult to effectively convey how your proposal works as a whole unit, which is what is has to do to correctly tackle the all important RFP.

Whilst SPT does have its good points, especially for the shorter regional competitions, in terms of organisation and ease of execution, there are newer and more dynamic ways to make a presentation that we recommend for the national and international finals.

New Presentation Format
This is where NPF comes in. NPF or New Presentation Format uses the design of your presentation to convey information more smoothly and efficiently. It does this by grouping information by topic rather than by department. There are many versions of NPF based on which points you want to stress; the example below is known as the *Beck Model* and follows this structure:

1. Design Overview (Structure)
2. Human living quarters and internal layout (Human)
3. Human activities and computers (Automation and Human)
4. Life Support (operations)
5. Control and monitoring (Automation, Operations, Human)
6. Profit and manufacturing (Marketing and Operations)
7. Construction (Automation and Structural)
8. Final lists and costs (Marketing, Structural, Automation)

The advantages of this layout should be clear. RFP points 2.1 (Construction) and 5.1 (Automated Construction) are practically the same. It doesn't make logical sense for the entirety of the departments of Operations and Human to

be between them in the presentation. Arranging the presentation this way makes it easier to understand the design of your settlement. A similar argument could be made for the combination of RFP points 4.2 and 5.3 which cover how the lives of people on your settlements are influenced by the automated procedures that help to run it. I could go on but you get the point. This presentation format has a far better flow to it!

However there are a couple of disadvantages. The major one is the increased complexity makes this layout far more difficult to manage. I would not recommend jumping to this layout for your first ever regionals; it is a significant increase in workload that you can't really manage effectively in the short amount of time that you will have.

Unlike with SPT, NPF is also not a one size fits all sort of solution. Each and every RFP is unique, with its own web of interrelating points that all have to be intricately organised to best present your proposal, in a sales pitch that most closely resembles the art of storytelling. This sort of layout requires excellent understanding of the RFP from within the leadership team of your company to correctly implement all of the required management structures to make such an order work. However, on the few occasions that I have seen the NPF effectively pulled off, it has won the competition by a landslide, easily outshining the rigid and outdated SPT.

Summary
The perfect presentation layout probably doesn't exist; the received wisdom from the corporate or education worlds do not apply to UKSDC and so applying some thought to the subject will really set you apart. Some day in the future, some UKSDC competitors will have a great deal of free time and rank the proximity of each RFP point to another in terms of flavour. They will then go on to make a machine learning program to optimise the layout. This layout will either be spectacular or terrible. At the end of the day, you can apply all of the theory you like to this problem but humans still have to stand up and present it: if your layout is so intricate that you can't do this with ease, then you've missed the point. Experiment and you will find the layout that works well for you.

Tips and Tricks for Presenting

So, you may or may not have followed all of the advice so far and your presentation is either looking dire or brilliant. Either way, it's now time to present. This will make or break your weekend. The most mediocre *PowerPoint* can be saved by an outstanding presentation of it or the best PowerPoint can be wasted by a bad one. The latter case is known by the authors all too well. As a rule, at a competition, there will be two PowerPoints of comparable strength and all that will set them apart is the presenters. There is rarely a case where three PowerPoints are equally strong and even in the case where one is preeminent, it hasn't yet bought its company victory. These few tips and tricks will hold you in good stead for the presentation, if you can bring yourself to use them.

Know your slides
Know what's on each slide and where each is. This is critical to knowing when you're up and what you have to say especially if the previous presenter doesn't give you a cue.

Know who's presenting
Know which slides they're doing and what they're going to say. This is important for handing the reins over smoothly and for making sure it makes it look like you as presenters are in control of the situation.

Be confident
If you're shaking like a leaf, it makes your design look equally shaky.

Present to the judges not the audience
Sweep your eyes over the audience before and after presenting killer points but always focus back in on the judges.

Move about
A stationary presenter looks like a scared one. You'll have someone to change your slides so don't worry about that.

Approach the judges
In the case where the computer is behind a desk, have someone remain there to man the slides, but you should present from in front of it. This is a psychological trick; making it seem more like you're talking with the judges rather than at them, it also passively suggests that you're their friend and have nothing to hide. There comes a point, though, where you shouldn't be

sitting on their laps; so do give them some space. This technique will also make sure they can hear you.

Engage the judges
This technique is used widely at ISSDC, e.g.: ask the judges their hobbies and then show how they could do it in your settlement. If the judges roasted something during your Red Team Review, follow the theme and joke about how you have resolved the issue, playing it off as a joke.

Be comfortable with silence
Use dramatic silences to hammer home points or give people time to take in your beautiful graphics. This can be particularly effective when combined with a slide change or animation.

Use the time fully
The RFP is so complex that you are never going to be able to fulfil every point in it to its fullest extent. Therefore, if you are not using the entire time available to you to present, you are most likely missing key information. If you do not show something clearly in your presentation or say it while presenting, you don't have the right to be annoyed when the judges miss it. The onus is on you to explain your design in your presentation, not for the judges to crawl through your slides. Make sure to spend particular time on the unique selling points that set your design apart from the competition.

Do not go over the allotted time
Simple enough idea to perhaps not warrant explaining, you will be cut off at exactly the time limit and not a second over. If your presentation is cut short by a couple of slides, you have just missed the opportunity to show off more of your design and have made your presentation look less professional. It is incredibly easy to go over, but the judges will hold up signs at five minutes, one minute, etc. Look out for these signs and if possible, have a timer somewhere obvious to the presenters to keep themselves on track and under time.

Do not go over the slide limit
Equally as simple, do not go over the slide limit; the judges will ruthlessly cut you off as soon as you get to slide 36 or 51 (depending on the competition). This is a waste of the work people have put in to make whatever is on those slides and it will not be judged.

Prepare

All too often people try to wing their presentations. Don't. It's disrespectful to all of your company-mates who have worked so hard that you think you can pull off the presentation based on your natural talent. You will be under immense pressure standing in front of 200 people, often running low on sleep at some of the overnight competitions. Put the work in and prepare what you're going to say before you rehearse so that it's not a waste of time. You should take this approach for every company meeting as well be it internal or with the Red Team, for the same reasons. Heads of department meetings: prepare. Presentation: prepare, sleep and prepare again. Preparation makes everything run more smoothly.

Questioning

Prepare for what they could ask and know the answers to questions they should ask. Every question is an opportunity to show off the thoroughness of your design. Your main question answerer should know the presentation and design back to front and be able to delegate for what they don't know. Delegating questions is a good way to give credibility to your design: don't pretend that you know everything (especially if you do or, worse, don't). Passing off a question to the designer prevents the main question answerer form misunderstanding it and making the situation worse. It also stops you looking like you're making stuff up on the spot. That being said, you want to answer as many questions as possible so don't delegate when asked something you can answer quickly and correctly. When you do delegate, you should know, without fail, who to delegate to and who (preferably) wasn't a presenter.

Discipline

You shouldn't tag an extra point on the end of somebody's slide; it'll throw them off track, could suggest to them that you want to take the next slide and worst of all could make them feel like they're doing a bad job. Even if they're going wrong, shoot a glance to the next speaker in line to do something about it. This idea of discipline also applies to shutting up when someone else is speaking. Talking behind your fellow speaker obviously or audibly, not only puts them off but also annoys the judges; show your fellow speaker some respect and the judges will respect you more.

Secondary speakers

You never know what is going to happen, particularly for online presentations, and so it is key to prepare backup presenters. This often falls to a freestyling president, which is a very stressful ordeal (believe me!) and so please try to foresee this issue and prepare for it in advance.

Conclusion

Those are some of the in-the-moment tips and tricks and I hope you have gleaned that preparation is key to doing well. There are also some tricks related to that preparation. It is worth making the presenters take some time away from the PowerPoint before the final runthrough. The president will have to take over the managerial void if any of the presenters are also heads of departments. This does, in general, give the presenters a bit more detachment from the PowerPoint which generally means they can stick to what they've prepared to say rather than resorting to reading the slides so as not to miss anything. This is a risky technique but it gives the presenters time to clear their mental space and rest before going up on stage. The presenters generally come out of their 'quiet time' less stressed and so speaking more cogently as well as being able to take in new information and changes with less mental resistance. The presenters must have time to look over the revisions before the presentation, however. Doing so will often put them in a better mood, since those last minute changes really pull a presentation together and make the whole thing look good. This can be a significant morale booster to see what seems like a sudden change.

How long should this quiet time be? This varies based on the competition and amount of work that has been completed already. At regionals, this time cannot afford to be longer than half an hour in any circumstance. At Nationals, this can even be a full night's sleep depending on the skill sets at play and level of organisation. Between you and the authors, taking a full night's sleep while others slave away will upset people in the company. You need rest but you need to contribute as well beforehand.