Category

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Data Literacy for Manufacturing & Industrial Operations Playbook

Reading process data well enough to tell a real quality signal from routine noise

- Practitioner
- Intermediate
- Template Included

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- 4 minute(s)

Overview

A framework for building data literacy within manufacturing and industrial operations teams — statistical process control fundamentals, sensor data reliability judgment, and root-cause versus symptom distinction — addressing the specific need for operations staff to distinguish genuine process signals from routine variation using appropriate statistical thinking.

Manufacturing already has strong quality control traditions —

isn't data literacy already well established? Traditional quality control (inspection, defect counting) is strong in many manufacturing environments, but genuine statistical process

control literacy — distinguishing normal process variation from a genuine signal requiring intervention — is a related but distinct skill that's not universally well developed, even in quality-conscious operations.

What's the most common data literacy gap specifically on the

factory floor? Reacting to every individual data point outside a target value as a problem requiring intervention, rather than distinguishing normal process variation (common cause) from genuine signal (special cause) using statistical process control principles.

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