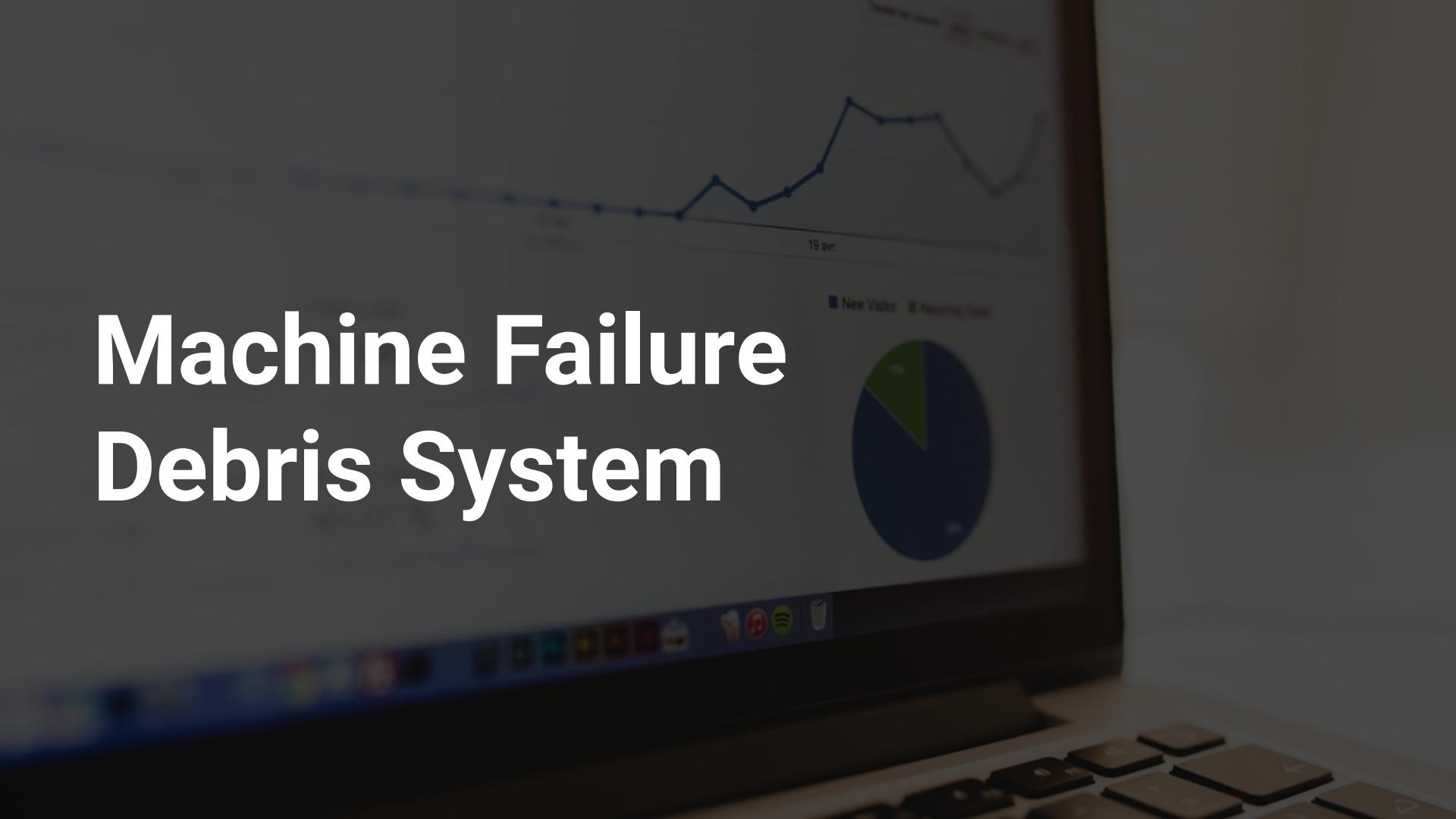


Group E

Kunchala Anil

Machine Failure Debris System



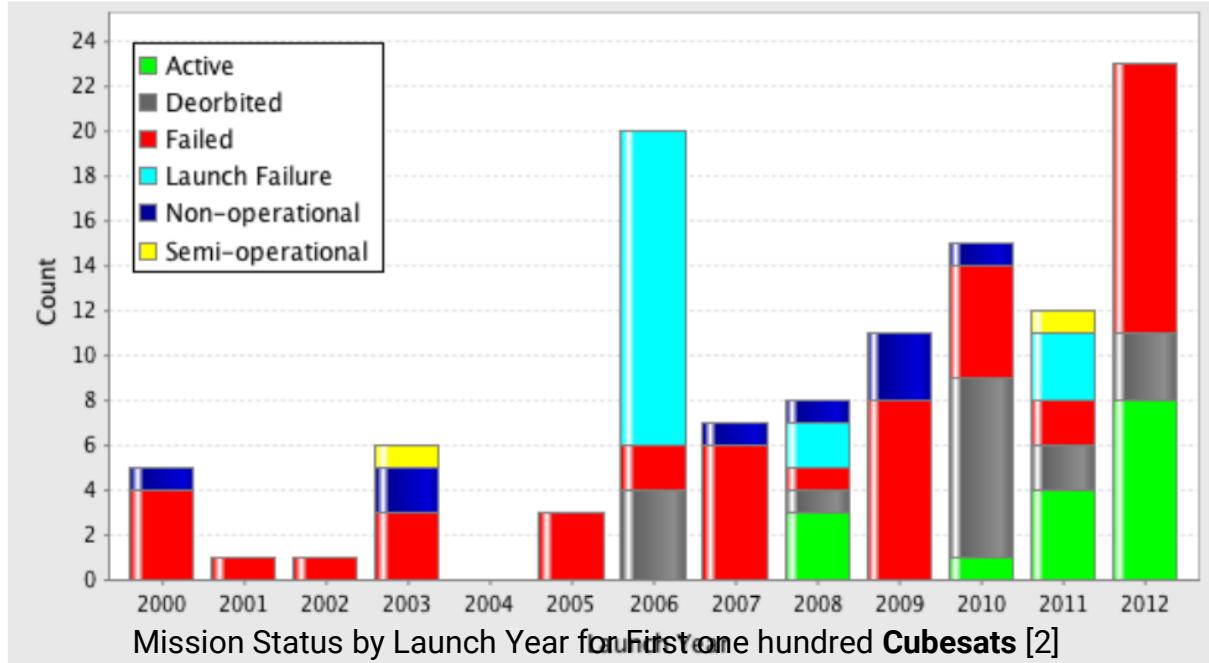
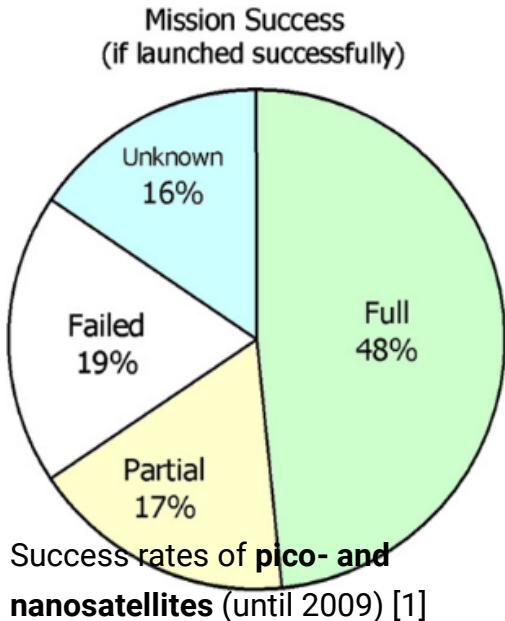


WHAT

Technology Demonstration Payload

Deorbiting the Satellite in
case of **mission failure**
within the mission duration
by using feedback
mechanism .

WHY



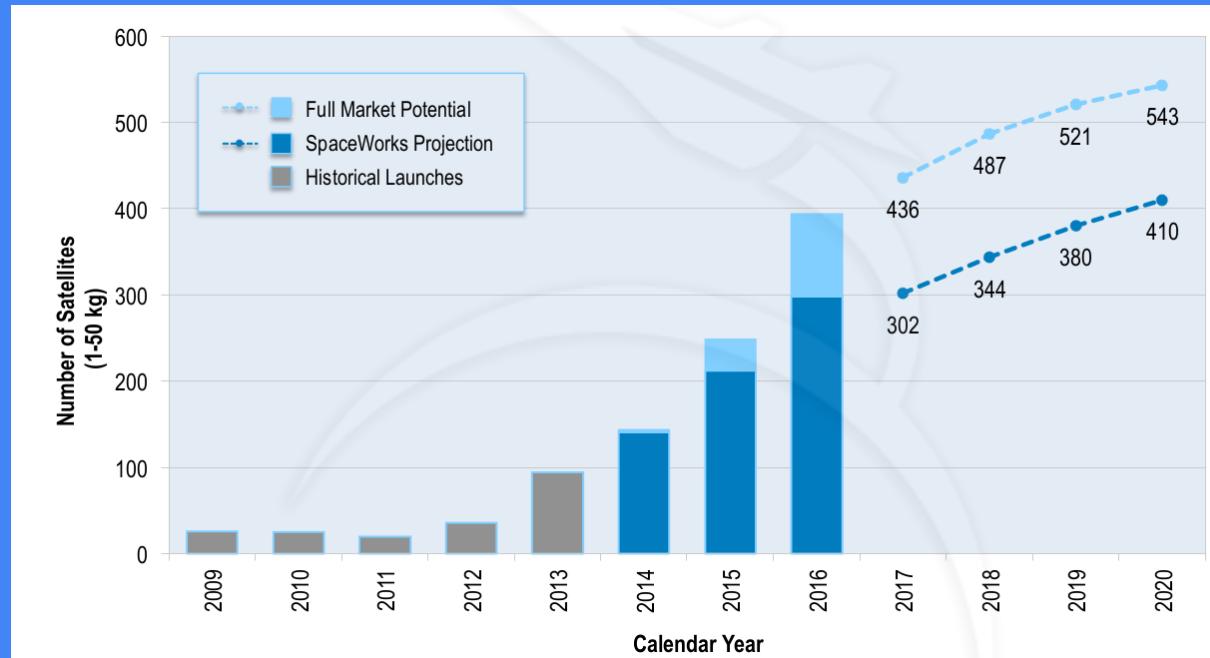
1. J. Bouwmeester, J. Guo "Survey of worldwide pico- and nanosatellite missions, distributions and subsystem technology"
2. Michael Swartwout "The First One Hundred CubeSats: A Statistical Look"

WHY

The target mission duration of the satellites is unknown for more than half of the 94 pico- and nanosatellites, especially for the educational satellites,

for the known pico- and nanosatellites they vary from a few days up to five years[1]

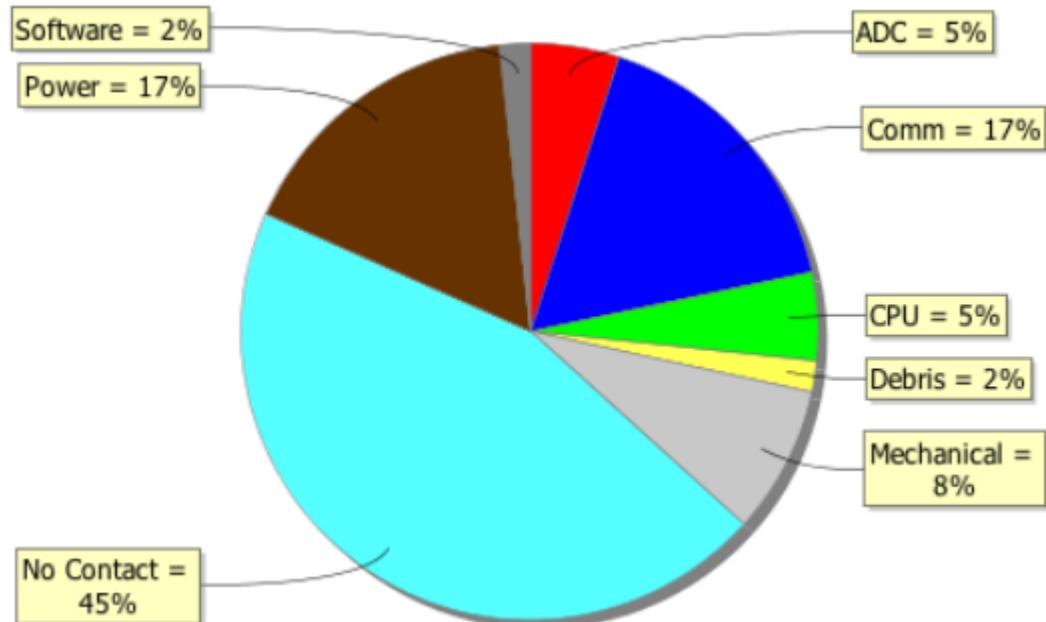
Why wait until the end of mission duration **when mission is failed**



HOW

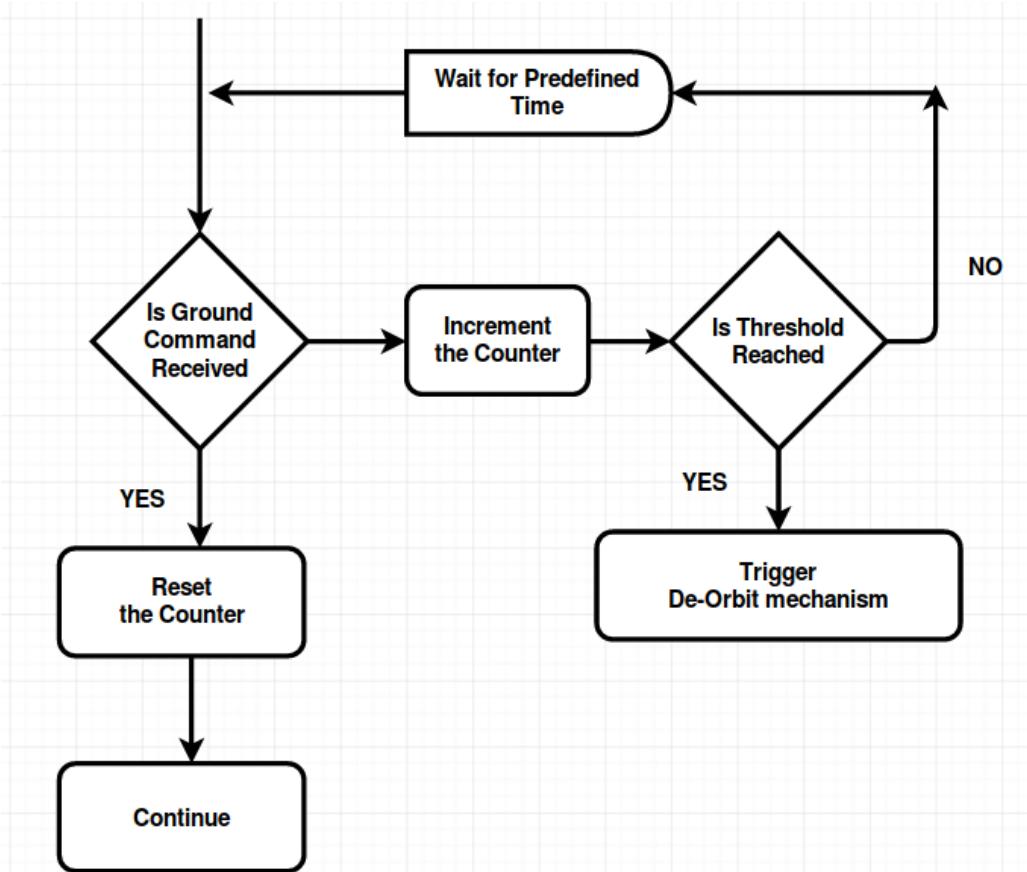
There are De-Orbiting Mechanism Is available to reduce the Space Debris.

Trigger a De-Orbiting Mechanism When Mission is Failed due to any one or multiple subsystem failure by having a feedback mechanism for all subsystems



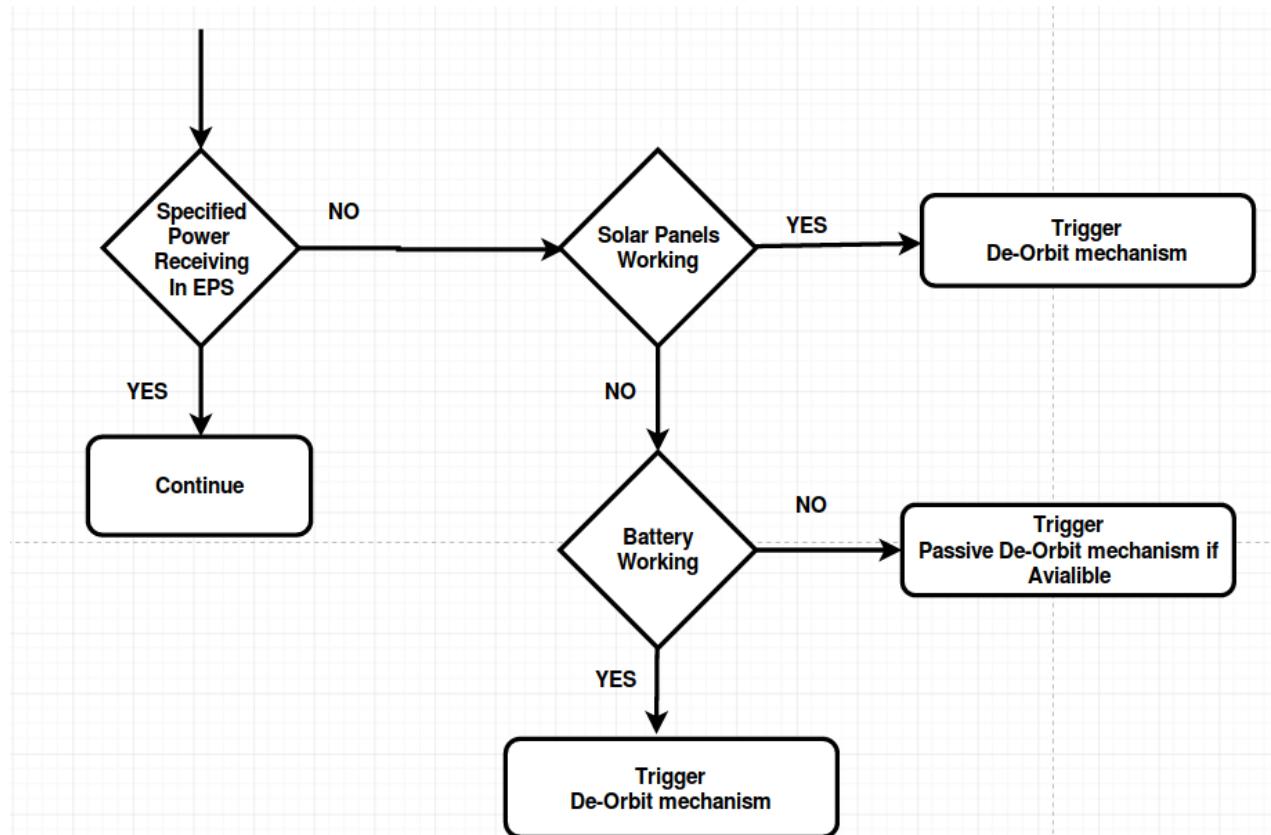
Causes for CubeSat Mission Failure, 2000-2012 [2]

Comm & No Contact



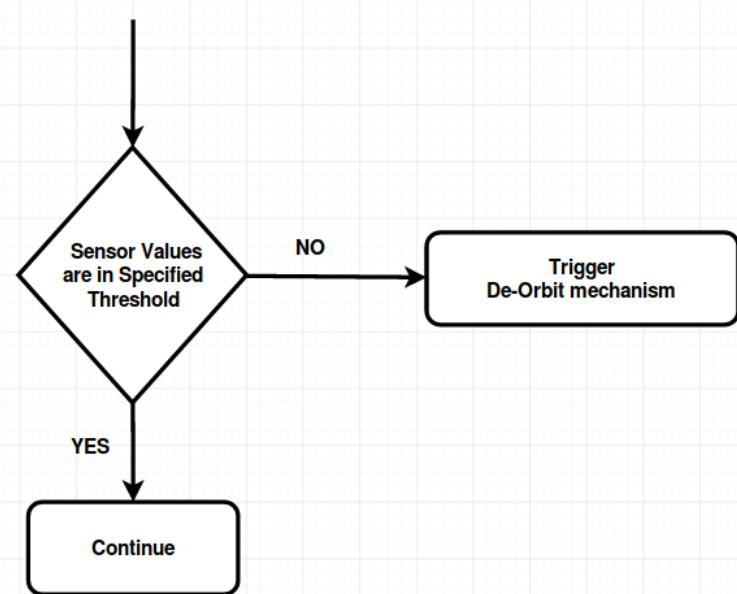
Generalised
View

Power



Generalised
View

ADC & Mechanical



Generalised
View

How it works

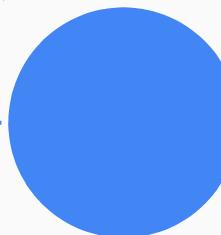
Step 1

Get the Feedback from subsystem using Interfaces like SPI,I2C



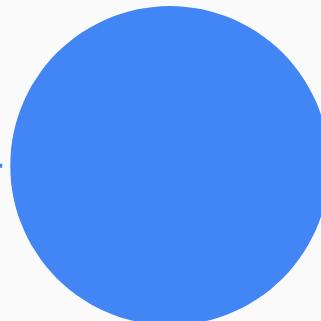
Step 2

Check for Data Validation or Subsystem Functionality



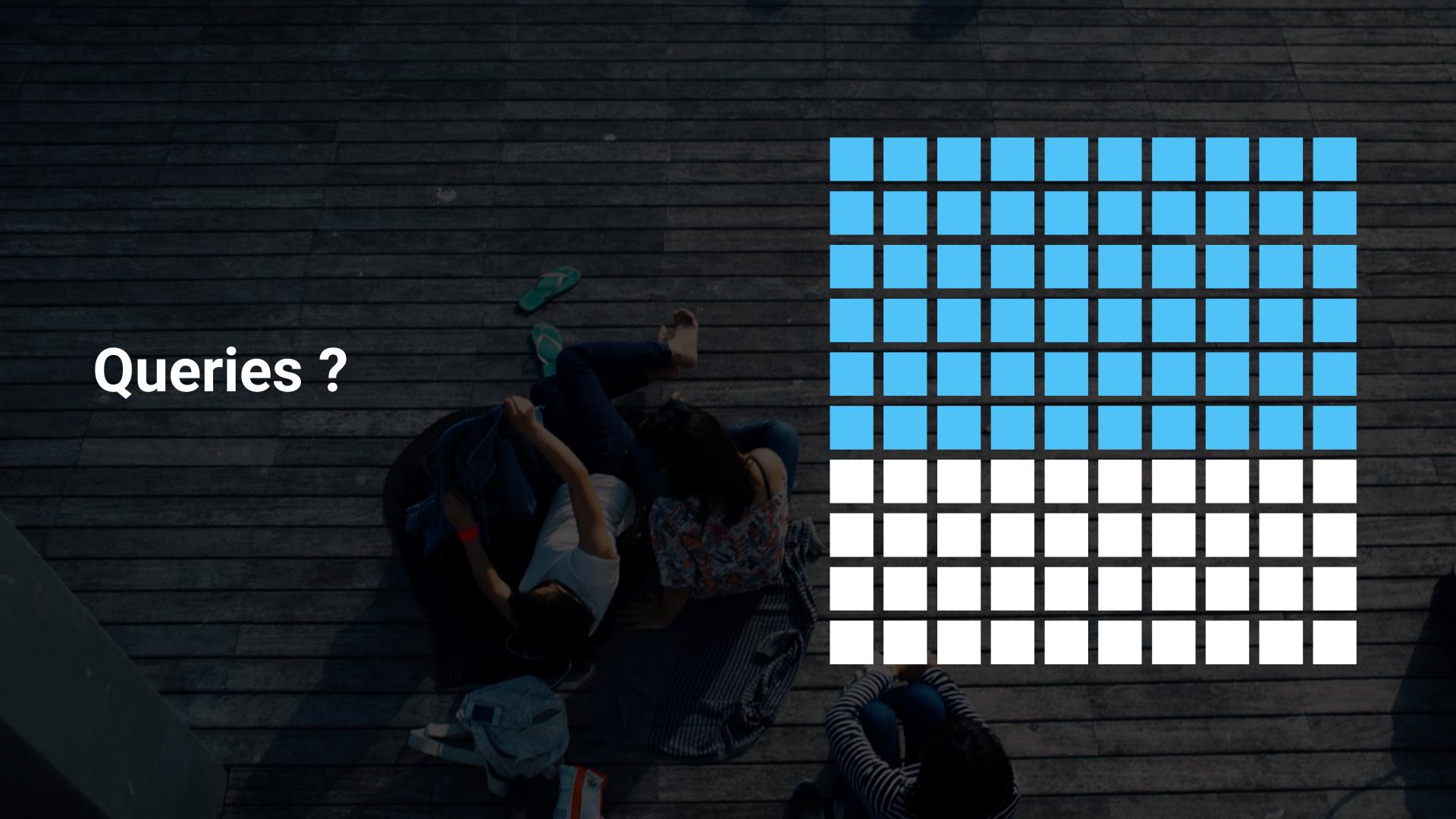
Step 3

Trigger the De-Orbiting Mechanism if any subsystem fails which results mission failure



The background of the slide is a dark, moody cityscape at dusk or night. The Empire State Building is prominent in the center-left, its Art Deco spire reaching towards a sky filled with scattered clouds. To the right, the One World Trade Center is visible, its distinctive spire reaching upwards. The city lights from numerous skyscrapers create a grid of glowing points against the dark sky. The overall atmosphere is somber and futuristic.

The Methodology: DeOrbiting + Automatic Trigging Based on Feedback



Queries ?

