# Abstract IoT interface

Interface should function as a middleware between IoT sensors collecting data from assets and block chain.

IoT data can be anything i.e. temperature, light, humidity, gps coordinates.

IoT interface should be as much as possible independent of technology underneath i.e. sensors it reads data from.

It should normalize the data read from sensors before presenting it to the blockchain or tracking network i.e. Radien or perun.

Normalization means that data read from sensors can be in different formats or units i.e. temperature can be faranheit or celius , similarly light data can be in lumen or cd/m2 but interface should be able to read from and convert between different types of data

The IoT should have an easy mechanism for extending it to support different types of data i.e. easy upgrade in future to add support for other sensors

The data read should be secure i.e. it should be read using some secure protocol i.e. telehash or mqtt. The protocol of our choice weill guide sensor selection in the implementation stage of the project.

Interface should support atleast one or more low level communication mediums i.e. bluetooth nfc/rfid or both.

# Security on chip and Secuirty on Device

* Decide weather you want security on chip i.e. interface the sensors with on board solution like rasberry pi and embed secuirty in chip or chose off the shelf solutions like telos b sensors or waspat.
* We also need to have security on smart phone devices i.e. take raw data from sensors on packages or IoT device and add security before pushing it on to the blockchain. This can be less hassel and can be easily extensible. More powerfull crypto can be added

# SmartPhone App

The data with be read from sensors using a smart phone i.e. android.

The data will then be uploaded into a blockchain in a secure manner

Secure manner means the data will be either simply encrypted during transport or transported using a secure protocol such as telehash or MQTT

Functional requirements of the Smartphone app will be greatly informd by weather we go for security on chip or secuirty on device.

# Web tracking interface