

Problem Statement Worksheet (Hypothesis Formation)

How can **Nordic Sensor Company** get the failure rate of InSense back down below 5% before shipping them to key accounts by (1) shutting down poor manufacturer lines and/or (2) stopping buying from faulty parts supplier, without facing underproduction?

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1 CONTEXT

(1) Background of issues

Nordic Sensor Company (NSC) is a top-five player in the IoT sensor space focusing on energy consumption and production. InSense energy tracking sensor is NSC's newest offering in the residential energy usage space. In early-stage development testing, about 1-2% failure rate was normal for manufacturing the InSense sensor. But the current sensor failure rate is 15%.

(1) Management decision

The company needs to know which manufacturer to shutdown or parts supplier to stop buying from in order to get the failure rate back down below 5%.

2 CRITERIA FOR SUCCESS

Successful for this project = poor manufacture line will be stopped and improved and faulty supplier will be replaced.

3 SCOPE OF SOLUTION SPACE

1. Manufacture lines in the four factories in Asia, which focused solely on InSense.
2. 26 suppliers for the seven InSense sensor parts

4 CONSTRAINTS WITHIN SOLUTION SPACE

1. The data from Cert is limited due to system. More data will be needed.
2. The issue is investigated only from the aspect of manufacture and supplier. If any enough reason is not uncovered, the shipping or stock management should be considered.

5 STAKEHOLDERS TO PROVIDE KEY INSIGHTS

James Hansk	: CEO,
Otto Evanse	: InSense President,
Bernard Ong	: CTO,
Shane Buchholz	: Head Engineer
Vince Maccano	: Head of Data Science,
Tony Abraham	: InSense VP
Gary Neumont	: Head of Manufacturing
Jessica Jones	: QA/QC Engineer

6 KEY DATA RESOURCE

Data from Cert: Excel format. This contains status, parts, suppliers, and manufacturer covering two quarters.

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