



ShopFloor I.App Solution Introduction

Advantech Industrial IoT / AII/
iFactory Smart Manufacturing Solution



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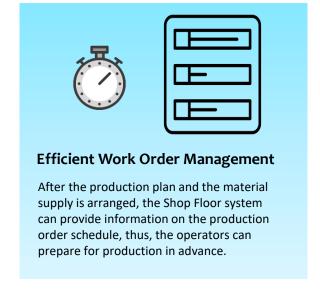


Overview

Shop Floor is a set of manufacturing management systems and tools for production tracking, scheduling, and status reporting.

Data about work progress and production time is collected and reported by the Shop Floor system to increase productivity and shorten cycle times. In addition to providing workforce information to supervisors, real-time Shop Floor control is also useful for operators themselves.

It provides operators with access to their own workflow, enabling them to set, reach, and exceed their own goals. With an incentive mechanism, operators can be further encouraged and motivated to achieve these goals, thereby improving performance and overall plant productivity.











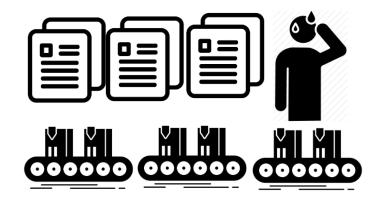
Pain Points & Proposed Solution

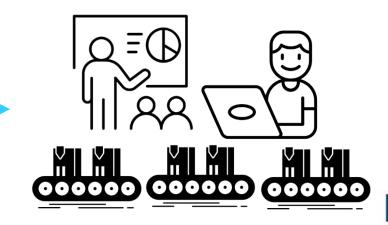
Main Pain Points:

- Paper job reporting or manual input of job reporting information are time-wasting and sometimes incorrect.
- 2. Frequent line changes, means difficult production schedule management.
- 3. Manually confirm the progress of WIP, current reports of production progress might need to wait until the next day.
- 4. Traditional input methods of production make it difficult to trace back the production data.

Solutions: iFactory Shop Floor

- 1. Digital production management including:
 - Work order management function.
 - Electronic assignment of work orders to specific equipment.
- 2. Real-time dashboard of work order status, accelerating production line management.
- 3. Complete storage of production data which allows tracing back production history, also it can be used as a secondary analysis in the future.
- Combined with I.App Data connector, connects the information of MES, WMS, ERP enterprise systems to build a complete information chain.









Application Scenarios of iFactory/ShopFloor I.App

Many small and medium-sized enterprises still use computers or manual type to alternately manage factory production. iFactory/ShopFloor I.Apps can collect information, monitor and reports it to managers on the manufacturing site to enable managers to immediately understand production conditions and make corresponding decisions to quickly resolve production problems and reduce cost of losses.



Metal Process

Provide workshop production status and information to managers for plant control and management.



Electronic Assembly

Intelligent data acquisition in each process, to achieve seamless connection, rapid adjustment, to improve efficiency.



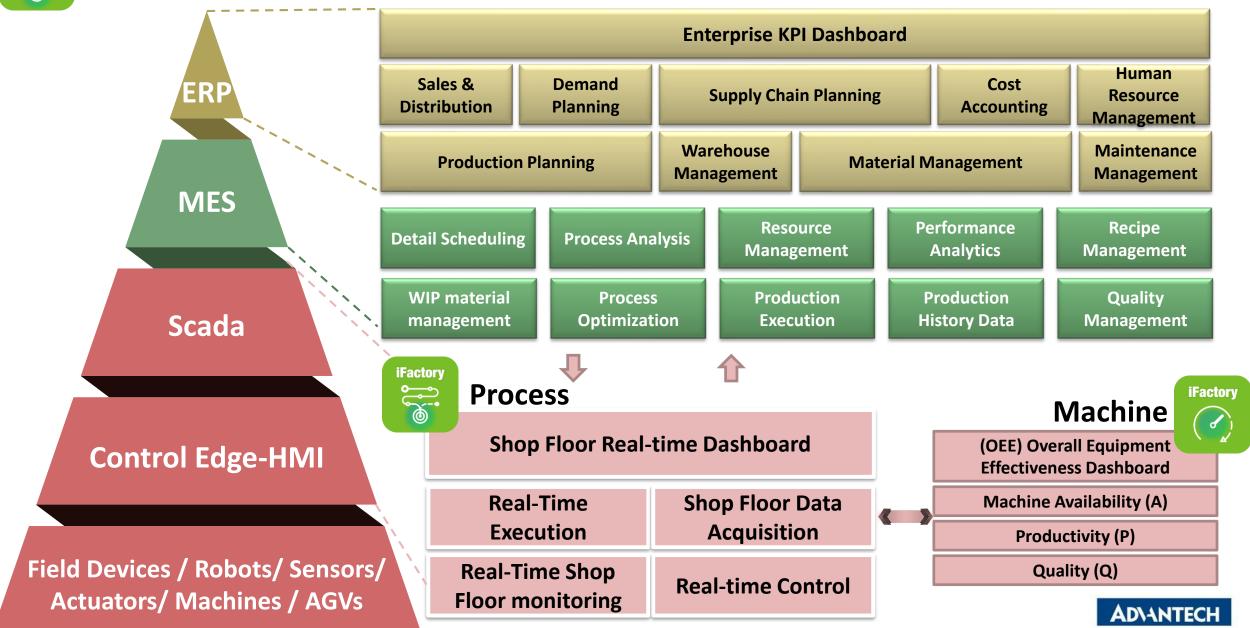
Footwear and Shoe

Paperless data to workstations,
equipment, for intelligent
scheduling to provide visual
electronic real-time display of the
production site





iFactory/ ShopFloor I.App Co-Relationship Structure



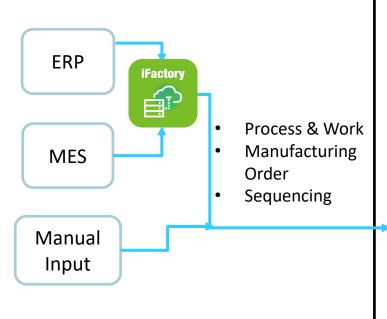


Features in Shop Floor





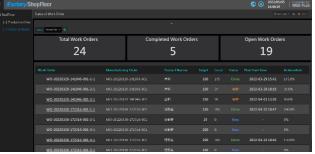
Shop Floor Operational Data Flow

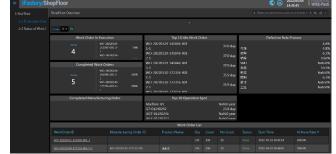


Input method

Shop Floor Control and Management

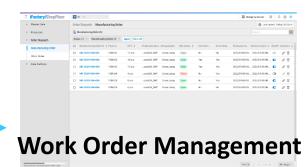
Dashboard of WIP / WO Status

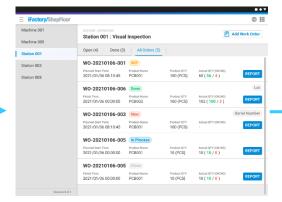




Job Dispatching/Producing







Job Reports and Records

Production **History Record**

Data Storage & Application







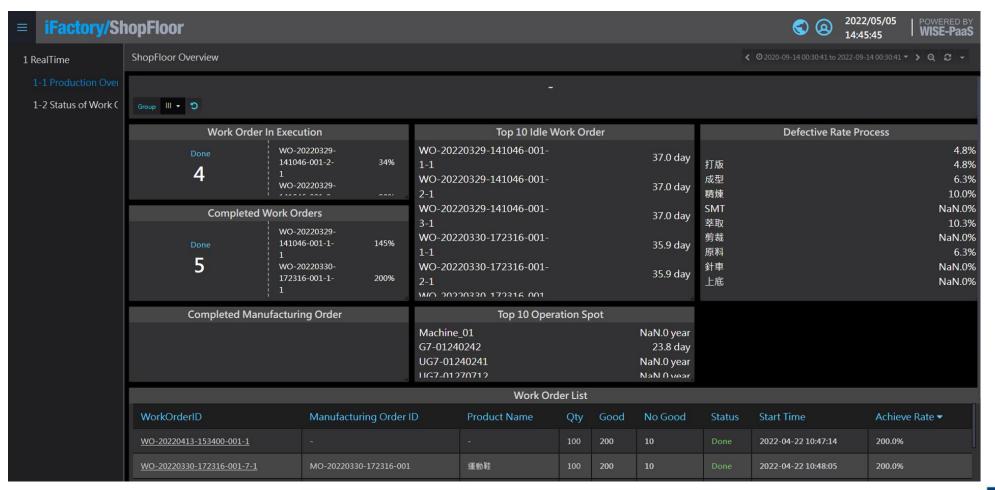






ShopFloor Management System – Production Overview

Production overview dashboard can calculate and display the timely status of work orders, facilitating decision-making to improve production efficiencies.

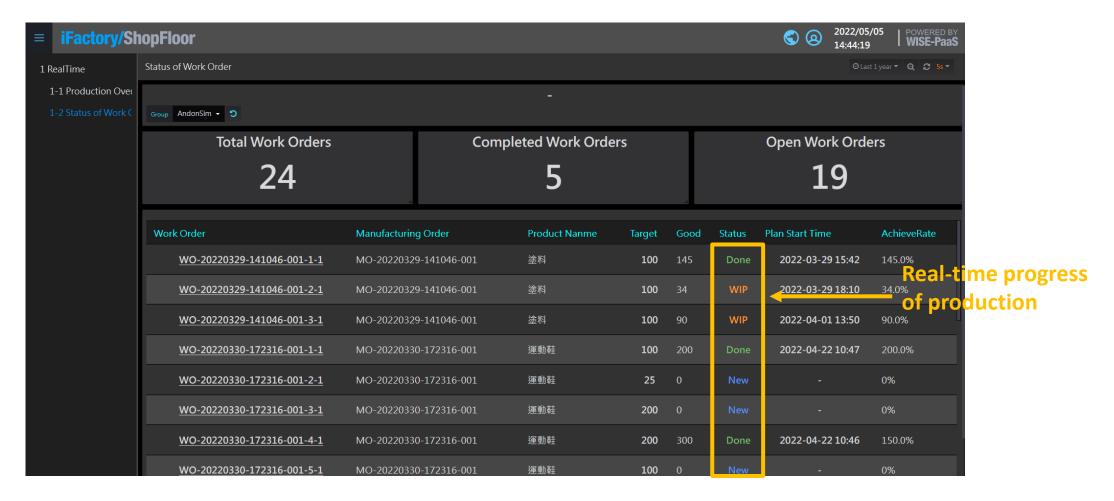






ShopFloor Management System – Production Overview

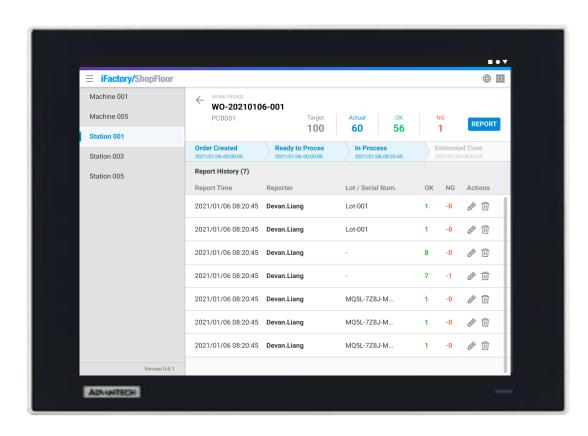
Work order status dashboard **shows real-time progress of production**. Apart from tracking the status of work orders by an operator, it also allows managers to **identify bottlenecks in the production process**.

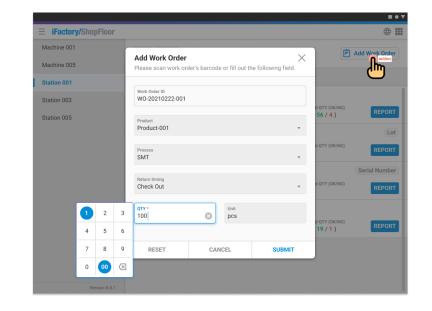




Job Report

Touch panel job report collects production data and empowers workers and managers with up to the minute production visibility and control. Easy work order reporting interface minimizes operation time.





Touch Panel Job Report

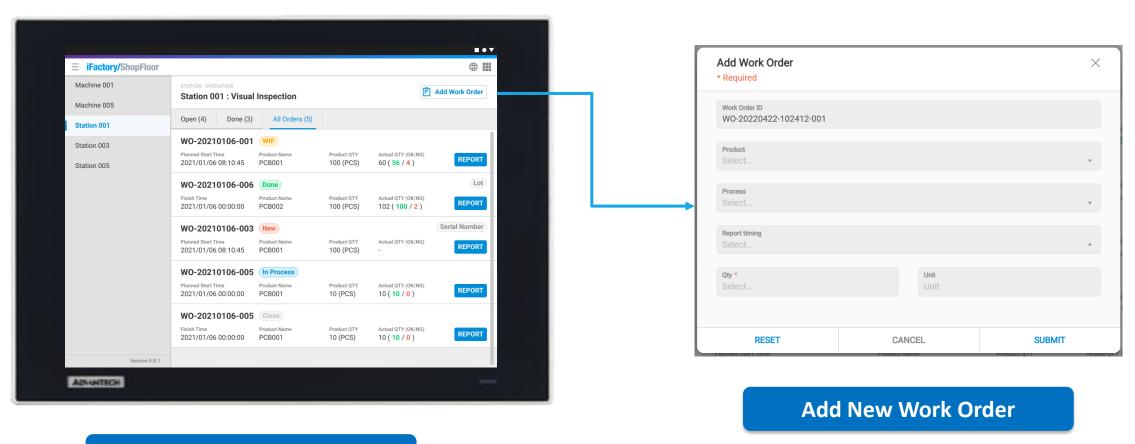
Manufacturing Quantity Report





Job Report – Work Order

Flexible reports with pre-set work orders. New order creation on touch panel to **fulfill any scenario**.



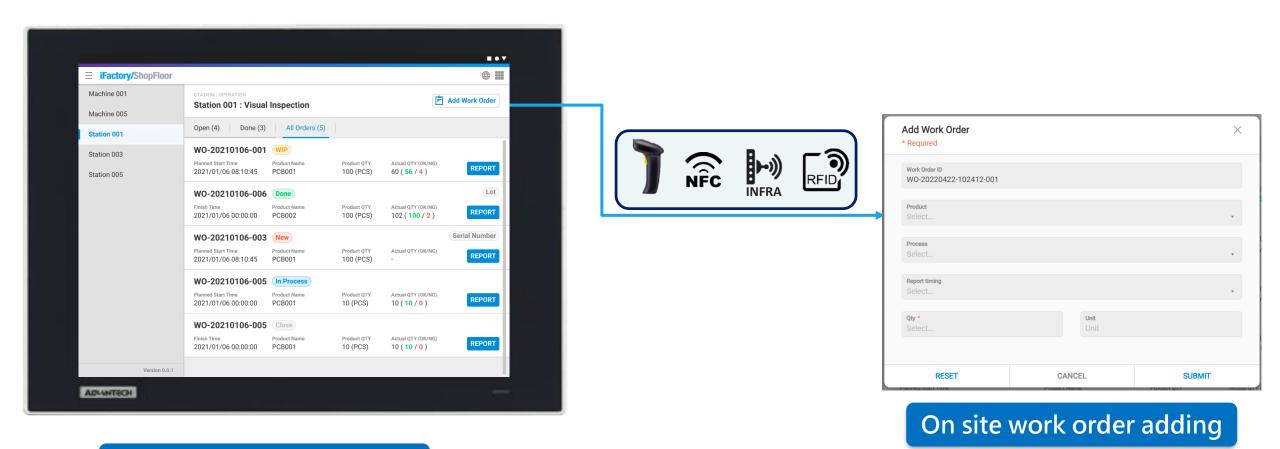
Job Report Work Order





Multi-Method of Work Order Import

- Flexible work order import method
 - Preset work order options: such as barcode scans, RFID etc.
 - On site work order add function for importing external work orders



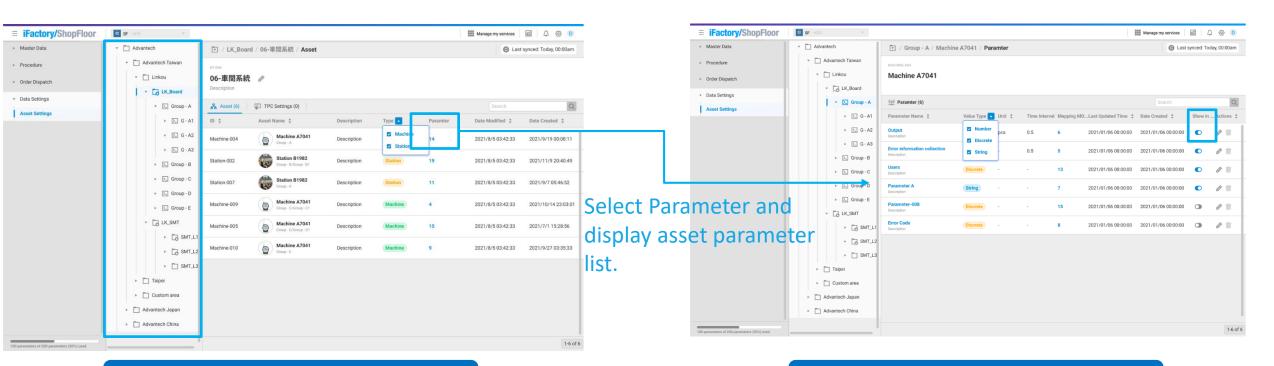
Work order Mgmt.

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Data Settings – Asset Settings

Leverage iFactory/RTM to manage manufacturing assets. MIS can set up essential parameters for Shop Floor usage, such as machine output quantity and abnormal error codes.



Asset List & Topo.

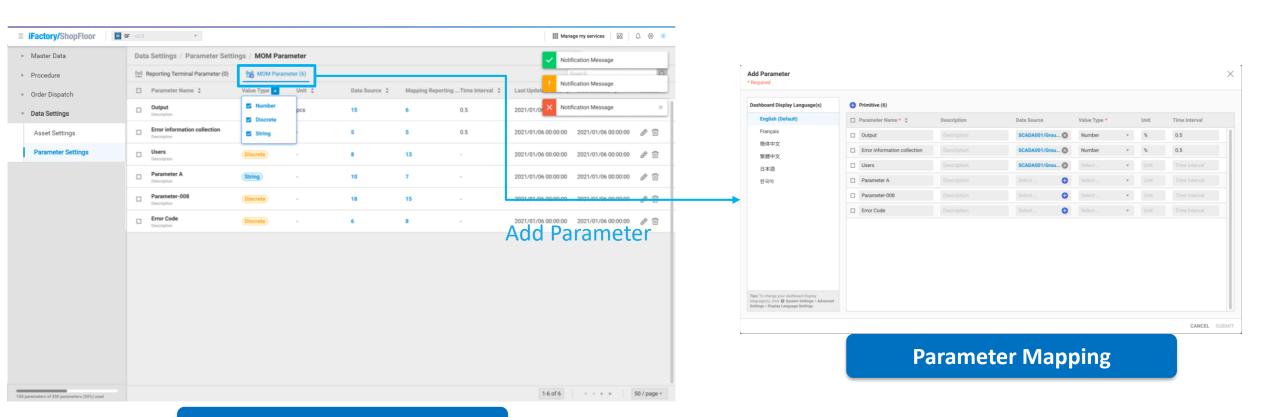
Asset Parameter Mgmt.





Data Settings – Parameter Settings

Create your own shop floor parameters and settings after importing data source. After configuration, the service can automatically collect essential data from the data source for business logic usage.



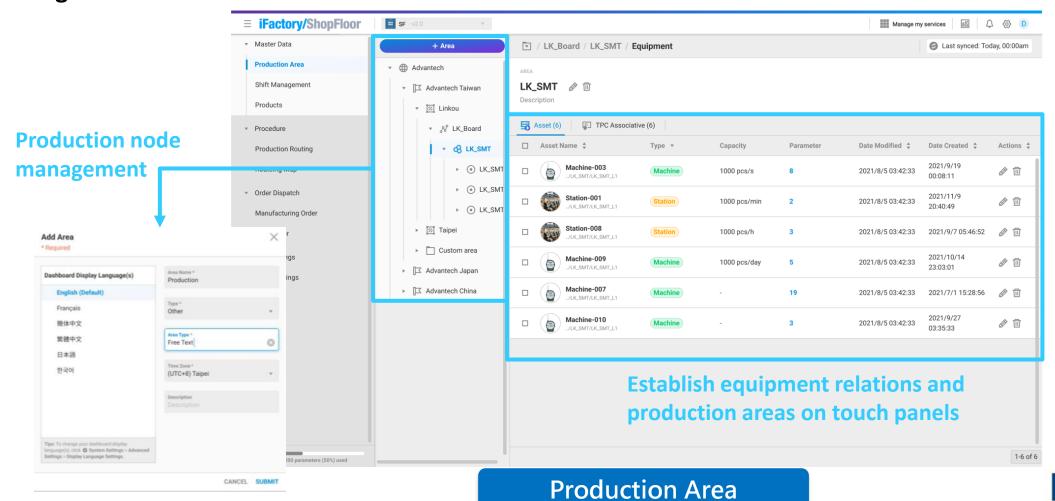
Parameter List





Master Data - Production Area

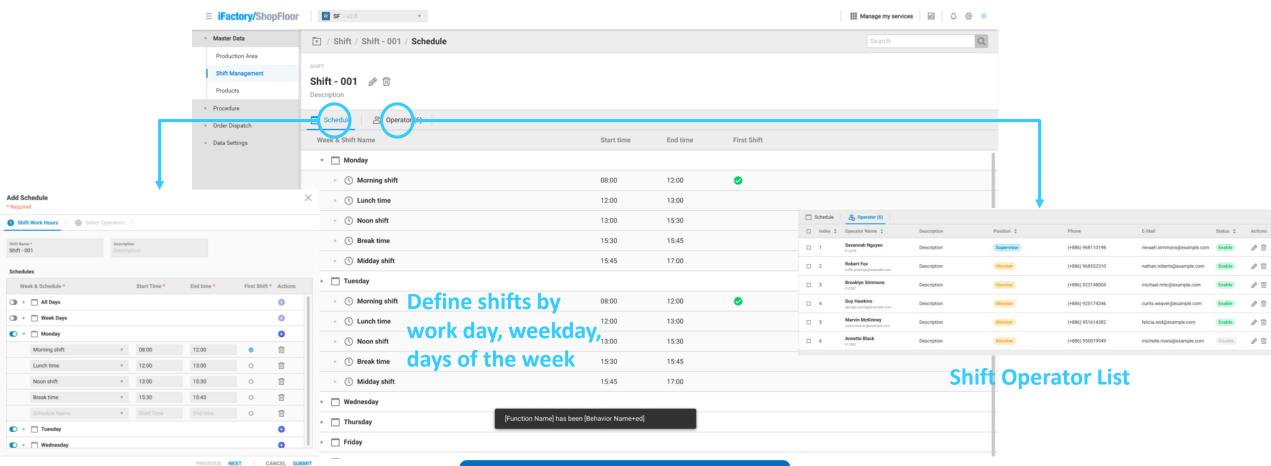
The Production Area defines your manufacturing process in a tree view and provides an organized way to configure, control, and analyze your manufacturing activities. It provides the foundation of production organization on which areas are built.





Master Data – Shift Management

For production data analysis across shifts, we provide a feature for defining shifts during production runs. Shift Management allows production mangers to quickly and easily manage schedules on site.



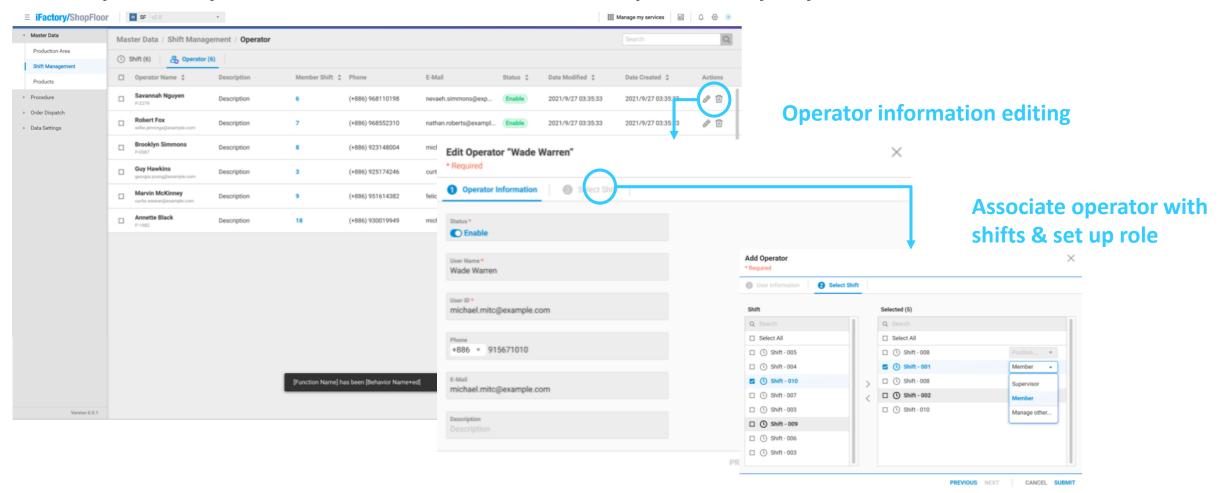
Shift Group List





Master Data – Shift Management

Shift Management is a tool to manage the shifts of employees. **Based on the schedule and dedicated operators, you will be able to know the state and productivity of your teams.**

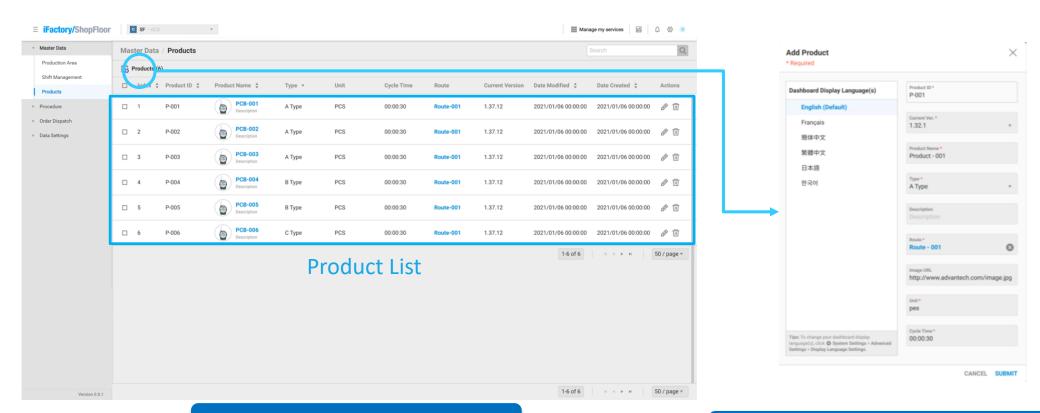






Master Data – Products

Depending on the manufacturing processes which have been set under products, shop floor will incorporate due dates and sequencing of work orders through the manufacturing workflow, which can improve efficiency.



Product Settings

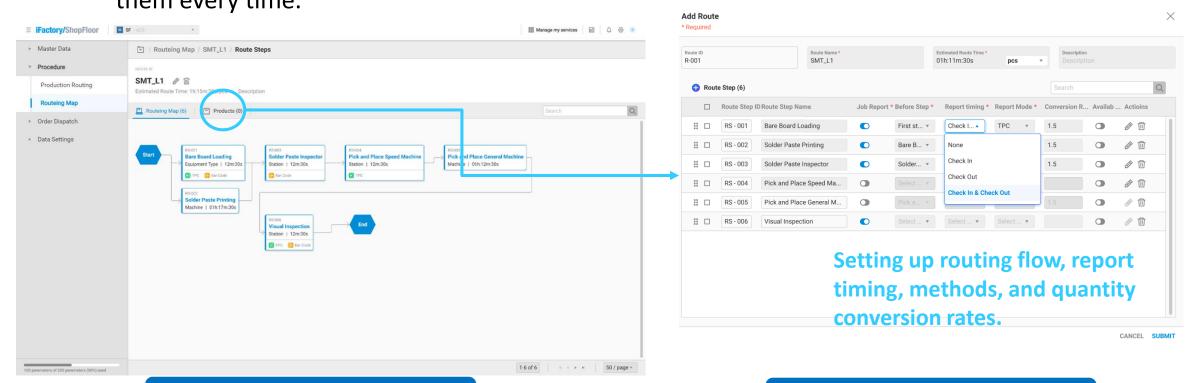
Product Detail Information





Procedure – Routing Map & Production Routing

The procedure module provides the functionality to define important pieces of manufacturing. By breaking down the process in the labor and machine groups, production routing allows you to define operations as a combination of these elements. You can then create routings as a set of step-by-step operations for use in the order dispatch module without needing to recreate them every time.



Routing Map

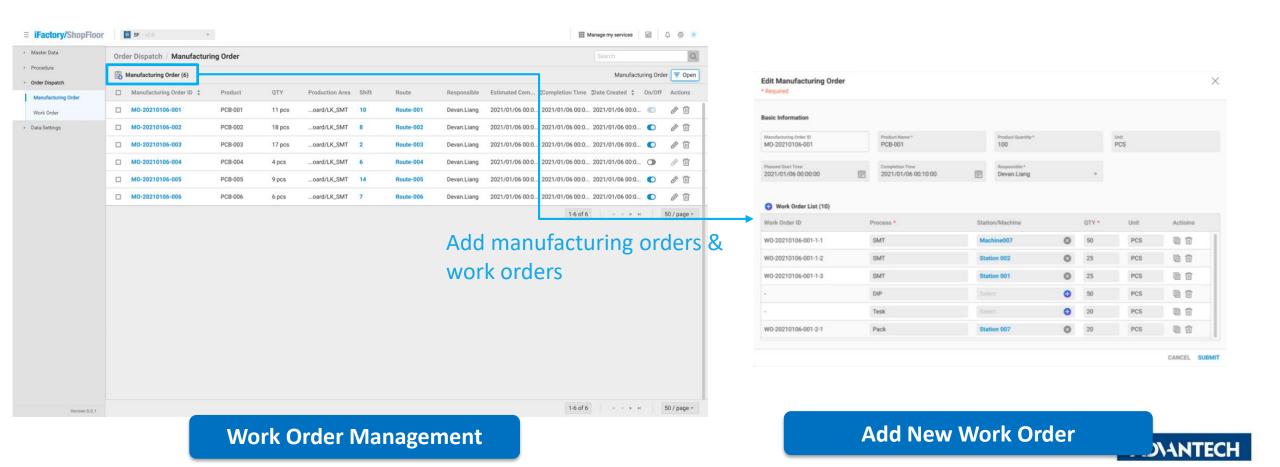
Routing Step Settings





Work Dispatching – Order Dispatch

Managers of production create work orders and schedule production dates and dispatch those to every workstation through WISE- Shop Floor Order Dispatch.





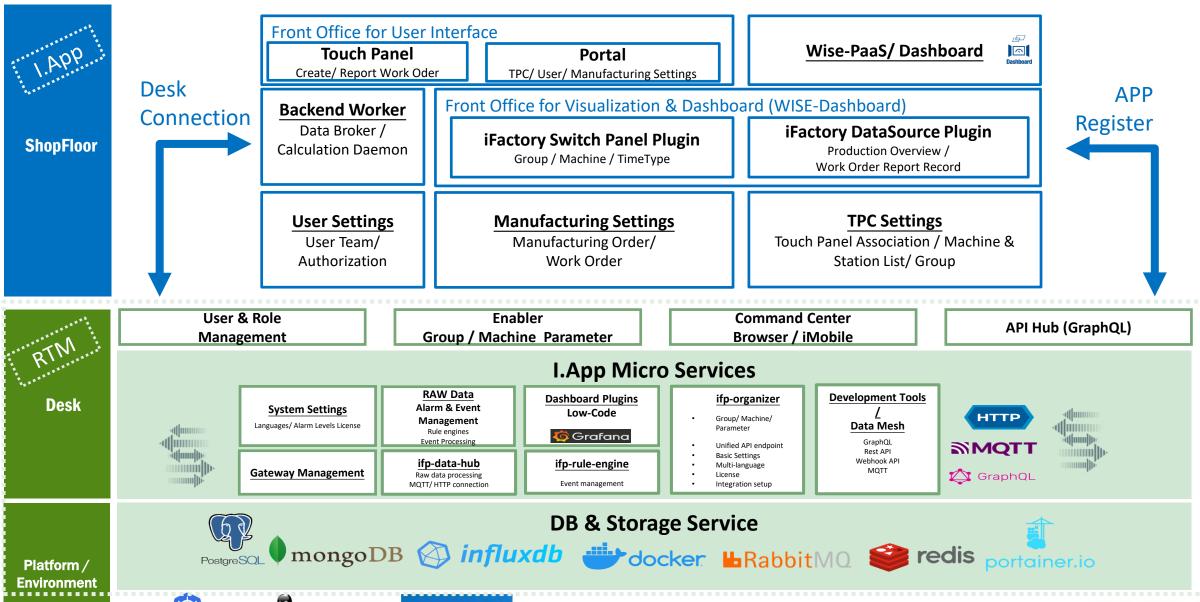
Touch Panel Initialization

One-step touch panel initialization by submitting an auto-generated ID.

≡ iFactory/ShopFloor		♡ €	
	Touch Panel initialization		
	Touch Panel UUID *		
	VFBDLTE2NDc1NzA5MDI=		
	Touch Panel Name*		
	TPC Name		
	Submit		



iFactory ShopFloor Architecture















Co-Creating the Future of the IoT World

