



APRIL 2023

FIONA BEACH

GETTING THE MOST OUT OF PROCESS SAFETY REPORTING

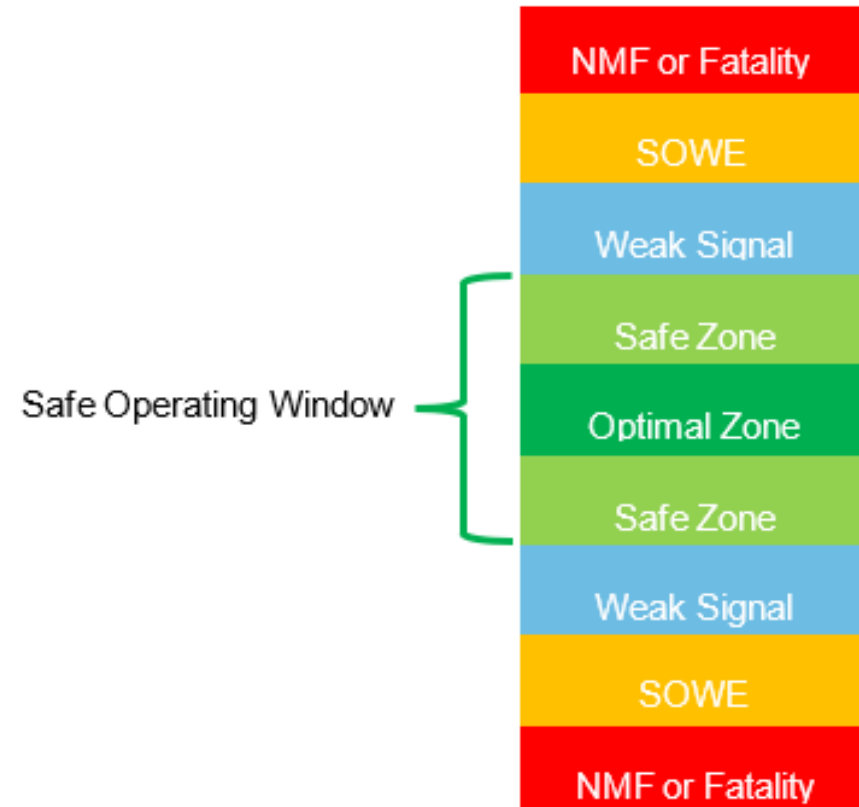
25 IS & PE sites globally



- Changed the way in which we analyse the event data
- Event reporting still through the same system – Enablon
- The way we classify events in IS & PE has improved
- Now analysing the data using Power BI

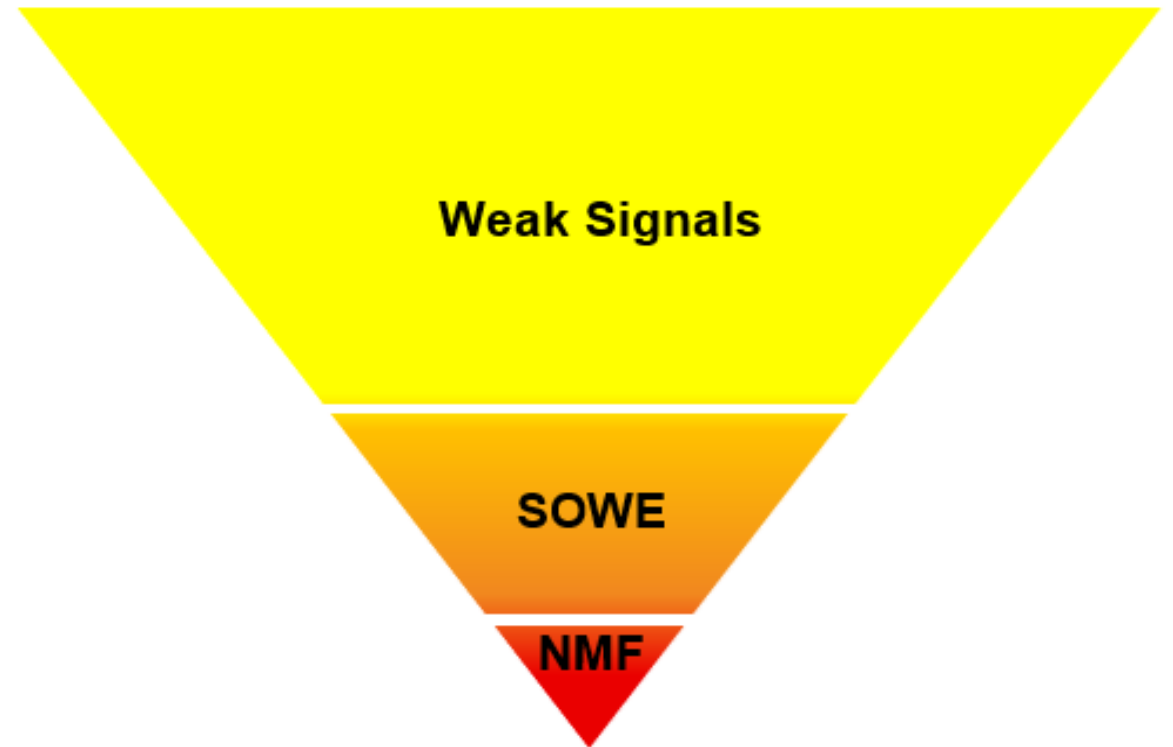
Event Classification - Safe Operating Window

- It is rare that a catastrophic process safety event occurs without prior warning signs related to human behaviour, equipment reliability, procedural failures, process system failures, management system failures or organisational factors.
- If we can detect and rectify the many apparently minor process safety issues we see in our plants, this decreases the probability of a catastrophic event occurring in the future.



Process Safety Triangle

- In order to minimise the number of NMFs or fatalities, we need to be reporting all weak signals and SOWEs such that an investigation can be completed if warranted and improvements implemented.
- If the system is working correctly, we should see significantly more weak signals than anything else, and very few NMFs.
- No target numbers set as the processes at our sites can be very diverse, but the trend is reviewed.



Developed a simpler reporting tool for WS

- When we first launched this new event classification approach, we found that it was very time consuming for our site personnel to enter weak signals into our standard event reporting proforma.
- In order to encourage the reporting of Weak Signals, we developed a simpler reporting form, reducing the amount of fields that need to be filled in to report the event.

The screenshot displays a web-based reporting form with the following sections and fields:

- IDENTIFICATION**
 - Short Description *
 - Event Date (Local Time) * 14/04/2023 at 2:57 PM × Now i
 - Reported Date (Local Time) * 14/04/2023 at 2:57 PM × Now i
 - TimeZone
 - Reported by * Fiona Beach i
- DETAILS**
 - Classification *
 - Risk Categories * weak i
- DESCRIPTION**
 - Report (Site language) *

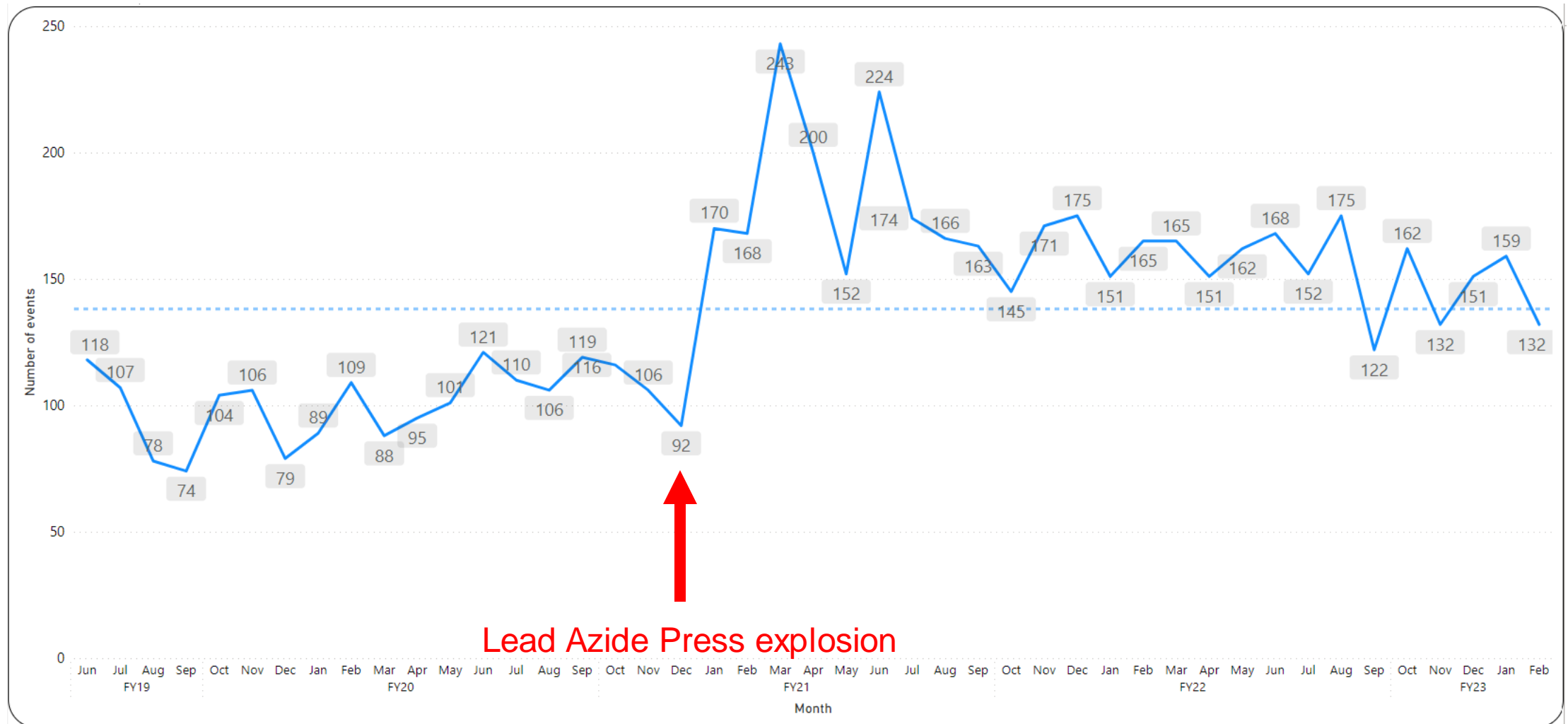
A dropdown menu for Risk Categories is open, listing the following options:

- Weak Signal - Cord / Shocktube tension (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.13)
- Weak Signal - Damaged Detonator (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.5)
- Weak Signal - Electrical (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.6)
- Weak Signal - Energetic materials in wrong place (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.7)
- Weak Signal - Fire (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.8)
- Weak Signal - Foreign object (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.9)
- Weak Signal - Key control (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.10)
- Weak Signal - LOC / Spill (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.11)
- Weak Signal - Mechanical failure (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.12)
- Weak Signal - Other (R-SHES1 > R-SFTY-ISPEPR > R-SFTY-ISPEPR.14)

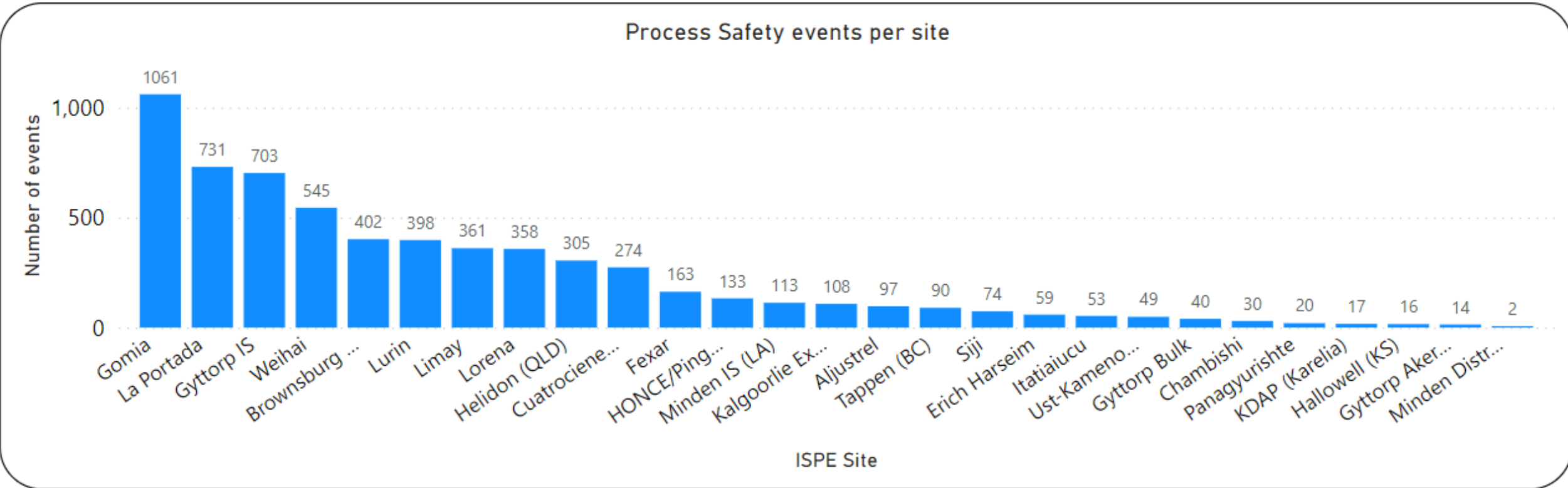
At the bottom of the form, there are buttons for "Save" and "Save & New", and a message: "Saving will start a new Audit Tra". A red asterisk indicates "* Required fields".

ANALYSING THE PROCESS SAFETY EVENT DATA

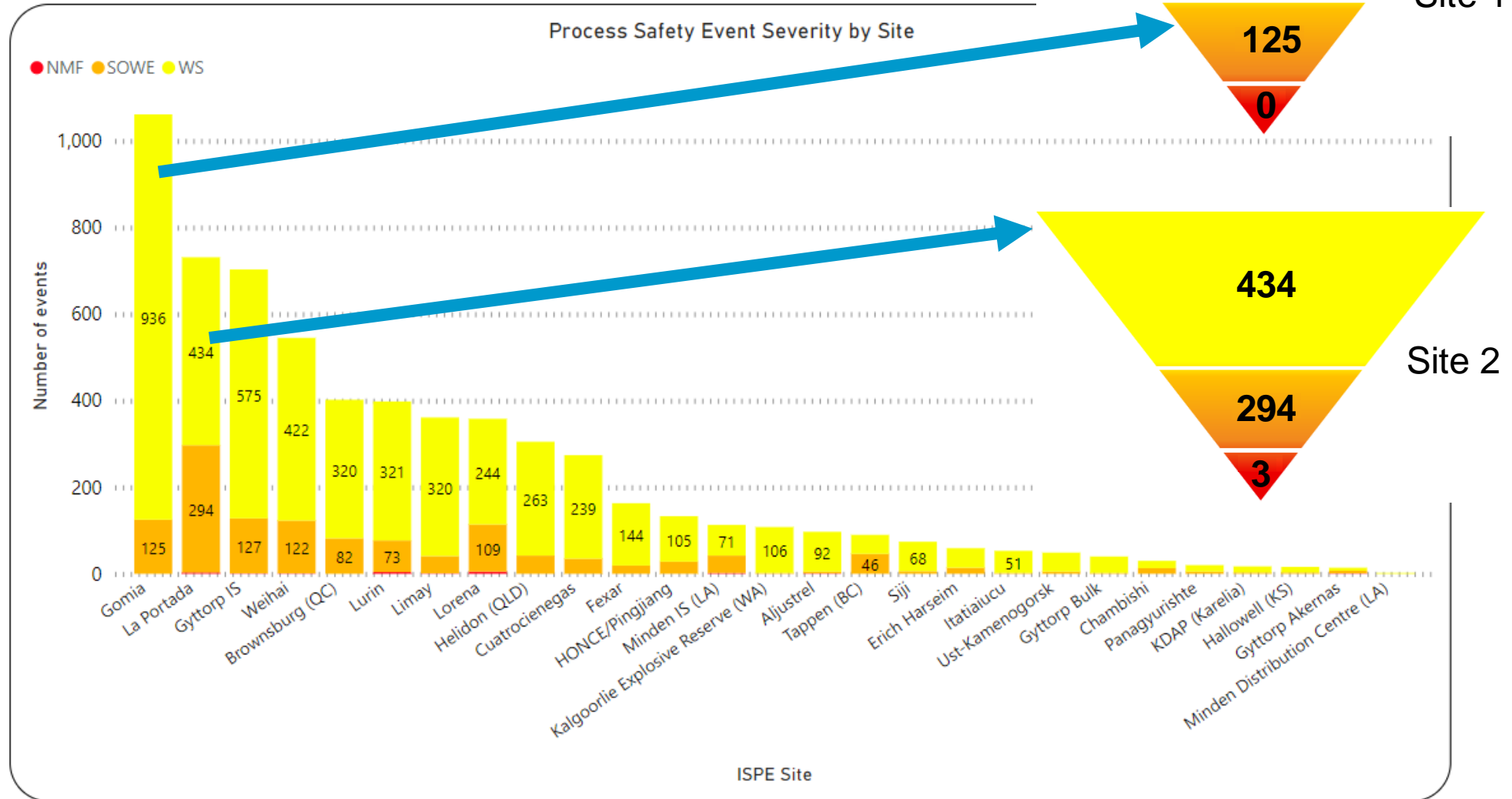
IS & PE PS events analysed using Power BI to date



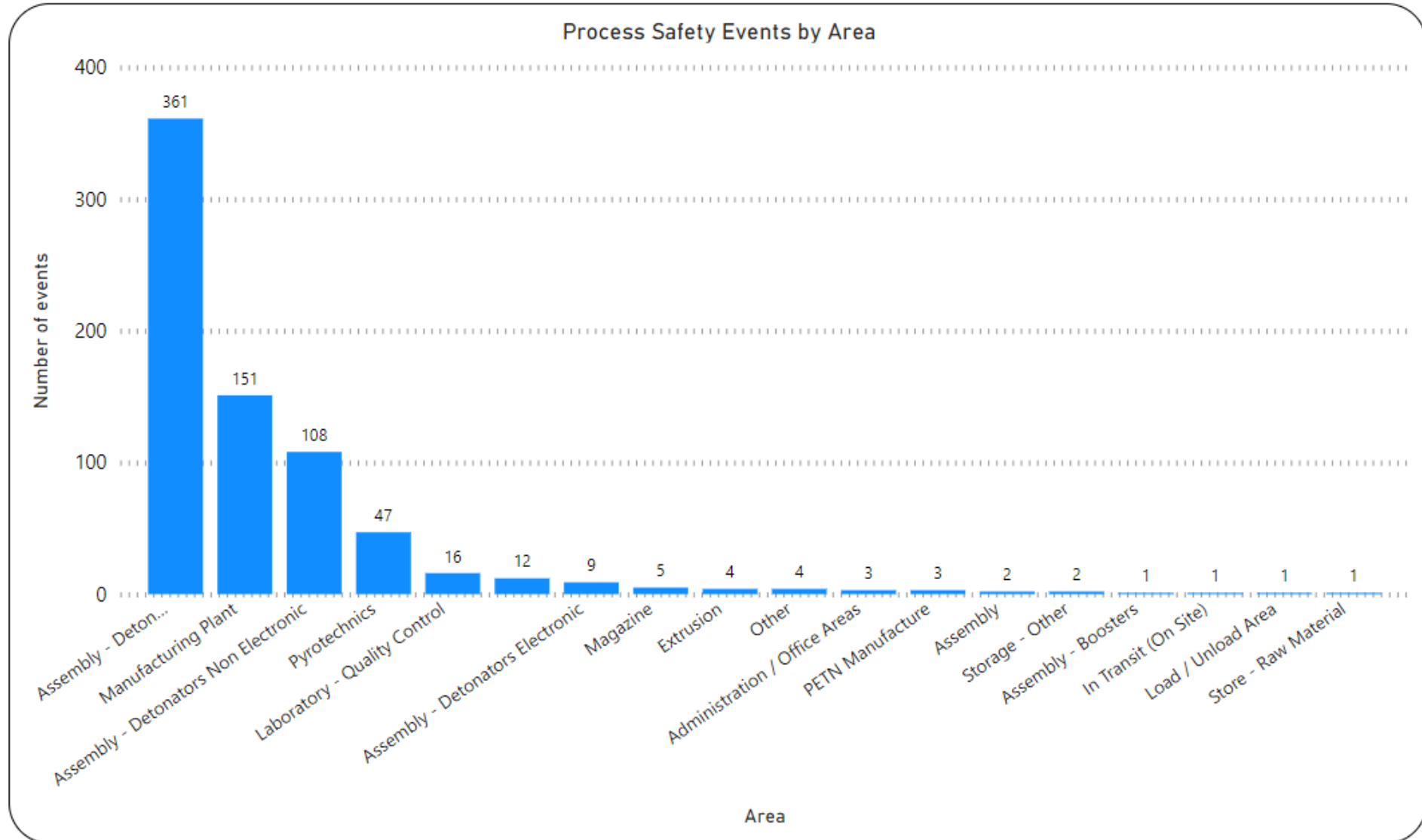
Process Safety Events by Site



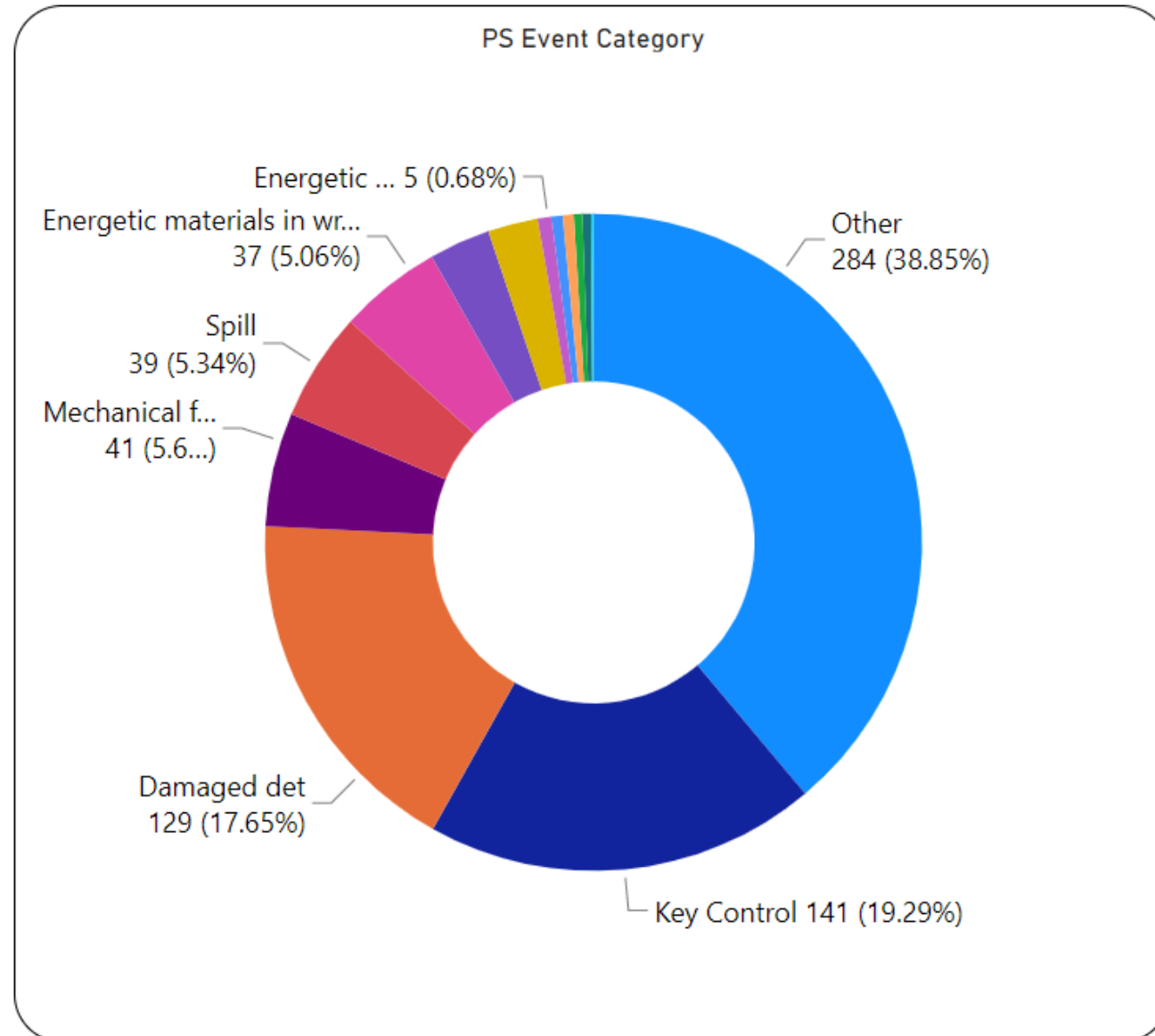
Process Safety Triangles by site



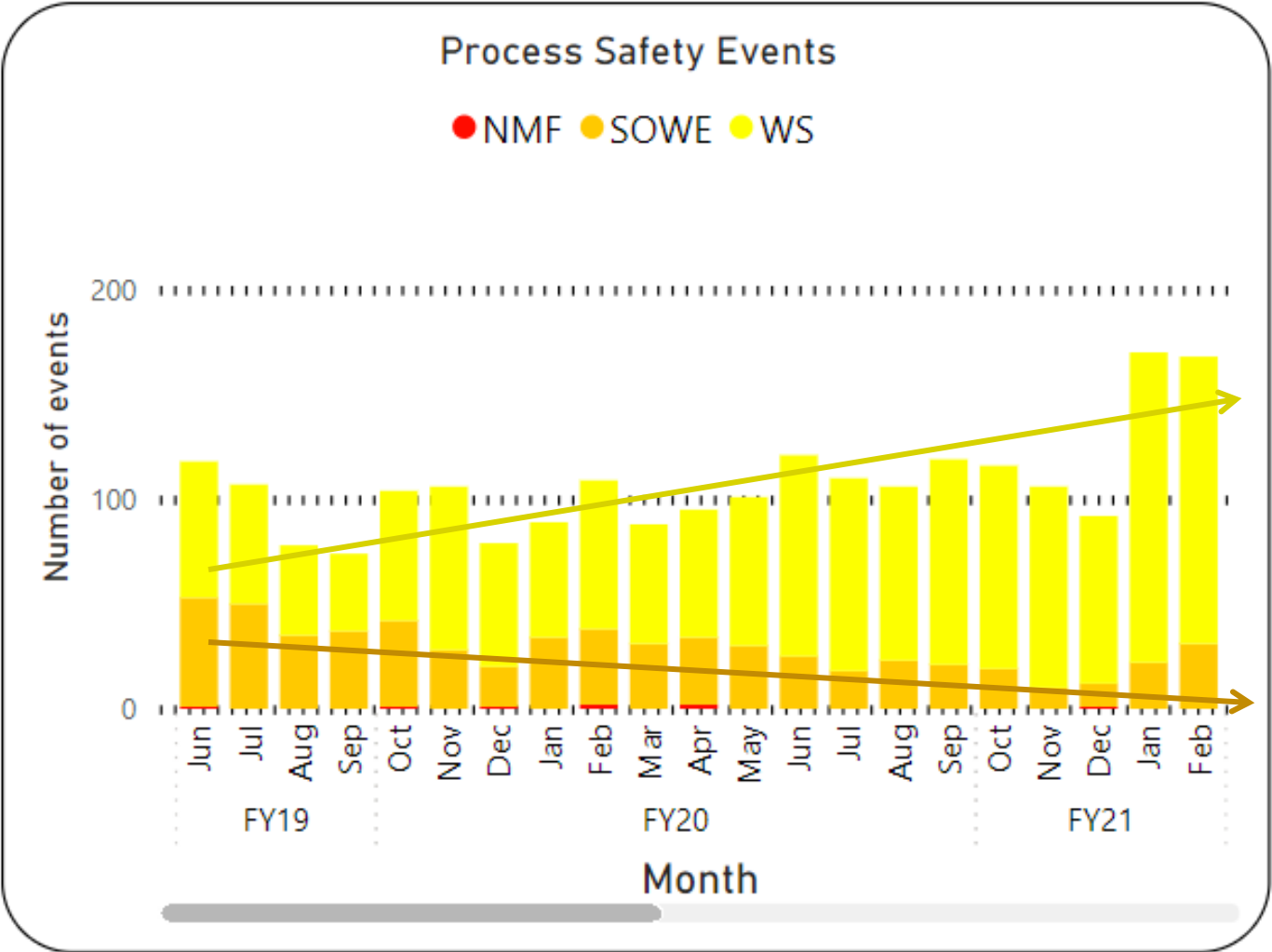
Drilling down into the detail Site 2 – Plant Area



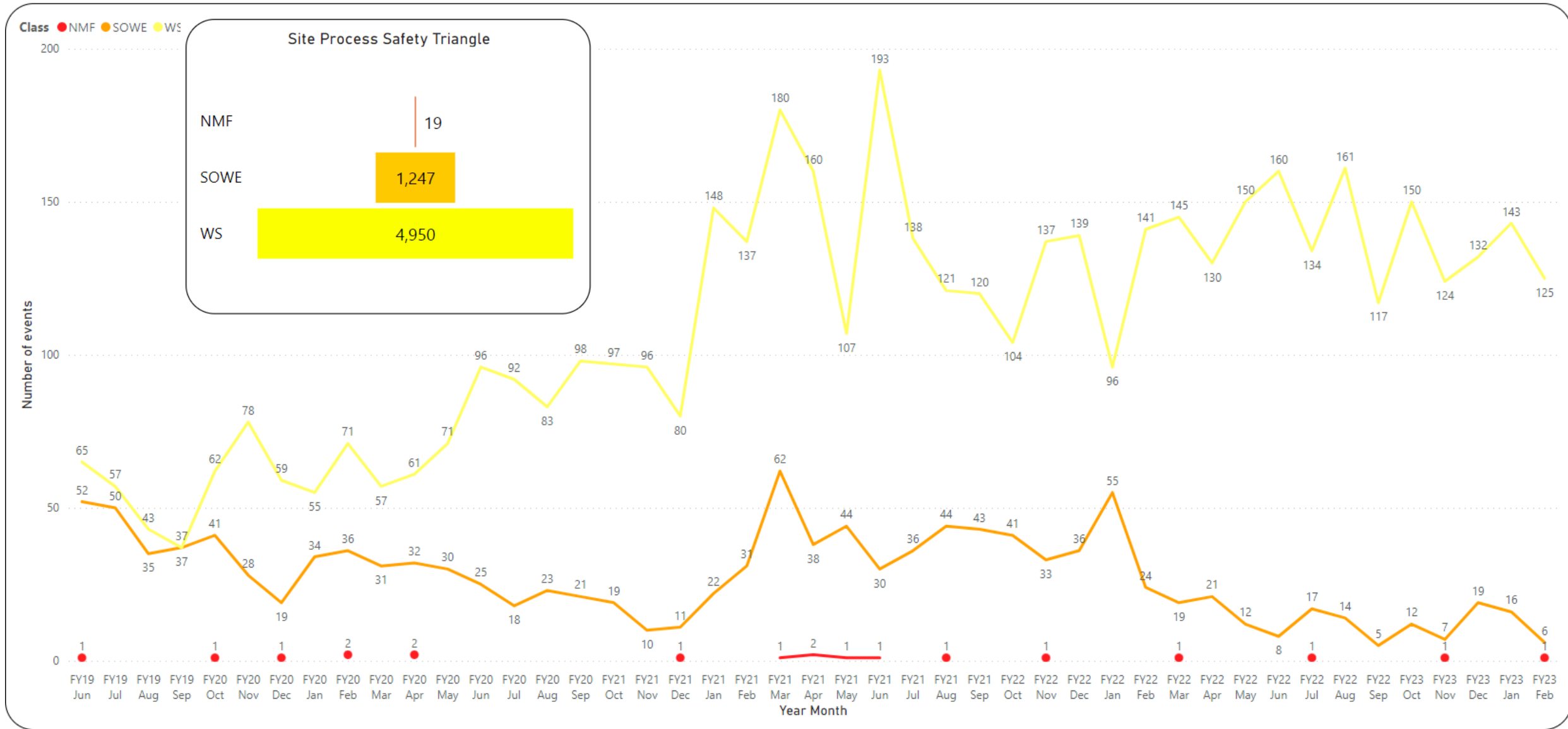
Drilling down into the detail Site 2 – Event category



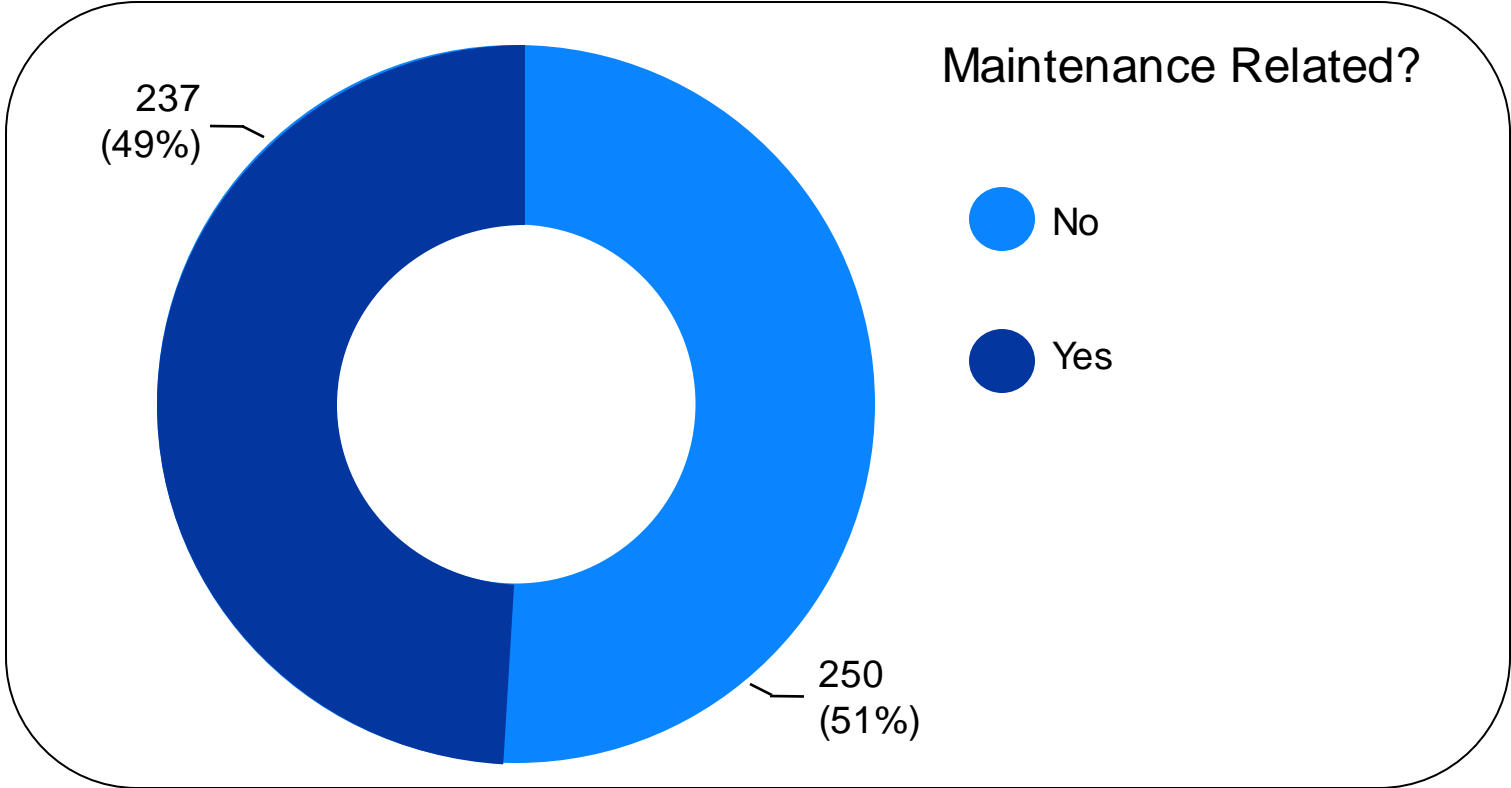
Improvement in Site 1 process safety triangles



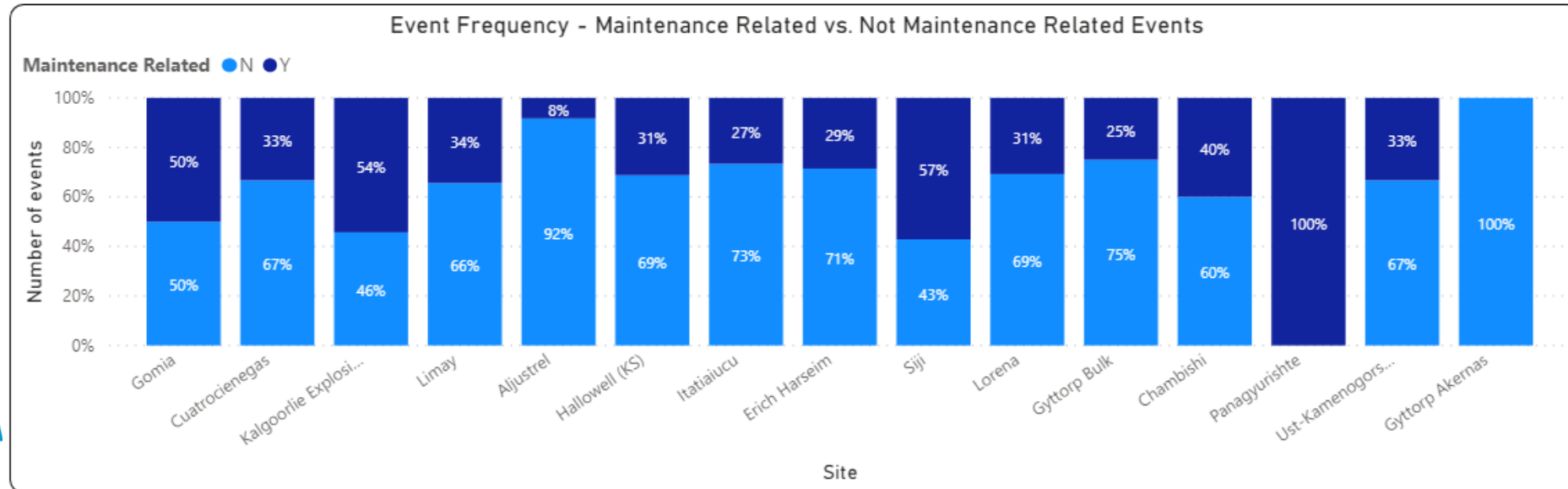
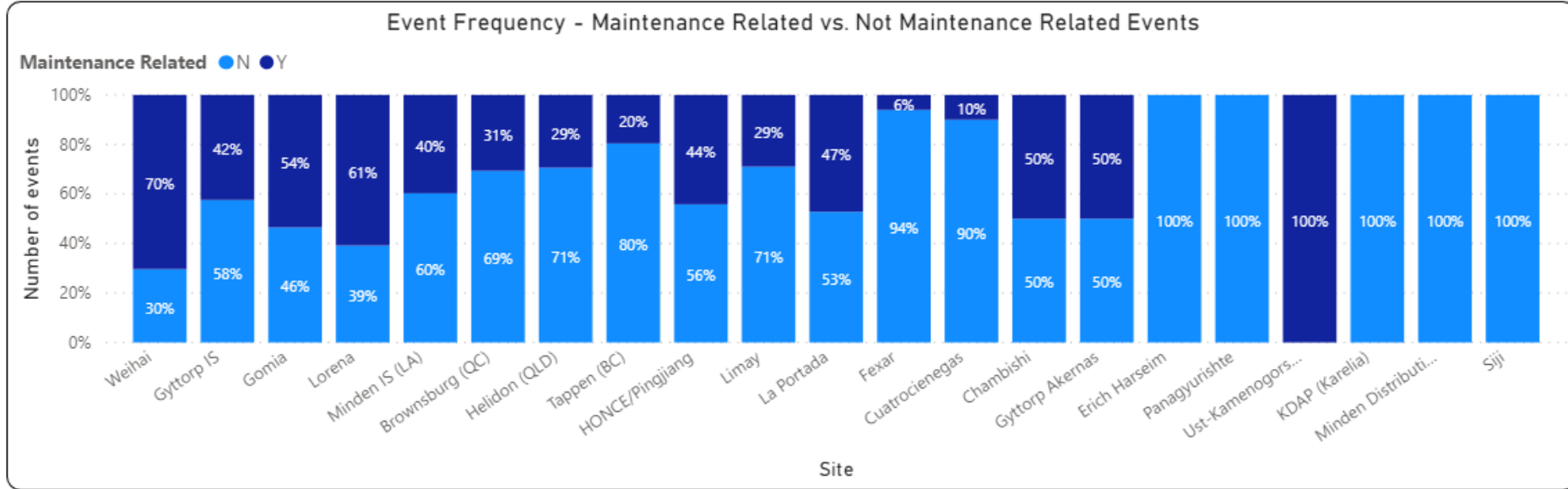
Global trend Improving as well



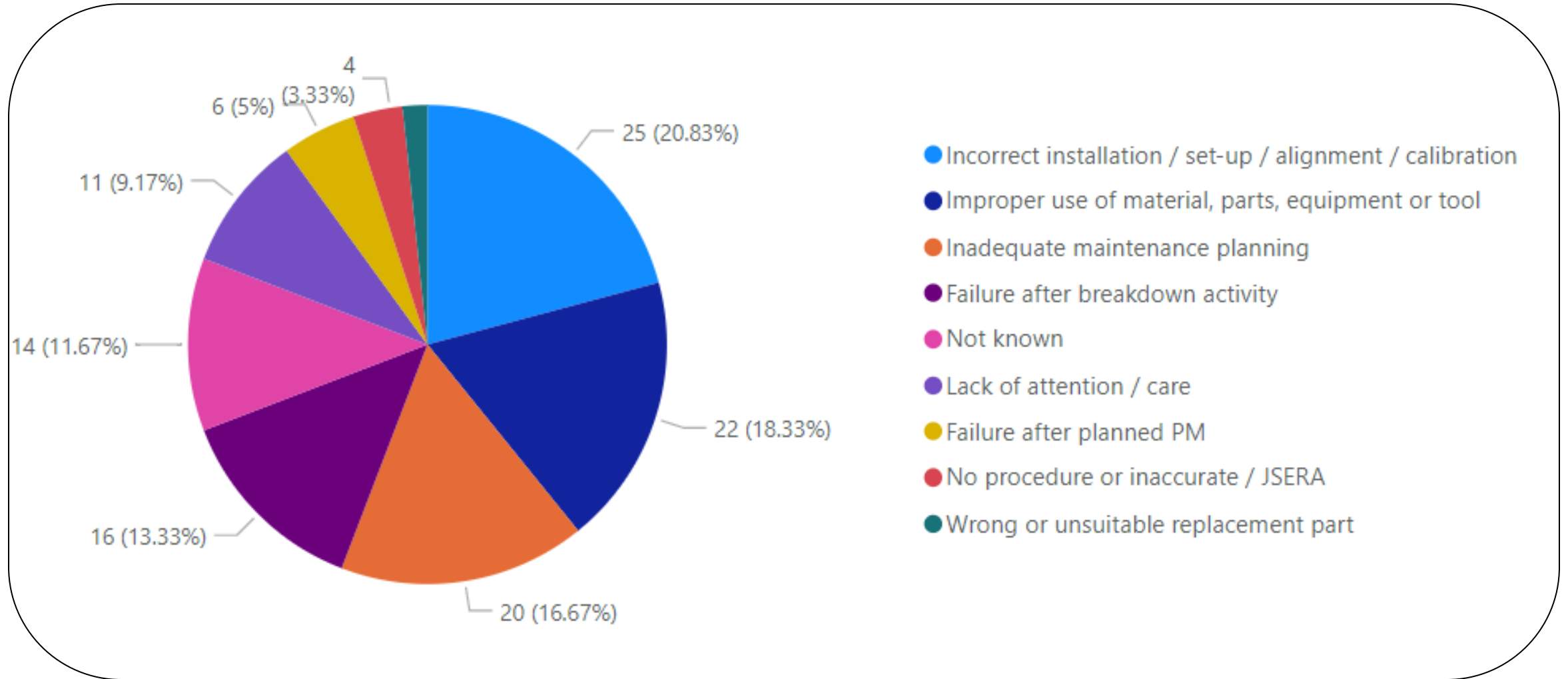
Maintenance Related Events – May 2020



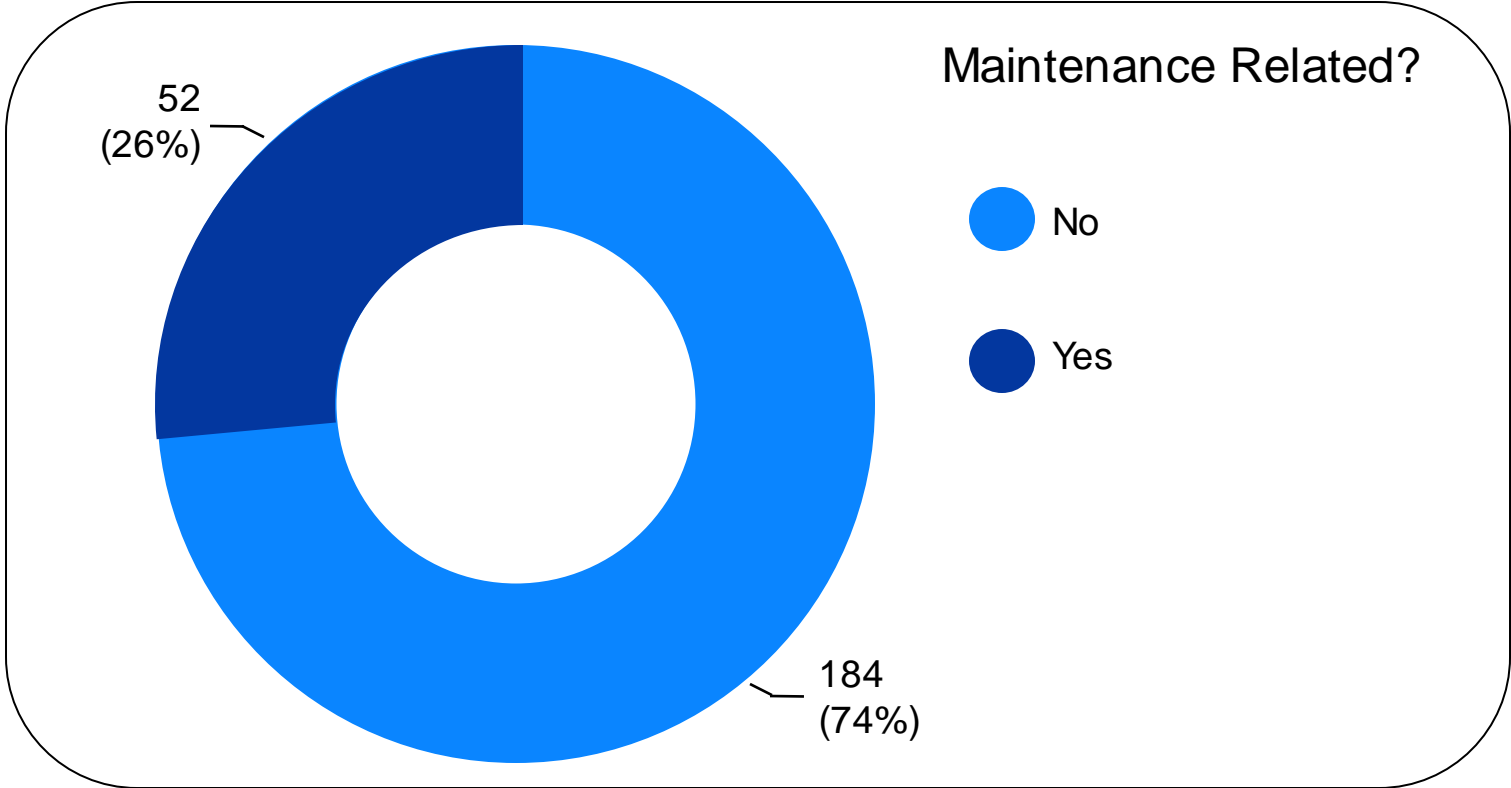
Maintenance Related Events – Breakdown by site



Maintenance Related Events – deep dive



Maintenance Related Events – April 2021



THANK YOU

QUESTIONS?