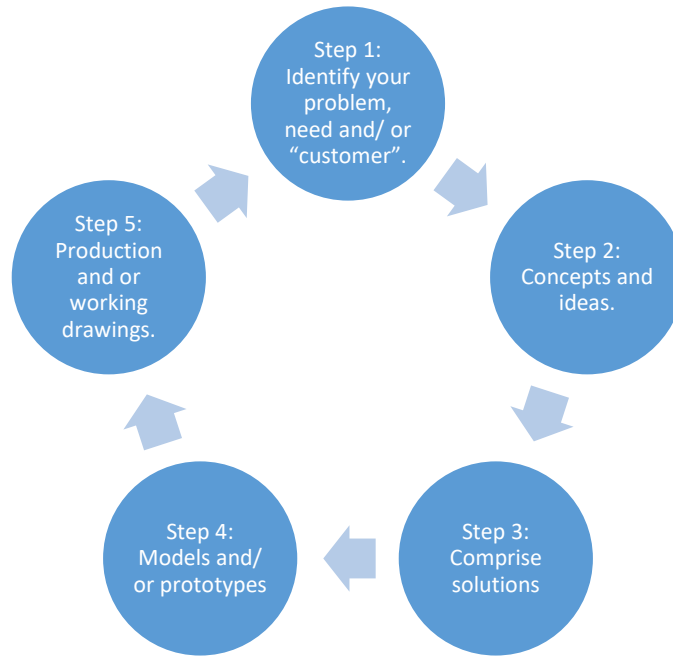


The 5-Step Design Process



Step 1: Identification of problem, need or “customer”.

In this step you will need to ask a number of questions. You need to identify your problem, needs, wants, and any questions you have at this point, large and small. The designer not only must identify the problem or need but also the *customer*. The creation of a new design ultimately will be driven by its end users.

Step 2: Concepts and Ideas:

In this step you will do things such as research ideas, look at what others have done in the past, look at similarities between what you want to do and another object/ design. Many, many, many ideas are collected, *reasonable and otherwise*, for possible solutions to the problem and many, many, many sketches are produced. No attempt to evaluate the ideas at this stage, and all notes, research and sketches are dated and signed and saved for later use and record and proof.

Step 3: Compromise Solutions:

All ideas need to have careful consideration and combined into one or more promising compromise solutions. Look at the pros and cons and readdress the questions you came up with in Step 1. Refine your sketches and develop them further to study more detailed items.

Step 4: Models and/ or Prototypes:

A scale model is constructed to study, analyze, and refine a design. It is also a way of physically showing your client the idea. A full sized working model is called a “prototype”. The best models are the ones made of the actual materials planned on being manufactured with, but sometimes alternative materials are acceptable. In addition to physical models, 3D computer models can also be built. Often at times when a designer reaches this step they realize something that was unknown before and have to go back to Step 2. This is not considered a failure, just part of the design process.

Step 5: Production and or Working Drawings:

To produce or manufacture a product, a final set of working drawings must be made, checked and approved. Draft drawings that fully describe the object you have designed so it can be manufactured and produced.