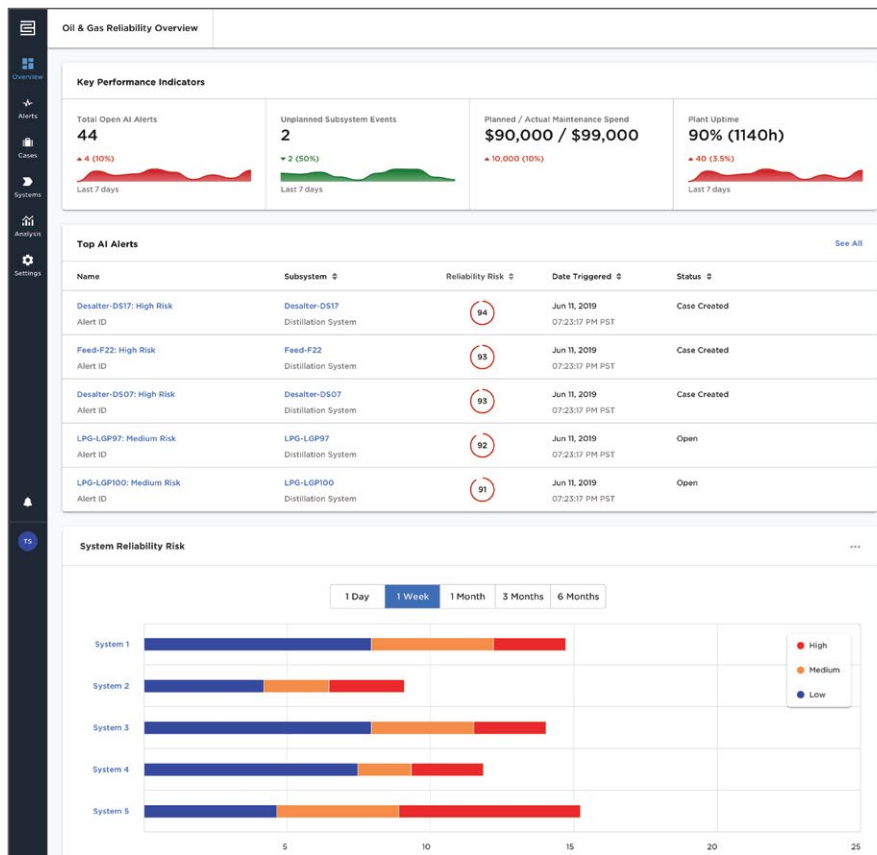**BakerHughesC3.ai**

BHC3 Reliability

Take Early Action to Identify and Prevent Anomalies

BHC3 Reliability™ is a fullstream AI software solution that provides reliability engineers, process engineers and maintenance managers with AI-enabled insights to address process and equipment performance risks. The application identifies anomalies, provides prioritized alerts to operators, recommends prescriptive actions, and enables collaboration across the enterprise. The application delivers value through increased revenue from recovered production, reduced costs of unplanned downtime, extended equipment life, and improved safety in operations.

BHC3 Reliability uses unsupervised and supervised machine learning algorithms to identify issues that can lead to equipment downtime and process upsets. Major systems monitored include off-shore oil platforms, downstream refineries, and connected field equipment. The application leverages the BHC3 AI Suite™ to integrate enterprise-scale data from disparate sources such as individual sensors, operational systems, and enterprise-data historians.


BHC3 Reliability provides a comprehensive set of visualization, diagnostic, and collaboration tools to investigate and act against equipment and process-related risks.

Feature Summary

- **System-of-systems AI approach**
  Leverage AI to identify equipment and process issues that impact system-level health and operational performance. Understand how individual tags across independent systems are related to overall system health.

- **Unsupervised anomaly detection**
  Leverage cutting-edge deep learning and machine learning technology to identify anomalies in process flow and equipment performance.

- **Root cause identification**
  Prescribe failure mode recommendations to guide reliability engineers to enable faster, more consistent, and traceable root cause investigations.

- **Continuous learning**
  Continuously learn and improve AI models based on new data and user feedback. Increase the accuracy of failure mode recommendations and anomaly detection alerts over time.

- **Prioritized alerting**
  Focus operations on prioritized alerts and reduce the number of unnecessary alerts through AI-enabled detection and categorization of process risks.

- **Visualization across process equipment**
  View and traverse unified process data at the aggregate system or facility level or drill down to understand individual equipment performance.

- **Seamless integration with existing tools**
  Create work orders and launch investigation cases directly from the application. Integrate with existing systems to enable a seamless digital reliability program.

Anticipate Equipment and Process Risks, Investigate Issues, Prioritize Actions, and Enable Closed-Loop Feedback

- **Respond to risks and anomalies** in process flow and equipment performance, along with failure process upset predictions.

- **Investigate and take action** using AI-recommended failure mode assessments for each identified risk. Conduct RCAs and failure mode effects analysis with all relevant data.

- **Assess system and subsystem health trends** over varying time intervals across configurable risk indicators.

- **Collaborate across the enterprise** with case management tools, including data investigations, messaging, user tagging, file upload, and external messaging (e.g., email or text).

- **Aggregate process data** to view all relevant data for interdependent process equipment. Understand how tags from independent systems correlate to distinct process steps.

- **Track, benchmark, and rank performance** of regions, facilities, systems, and equipment based on configurable health and reliability metrics.

- **Optimize operations and capital** expenditures by proactively planning reliability improvement projects and minimizing unplanned downtime.

BHC3 Reliability Delivers Value to Fullstream

- **Improved recovered production** due to early identification, prioritization, and resolution of equipment and process risks.

- **Longer equipment life** by improving operating conditions and turnaround decisions with data-driven history and risk predictions.

- **Reduced unplanned downtime** by proactively addressing process and equipment reliability issues. Prepare operators with prescriptive actions to change operating conditions and reduce upset risks.

- **Improved safety** due to a reduction in high-risk emergency repairs.
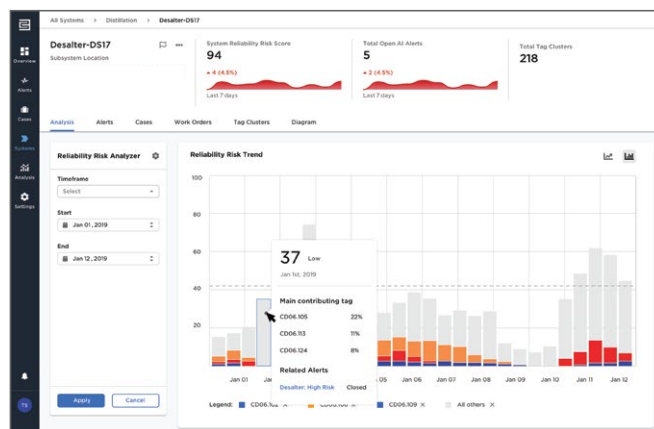
BHC3 Reliability is designed to help oil and gas operators anticipate, prioritize, and take action to address equipment risks and process upset conditions.

Proven Results in 8-12 Weeks | Visit BakerHughesC3.ai/get-started