Problem Statement Worksheet (Hypothesis Formation)

Identify the manufacturer/s that is causing the high failure rate in our sensors.

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1 Context

Nordic Sensing Co. is in the business of manufacturing sensors. The normal failure rate of these sensors in early-stage development testing is about 1-2% but for some reason they are seeing a failure rate of 15%. There are 26 suppliers for the 7 InSense sensor parts. We need to find out which manufacturer to shutdown or part suppliers to stop buying from in order to get the failure rate back down to below 5%. We are working on this problem because we need to bring down the failure rate at an acceptable level of 2%.

2 Criteria for success

The main criteria for success is to identify the manufacturers or suppliers to sh
utdown or stop buying from in order to bring down the sensor failure rate below 2%.

3 Scope of solution space

The scope of this problem is in identifying the manufacturers that we need to drop.

4 Constraints within solution space

Initial statistical analysis was done like Chi-sqaures test but failed to Identify the cost of the high failure rate. Excel file is limited to 20k rows.

5 Stakeholders to provide key insight

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6 Key data sources

Key data source is an Excel file with all of the sensor data with 20k rows.