



An international oil company needed to quantify the availability of their Safety Critical Equipment (SCE) over the past decade across all their offshore assets.

The project deliverables were to accurately quantify availability, identify the bad actors, and provide a maintenance solution to ensure future compliance.

BENEFITS

- Full compliance of the SCE
- Fit-for-purpose maintenance schedule
- The ability to track future compliance accurately

METHODOLOGY

All of the Corrective Maintenance work orders were extracted from the CMMS (Maximo) for all of the SCE located on offshore platforms over the past decade.

The data was cleaned and screened to allow for operational anomalies before being regressed and analyzed by RAMP-up (ProAIM’s bespoke software for the upstream industry), to enable the availability to be calculated for each piece of safety equipment and its expected future performance quantified.

These availability figures enabled the reliability team to focus its resources on those assets that required additional work. A number of platforms indicated availability levels below those required:

SCE	Availability	Downtime (Hours)	Downtime (Days)
28a-128	98.99	799	33
24t-436	99.98	562	23

A traffic light report was produced to highlight the historical availability performance over the past 10 years.

2013												2014												2015											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	8		84		8	2				12		361	723			6										8		12			1440				30
	30											12	6	4					408							6					34				
	6											12	12	12				4		888	24					8				6	30				
		78					2		8			8		22						240	8	5						15			4			10	
		10		5		8						13		50									6			6								19	8
								117						1				12												13					
1			14							3									110	177	42			845					6	6	388			1734	
																			6		15									5199				12	7
		12								12	6																							22	

A number of SCE assets were then chosen for FMEA, to identify and quantify failure modes and understand any patterns in reliability. Following the analysis, a workshop was held with the management to agree on the fit-for-purpose maintenance strategy (Planned Maintenance and spares optimization) to maintain future compliance. In addition, changes were made to Maximo to ensure the compliance could be accurately measured and reported in the future.

ABOUT PROAIM

A reliability-engineering consultancy based in the U.K. with operations across the globe.

Providing specialist bespoke consultancy with integrated RAM technology and training solutions in the area of reliability and maintenance engineering.

We enable our clients in asset centric process industries, to achieve the safety, production output and costs targets for their business.

ProAIM is one of the leading companies able to quantify the true life cycle costs from design to decommissioning by combining RAM and Process Synthesis with ProAIM's patented RAM-int.

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