

# Asset Health Center

## Enabling enterprise-wide, end-to-end asset management

ABB's Asset Health Center enables utilities to establish enterprise-wide, end-to-end asset management business processes to lower costs, minimize risk and improve reliability.

### Overview

Aging equipment is not a short-term challenge for the electric power industry — it is a core business driver in this asset intensive industry. Transformers, circuit breakers and other critical assets in transmission and distribution systems are expected to continue to perform reliably for years, and in many cases, well beyond their original intended working life.

### The asset health management imperative

The decentralized lifecycle management strategies that have dominated utility asset health management are unable to provide the kind of visibility and intelligence-rich Key Performance Indicators (KPIs) across the enterprise that today's utility executives must have to make informed asset lifecycle decisions.

The advent of integrated smart grid communications and technologies allows utilities to build a decision platform for end-to-end asset health management that supports the kind of robust enterprise-wide, engineering-based analysis necessary to achieve the important improvements market conditions require. For the first time, utilities are now able to drive development of end-to-end asset health management business processes that combine system integration and business intelligence, with an embedded understanding of the equipment itself, to optimize overall asset health enterprise-wide.

An enterprise-wide, end-to-end asset health management solution enables utilities to align strategy and tactics to:

- Achieve reliability, performance and compliance goals
- Prioritize equipment and/or facilities for repair/replacement
- Optimize work force productivity, efficiency and effectiveness
- Minimize maintenance and repair costs
- Maximize network performance
- Reduce risk of asset failure



### ABB Asset Health Center

The ABB Asset Health Center uniquely embeds ABB's transmission and distribution (T&D) engineering, equipment monitoring and systems expertise into a comprehensive intelligence platform that enables utilities to establish enterprise-wide, end-to-end asset management business processes to manage O&M costs, minimize risk and improve reliability. In other words, we make the data actionable so you can make the most cost effective decision(s) possible.

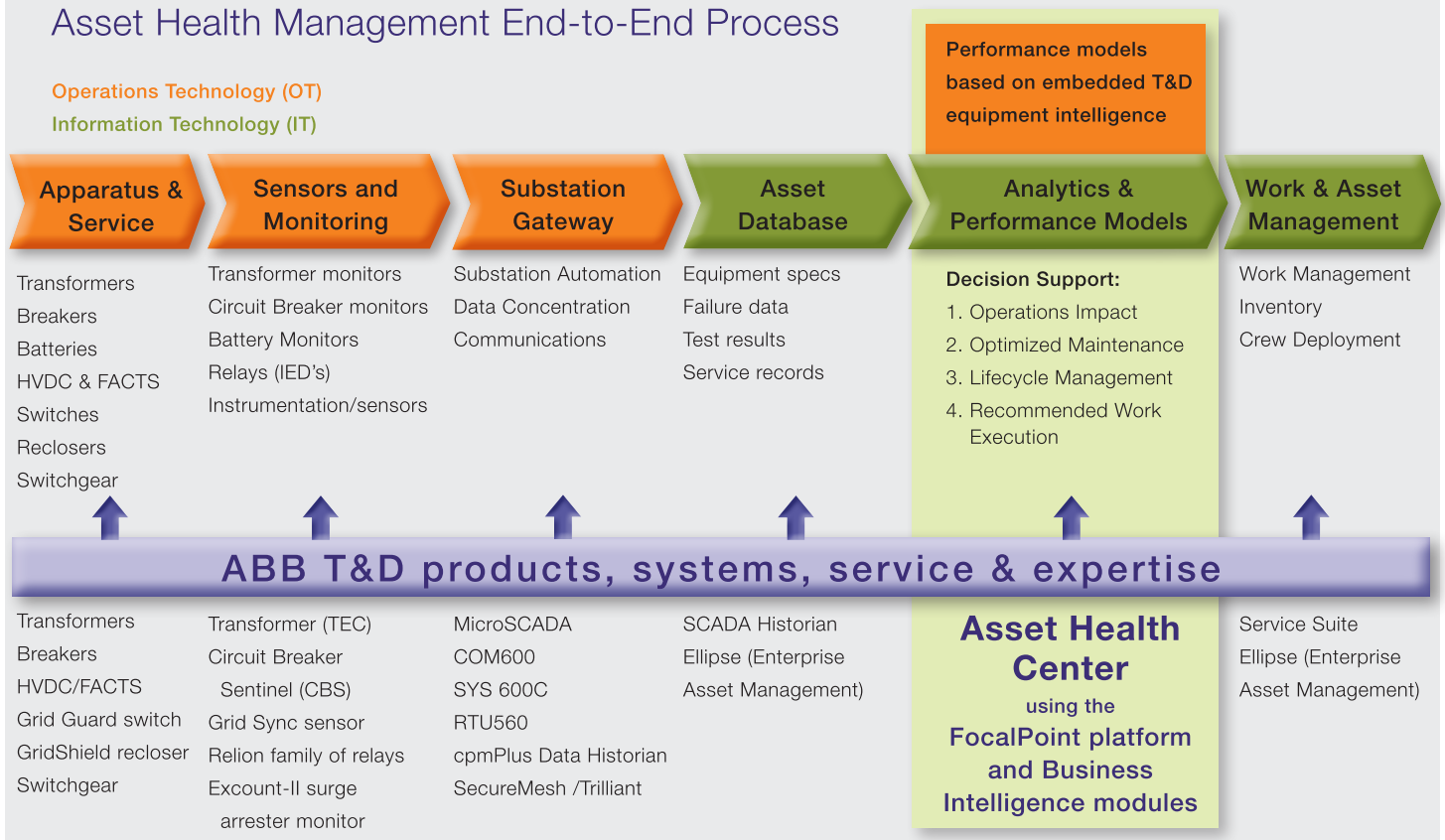
### Apparatus expertise

ABB recognizes that one of the most important aspects of any end-to-end solution starts with a deep knowledge of mission critical assets. ABB has extensive design knowledge of critical substation assets including: transformers, high voltage circuit breakers and substation batteries. This expert knowledge is embedded onto our intelligent platform to create an optimized asset health solution. Expert knowledge allows ABB to provide customers with an automated tool, capable of tracking significant changes in technical operational parameters of assets to minimize operational risk.

### Data integration

The Asset Health Center combines data from a variety of sources, including real time data from sensors and monitoring devices, as well as facts and dimensions from other resources such as ERP systems and data warehouses. The data is assessed using algorithms that can recommend actions based on the current conditions. The algorithms will also rank all monitored assets based on likelihood of failure, in order to inform maintenance regarding asset replacement decisions.

# Asset Health Management End-to-End Process



## Business intelligence

Processing the ever increasing amount of data available to utilities today into actionable intelligence requires more than just software. In order to extract knowledge from the data, and deliver it to multiple constituencies across the enterprise, the asset health platform needs to be embedded with an intimate understanding of the assets, systems and processes.

The ABB Asset Health Center's business intelligence module integrates operations technology (OT) and information technology (IT) to support decisions based on an asset's present condition based on all available sources providing data about the asset.

The business intelligence module pulls data from all available sources to provide information that

- Triggers alarms
- Initiates condition-based work orders
- Feeds asset health dashboards
- Drives decision-support processes
- Enables a transparent process for lifecycle management of assets determining when to retire and when to refurbish or upgrade equipment.

## Benefits

Implementing the ABB Asset Health Center allows utilities to leverage new smart grid technology investments to:

- Provide timely, accurate analysis of critical assets to achieve asset performance goals and operational excellence
- Facilitate condition-based maintenance practices that minimize risk of unplanned outages due to catastrophic asset failure
- Optimize equipment and human assets across the network
- Do more with less through improved work force productivity, efficiency and effectiveness for maintenance and capital projects
- Improve operations and maintenance efficiencies through implementation of standardized business processes across asset classes
- Mitigate the risk of missing critical deadlines for compliance performance, avoiding potential safety hazards and costly fines.

## ABB Inc.

### Asset Health Center

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