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[Reliability Engineering Principles](#) training class presents new reliability tools you did not study at the university. These engineering tools will help you to make workplace cost reductions by avoiding failures. Failures in business detract from profitability for the company.

The demonstration project is “**show me, don’t tell me**” evidence the students can solve a reliability problem in their area of responsibility demonstrating mastery of the new reliability engineering tools. This demonstration project needs to be completed in 6 to 8 weeks after the course else the new training tools will become obsolete. Each student selects their project to quickly use the new tools to reduce costs and pay for their training course.

At the end of the Reliability Engineering Principles class each student will have a few minutes to describe their project to the class. The demonstration project task requires writing one sentence for each of the following items:

1. **What is your demonstration project?**
2. **How will you complete the project?**
3. **How much money will you save and when?** [If unsure, bracket the results.]
4. **What new reliability tools will you use?**
5. **How will you sell this project to your supervisor?** [You must sell everything!]

It is important to condense the demonstration project information into one sentence for conciseness and clarity. The presentation time will consume approximately one minute for each student to explain their demonstration project to the class. Why a one minute limit? Time is always scarce. No one wants to listen to a one-hour rambling presentation.

Here is an example from Section 31 of Reliability Engineering Principles of a demonstration project:

1. **What is your demonstration project?**  
**Solve the electrical power cable splice failure problem that occurs ~once per year.**
2. **How will you complete the project?**  
**Validate or disprove cable splice failure mode and correct the failure issues.**
3. **How much money will you save and when?**  
**Failure costs are ~US\$500,000 per year and we want to save ~US\$400,000+ per year.**
4. **What new reliability tools will you use?**  
**Weibull plots for failure modes + Crow-AMSAA plots for failures before/after change.**
5. **How will you sell this project to your supervisor?**  
**Demonstrate to my boss, the Plant Manager, the new reliability tools are practical and will work for us to solve high cost failure problems in a chemical plant.**

This was an actual demonstration project of the Maintenance and Engineering Manager in a European chemical plant.