# Emerson Alarm Management Solution for Greenfield

Many capital projects have the requirement to perform Alarm Management as a part of the engineering process. These services are better performed under the MAC approach. We would assign an Alarm Management Engineer to be a part of the customer's team reviewing alarm data provided by package vendors and the EPCs. It is critical that certain requirements are in-place with package vendors to ensure that the appropriate data is available from their system. The Alarm Management Engineer will work with vendor specifications upfront to avoid costly change orders or reduced quality later in the project.

During Detailed Design, the Alarm Management Engineer reviews causes, consequences and operator action data, attends HAZOPs, and P&ID reviews. They ensure instrumentation is appropriately positioned for both advanced controls and Alarm Management purposes. Once the alarms limits and alarm rationalization data (causes, consequences of inaction, and recommended operator response, etc.) are established, they assign priorities per the alarm philosophy and communicate configuration to the control system configuration team. Having an effective alarm system reduces risk, shortens startup time, and reduces potential equipment damage during initial startup.

During the greenfield process, we collect a lot of information about process and equipment limits. We refer to that as boundary data. As the project progresses, this boundary data is used for a lot of different items including alarm management.
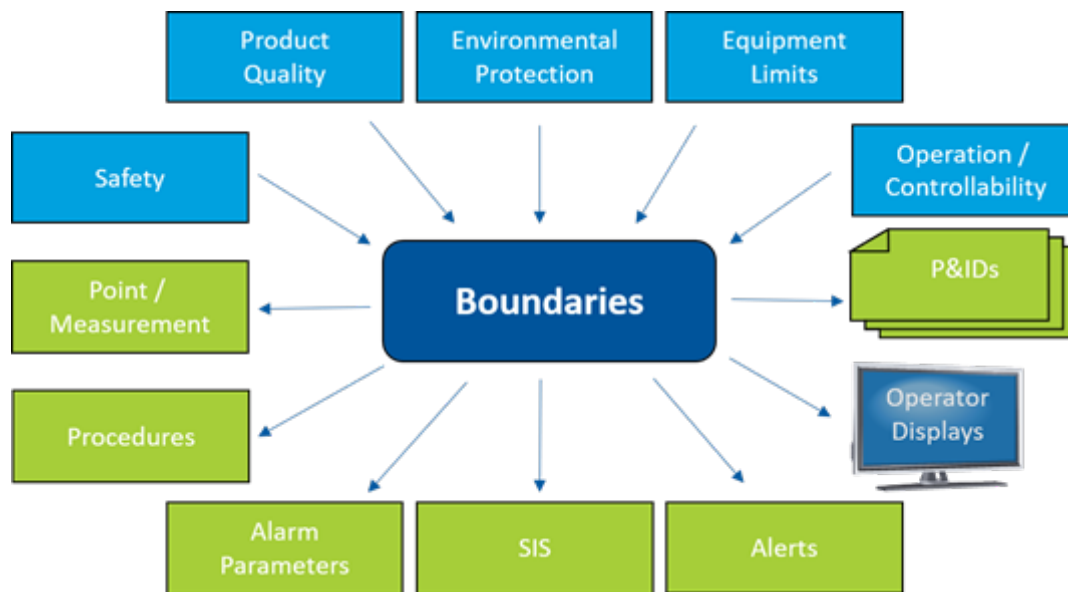
Boundary Collection and Application

Boundary information can be collected in Emerson's AgileOps solution by instrument location and equipment before control and safety configuration is established. The AgileOps solution would be used by the Alarm Management engineer and others on the team to qualify boundary information into alarms. This reduces lost time and errors in transforming and communicating data.

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Linking a Boundary to an Alarm

AgileOps can be used to design and implement Dynamic Alarming. This reduces the cost and errors in providing detail control system configuration to support dynamic alarms. Dynamic alarming ensures that alarm floods are not generated on plant start-up, upsets and shutdowns and provides the largest safety benefit in alarm management.
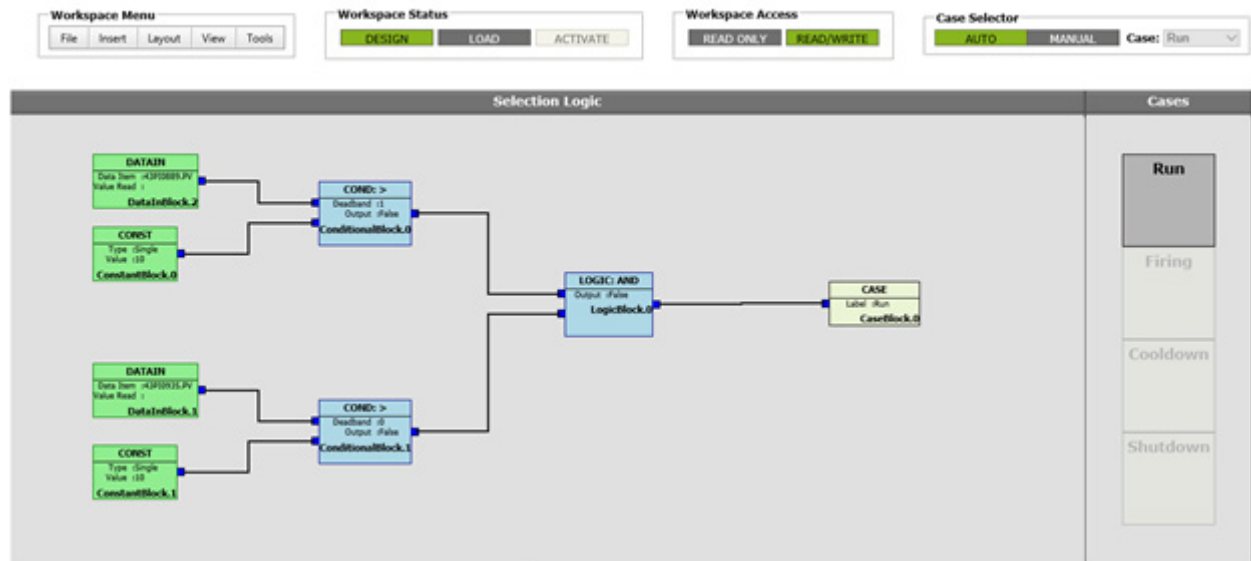
AgileOps Dynamic Alarm Management Workspace

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AgileOps Dynamic Alarming Specification

AgileOps can be used to audit the final control system configuration during FAT and SAT and continue into the operational phase of the plant as a part of the DeltaV or other control system.

Our Alarm Management Engineers and AgileOps solutions are focused on delivering on both our Project and Operational Certainty promise.

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