



# Sensor Node

## Healthy homes for everyone

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### Connect Anywhere

Reaches 95% of  
NZ homes



### Low Cost

Optimised for  
low cost



### Mobile App

Easy set up and  
data  
visualisation



### Real Science

Accurate, high  
quality sensors





**AI Brennan  
Technology Developer**

# Overview

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Why do we need to do this? Why is it important to me?

What does the product have to do?

A brief aside on Makers and Engineers.

Demo.

# Why develop Sensor

And why is it Node important to me?

“ The Ministry of Health says 6,000 children are admitted each year for ‘housing-sensitive hospitalisations’. These children have been found to be nearly four times more likely to be re-hospitalised and 10 times more likely to die in the following 10 years. We cannot continue to accept this. ”

– Hon Phil Twyford - Minister for Housing and Urban Development

# Why develop Sensor

And what's important to me?  
**Node?**

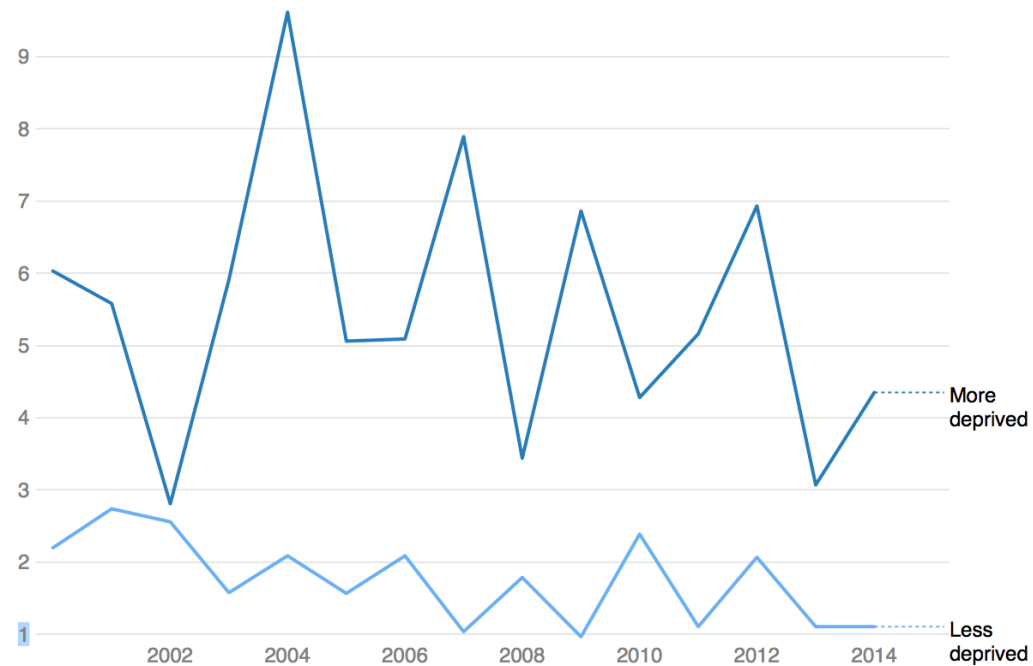
 Poor areas suffer the most

 Bronchiectasis is a third world disease

 Linked to cold and damp housing

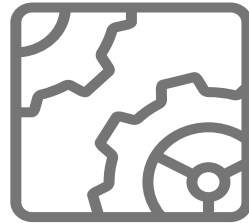
 People without internet connection

Poverty-related deaths per 100,000 children



# Sensor Node Specifications

Minimum Viable Product (MVP)



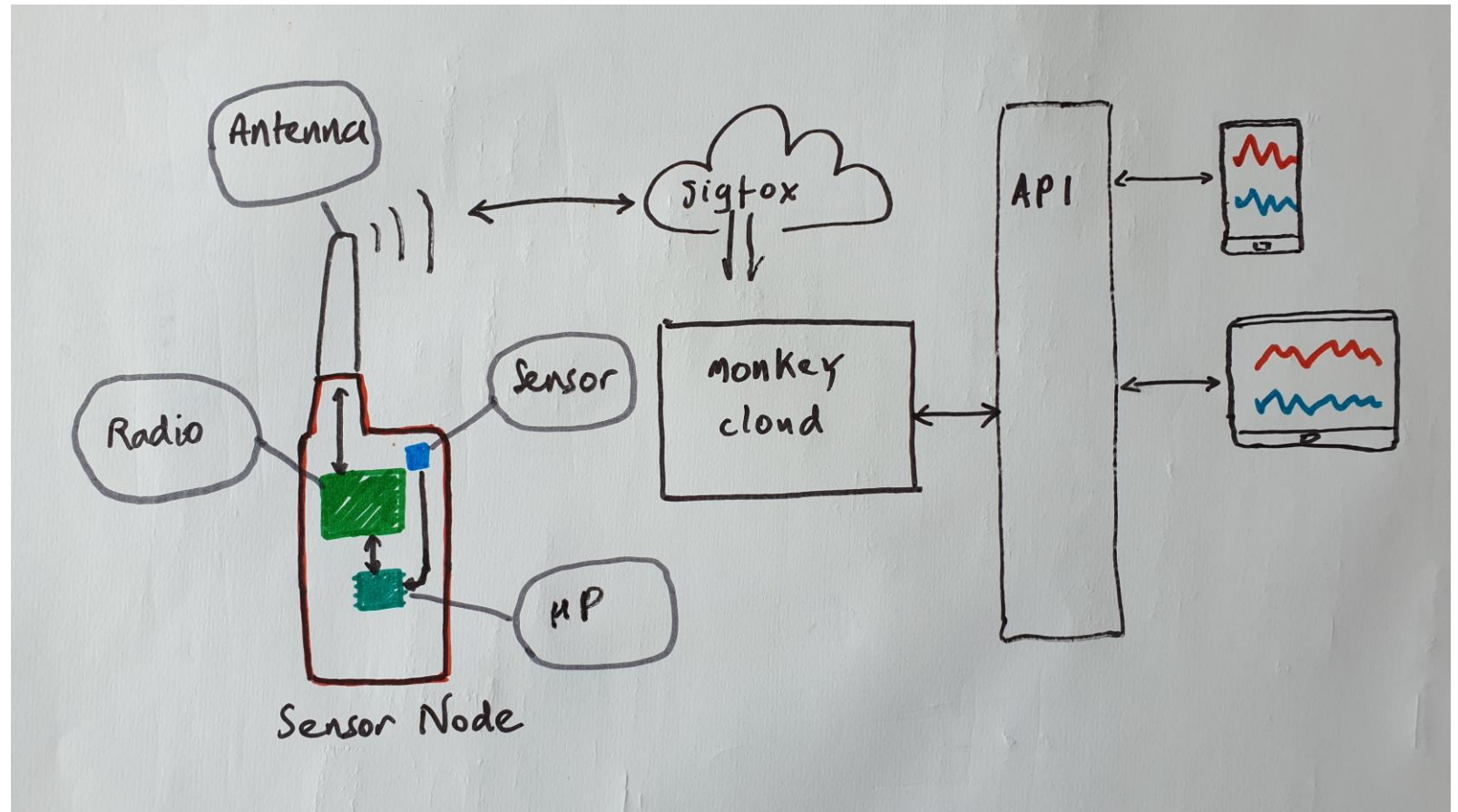
- ✓ | Low Cost
- ✓ | Temperature and Humidity
- ✓ | Low Power & Long Range
- ✓ | Accurate Enough

- ✗ | Fancy Features
- ✗ | Carbon Dioxide / VOC etc
- ✗ | High Data Rate & Low Latency
- ✗ | Super Accurate

# Sensor Node Specifications

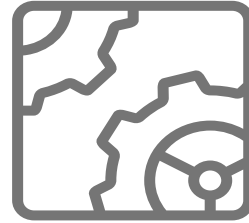
## Modular Design

- ✓ | Sensor
- ✓ | Microprocessor (uP)
- ✓ | Network Protocol
- ✓ | Cloud & API
- ✓ | Mobile App



# Maker Versus Engineer

## Similarities and Differences



- ✓ | Complex Designs
- ✓ | Quick Prototypes
- ✓ | One off designs
- ✓ | Flexible

- ✗ | Scalable
- ✗ | Security & Authentication
- ✗ | Safety
- ✗ | Regulatory



# Summary

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| We need a cheap reliable wireless Temp & Hum monitor.

| We need a minimum viable product.

| We need to do this properly, securely & to scale.

| Demo.



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