

Operators regularly spend considerable time and resources on inspections to maintain plant integrity.

To increase asset reliability, Integrity Management has shifted from a broad time or risk based approach to a targeted and cohesive approach using Process Control and Integrity Operating Windows API RP 584 (American Petroleum Industry Recommended Practice).

Integrity Operating Windows (IOWs) are created as a subset of your Process Control operating limits. IOWs link operating limits, with impacts of process variables—feedstock quality, operating conditions or process configurations—to identify predictive limits that can be monitored and controlled, to reduce the likelihood and rate of damage.

By understanding the consequences of excursions outside of IOWs you can proactively manage integrity and target why, what and when you need to inspect, resulting in:

- Minimising unplanned down time and shortening planned shutdowns;
- Enhancing profitability by eliminating cost and improving reliability; and
- Reducing risk and meeting regulatory obligations.

Our team pride themselves on the strong relationships, founded on trust, they have with our customers—they ensure dollars aren't spent when they don't need to be.

Connect with us to discover more.

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Integrity Operating Windows are a predictive and proactive approach to strengthening your Integrity Management program.

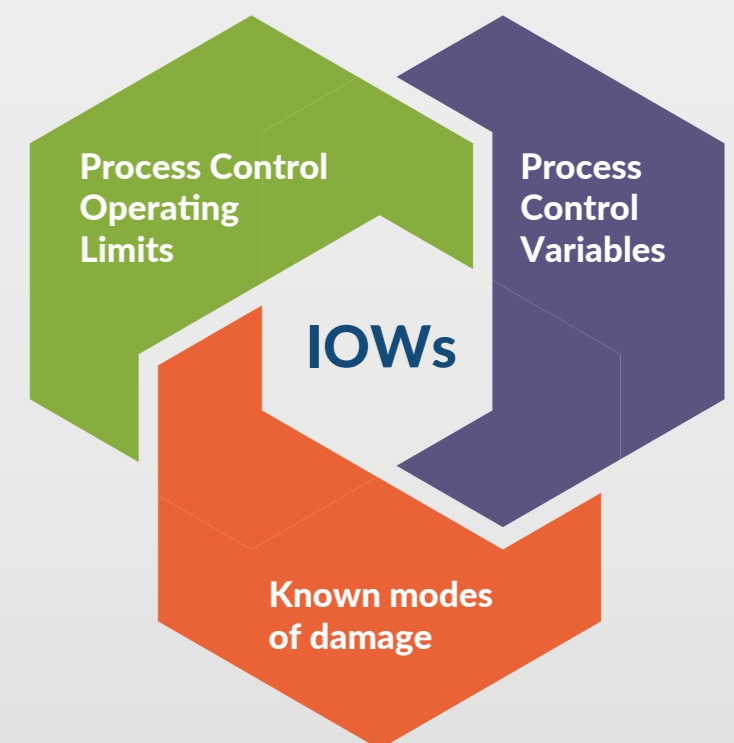
Time based inspection results in reactive maintenance or replacement.

Risk based inspection prioritises inspections based on likelihood of failure and consequence.



Integrity Operating Windows (IOWs) provide the rigorous basis for proactively managing plant integrity.

Objective Based Regulation is recognised internationally by regulatory authorities, risk management professionals and academics as being the most appropriate regulatory framework for high hazard industries*



Implement Integrity Operating Windows

Predict, avoid and prevent unexpected equipment degradation that could lead to loss of containment by implementing Integrity Operating Windows API RP 584*

PHASE 1 ▶

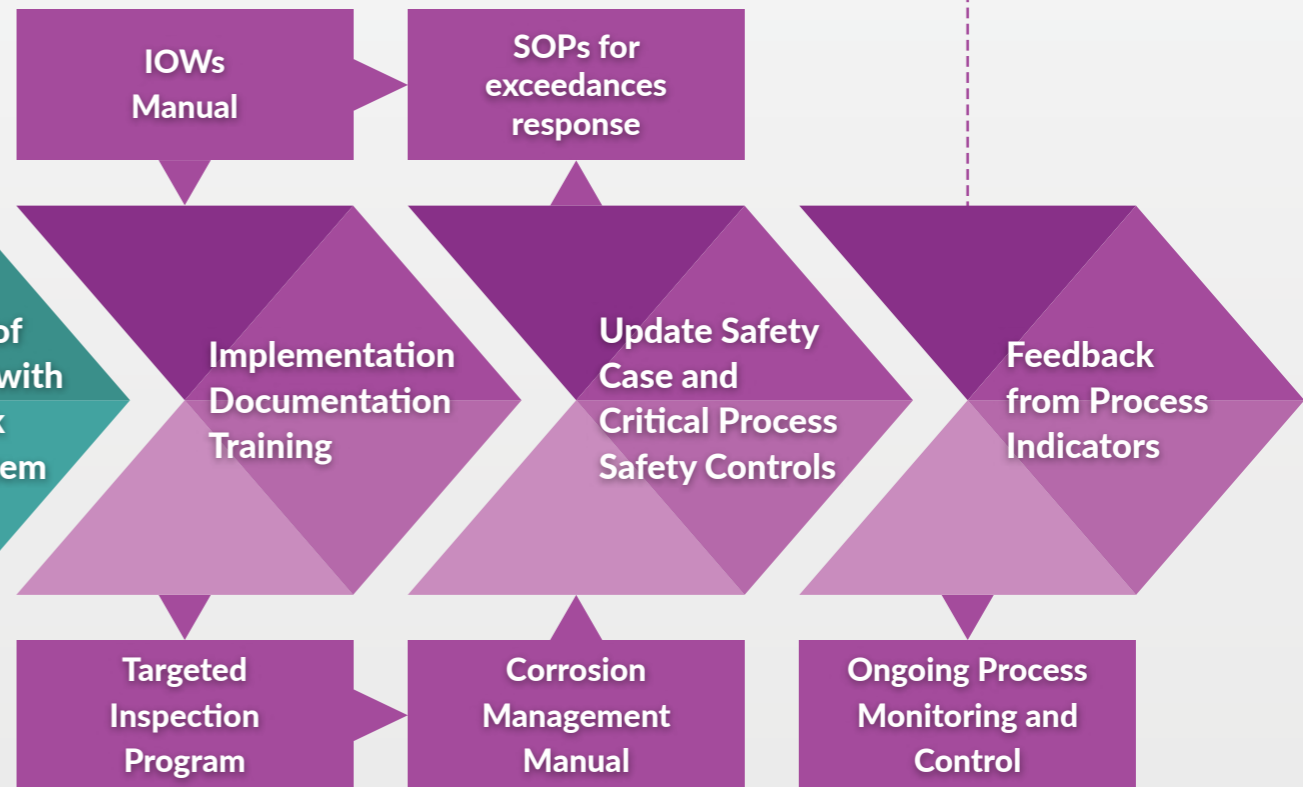
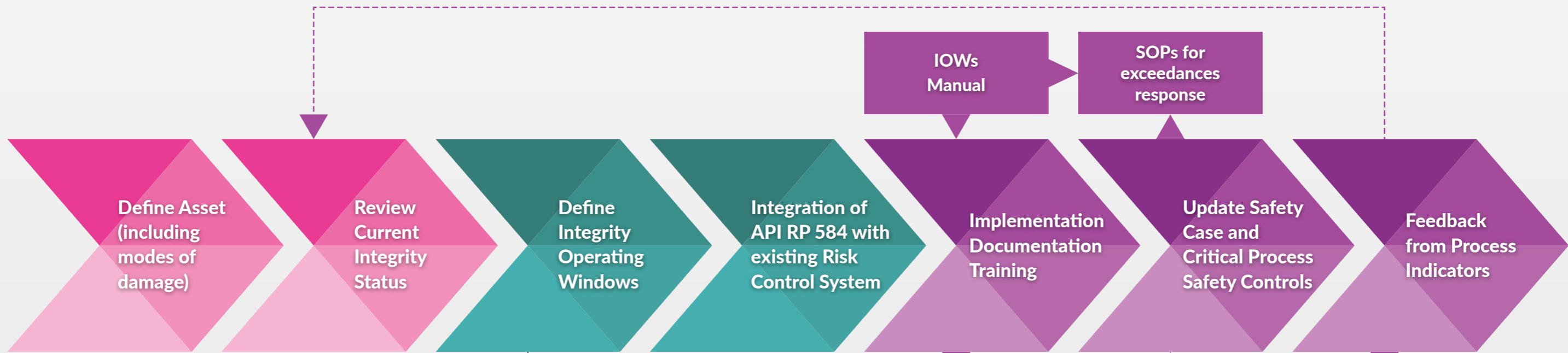
Identify the drivers of damage that potentially threaten plant integrity.

PHASE 2 ▶

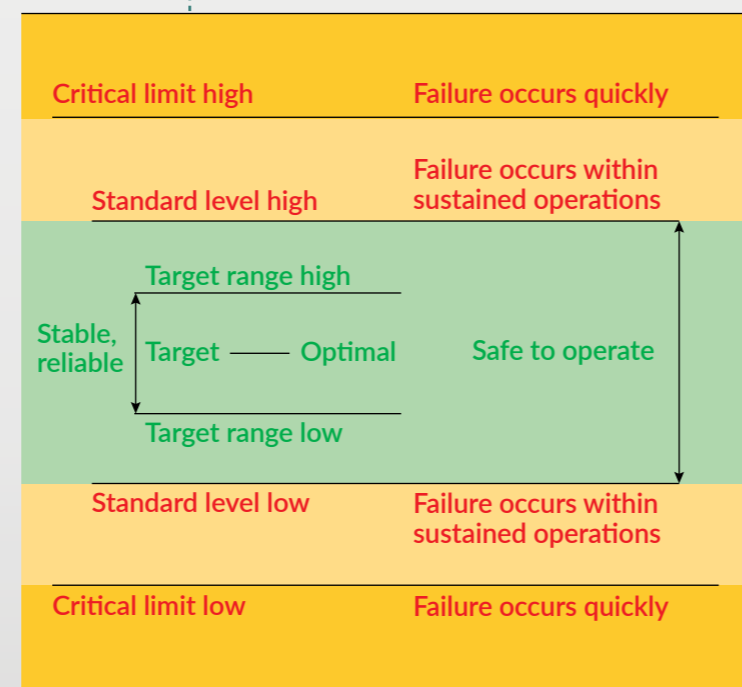
Use process control and knowledge of degradation to target what, why and when to inspect.

PHASE 3 ▶

Manage plant within predefined IOWs that meet business production objectives and optimise reliability.



- ▶ Provides limits for informational, standard or critical thresholds
- ▶ Identifies instruments for reporting critical process or mechanical control parameters (e.g. pressure; CO₂; cyclic strain)



- ▶ Establishes consequences of excursions outside of IOWs
- ▶ Includes responses to exceedances

FOR EXAMPLE:
Carbon steel corrosion rate in dry gas is insignificant at < 0.01 mm/yr. Knowing the moisture content eliminates the need for inspection of wall thickness.

Piping integrity is ensured by consistent operation within the IOW limits for moisture, to be validated by process control records.