



New Product Development Phase 3: Design for X

Onsite or Virtual – 2 Days, 8 hours/Day – 3-6 Participants

Training Description:

In this 2-day training, participants will learn the critical methodologies and best practices for how to design and develop hardware products. This training is centered on design for cost as well as design for size/weight. Participants will learn methodologies such as Pareto Analysis/Vital Few that can be used to attack the cost of goods sold. Participants will also learn how to apply methodologies from previous classes to new problems and learn about Ashby's work on material selection as well as other drivers for size and weight. This training is delivered either on site or virtually through lectures and assignments with the intent to resolve gaps in their current or future products or supplied fictional examples. Taking this training will give the participants the tools to execute on new product development like a seasoned pro! The ideal audience for this training is engineers and managers.

Training Objective:

The objective of this training is to give participants the tools to efficiently develop new hardware products. These tools will allow them to prevent problems before they arise and to attack problems quickly if they do emerge. The exercises will allow them to examine their current work and get topical advice and tips in a supportive atmosphere. Participants will also get various templates that they may use in the future.

Skill Attainment:

As a result of this training participants should be able to complete the following:

- Methodologies for finding problems and solutions such as Pareto Analysis and Pugh Matrices

Training Agenda:

- **Design for Cost:**
 - Discuss how to capture cost data: the costed Bill of Material (BOM)
 - Discussion around right sizing vendors for projected volume
 - Methodologies for prioritizing cost reductions like Pareto Analysis/Vital Few
 - Methodologies for reducing labor costs and making in-source v. out-source decisions
 - Exercise: Source something
 - Exercise: Do a time study on a fictional assembly
- **Design for Size/Weight:**
 - Building off the lessons from the previous class learn how to apply Pareto to other problems like weight
 - Learn about Ashby's work on material selection
 - Discuss size drivers in design



- Exercise: Pick the best material for a fictional product
- Exercise: Reduce the weight of a fictional product
- Training wrap-up