

Synchronizing Inventory Management with Real-Time Manufacturing Production Scheduling

Challenge

A leading manufacturer of F&B ingredients based in Singapore was utilizing an underpowered system to track inventory levels and manufacturing orders. This meant that production planners had to manually identify low inventory levels before issuing a manufacturing order causing subsequent production delays. The production process itself was not tracked and hence proper scheduling could not be achieved. Our team was tasked with maximizing visibility and control for the mixing, packaging and sealing production lines that include: fully manual, semi-automated and fully automated processes. This process involved setting up workstations throughout the facility to enable the sharing of manually recorded data in real-time and to retrieve information from their pre-existing Material Resource Planning system. By doing so, operations on the production floor can be efficiently tracked and monitored and production planners can be instantly notified of low inventory levels.

Process

Our team of expert engineers worked closely with the production planners to fully understand both the inefficiencies of manually identifying low inventory levels and the lack of visibility of their production line. The following issues were targeted:

- **Enhancing Inventory Control:** By tapping into their pre-existing Material Resource Planning system, data was retrieved in real-time providing instant updates of low inventory levels. By automating this process, production planners are relieved from the manual identification of low inventory levels, enabling less time-wastage.
- **Improving Production Planning:** The difficulty level of each manual process was assigned to each job providing a standard of fairness for personnel and workstation teams. As a result, production planners are able to fairly appoint and adjust work schedules in real-time.
- **Maximizing Full Control:** ORC OPS™ enabled tablet workstations were set up at each process step throughout the production line enabling full visibility and control of each batch until completion. By doing so, production personnel are fully accountable for delayed start/stop times and production scheduling can be tightened to maximize efficiency.
- **Make Preemptive Maintenance Decisions:** Specific parameter thresholds relating to the health of each piece of machinery were assigned for both semiautomatic and fully automatic production lines instantly notifying authorized users of required repairs and maintenance. As a result, this enables automated maintenance scheduling and enhances the ability to make preemptive and predictive repair decisions ahead of time.

Result

The Arcstone's **arc.ops™** is an effective and easily adaptable platform designed to manage fully manual to fully automated production processes. The primary benefits of utilizing **arc.ops™** to this client included:

- **arc.ops™** flexible software effectively retrieved data from the client's existing systems alleviating production personnel from the manual identification of low inventory levels and enhancing labor productivity.
- A customized algorithm was constructed specifically for the client's manual processes to appropriately match a level of difficulty to each process step leading to improved production schedule planning and allocation of fair work efforts in real-time.
- **arc.ops™** enabled tablet workstations were installed at each process step to provide full visibility of the progression of each production batch until completion.
- Utilizing **arc.ops™** Smart Alerts, authorized users were automatically notified of personnel or workstations delays regarding start/stop times. These alerts included emergency repairs, low inventory of raw materials and finished goods and total production output.
- Deployment of **arc.ops™** reporting tools range from personnel time sheets to weekly reports on production to inventory levels. As a result, upper-level management is equipped with accurate information retrieved in real-time enhancing their ability to make better-informed decisions.

About **ARCSTONE**

Arcstone was founded to revolutionize the way data is utilized in enterprises. Giving purpose and meaning to data is fundamental in bringing an enterprise closer together. We provide management and workers an intuitive and powerful solution for running their day-to-day operations while also being able to forecast and plan for future growth.