Nordic Sensing Mining Case Study

How will Nordic Sensing bring down the current failure rate at 15% to below 5% by identifying the manufacturer to shut down or the supplier to stop buying from them? The actions must be applied immediately or as fast we can communicate the production lines.

1 Context

After a successful development stage with a 1-2% failure rate for the InSense sensors, Nordic Sensors had a spike in the failure rates reaching 15% by March reports.

The productive chain uses 26 suppliers for the seven InSense sensor parts and assigned 3 out of 4 Asian factories to produce the sensor and produce one sensor every 30 minutes.

So is mandatory is to start to take action after the stakeholders agreed on the solution in the next meeting to avoid material waste and any possible brand reputation damage.

Analyzing the Cert data provided by the Singapore group, we can figure out the origin of the problem and define the best solution.

2 Criteria for success

- Identify the supplier or factory responsible for the high failure rate.
- Decrease the failure rate to less than 5%.

3 Scope of solution space

Using the data from Cert clustering the defective sensors to check the scenarios:
- Part(s) is(are) from the same vendor (solution: stop buying from this vendor)
- Defective sensors produced at the same factory (solution: shutdown manufacturer)
- Different faulty parts across all factories (overall poor manufacturing once tests had only 1-2% of failure rate)
- Across all factories - same defective part from different vendors (probable assembling project issue not detected during the tests)

4 Constraints within solution space

- Multiple suppliers with faulty parts and no other supplier available in the market for the faulty parts.
- Multiple factories with poor manufacturing quality – possible delay in production due to time to repair all production lines and checking if the issue is solved.
- Factory manufacturing defective without the capability to address the solution.

5 Stakeholders to provide key insight

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

6 Key data sources

- Cert - all InSense sensors data stating if they failed on testing.