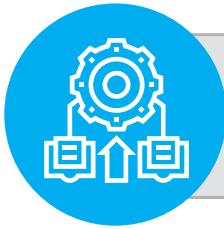**PHM Technology**
Decisions better made

Syndrome Diagnostics

- **Causation-based AI**
- **Real-time Fault Detection & Isolation (FDI)**
- **Incipient Failure Identification**
- **Optimized System Availability**
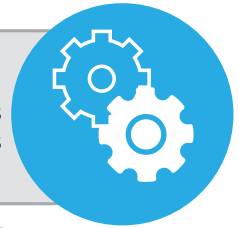- **Industry 4.x ready**

Syndrome Diagnostics (SD) is a Causation-based AI (Cb-AI) tool that delivers real-time Fault Detection and Isolation (FDI) capability. Designed for complex, safety & mission critical systems, SD identifies incipient failures with a reliability, speed and confidence not possible with correlation-based AI tools. SD is the industry standard in predictive maintenance technology.
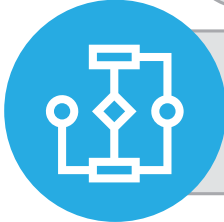
SYNDROME DIAGNOSTICS

Causation-based AI (Cb-AI)

SD sets new standards in delivering rapid and reliable FDI analysis not achievable from competing systems. Our Causation-based AI identifies the true cause of a failure, not only the symptoms.

Digital Risk Twin

SD leverages the Digital Risk Twin (DRT) to understand how a system is designed to operate, and identify all its potential failures. This ensures consistency between design and operations.

Avoid Overfit

Avoid incorrectly attributing failures based on an incomplete training set of data and lack of domain knowledge because SD utilizes a Causation-based approach.
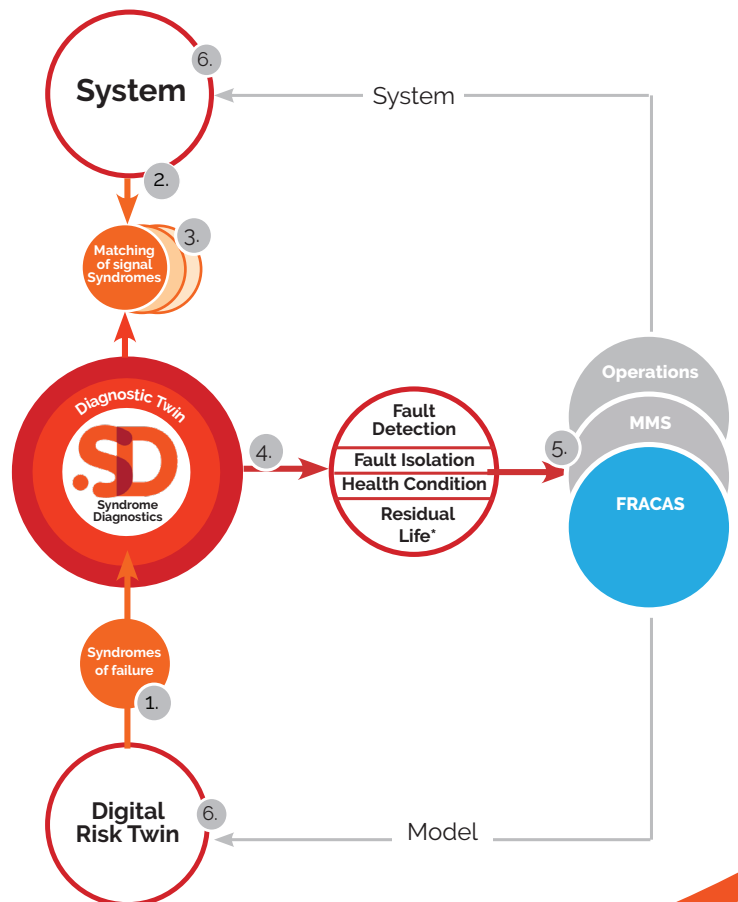
Understand Why Your System Fails

The combination of the DRT and our Causation-based AI approach within SD means that you better understand the health state of your system and the possible failures that can occur.

How Does It Work?

1. Analyses from the DRT establish syndromes of failure.

2. Data from the monitored system is extracted and processed to clean data.

3. Autonomous analyser algorithms are used to identify anomalies in the data.

4. Matching of the syndromes of failure with the identified syndromes of failure from the DRT.

5. Identified faults are communicated for corrective actions, closing the loop in the w process.

6. Updates the DRT to enable continuous improvement of the system based on technical analyses.

System

6.

2.

Matching of signal Syndromes
3.

Diagnostic Twin

SD
Syndrome Diagnostics

4.

Fault Detection
Fault Isolation
Health Condition
Residual Life*

5.

Operations

MMS

FRACAS

System

Syndromes of failure
1.

Digital Risk Twin
6.

Model

*In planning & development stage

PHM Technology
Decisions better made

SD SYNDROME DIAGNOSTICS