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Making digital happen



Microland's turnkey solution enabled Assembly Operations Intelligence, boosted Worker Productivity, and accelerated Product Traceability for a Global Automotive Manufacturer

Client

One of the largest motorcycle brands in continuous production with an annual throughput of over 850,000 units, known for its unique and distinctive modern classic motorcycles in the mid-size segment.

Challenge

The objectives of the project included improving visibility into engine assembly operations and comprehensive quality parameters to take faster actions in case of defects or other issues.

The client's engine assembly line comprises 126 stations and produces over 450 units per day across three shifts. Such round the clock operations require multiple changeovers of operators while ensuring target production performance and minimal quality (reworks) issues. Each engine in the line moved with a paper-based history card which involved a lot of manual interventions to fill it and is further retained to refer in case of receipt of any engine issues.

Similarly, the client had many other manual workflows, and siloed systems to track metrics around production performance & quality trends and was looking for a holistic solution to provide visibility and insights into the engine assembly operations, along with modernizing the shop floor eliminating manual & mundane tasks

Solution

Engine Assembly Visibility

- Operational visibility and intelligence connecting 54 main stations and 72 sub-stations of the engine assembly
- IIoT experts resolved all the data interoperability challenges across legacy and modern assets including 27 PLCs by various OEMs
- Persona based real-time insights like trends on production performance, reworks, line OEE, alerts, etc.

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Productivity & Skill Matrix

- Automated manual & mundane workflows that boosted worker productivity & morale
- Integrated dynamic skill matrix & allocation of resources across all the stations round the three shifts for improved planning & productivity
- Biometric based workstation authorization to ensure compliance, right skill fitment and reduce rework

Paperless Shopfloor

- Digitized the paper-based product history cards that moves through all stations along the assembly line. History card for any product in the making is now available in real-time.
- Significantly reduced errors & data inconsistency that was prevailing due to manual record keeping of the engine assembly parameters

E2E Product Traceability

- Enabled end-to-end traceability to the actual production parameters, resulted into major cut-down in time to diagnose & respond to product quality issues
- Improved quality intelligence integrating all quality/error proofing reports on a single platform, e.g., Poka-yoke report, CPk Report, X-bar R-Charts report.

As the next phase, Microland is closely working with the client towards expanding the modernization across the factory by covering additional units for other product lines to enhance decision making.



- **20% increase in worker productivity through automated workflows & biometric integration**
- **60% reduction in turn-around-time for quality issue backtracking**
- **2 MN+ sheets of paper saved annually with digitized shopfloor operations**

About Microland

Microland's delivery of digital is all about making technology do more and intrude less. As we help enterprises move to nextGen technologies, we make sure this embrace of brilliance is predictable, reliable and stable. Incorporated in 1989 and headquartered in Bengaluru, India, Microland comprises more than 4,500+ digital specialists across offices and delivery centers in Asia, Australia, Europe, Middle East and North America.

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