

Cloud SaaS

V-Sensor

'Real-Time' Dashboard

'Real-Time' Throughput Computer

Business Challenges

- Missed Sales Opportunities — Often times this occurs due to limited visibility of available production capacity to meet potential orders.
- Excess capacity usually becomes available when production experience ramping down period. Often times this period is unknown to sales thus making it difficult to predict the window period to take in new orders.

Methodology

- Using throughput computation to measure output rate for each Product ID in real-time.
- Virtual Sensor probe is commissioned virtually to obtain readings to predict ramp up and ramp down period
- Analytics to predict risk of bottleneck resource that may reduce net output rate

Summary

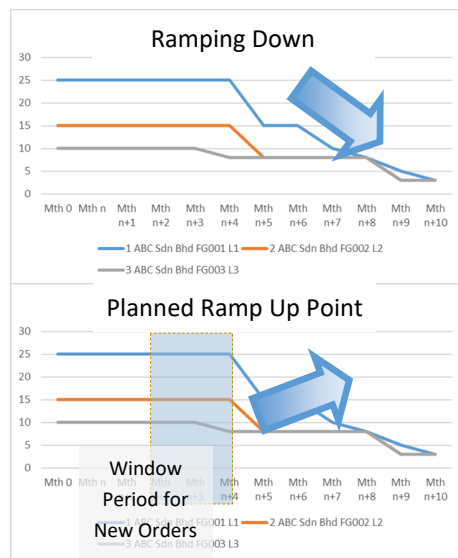
HARMONIX Solutions is a SaaS layer that solves 'disruptive' event that may occur during or after material procurement, logistics or production work order has been committed. Its primary role is to harmonize operations by continuously adjusting WO, JO sequencing and material movement to achieve the most favorable results. What makes HARMONIX unique is that it has an embedded 'Intelligence-Assist' (patent filed) capabilities that assist operations to respond to 'disruptive' events that may occur during the order fulfilment cycle; beginning from material procurement to delivering the finished goods.

Benefits

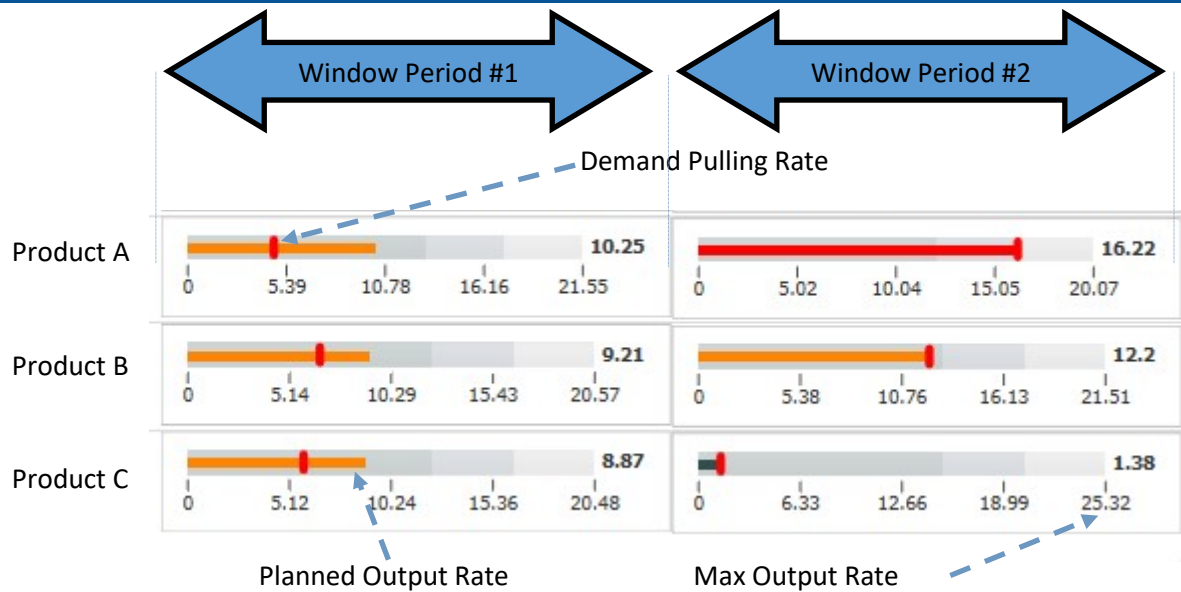
- Capitalized missed opportunities that occur during ramp up & down window period, so that 'pockets' of idle capacity can be utilized to achieve higher net output yield.
- Analyze bottleneck resource and identify window period that is critical so that contingency plan can be initiated ahead of time.

Reduces operational cost and increases inventory turnover rate

HARMONIX reduces risk of over-producing WIP thus eliminates operational 'wastage' and 'frees up' material for real demand orders therefore increases inventory turnover rate.



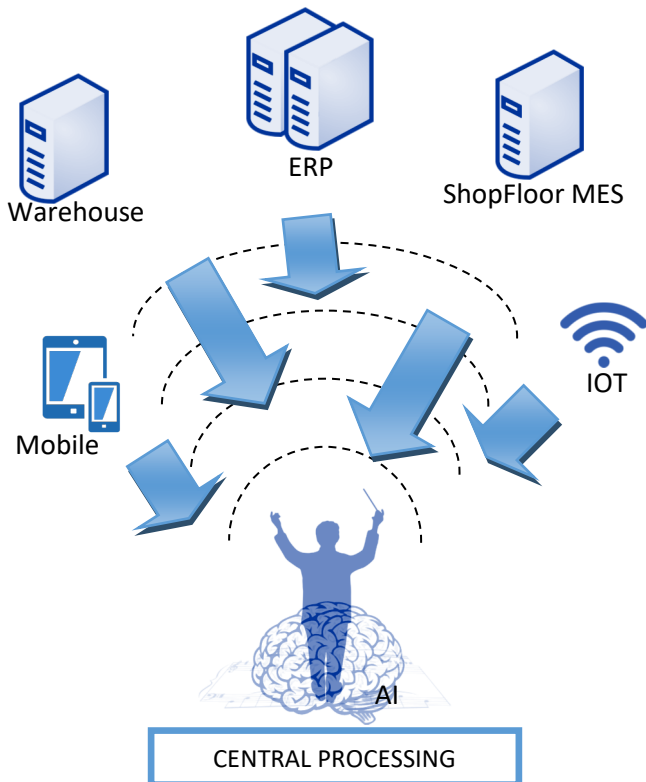
V-Sensor – Net Output Dashboard



HARMONIX V-Sensor measures net output for each Product ID planned against the demand pulling rate. It also provide real-time feedback of planned output rate against your maximum net output capacity. Very useful to evaluate available capacity to meet demand in real-time at selected window period of the month.

It works without IoT devices thus making it suitable to work with Production system that consist of 'heterogenous' equipment such as computerized and non-computerized equipment; fully automated line and labor intensive manual line. HARMONIX relies on its Virtual Sensor to process measurement where IoT devices are too costly or impractical to be installed

Concept of Harmonization



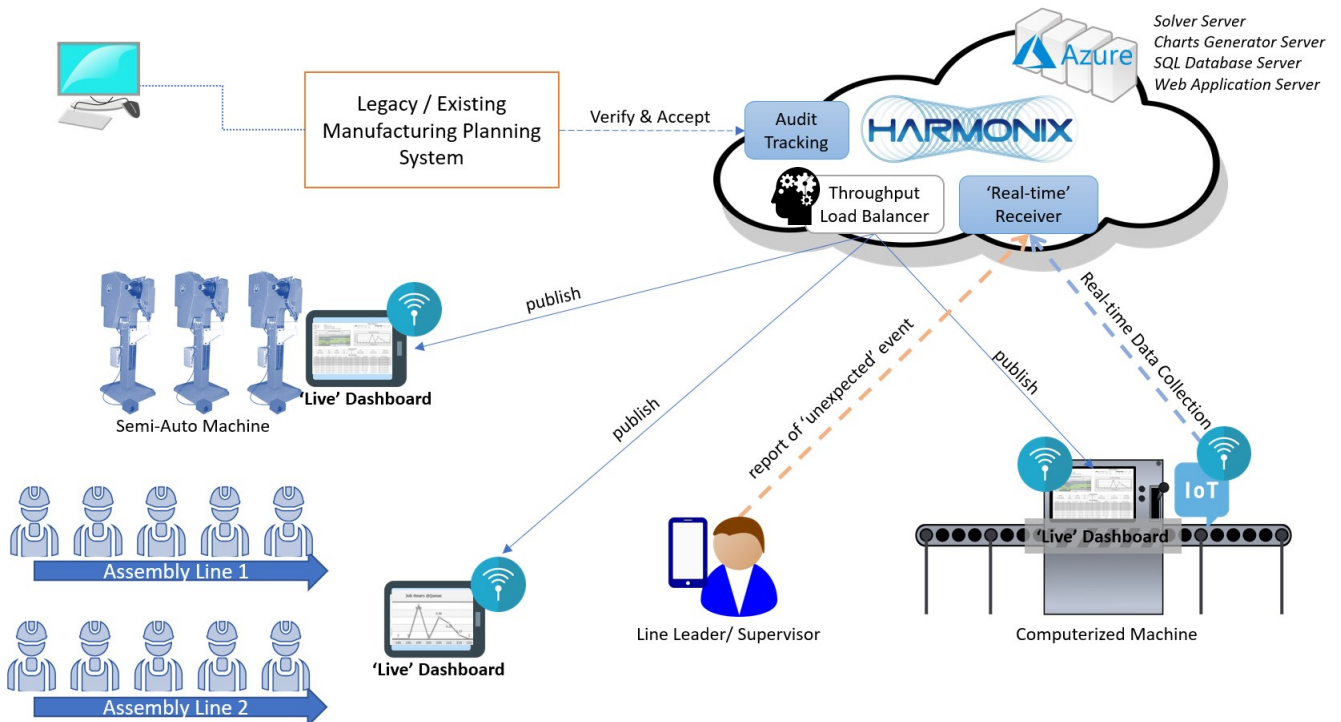
Single Centralized OR Harmonized System?

It is common belief that the objective to implement a single centralized end to end system, is to eliminate operations having to work in silos by centralizing all operational data transactions in a unified system. While this belief is idealistically true, but in real world application, all materials/ WIP movement are not static objects, they are dynamic in nature and are constantly moving at a varying rate depending on demand pulling rate, production output rate and series of unexpected event that may occur during order fulfilment period.

A unified system that integrates Production with the Sales & Operations does not necessarily provide 'harmonized' operations between demand and production because the key success factor lies within the solving algorithm than its ability to centralized all operational data transactions into single location.

The effective approach for real-world application is to implement a 'intelligent' system architected to co-exist with pre-existing centralized system so that all operational data are processed centrally and harmonized to achieve the most optimal outcome

Overview



Key Features

HARMONIX Intelligent Process Routing

- Smart, Flexible & Robust algorithm to simulate realistic WIP flow

HARMONIX Intelligence Assist

- Intelligently sequence the jobs to achieve best outcome

HARMONIX 'Smart' MCR

- 'Smart' to recommend executable options instantly during unexpected event such as material rejection, quarantined, defects or cannibalized by other orders

HARMONIX "True" Process Cycle Time

- Supports more comprehensive cycle time calculation; up to 5 + 2 types of operation cycle time for better accuracy

HARMONIX Now!

- Fastest deployment time and hassle free

HARMONIX Intelligent Router

- Very easy way to define process data in Excel format without compromising logic accuracy

HARMONIX Intelligent QTP

- Intelligently calculates quantity-to-produce to maintain optimal buffer stock level while meeting required demand output

HARMONIX Team Harmonizer

- Simple and effective tool to support "collaborative" team effort for order fulfilment

HARMONIX CentralDash

- Easy and quick way to visualize Order fulfilment status and Bottleneck prediction

Please **contact us** for more information.

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