

Interdisciplinary Capstone Design

Value Proposition

Assignment Goal

To articulate a *brief* value proposition statement for your capstone design project, highlighting the greater purpose and value the project will bring to the customer, society, or the greater good

Learning Outcomes

As a result of completing this assignment, you should be able to:

- State the “big picture” goal of the project to help provide context.
- Identify the knowledge or capability gap being addressed by the project.
- Clearly articulate the objective of the project.
- Project how the project is expected to close the knowledge or capability gap.

Relevant ABET Learning Outcomes

1. An ability to communicate effectively with a range of audiences.

Rationale

This is no one single correct method to create a value proposition for your project or idea. It is also important to recognize that we are NOT creating a marketing campaign for the project. Fundamentally, we want to have a short “elevator speech” that allows us to convey the greater purpose and value the project will bring to the customer, society, or the greater good.

Task

One suggested method to craft a value proposition message for the project/idea is to use the following guidelines:

- 1) Write a simple paragraph (<150 words) description of the project Include the following information:
 - a. High level background. What is the greater goal trying to be accomplished? Sometimes additional supporting information is needed to provide context.
 - b. Problem statement. What is the missing solution or knowledge gap?
 - c. Objective statement. What is the objective of the project? (hint: the objective should be to create a solution or close a knowledge gap)
 - d. Expected result. How will the design meet the objective?
- 2) One you have a value proposition, be sure to use it to tell the “story” about your project when presenting it to others. This enables your audience to understand “**Why?**” you are doing the project and how it will be helpful to them or others.

Assessment

Teams should plan to present the value proposition at every project milestone, including:

- Snapshot Days
- Concept Reviews
- Engineering Release Reviews
- Final Project (EXPO) presentations

Each of these milestones include assessment criteria for providing the context and value proposition for the project.

Examples

Example A:

Universal Electric Airplane Tug

Currently, there are no airplane tugs on the market that can tow multiple aircraft with little input from the user or without significant modification with changes in wheel type. As the average age of the general aviation pilot increases, the need for an easy to use powered airplane tug increases. Also, most flight schools have multiple airplane tugs to pull specific airplanes. The goal is to create a solution for this problem by designing an airplane tug that can be used with a wide variety of tire sizes and types including those with wheel pants. Our solution will be easy to use and require very little input from the user.

Example B:

Liquid NanoTint Performance Evaluation

An enormous amount of energy is spent heating and cooling our buildings and much of it is wasted through the building's windows. Most options to help insulate windows and reduce solar heat gain are expensive or block out most of the window's visible light. Liquid NanoTint offers a cheap and easy to apply coating that claims to block almost all UV and IR rays while reducing visible light transmission very little. We will be applying Liquid NanoTint to University of Idaho's Golf Pro Shop in order to quantify the coating's effectiveness and electricity use reduction in a real-world setting. We will also be building a demonstration unit that will show Liquid NanoTint's benefits and effectiveness in real time to prospective clients.

Notice how each of these examples follows the same structure by providing:

- a) high-level background
- b) problem statement
- c) objective statement
- d) the expected result.