Innovation and Ideation

# Introduction:

Start by watching the video at

<https://www.youtube.com/watch?v=_r0VX-aU_T8&t=9s>

Innovation and creativity are fundamental to the technical world. Each day brings new challenges, different problems, and the possibility to add your own creative capabilities are endless. This is true in all the various steps, but in no step is it more relevant that the product ideation stage.

You may or may not have heard the world ideation before, but quite simply, it is the process of bringing a wide range of creative ideas to the process. While there can be many different approaches to bringing forth great ideas, here you will focus on a series of questions that will lead you through the ideation process.

Now a note on the process. Don’t try and come up with a detailed answer to each question the first time through the process. Start with a set of basic answers. Then, when you’ve gone through the entire process, you can go back and add detail. We call this an iterative process, where we don’t go through each step looking for the perfect answer the first time, rather we take lots of loops through the steps.

# Question 1: What is the problem you are trying to solve?

The first question, perhaps the most important of them all, is to define the problem you are trying to solve. This might seem both trivial and obvious, but it is generally much more complex than you will realize. So let’s go through some questions that might lead us to a good description of the problem that you are trying to solve. Eventually you might capture this information in a Customer Definition Document.

## Question A – Who has the problem?

This is an important question, as it will help you to refine the definition of the problem. Describe, in as much detail as makes sense, the individuals or groups who have the problem:

Indigenous communities and wildlife.

Examples of some possible answers:

* Individuals who live in Retirement Communities
* Elementary School Teachers
* Individuals organizing a Family Reunion

## Question B – What are they doing when the problem occurs?

Now, thinking of the individuals in the last answer, try to describe, the activity that they do that creates the problem. The first time through the process you’ll want to use just a sentence or two. Eventually, you’ll go into great detail.

Economic pressures from agriculture industries and climate change

Examples of possible answers:

* Choosing the menu of meals provided.
* Assessing students on their understanding of the material.
* Creating a contact list.

Question C – What is it about the activity that is difficult, or provides an opportunity for improvement:

Improper land use. As agriculture expands quickly, agriculture industries pursue financial growth by destroying forests for activities like beef production.

Examples of possible answers:

* Gathering the menu input using a paper process requires lots of time and effort to gather and aggregate the information.
* Keeping track of assessments is time consuming and often has errors.
* The contact list is difficult to maintain.

# Question 2: What can be done to address the problem?

Now that you have some idea of the problem that you are trying to solve, now comes the really interesting part of the process. Can you come up with some solution fragments that can address the problem. The first time you answer this question it should be a just a few sentences. Eventually, after you’ve gone through the process a significant number of times, you might have created a document called a Product Requirements Document.

Create zoning maps using GIS software to balance economic development with forest conservation.

Examples of Possible answers:

* Create an automated system where users an enter the menu choices.
* Create an assessment system that can easily track students assessment scores.
* Create an automated list management system.

# Question 3: What does the solution look like?

Not what you have some ideas of what can be done to address the problem. This is the most open-ended part of the process, and rarely is there a single “right” solution. This will almost certainly include prototyping, visiting with those you defined as having the problem, and lots of iteration. Eventually, after you’ve gone through the process a significant number of times, you might have created a document called a Product Definition Document.

A GIS-powered mobile and web application that helps government agencies and conservationists with land use, planning, and monitoring. By using **real-time satellite data & AI predictions, this app can help** highlight at-risk forests and send alerts for illegal logging and deforestation hotspots while suggesting optimal locations for farming, reforestation, and conservation areas using GIS analysis.