Problem Statement Worksheet (Hypothesis Formation)

Nordic Sensing needs the failure rate of its InSense sensor to be back down to 5% and below, we need find which manufacture or parts vendor is causing the high failure rate and how to reduce Q2 of the next fiscal year.

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1 Context

Nordic Sensing Co. makes IoT sensors, and their InSense energy tracking sensor is their newest offering, while in its earlier stages it only had a failure rate of 1-2%, but in recent production it has been 15%

2 Criteria for success

Reducing the InSense sensor failure rate down to 5% and below as soon as possible. Reducing the failure rate of the InSense sensor by 3.5% each quarter until it is below 5% from the current 15% failure rate by Q2 of next fiscal year.

3 Scope of solution space

Narrowing out different vendors and manufactures to isolate the problem as to which vendors or manufactures has the highest or lowest failure rates when building the sensor with them.

4 Constraints within solution space

Lack of workforce and resources to identify each vendor and manufacturer in real life. Time, the longer it takes the faultier sensors are in production. Given the scope of the problem a clear cut time-line is hard to implement.

5 Stakeholders to provide key insight

James Hanks – CEO, Otto Evans – InSense President, Tony Abraham – InSense VP, Vince Maccano – Head of Data Science, Shane Buchholz- Head Engineer, Gary Neumont – Head of Manufracturing, Bernard Ong – CTO, Jessica Jones – QA/QC Engineer

6 Key data sources

Check data logs from where each sensor was manufacture and which parts were used and see their failure rates. Data from Cert to further identify which vendor and manufacturer had higher failure rates.

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