Smart Automotive Manufacturing

falkonry

Enhance operational reliability through condition-based actions

Address disruptions *before* they impact operations

Timely, understandable alerts
Discover and understand real-time operational issues

Centralized data monitoring
Better decision making through centralized plant-scale analytics

Effortless activation & scale
Operationalize and expand with minimal resources, time, and effort

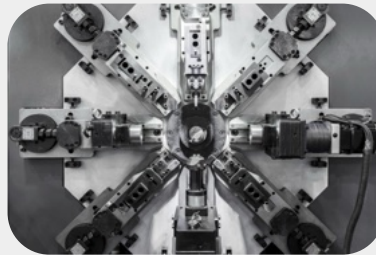## Application across automotive manufacturing operations

|	**Welding**	**Wire Bending**	**Robotic System**
Problem:	Quality of machine welds varies over time resulting in expensive manual rework	Undetected quality deviations at point of production lead to downstream production waste	Unscheduled downtime of robotic equipment leads to over $10,000 per minute of downtime
Solution:	Discover patterns that precede quality variation in robotic welds and provide smart alerts preceding defective welds	Identify quality deviations by comparing observed patterns with known good patterns to eliminate defects during production	Discover patterns that precede downtime and provide early warning to schedule maintenance and prevent any unscheduled downtime
Benefit:	96% reduction in downstream rework and material losses without increasing inspection costs	Real-time quality monitoring results in improved production yield	Throughput improvement and cost benefits due to reduced incidence of equipment downtime

> *"We analyzed 62,000 welds in about two and a half minutes. Our engineers were able to look at the different classifications that Falkonry identified and identify which welds were superior, which were good, which were normal and which were poor."*
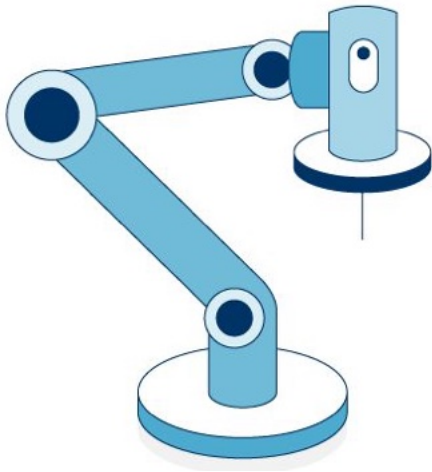>
> ***CIO & SVP***
> ***Toyota Material Handling, North America***

Falkonry Solution Framework
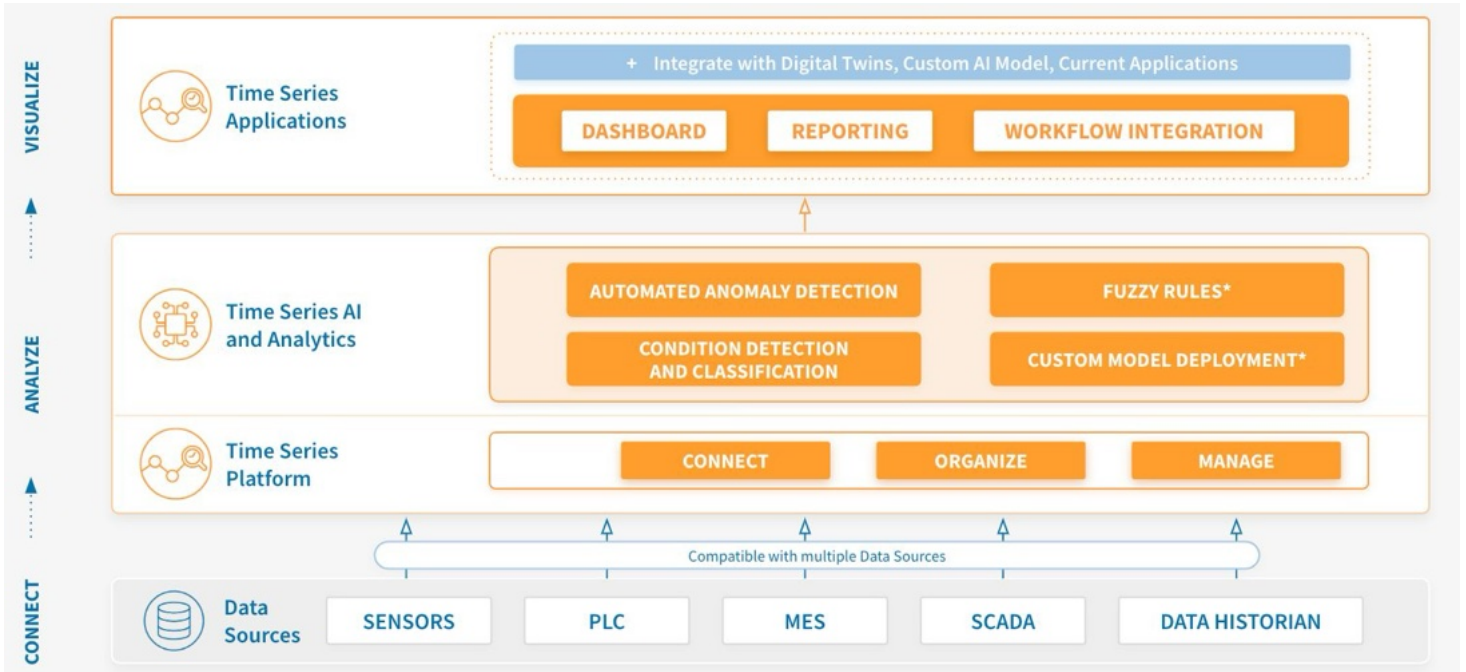
Case study: Quality defect reduction using time series AI

Automotive Welding Operations

$14,000 per machine per day rework cost

- Falkonry's AI Suite helps limit process failures and uphold strong product standards

- Falkonry is able to identify bad welds before they turn into quality and warranty issues

94%	**96%**	**10-20** mins
accuracy in classifying welds	reduction in welds sent for rework	to discover patterns