







Tell your engineering story

- Incorporated and Chartered Engineers both solve engineering problems.
- There are some differences between them in the way they apply technology to solve problems
- A standard problem-solving approach can help develop a narrative, for both the application form and the interview

Similar Models





The Problem Solving Loop



Problem Solving

- Engineers, and too often clients, think they know the problem they want solved
- Too often they don't, or don't express the problem well
- Define the problem first!



Problem Definition

- Do you know enough about the problem?
- Do you need to know more to understand the problem?
 - Maintain and extend your knowledge [A1]
- Evidence-based approach? [IEng, A2]
- Creative and Innovative? [CEng, A2]
- Expand the problem domain before converging on the real issue [A1, A2]

Define Solutions

- Apply appropriate methods to [solve problems]
 [B1]
- Identify techniques and methods [IEng]
- Identify potential projects/opportunities [CEng]
 - Understand user requirements
 - Understand constraints, issues, risks, etc.
 - Recommendations for improvements
 - Determine criteria for evaluation
- Expand the solution set before final selection

Develop Solutions

- Contribute to/undertake Design and Development [B2]
 - Identification and specification of designs
 - Agree research methodologies
 - Identify/evaluate risks, etc.
 - Apply "Plan, Do, Check, Act" feedback



Implement Solutions

- Implement solutions, evaluate their success [B3]
 - Resources
 - Critical constraints
 - Evaluation criteria
 - Feedback and continuous improvement





- How did you approach the "problem solving loop"?
- How did you manage and report progress?
- How did you address risks, issues, communication, buy-in?
- [C and D]

Diverge/Converge



Think STAR !



- In lots of interviews, interviewers apply a STAR technique
- Situation what was happening that needed your expertise
- **Task** what were you required to achieve
- Action what did you actually do
- **Results** what was the outcome of what you actually did, including what you learnt

Think STAR



- Develop your application (and your presentation) in a way that allows you to convey a story of how you made an engineering difference
- This gives you the chance to ensure the interview is driven by you and your experiences
- Do make sure you have covered all the 17 subcompetences in your <u>application</u>
- Do ensure your <u>presentation</u> is focused on A & B