



CHRYSAOR

Increased Equipment Reliability Using Smart Data Analysis

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Objectives

- ❑ How Chrysaor are intending to use smart data analysis to achieve the following on topside equipment:
 - ❑ Maximise production
 - ❑ Reduce cost
 - ❑ Reduce onshore and offshore man hours
- ❑ Early findings from one of our process modules using Smart Data Analysis
- ❑ The current plan for Smart Data Analysis trials in Chrysaor

Big Data Analysis - Where this fits in

Pipeline
Data

Barrier Model
Management

Financial
Data

Production
threat
Tracking

DCS and
ISS Data

Safety and
Environmental
Data

Production
Tracking

Process
Data

Various
Logs

Metocean
Data

Equipment
Panel Data

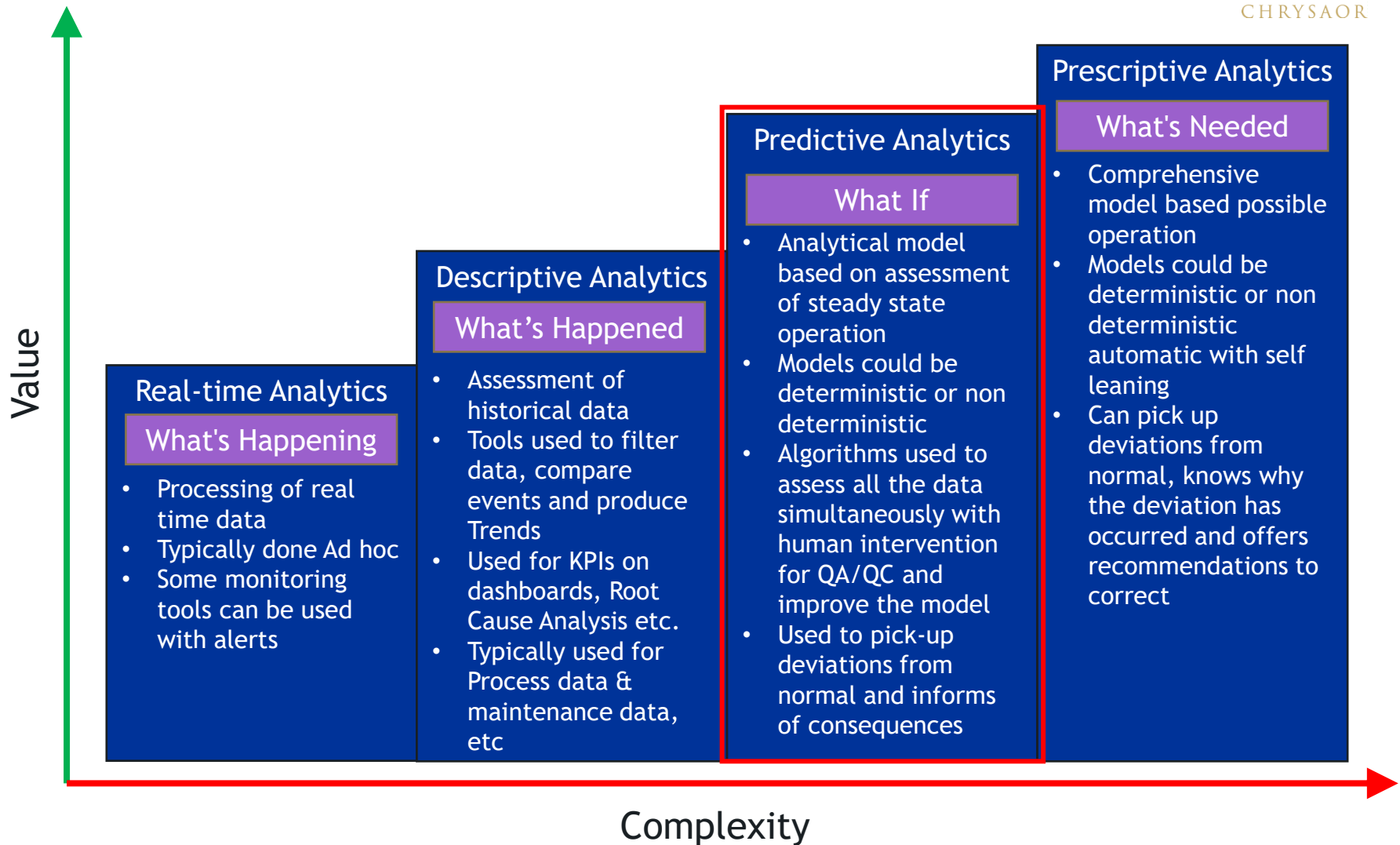
Fluid
Analysis

Computerised
Maintenance
System,

Logistics



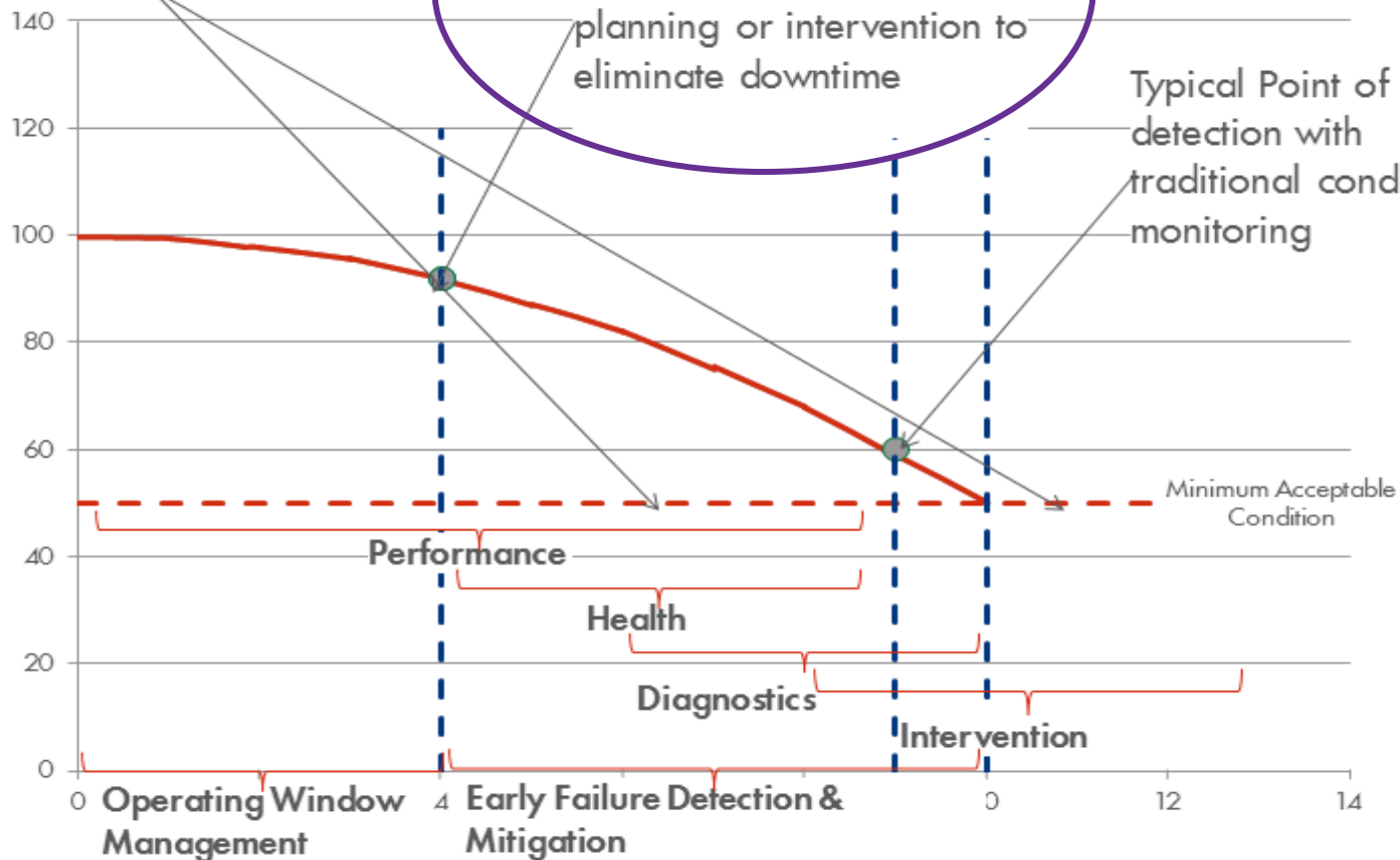
Smart Data Analysis Levels



Equipment Monitoring

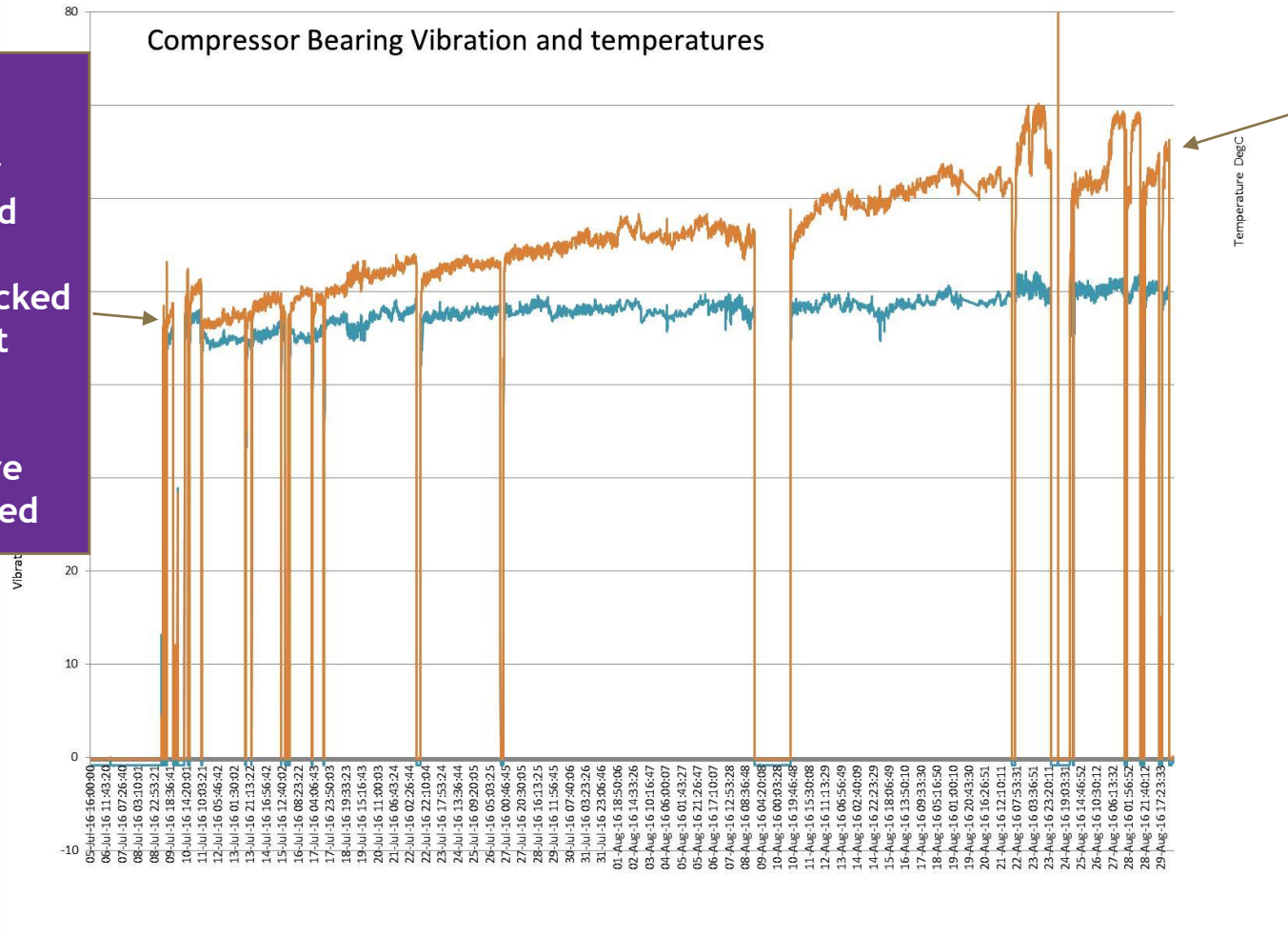
Schedule maintenance could be here or here

Condition

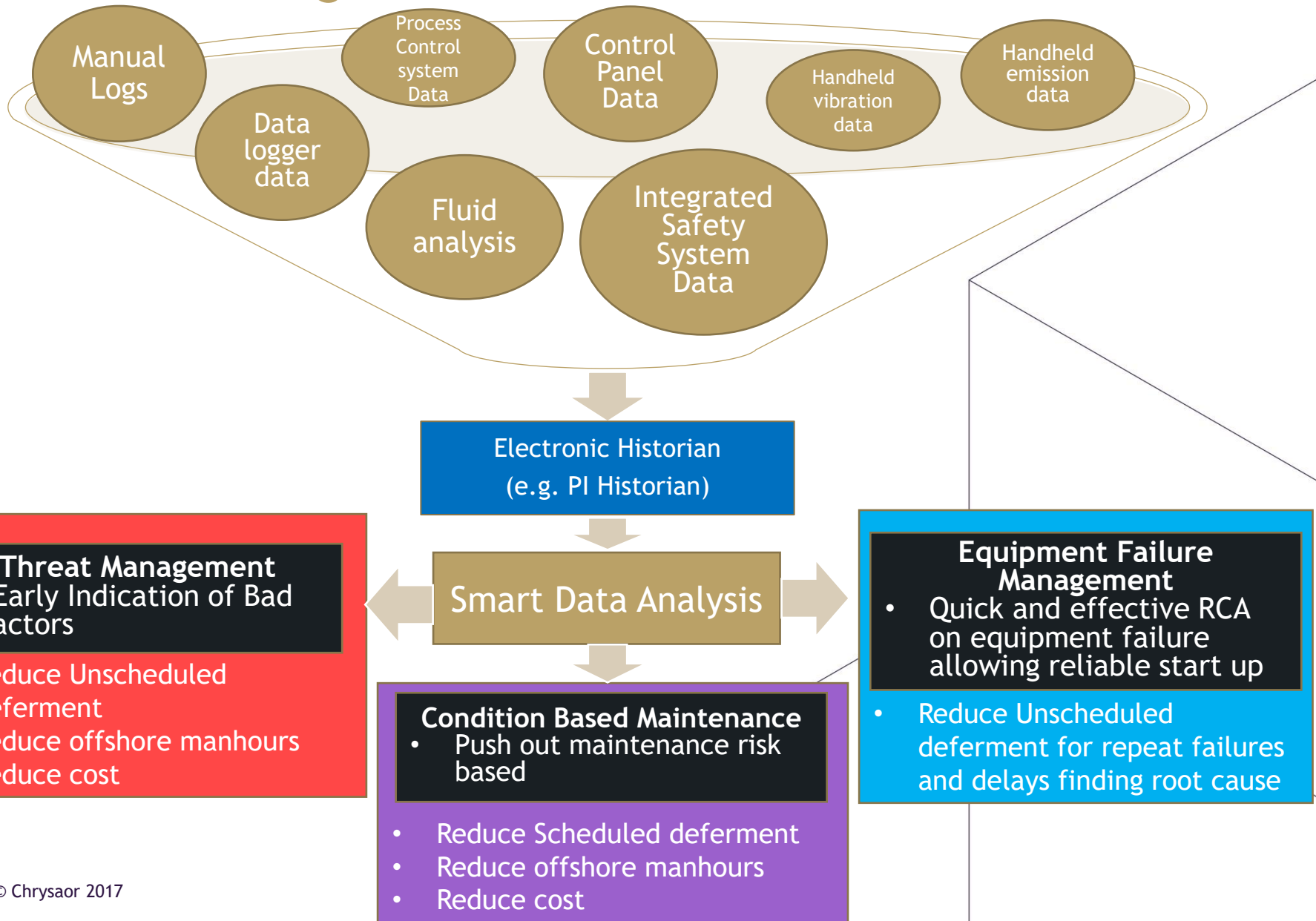


Example - Compressor Bearing Deterioration

Compressor Bearing Vibration and temperatures



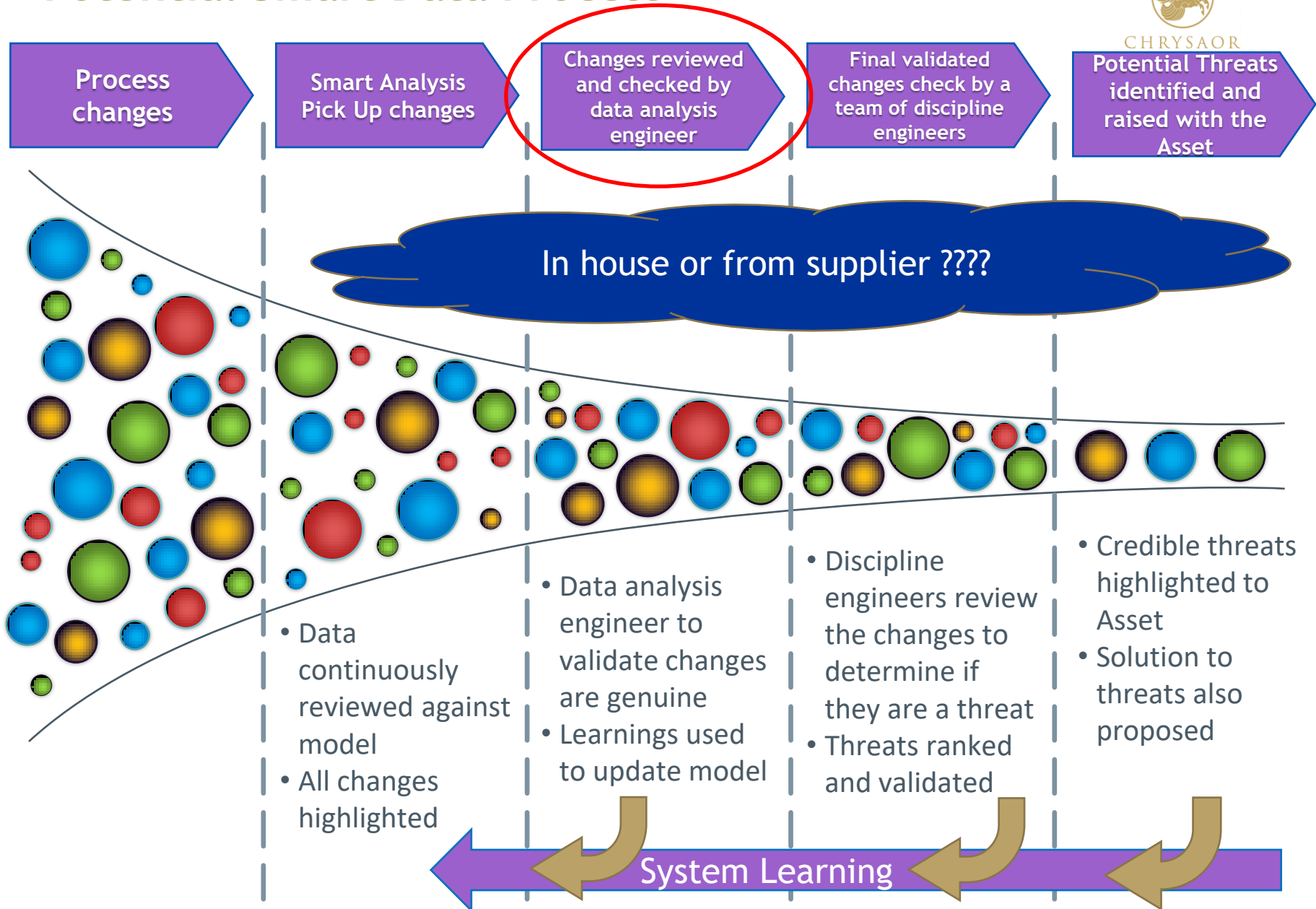
Data Processing



Potential Smart Data Process



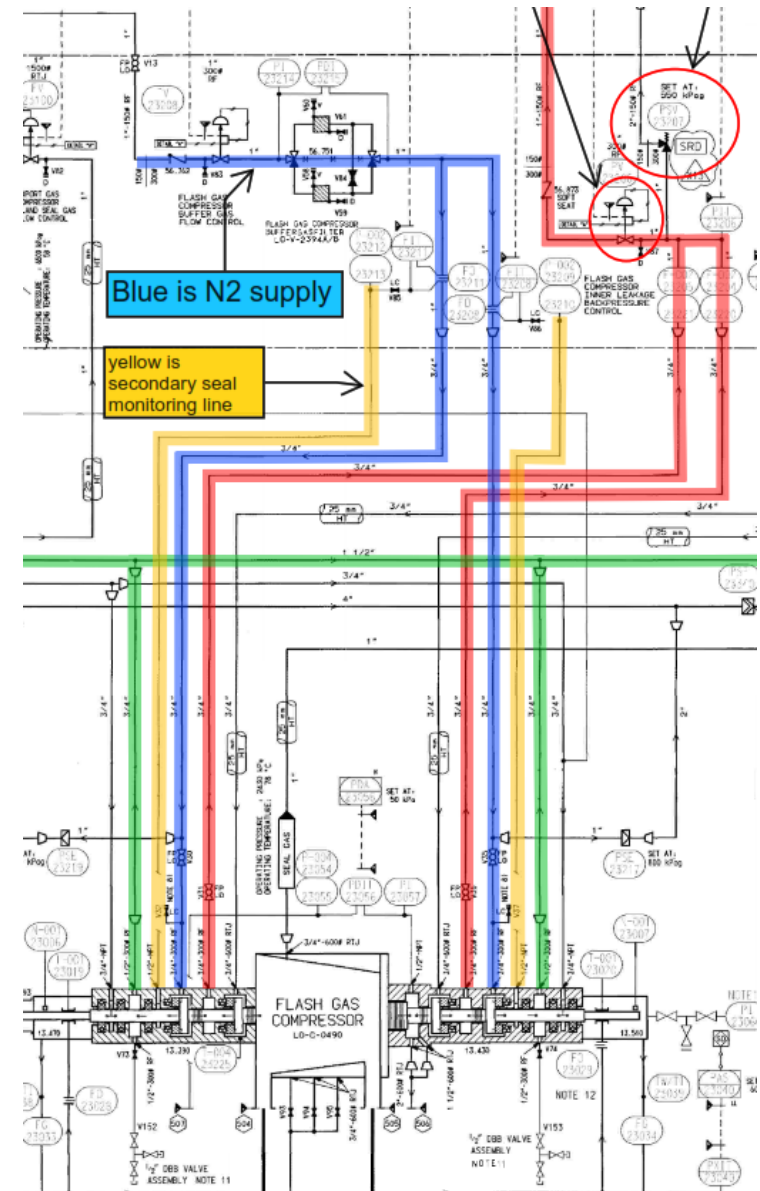
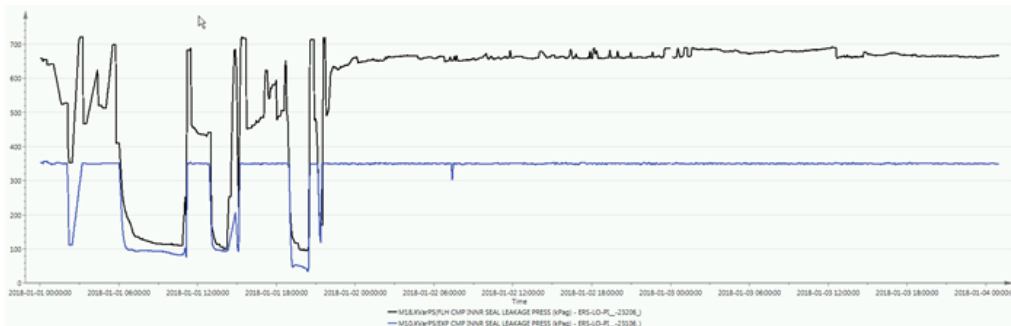
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Example of Success with Smart Data Analysis



- Issue raised due to instability of primary vent pressure and back pressure PCV on dry gas seal system
- Investigation confirmed PCV control was not operating correctly
- PCV bypass PSV was not set correctly approx. 1.5 barg over design set point
- Indications are that DGS on the DE was hung up due to fouling TBC as facility shut down due to other issue and could not be restarted



Summary

- ❑ Chrysaor are intending to use smart data analysis to achieve the following on topside equipment:
 - ❑ Maximise production
 - ❑ Reduce cost
 - ❑ Reduce onshore and offshore man hours
- ❑ Early indications on a trial shows that using Smart Data Analysis can be beneficial
- ❑ Further 12 months trail to be carried out with OPEX on two Chrysaor installations from Q3 2018 - 2019, then re-evaluate if there is value doing this
- ❑ One of the key challenges will be getting the data & telemetry digitized cost effectively so it can be made available for analysis now an in the future



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