ROBOTS

THE PROBLEM:

Robots are intermittent assets, which makes monitoring these assets very difficult. These assets are responsible for moving different parts from one point to another. Without this asset working correctly there would be a halt in the line causing a stop in production.

If this asset were to suffer from a failure it would lead to a lot of downtime and would put the plant behind on production losing them money. That's why it is crucial to have the correct monitoring solution.

COST OF ASSET FAILURES

$905,000/hour
Downtime Cost

10 hours
Downtime

INDUSTRY SAVINGS POTENTIAL

$9,050,000
per asset

$ 72,400,000
plant wide
based on estimated asset count

ASSET BLIND SPOTS:

There are challenges related to monitoring Robots.

Challenge #1: Difficult for the human ear/eye to detect vibration frequencies associated with the failures of this particular asset.

Challenge #2: Time based PMs and other checks are not thorough enough to ensure no failures would occur.

Challenge #3: This is an intermittent asset that is not consistently operating making it difficult to monitor using traditional means.

A NEW APPROACH TO THE PROBLEM

The IoT Hub

With our current V3 sensors the data points we receive are based off a given time-based interval and are therefore somewhat random and may give us a lot of non-useful data. Using a triggered monitoring technique can give us more useful data to properly monitor the health of this asset.

The proposed solution is using the HUB to monitor these assets in order to be able to set when the data is taken through triggering. We can tell the sensors when to take data and that allows for us to receive more useful data and allow us to catch failures more often.

HARDWARE

- **1 IoT Hub** per Robot

SOFTWARE

- Set thresholds and other indicators after collecting sample data.

CUSTOMER INPUTS

- No additional information needed

TRAINING

- Sentry
  - Site visits quarterly
  - In-person training
- Academy
- Customer training/handbooks
- Asset playbook