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Persistent's Track-and-Trace solution suite for the manufacturing industry

Persistent's Track-and-Trace solution suite for manufacturing, powered by Appian's class leading enterprise low code automation platform addresses the key pain-points related to real-time tracking of the manufactured product and its lineage.

The Challenge

In any discrete manufacturing or assembly plant, product traceability is a key requirement to track all the relevant attributes and components that make up the product. With the focus on quality and compliance, the need to trace the product attributes and its lineage is paramount. Traditional methods of manually tracking product lineage are extremely time-consuming and prone to errors which could result in rework and an increase in logistics and maintenance costs.

According to a report published by Acumen Research and Consulting in June 2019, the global track-and-trace solutions market is estimated to grow at a CAGR of at least 18% between 2019 to 2026 to reach a market value around USD 7.2B by 2026.

The application of traceability spans various functional aspects of manufacturing, including **quality improvement, process improvement, cost management, risk mitigation, regulatory and process compliance** and indirectly improves the **customer experience and branding** of the organization.

Manufacturing plants are now moving to automated traceability solutions that capture, store and manage product attributes and process flows at various stages of a product lifecycle. All the data captured throughout these stages is available in real-time for further analysis and helps in improving operational efficiency and customer experience.

Persistent's Track-and-Trace Solution Suite

The Track-and-Trace solution, based on underlying technologies such as Workflow Management, Data Acquisition, Visualization and Analysis, can support a wide range of potential use cases in the following areas:

Production

Real-time tracking and visualization of product and production tools with component-wise traceability enhances the quality of the products and results in better utilization of the assembly line.

Impact — Up to 20% reduction in reverse logistics costs. Up to 50% counterfeit reduction.

Sales & Customer Experience

End-to-end tracking of product availability, proactive monitoring, product recalls and reverse logistics, counterfeiting to deliver an enhanced customer experience.

Impact — Up to 25% scrap and rework reduction. Up to 20% efficiency improvement.

Maintenance, Supply Chain & Logistics

Real-time visibility of raw material flow, inventory monitoring and optimization, fleet management, warehouse management to deliver operational efficiency.

Impact — Up to 10% Maintenance cost reduction. Up to 25% reduction in spare parts inventory.

Case Study

A global auto component manufacturer has automated the tracking of all components and attributes of their product as it transitions through different stages of the assembly line.

This helps them achieve superior quality by digitally capturing product attributes in real-time and flagging any potential issues with the product. Further, the solution also tracks all rework effectively, thereby improving the overall efficiency of their assembly process.

Powered by **Appian's class leading enterprise low code automation platform**, this solution delivers the following:

- Captures relevant product attributes digitally from the originating source at each step of assembly

- Customizable reports

- Templatized solution with the flexibility to implement different use cases

- Provides a traceability report including all components for each assembled product providing details about the date & location of product assembly, batch details of components used, product attributes, worker details etc.

- Integration with a variety of manufacturing controllers such as PLCs and CNCs

- Standard set of manufacturing data models

- Ability to create product assembly workflow process with agility to support on-demand changes

- Supports different levels of authorizations and work-flows related to it

- Detailed effort tracking & time spent by each worker, including reworks and quality fixes

About Persistent

Persistent Systems (BSE & NSE: PERSISTENT) builds software that drives our customers' business; enterprises and software product companies with software at the core of their digital transformation.

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