

Productivity Management Platform @Whirlpool EMEA

October 2021

Our context and why PMP

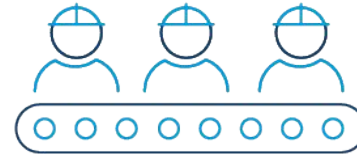
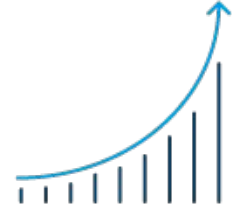


Our Vision: Be the best kitchen and laundry company *in constant pursuit of improving life at home.*

The context where we play:

Demand is higher and more volatile, people are investing more in their home appliances

Manpower and Energy costs, Materials availability and inflation are affecting our competitiveness



How manufacturing can contribute to our competitiveness?

Labour represents about 60% of our cost perimeter, our business is labour intensive, ergonomics is key to improve in the right manner:

Productivity Management Platform

Smart system to monitor labour performance in real time, to untap 'hidden losses' and drive productivity actions with the right organization, skills, process and empowerment.

Where did we start? Our assessment

1. **Lack of standard** for working cycle **analysis**
2. **Lack of standard for the ergonomic impact evaluation**
3. Weakened competence in work analysis
4. Data collection is **fragmented, time consuming** and can provide only an aggregated picture of our utilization of resources
5. Productivity KPI shows **insufficient granularity and frequency**



**Hidden losses (cost and ergonomomy)
Late help chain responsiveness**

$$\text{PRODUCTIVITY} = M \times P \times U$$

METHOD

EFFICIENCY = P x U

Phase 1: Cycle Time reduction

- Development of a Central function to set time management governance and procedures
- Upskilling and qualification of work analysts
- Development of a shared set of standard operations (work standardization, VAA/NVAA)
- Implement TiCon application interfaced with SAP
- Integrate ergonomic evaluation with cycle time eg, EAWS

Phase 2: Efficiency

- Deploy productivity into comprehensive and computationally chained Operational Performance Indicators (OPI)
- Set up of a cloud-based platform to integrate paid working time and production data
- Implement a digital solution to track the utilization of “takt driven” direct and indirect hours
- Digital upskilling and empowerment of group leaders
- Feed WCM pillars with productivity losses previously hidden

What do we expect as result?

PRODUCTIVITY INCREASE



Both methodological and operative improvement would bring additional 5% productivity YoY on top of the current run rate

STANDARDIZATION & COMPETENCES



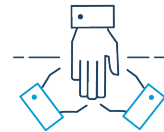
The standardized operations blocks together with the usage of TiCon would enable a competence upskill for work analysts that result in faster method improvements and accuracy in new product costs

HIGHER SPEED



Digital real time presence management and performance monitoring will enable faster problem solving and and improvements through the Help Chain

OWNERSHIP



Central team and plants will cooperate in work analysis and costing activities ensuring alignment and shared responsibility.
The new structure will allow for more empowerment of Group Leaders and better visibility and shop floor focus for Management.



BENTON HARBOR, MICHIGAN

PERO (MILAN), ITALY

HONG KONG, CHINA

SÃO PAULO, BRAZIL



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