

Archetype

Aftermarket quality & diagnostics

Design & development

Process performance & yield

Anomaly detection & asset health

Primary data inputs

Unstructured text, issue logs, service manuals, global inventory

Heterogeneous text, engineering metadata, PLM/ERP data

MES logs, recipe parameters, throughput KPIs

Process telemetry, CMMS history, LIMS data

Strategic value

High (Often centralized IT data)

Moderate to High (Scales engineering knowledge)

Moderate (Augments performance correlation discovery)

Moderate (Augments alerts with multi-system RCA)

Mistake tolerance

High; human-in-the-loop validates steps

Moderate; requires verifiable proof chains

Moderate; assists process engineers

Low; safety-critical domain