How to Scope a Project (Phase Zero)

Overview. This document explains how to explore a project idea in depth and breadth to reveal whether or not to proceed with the project. The discussion is tailored to Engineering Capstone Design. A useful tool for managing phase zero, the Initial Project Summary (IPS), is presented in a separate document.

Purpose

- Phase zero brings to the surface the important factors (both depth & breadth) that need to be considered for a project.
- Phase zero provides a time effective way to select best project ideas while eliminating ineffective ideas

Who?

- Phase zero is initiated by a project champion (faculty member or client). Phase zero is completed by a project team (students).
- Phase zero involves the key stakeholders (client, project team, faculty advisor, capstone instructors, etc.).

When?

- Phase zero is initiated before the project is launched
- Phase zero is completed rapidly

Inputs, Outputs, and Scope

- Phase zero begins when a potential client or sponsor has been identified by the Capstone Leadership Team
- Phase zero ends when four results have been accomplished by the project team:
  - The team has established that there are good reasons for doing the project. These reasons cause team members and stakeholders to feel excitement, commitment, and ownership.
  - The team has established a preliminary list of outcomes from the project.
  - The team has negotiated and documented shared agreements among main stakeholders
  - The team has explored key background information in depth and breadth
- Phase zero is done rapidly. The time required is:
  - Faculty Champion who structures the project: 4 hours
  - Client: 2 to 3 hours
  - Faculty Member who will advise the Team: 1 to 2 hours
  - Team Members: 10 hours each with this time spread out over about 2 weeks of calendar time

Last Updated on 9/8/05 by DFE. File = phase zero knowledge
Methodology (how the Capstone community scopes projects in Engineering Capstone)

STAGE I: PROJECT SETUP--the faculty champion and capstone leadership team collaborate will clients to develop a project that fits into the Capstone experience.

1. Advisor and client develop mindshare on information in the Capstone Sponsor packet.
2. Client develops a 1-2 page project description e-document.
3. Advisor, working collaboratively with the client, drafts an initial project summary (IPS).
4. Capstone leadership team:
   a. prioritizes and select projects.
   b. Assigns team members and advisors to each project.

Deliverables from Stage I: Project e-documentation comprised of a draft IPS and client project description.

STAGE II: PROJECT EXPLORATION--Deliverables from Stage I are handed off to the project team.

1. Team initiates tasks essential to effective team formation and documents this work.
2. Team gathers preliminary information & creates a first draft IPS. Team creates a project website and posts the draft IPS on their website.
3. Team plans a 10 minute phone interview of the client. Team conduct this interview.
4. Team improves the IPS and the project description.
5. (optional). Team requests assessment and sets up a time & place for the assessment.
6. Team negotiates, revises & obtain commitments on the project.
   a. each team member commits (signs off) on the project.
   b. client commits (signs off).
   c. advisor commits (signs off).
   d. other stakeholders commit (signs off).
7. Team posts the final IPS on their website.

END OF PHASE ZERO--The team has produced the four key results (see previous session). The Capstone community inventories lessons learned and improves the phase zero process. The teams receive instruction from the Capstone instructors and then launches Phase 1.