Project Phases

Deliverables
- Concept
- Concept Design
- Project Plan
- Engineering Basis
- Plan update
- Proof of Concept
- Path Forward Plan

Assess Customer Wants/Metrics/Specifications

Confirm Requirements
- Create/Design Concept
- Analyze; Test
- Benchmark Technology

Propose Concept

1. Design Concept
2. Prove Concept
3. Development

Feedback - Content
- Show logic & assumptions
- Use valid target customers
- Derive Wants = “should” ; constraints = “must”
- Derive lessons learned from benchmarking
- Derive Metrics = ways to measure “wants”
- Derive Target Values = Engr Reqts.
- Summarize why wants, metrics, target values chosen
- Identify, design, analyze critical subsystems
- Generate Concepts
- Explain tradeoffs among serious alternatives
- Derive “Decisions”, Select “Best” Concept

Feedback - Form
- Always deliver your best effort
  - Context – what is this report for?
  - Use Graphics!
  - Embed important Figs & use Fig. #’s (Avoid Flip?)
  - “Sloppy” means unreadable © (Use Writing Center)
- Always spell-check, proof-read, make user-friendly
- Always read out loud!

Feedback - Other
- Logical order of tasks?
- Validity of Customers/Wants/Metrics?
- Benchmarking
  - Photos, Data, Lessons Learned?
  - PTO Refs?
- Select Best Concept by Metrics/Target Values
- Check sensitivity of decision to inputs?
- TMI on Management?

McComick Black Pepper, With Grinder, 1.24 oz
Other products by McComick

Price: $2.49
Availability: Usually ships in 1-2 business days. Ships from and sold by Stardeals Supermarkets of New York.

2 used & new available from $2.49
See larger image

Features:
- Adds Great Flavor To Your Dishes
- All Natural
- Quality Sealed For Freshness
Phase 2 - Intro

- Background
- Customers/wants – updated
- Benchmarking
  - Lessons, metrics, range of wild ideas
  - Metrics & Target Values – How?, Why?
- Summary of Concept Selection
- Design Freeze by Ph2 Draft Submittal

Phase 2 - Detailed Design

- Flow Chart of Decisions?
- Subsystems & Interactions
- Critical Metrics, Target Values
  - Include deflection, strength, fatigue, vibration...
- Assumptions!
  - Cantilever conservative for stress
  - Simple supports conservative for deflection
- Easy/Tough Choices & Compromises
- Safety Factor/Margin Summary

Phase 2 - Audience Issues

- Coherence is #1 task
- Graphics (shrink sizes)
  - Redo sketches
  - Intersperse figures in report body
- Schedule – Roll up earlier sub-tasks
  - Drawings – Need Bill of Materials
- Backup Slides – Key to Good QA

<table>
<thead>
<tr>
<th>MEOO 304 Performance Guidelines</th>
<th>Phase 2 - Concept Design</th>
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<td>Senior Design (for reference)</td>
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- The project was considered to be "easy and free of constraints." It required rework, but original estimates and concepts were accurate.
- The design was improved through additional engineering and involved more people from the engineering team.
- The final design was reviewed and approved by the design team and submitted for further review.
- The project was completed on time and within budget.

- Demonstrate clear, concise, and engaging communication in individual or group meetings.
- Make key points clear and engage your audience; facilitate questions and respond thoughtfully.
- Schedule and manage your time effectively; prioritize tasks and meet deadlines.
- Collaborate effectively with others; work well in teams and demonstrate initiative.
- Document your work effectively; include detailed sketches, tables, and design specifications.

- Demonstrate comprehensive understanding and application of project details, materials, and technical concepts.
- Deliver persuasive Design Report with engineering drawings, presentations, and engineering analysis.