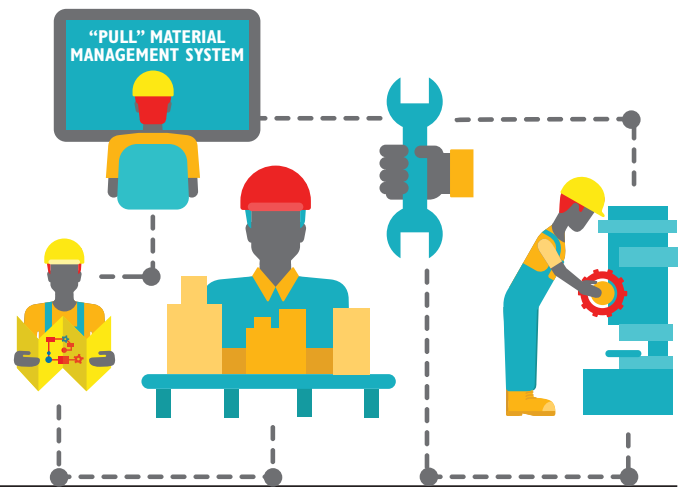


REVITALIZING THE SHOP FLOOR

Wipro is on track to assist a global OEM of home appliance realize savings of \$15 million in annual operational costs. Scope of key improvements include complete process transformation and implementation/ integration of a standardized Manufacturing Operation System.



CLIENT BACKGROUND

The US-based company, one of the largest home appliance OEMs in the world, manufactures and distributes a wide range of home appliances such as dishwashers, mixers, refrigerators, and other portable appliances. It operates in more than 170 countries, including in Latin America, Asia and Europe.

INDUSTRY LANDSCAPE

In order to stay competitive in the home appliances industry, companies need to keep introducing new products and models. To efficiently use their existing plant and infrastructure, there is a need to produce multiple products on the same line and switch lines regularly. The biggest challenges that this industry faces are mixed model production, lack of inventory visibility, high Service Incident Rates (SIR), scrap and rework.

THE OPPORTUNITY

The client, looking to maximize operational efficiency, wanted to make changes across 6 business units and 13 plants in North America. However, it faced several challenges related to production, materials, and quality, that included:

- **Mix Model Production:** There was a lack of an efficient system to switch product lines without any downtime
- There was also downtime due to delayed reaction to production and schedule changes
- Low **first pass yield** that led to too much rework and generated scrap
- Absence of an integrated strategy for **inventory visibility**, which made it difficult to track inventory levels

Additionally, the client's approach to material and operations data migration and archival was disjointed and, therefore, there was lack of reusable repository of information. This not only made decision making complex but also impacted Assembly Yield (AY) negatively. The client needed to replace its legacy systems with an integrated solution for better monitoring and control. However, a complete overhaul of systems across disparate plants would have been too costly.

We invested in creating mock systems that mirrored the client's manufacturing landscape. These helped with validation, training and securing early buy-in from key stakeholders and systems' users.



SOLUTION

Over a period of four months, Wipro partnered with the client to:

- Gather business requirements
- Complete plant readiness assessments, and
- Execute an ROI/benefits analysis for its plants

We automated and integrated data collection and analysis, implemented a Manufacturing Execution System (MES) to offer better inventory visibility and control of plant operations. We also drove efficiency in material flow through the use of Plan For Every Part (PFEP) methodology.

To accomplish this, we used a business process framework-based Commercial Off-The-Shelf (COTS) MES platform to standardize the manufacturing processes.

Wipro's use of ISA-95 standards, business process blueprints and mock systems accelerated the deployment. We invested in creating mock systems that mirrored the client's manufacturing landscape. These helped with validation, training and securing early buy-in from key stakeholders and systems' users.

We started with integrating the MES system and, in the next phase, will be implementing advanced analytics for further improvement in monitoring and control of plant operations.

"Through this project, we have laid a digital foundation that provides operational excellence to the client. New capabilities will be added on top of this foundation and a Digital Factory will be built." - Ramesh Dige, Senior Practice Manager, Manufacturing & Hi Tech - Smart Manufacturing, Wipro Limited

BUSINESS IMPACT

- The PFEP methodology has not only given the client a tight control over its inventory but has also transformed the material flow from a "Push" system to a "Pull" system. **Projected 20% reduction in work in process (WIP) inventory**
- Reduced client's service incident rates by 2%
- Improved visibility of production and schedule changes from **2 days to less than 1 hour**
- Fully integrated Manufacturing Operations Management (MOM) system helped collect data automatically, resulting in **assembly yield improvement of 33%**
- Our rapid deployment strategy reduced implementation time, thereby reducing implementation **cost by 20%**
- We are on track to assist the client realize savings of **\$15 million** in annual operational costs

About Wipro Ltd.

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WIPRO TECHNOLOGIES, DODDAKANNELI, SARJAPUR ROAD, BANGALORE - 560 035, INDIA TEL : +91 (80) 2844 0011, FAX : +91 (80) 2844 0256