# Functionality

Desired project functionality.

## Interesting sections of project

* Scalable cloud computing based platform.
* How *good* can a system based on simple hardware like this be? – Analysis of data collection/real-life tests.
* Simulation of data.

## Base Features

* Show a user an asset’s last known location
* Show a user an asset’s most likely current location
* Show a user meta data on assets e.g. contents

## Questions

What kind of accuracy can be achieved with a setup like this?

How does the number of smart assets in range of a dumb asset affect location accuracy?

How does distance between smart and dumb assets affect accuracy?

How does frequency of movement of both smart and dumb assets affect reporting accuracy?

How does rate of change of location and distance between smart and dumb asset affect location reporting?

Depending on real-time accuracy, is it possible to predict trajectories of moving assets?

How often would updates be needed to reliably predict asset trajectories?

How would the system perform under simulated load? i.e. simulate data input and measure how system scales/handles load.

Can we build a simulator to simulate noise, asset movement rates, asset communication rates etc?

## User Questions

Where are my assets right now?

Where were my assets at x time?

How long were certain assets stationary in my yard?

Where are my assets going to be?

Are my assets going to collide?

What is this asset?

# Architecture

