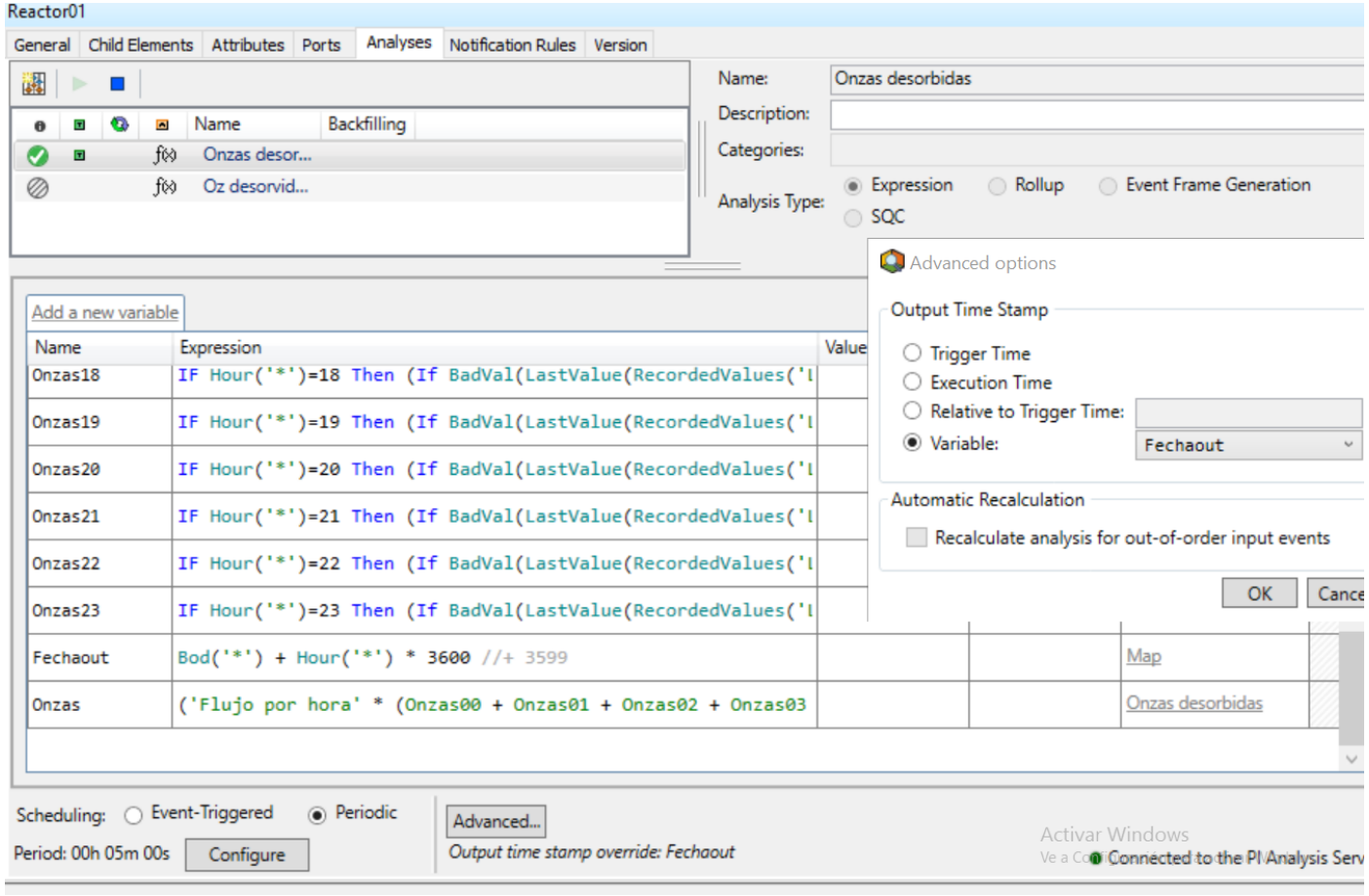
Gold Desorption Monitoring (Pi Asset Framework)

Calculates desorbed ounces based on laboratory samples analyzed in **Labware**.

```
Onzas00 = IF Hour('*')=0 Then (If
BadVal(LastValue(RecordedValues('LeyAu_Salida
_00','t','*')) -
LastValue(RecordedValues('LeyAu_Entrada_00','
t','*'))) Then 0 Else
(LastValue(RecordedValues('LeyAu_Salida_00','
t','*')) -
LastValue(RecordedValues('LeyAu_Entrada_00','
t','*')))) Else 0

Fechaout = Bod('*') + Hour('*') * 3600 //+ 3599


Onzas = ('Flujo por hora' * (Onzas00 + Onzas01
+ Onzas02 + Onzas03 + Onzas04 + Onzas05 +
Onzas06 + Onzas07 + Onzas08 + Onzas09 + Onzas10
+ Onzas11 + Onzas12 + Onzas13 + Onzas14 +
Onzas15 + Onzas16 + Onzas17 + Onzas18 + Onzas19
+ Onzas20 + Onzas21 + Onzas22 + Onzas23)) /
31.1035
```



Weighted Ore Grade Analysis (Pi Asset Framework)

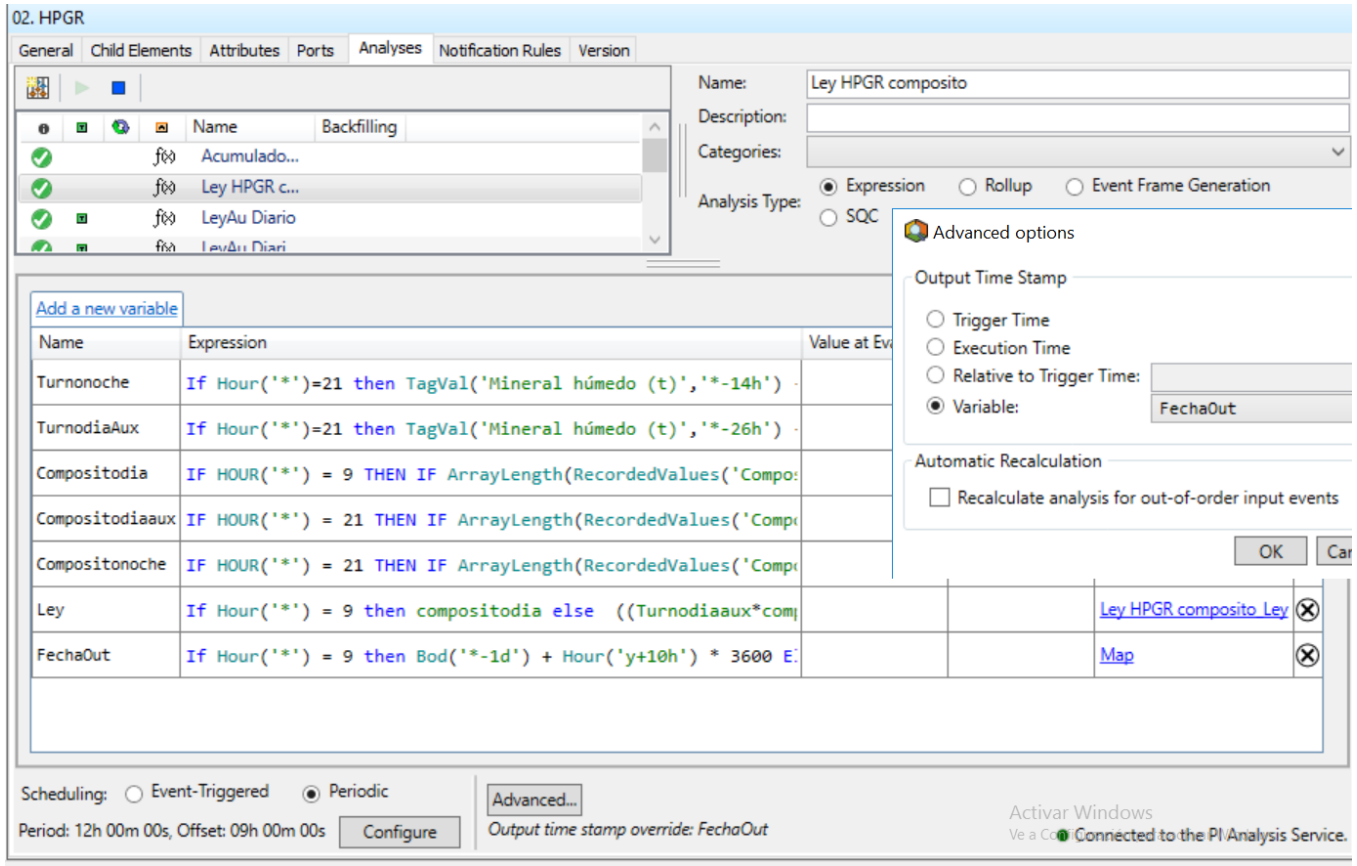
Reports weighted grades for the tertiary crushing process

```
Turnonoche = If Hour('*')=21 then
TagVal('Mineral húmedo (t)','*-14h') -
TagVal('Mineral húmedo (t)','*-26h') else
NoOutput()
```

```
Turnodiaaux = If Hour('*')=21 then
TagVal('Mineral húmedo (t)','*-26h') -
TagVal('Mineral húmedo (t)','*-38h') else
NoOutput()
```

```
Compositodia = If Hour('*') = 9 then
compositodia else
((Turnodiaaux*compositodiaaux) +
(turnonoche*compositonoche))/(turnonoche+turnod
iaaux)
```

```
If Hour('*') = 9 then Bod('*-1d') +
Hour('y+10h') * 3600 Else Bod('*-1d') +
Hour('y+22h')* 3600
```



Daily Production Analysis (Pi Asset Framework)

Calculates the quantity of ore processed on a daily basis.

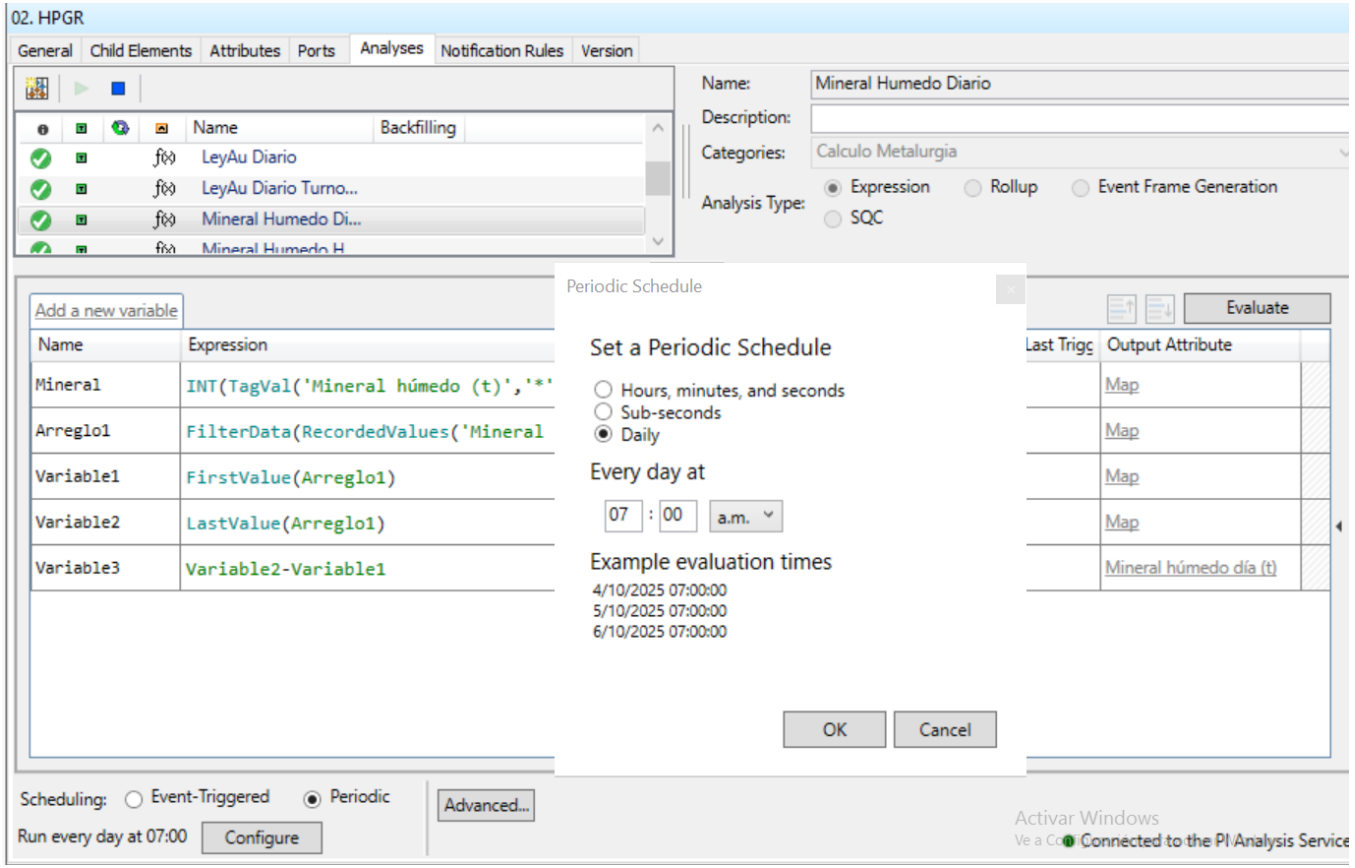
```
Mineral = INT(TagVal('Mineral húmedo (t)','*')) - INT(TagVal('Mineral húmedo (t)','*-1d'))
```

```
Arreglo1 =FilterData(RecordedValues('Mineral húmedo (t)','*-24h','*'),(NOT BadVal($val) AND $val>1))
```

```
Variable1  = FirstValue(Arreglo1)
```

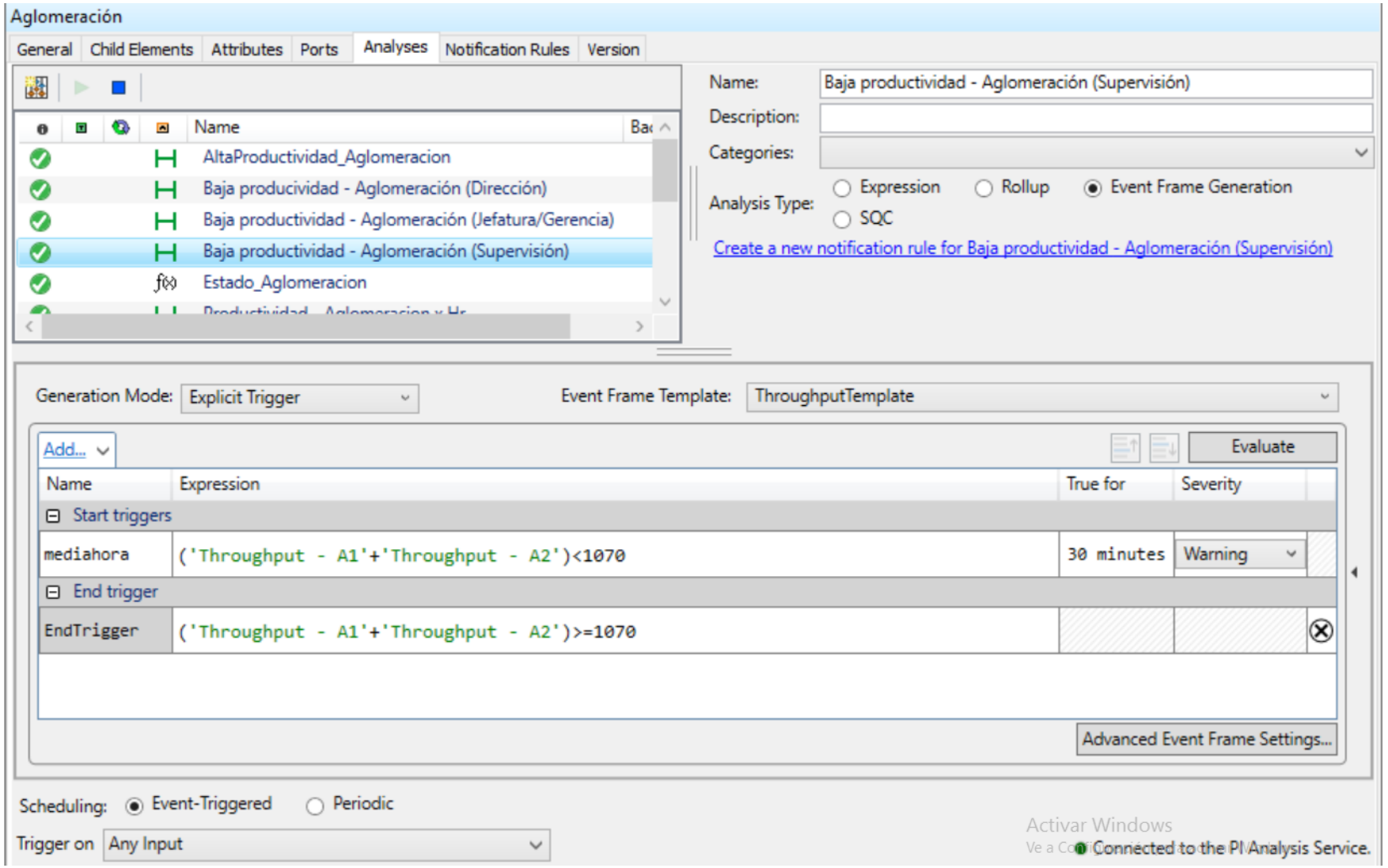
```
Variable2 =LastValue(Arreglo1)
```

```
Variable3 =Variable2-Variable1
```

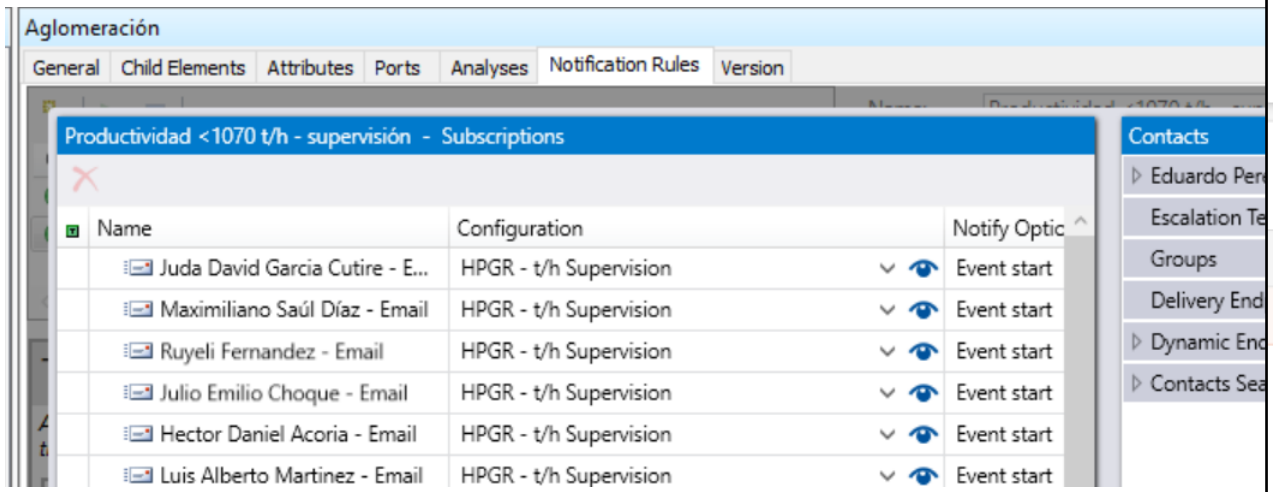


Low Productivity Events (Pi Asset Framework)

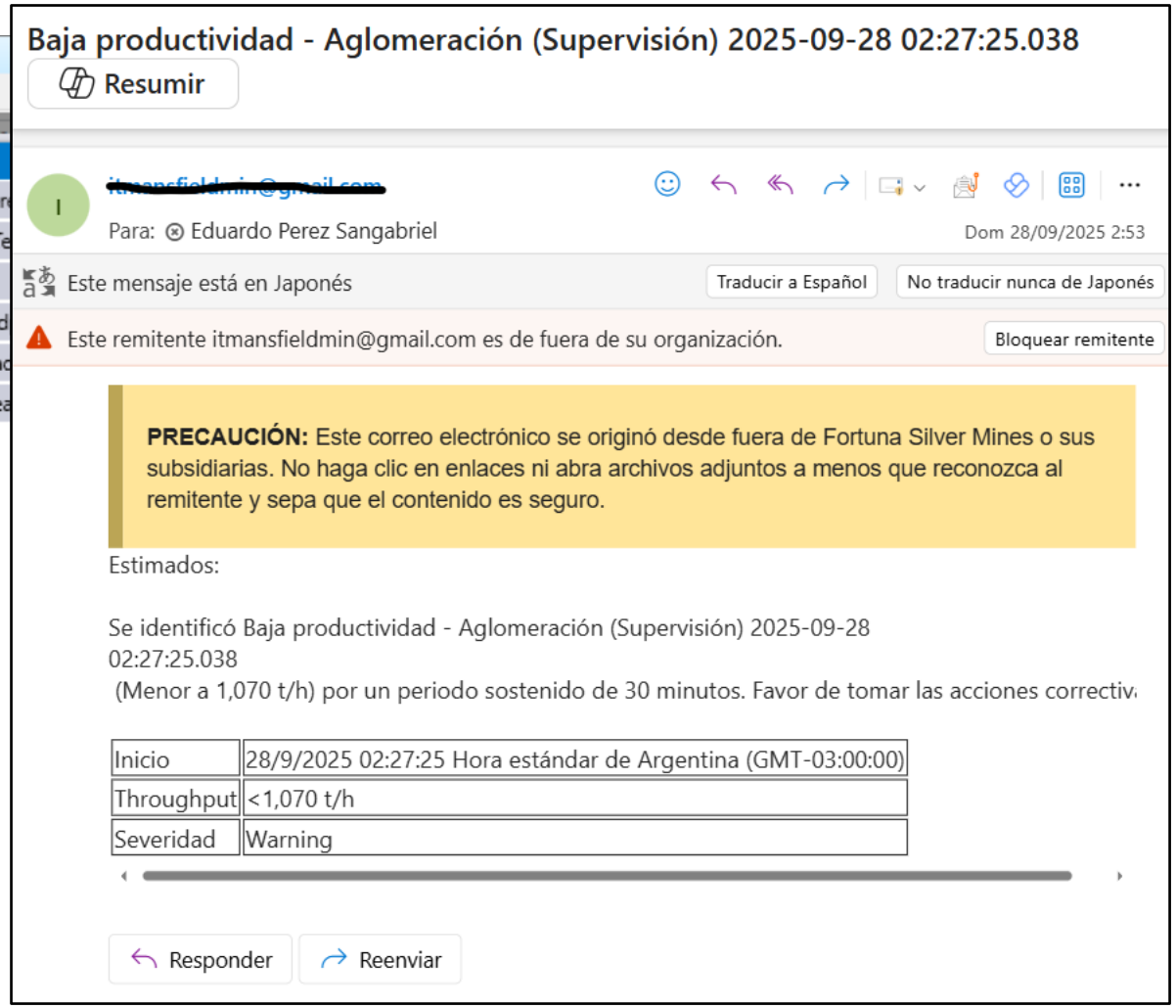
Tracks performance events including duration, date, and time. These events can be used as filters to analyze operating conditions during low-productivity periods.



Notifications triggered by low productivity events

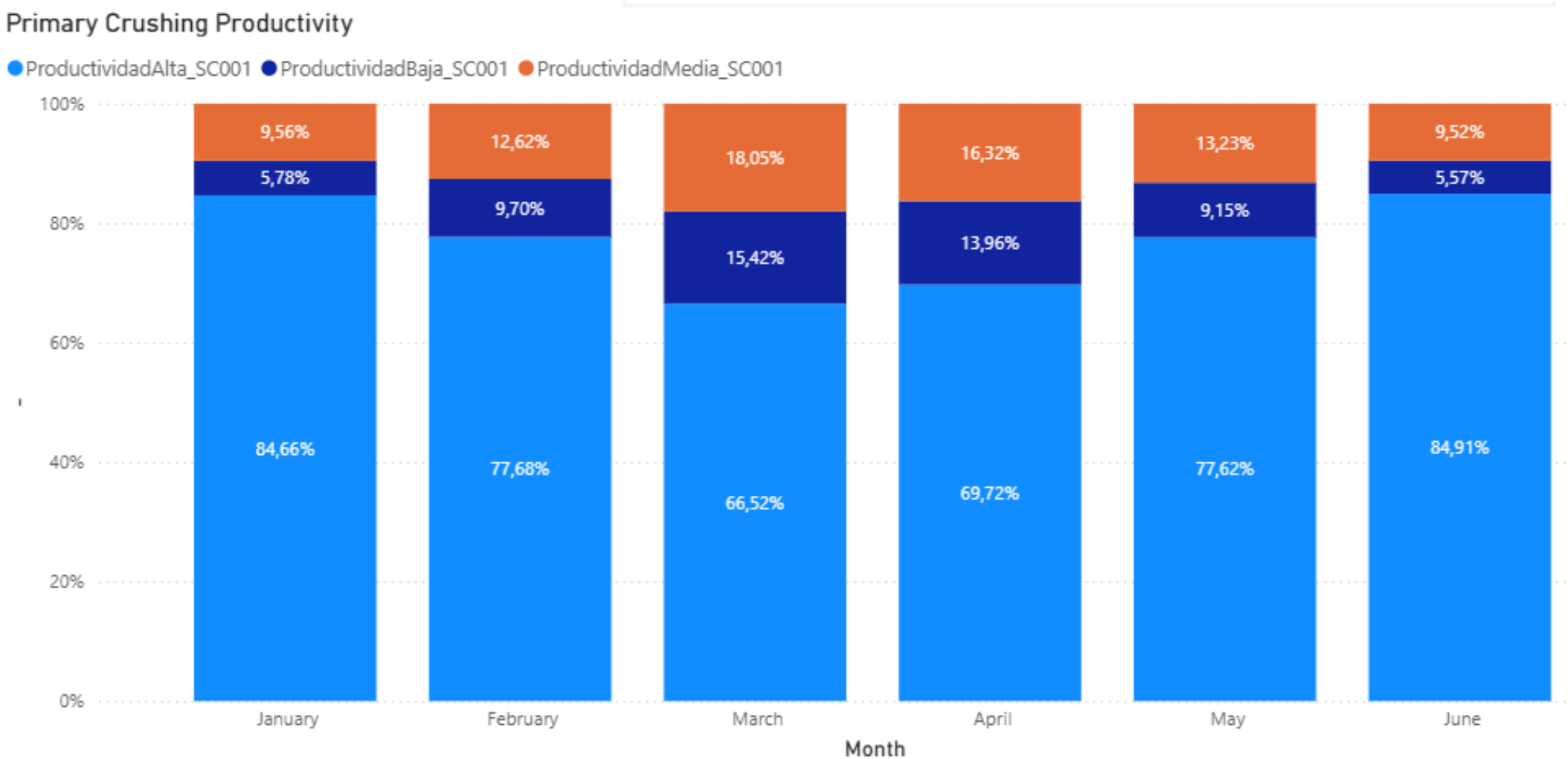


*Notifications are escalated to different recipients depending on how long the low productivity event lasts



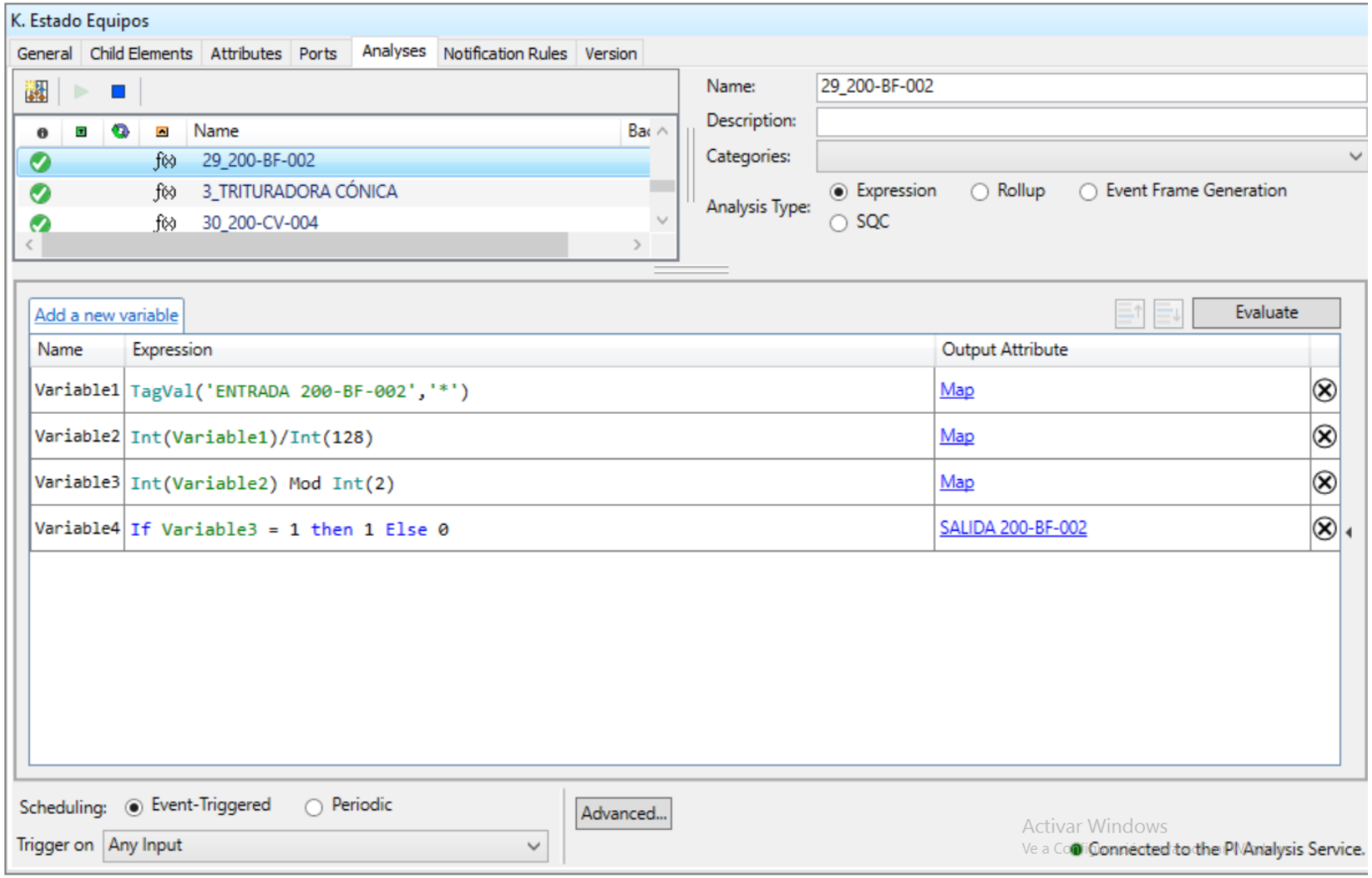
Productivity by Category

Evaluates the impact of corrective actions by excluding non-operating periods, allowing for a more accurate productivity assessment.



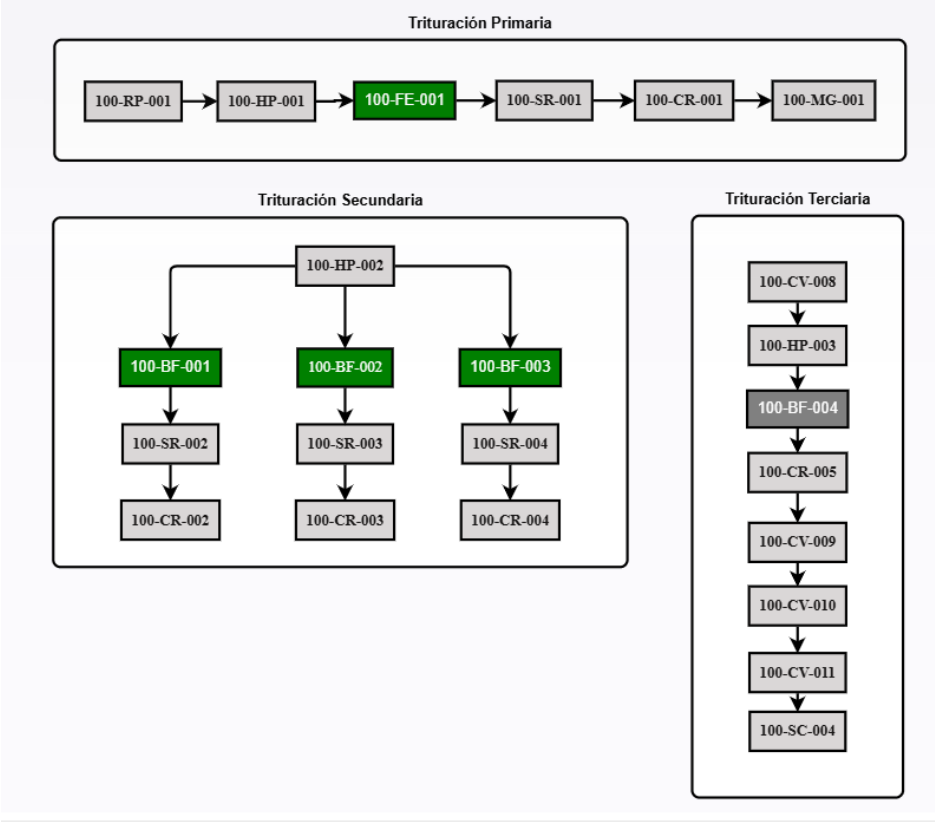
Equipment Status Event Frames (Pi Asset Framework)

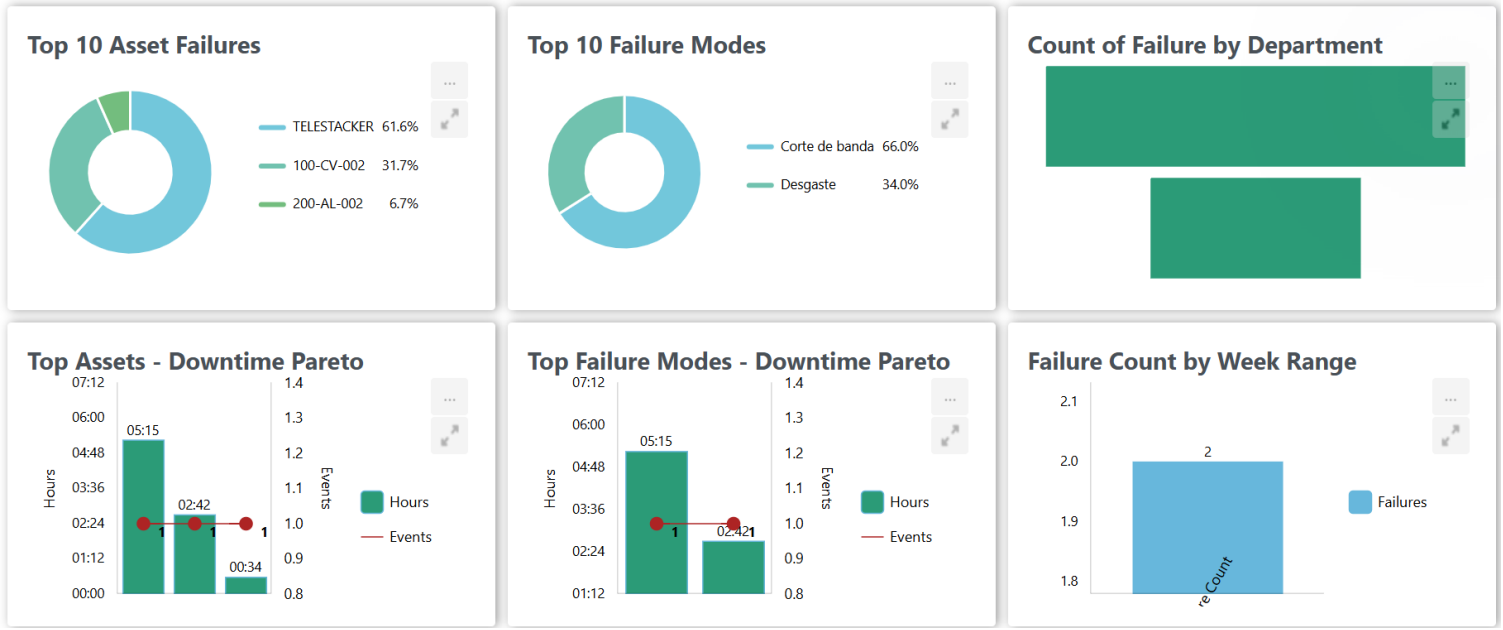
Converts **STATUS tags** from SCADA, originally in hexadecimal format, into binary (0/1) values for downtime analysis.



Downtime Analysis Integration

Event Frames generated from equipment status serve as inputs for third-party applications such as *Downtimes*. This enables comprehensive reporting and analysis of equipment performance.





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