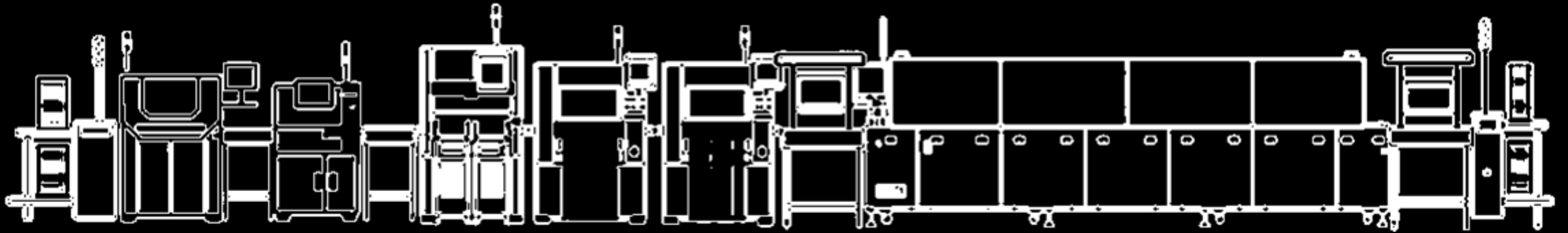


Iz SUPPLY CHAIN REDEFINED

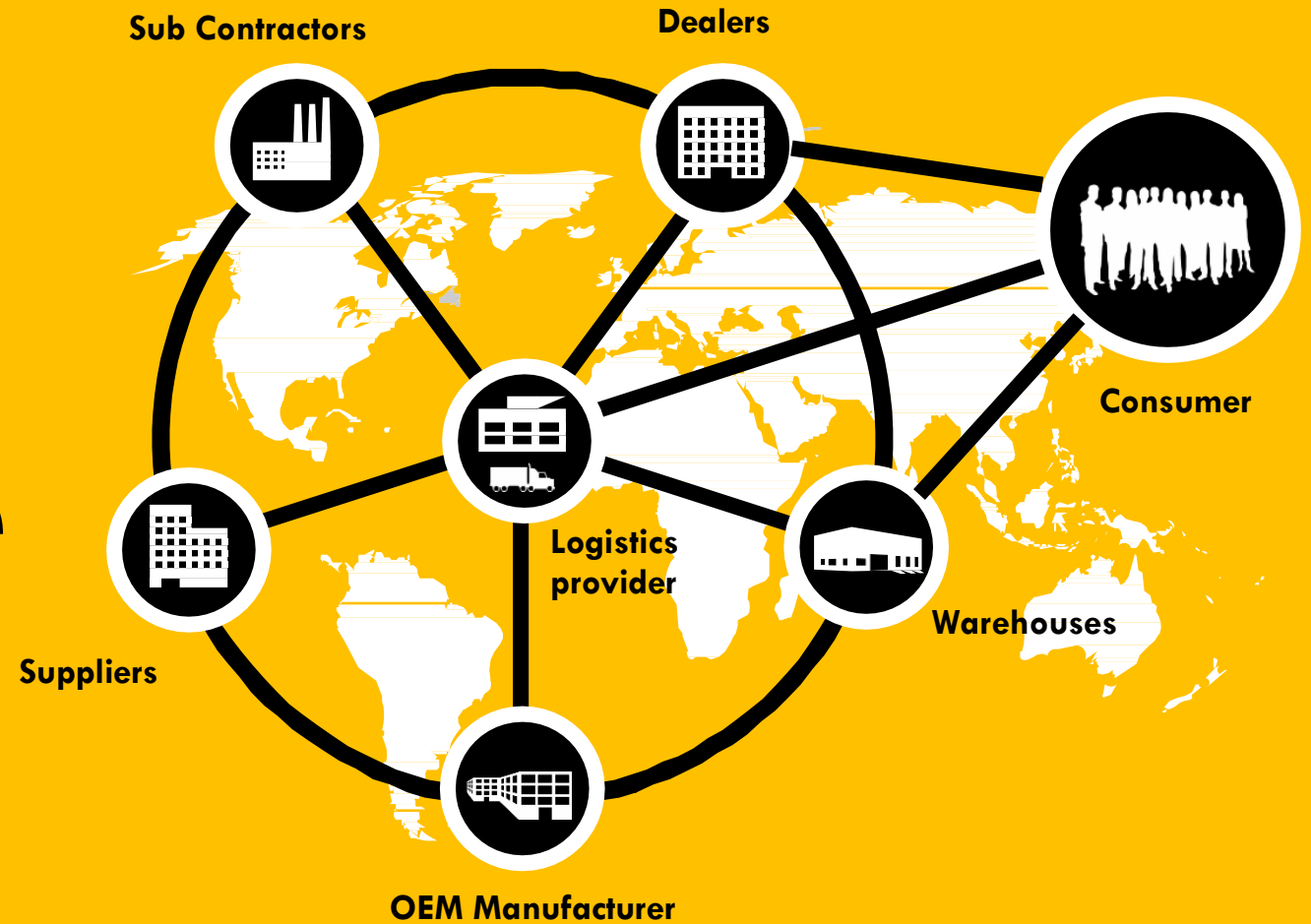
Intelizest



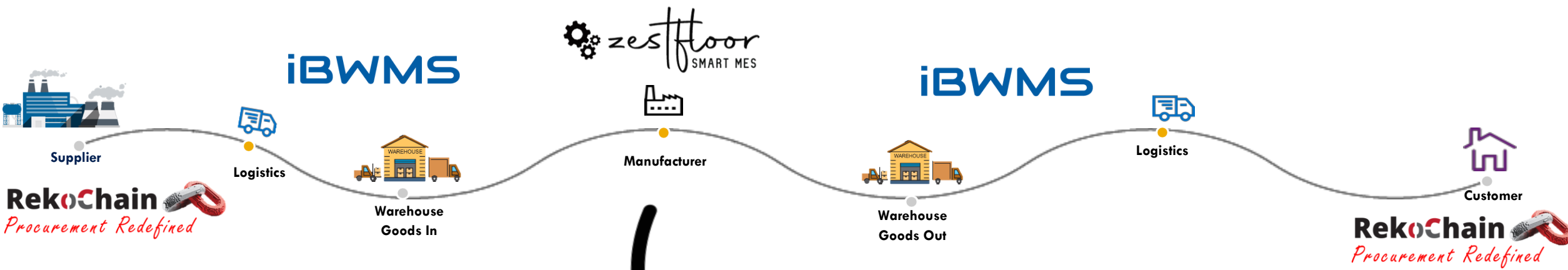
 *zestfloor*
SMART MES

DRIVING THE ENTIRE SUPPLY CHAIN

What we
DO!

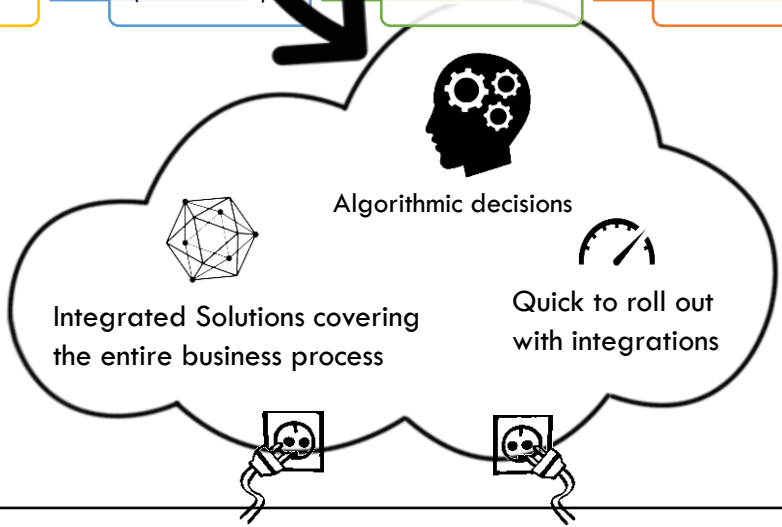


IZ SUITE – PRODUCT PORTFOLIO



TurboZest

Data Visualization Application with meaningful and readily available reports covering the entire supply chain

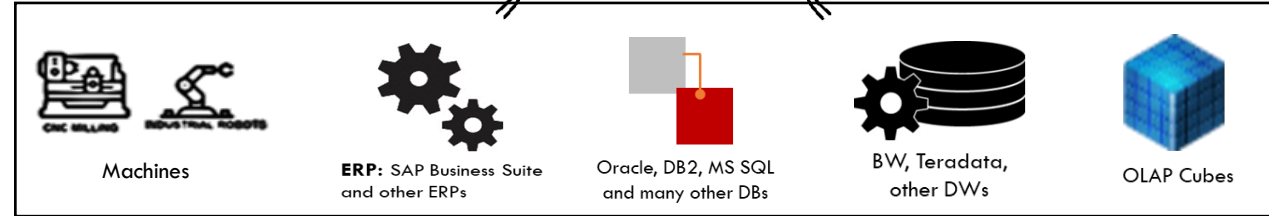


Zestlink

Supports universal communication protocol where software – software and machine – software interoperability has become essential

We have pre-defined communication protocols to connect with any machines or application in a short span improving the implementation efficiency

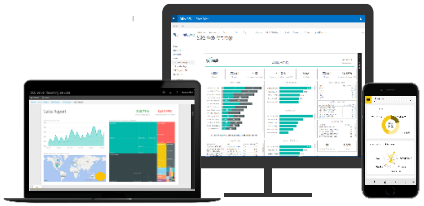
Backend Applications and Machines systems (On Premise) with necessary security firewall in place.



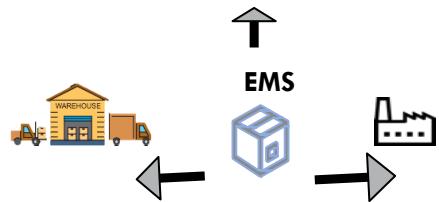
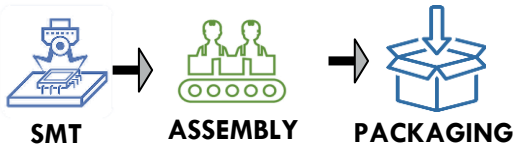
EMS – TRACK, TRACE AND CONTROL

Only complete package in the market for fast growing EMS industry vertical with a ready to deploy version connecting with all machine model/makes ensuring seamless data connectivity.

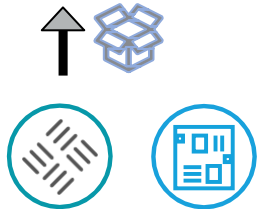
Zestlink — Influencing the API(LED) Connectivity



Analytical Layer



Distributor



Comp Manufacturer Comp Manufacturer



- **Turbozest** – Analytical application with advanced AI algorithms to provide real time insights, alerts and recommendations
- **Zestfloor (MES)** - Supports the complete journey of Bare PCB to PCBA to Box Build. Preconfigured features include, Solder Paste Management, FAI, Sample run, Mounter Feeder programs, **Interlocking** based on previous stages and interlocking of conveyors.
 - With the ability to interface with all **Machines**, **Test** beds and **ODM** software we ensure the complete process traceability till the very end.
 - Map against every stage, **serial** number to **BT** to **IMEI** is available.
- **iBWMS (Warehouse Management Solution)** supports the material intake. Key for **Traceability** is to give **identity** to all materials inward. Equipped with the latest technologies to support automation OCR is integrated to capture the details of inward and enable QR code printing. Also supports IQC, OQC and Put away/ Picking strategies.
 - WMS also supports post package (FG) products and dispatch against Sale orders.
- **Rekochain** (P2P) Omni-channel platform to support the procurement of all type of components. This platform is available in two models, first one being one Buyer to many suppliers on collaborative model where the supplier onboarding is at the discretion of Buyer (EMS companies). Second one is an Omni channel platform where many EMS companies and Suppliers of all kind available making it an effective market place.

MES ON INDUSTRIAL 5.0

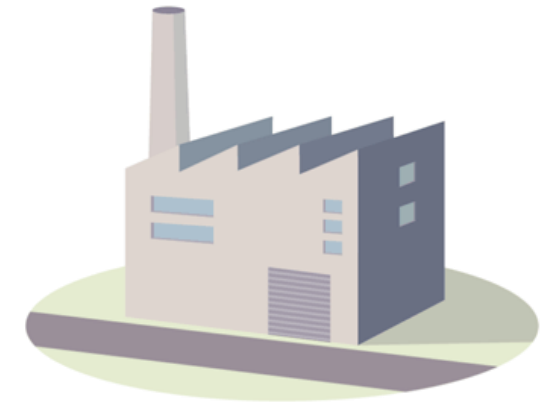
1 **Human Centric Approach** – Our Products has always evolved with the intention of keeping human resources. We have consciously developed solution to support the automation process where needed thereby the gaps can be addressed without any impact to the human resource or blending the technology to the needs of the business processes.

2 **Sustainable or Sustainability** is also an important factor where companies want to focus and invest on applications which can help automate and take care of removing manual and paper driven processes. In addition, our applications has the Machine learning algorithms which supports in optimizing resource efficiency and minimizing waste.

3 **Resilience** – Refers to the need of the hour applications which can support strategic value chains, adaptable production volume/ capacity and flexible business processes.

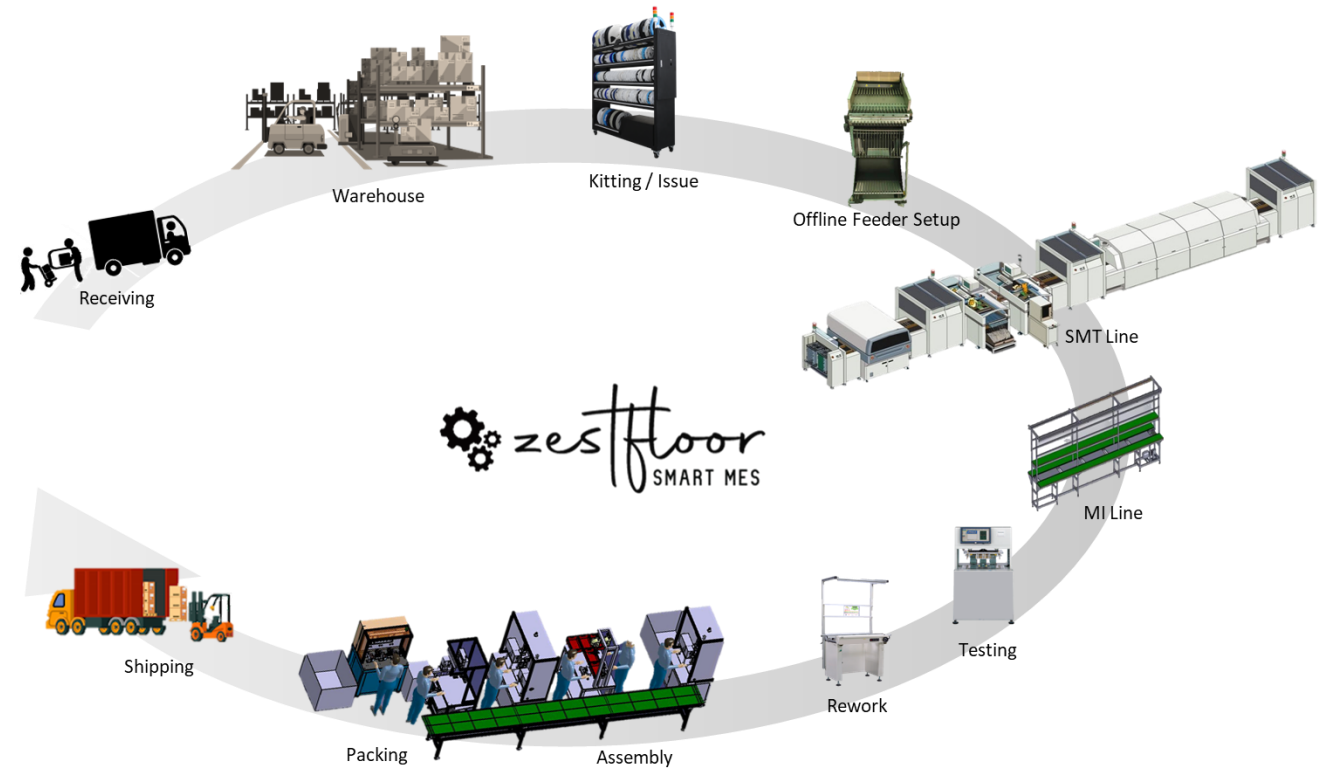
Sharing Technology for a better future with automation where required, banking on the strength of Human resources making the Human to Machine collaboration a circular economy and a shared vision of leveraging technology for a better future.

Zestfloor works on the model of converging the OT and IT systems and Digital twins with the highest security compliance ensuring the safety and integrity of critical infrastructure and business operations.





- Leading EMS companies use Zestfloor for their entire journey from Material inward to Dispatch
- Market Leader in Track, Trace & Control and Connectivity solutions for EMS Industries.
- Zestfloor is built on Industrial 5.0 framework with automation and interlocking enabled with the support of latest technologies.



1 Warehouse Management

2 Shopfloor Management

3 Track, Trace & Control

4 Quality Management



Warehouse Management



Inward



Operations



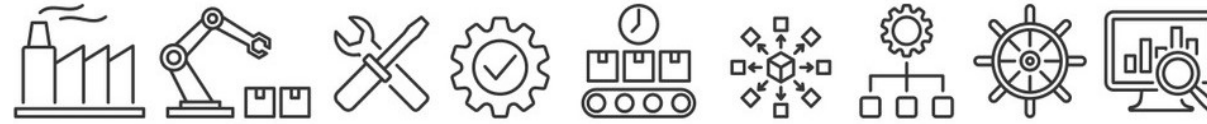
Outward

- Goods Receipt Optimization
- **Gate Entry/Out Pass** Management
- Dock Management
- Inward modules with **OCR AI** for supplier labels
- **Unique number** generation & label printing
- QR/Bar Code can be generated capturing batch/serial Management/shelf-life/Expiry dates
- **Batch Management and Serial numbers**
- Receive by Alternate UoM
- Internal Quality Check (**IQC**)
- Direct Receipt from Production – FG and Excess Material Returns
- **Inline rejection** returns
- **Auto Bin Determination** based on **Put-away** strategy
- Integration with other systems (ERP)

- Auto Put-away and Picker Assignment
- Kit to stock, BoM Management
- Returnable gate pass
- Inward adjustment, Store return
- Bin to Bin transfer, Internal/external warehouse **transfers**
- **Scrap/Waste Handling**, Expiry Item Transfer
- **Material availability report** for production & dispatch
- Seamless tracking at Product/Carton and Pallet/Rack level.
- Inventory management
- **Processing forms**
- **Stock audit** (perpetual/annual) - On-demand stock taking, Inventory cycle count, Stock consolidation
- Visibility into Warehouse operations and Queue
- Necessary **alerts and notification** to stake holders

- **Material request**
- Auto Bin Determination based on **Picking strategy** - (FIFO/FMFO/FEFO/MTO)
- Consolidation of Picking / Pick Slip
- Issuance, FG receipt, consumption
- Picking, Staging / Verification & Packing
- **Kit to Production Order**
- Pick by Cart, Production Supply (JIT)
- Delivery Management & Consolidation
- **FG dispatch** process
- **Carton packing, palletization**
- Packaging specifications
- Packing Slips & Documents
- TMS module with driver app & route optimization
- Shipment tracking – Last Mile Delivery
- Enhanced Labour management

Simple Warehouse Configuration starting from,
Warehouse Layout (Virtual Plotting)
Storage Sections
Storage positioning
Storage Types
Strategies at Storage Bins.
Master Data Setup
Handling Equipment
Vehicles



Pre SMT & SMT Line



MI / Assembly Line

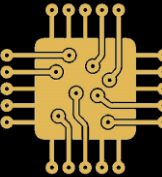


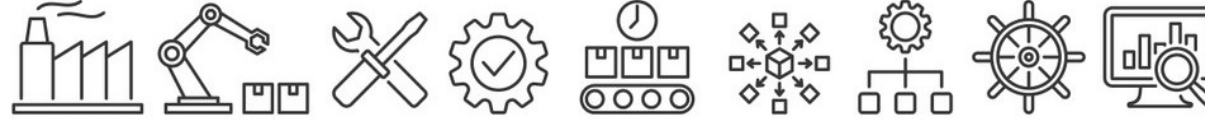
Packaging Line

- Inventory tracking of Components at each stage of Issue
- Kitting Control (follows the FIFO/ FEFO strategy) - **WMS integration for material issue validation**
- **Setup Verification**, Validation and Process control
- **FAI** to all quality parameters with approvals.
- Material issue check before loading
- **Solder paste Management** with alerts & multi-job transfer
- Feeder & mounter program data accuracy
- **Tool Management** - Stencil, squeegee tracking
- MSD Control
- Integration Protocols with all **Machine Makes** including **ICT, RF, Routers and other Machines.**
- **Machine ↔ Application ↔ Machine** - SMT validations: PCBA baking, IC programming, solder paste exposure, PCB cleaning & laser etching (inline/offline)
- Conveyor stop via PLC
- X-Ray counter

- **Routing** with approval workflows.
- Multiple routings per model
- **WIP Inventory** tracking at each stage giving real time inventory.
- Integrated with **MI/ AI** line to support the process through **PTH** and **WSM** machines for tracking including wave pallet count & tracking.
- **MI, PTH interlock with SMT completion**
- **Integration with ODM/ OEM machines/ systems** to get the throughput for seamless interlock at every process
- Functional testing machine integrations (BT, RF, ATE/ATS) - extract data from **Bluetooth testing machines, IMEI, MAC, SN verification**
- **Functional testing interlocks**
- Housing & label printing

- Label Setup
- **Dynamic label generation** using PRN/Bartender
- Labels for SFG, FG, housing, cartons, bins
- FG packing label prints
- **Adaptable** to customer-specific label type
- Weighing machine integration
- **Weight checks** at all applicable stations
- Customer serial number mapping & traceability
- **Mono, carton/bin, and pallet packing**
- Integrate with Label printers and scanners.
- Generation of labels against GB/ Carton/ Pallets and movement to Warehouse (Dispatch) against Delivery.





Work Order Management

- Configurable **work order types**: Standard, Dismantle, RMA, Others
- **Serial Number ID generation** & upload against Work Order
- **Work Order-specific BoM** pulled from ERP
- Aging forecasting, line-wise tracking
- Manual close, Cancel, Hold features
- **Order swapping**
- Operation/job order-based scanning
- Serial number comparison across stations
- **Line change** during production for running job orders

Serial Number Management

- Serial Number Generation (internal/external)
- Serial Number rule (ID/Track ID) for PCBA & FG
- Carton, pallet, shipment & packing rules
- MAC ID & IMEI generation
- Customer serial number mapping & traceability

BoM, PCBA, Firmware & Routing Management

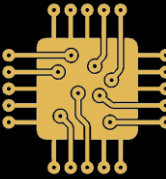
- Standard BoM with alternate items, sub-assembly station mapping, and workflow approvals
- **Routing** by Standard / Platform / Model with approval workflows.
- **Multiple routings** per model
- **Quality order** with specific routing
- **RMA** process with dynamic routings

Rework Module

- **Retest count** for ICT, FCT
- **Rework count** for all testing stages
- TRC visual inspection & **operator assignment**
- Material **replacement requests**
- **Rework & rejection traceability**
- Serial number **reset & unbind option**

Quality Module

- Detailed Quality module to capture the testing (100% sampling or Random sampling with respect to time or quantity) is supported.
- **Quality check sheets** with approval flows
- **Inline/process rejections** with ERP postings
- **Dismantle process** with reset part, RM, scrap approvals
- **Sampling rules** by operation, model, WO, time
- **Random sampling**, X-ray, LQC, FQC, OQC, EOLA & PDI
- Hold/release setup
- Dust, temperature & humidity updates
- Status control panel for quality holds/releases



Traceability

Manpower

Operator Name/ID
Each Operation's Start & End
Date/Time



Material

Material Tracking with
Unique ID, Part Number
Supplier, Lot & Date Codes
MSD Information



Machine

All process records directly from machines
Trace from material info (e.g., lot code, reel ID)
to find units produced



Tools & Consumables

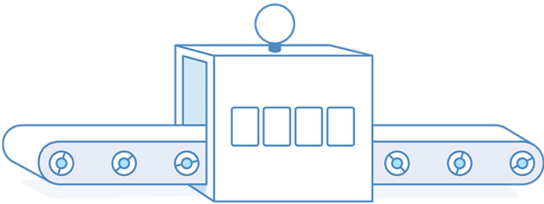
Tools used on machines
Specific tools
Life Cycle Management – No. of Strokes
Cleaning Process

Method / Procedure

Product & Work Order
Line Details
Machine / Workstation ID



COMPLETE AUTOMATION



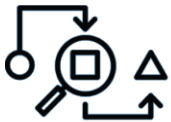
OCR

OCR

OCR enablement supports and makes life easier where the majority of companies have challenges since none of ERPs or any application captures critical data like MPN, Mfg. date and LOT number. It also saves \$\$ by avoid buying Machines.

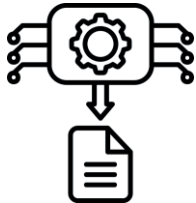
Interlock

Interlocking at every possible stage right from SMT to Assembly eliminating the possibility of defect boards to move down the line. Use of PLC automation to STOP the conveyor in case of anomaly either in materials, machines or processes.



Traceability

Complete automation of traceability end to end including WIP tracking and Handling nit where the SMT or boards that are completed with processes are stocked. Process and Part traceability Automation.

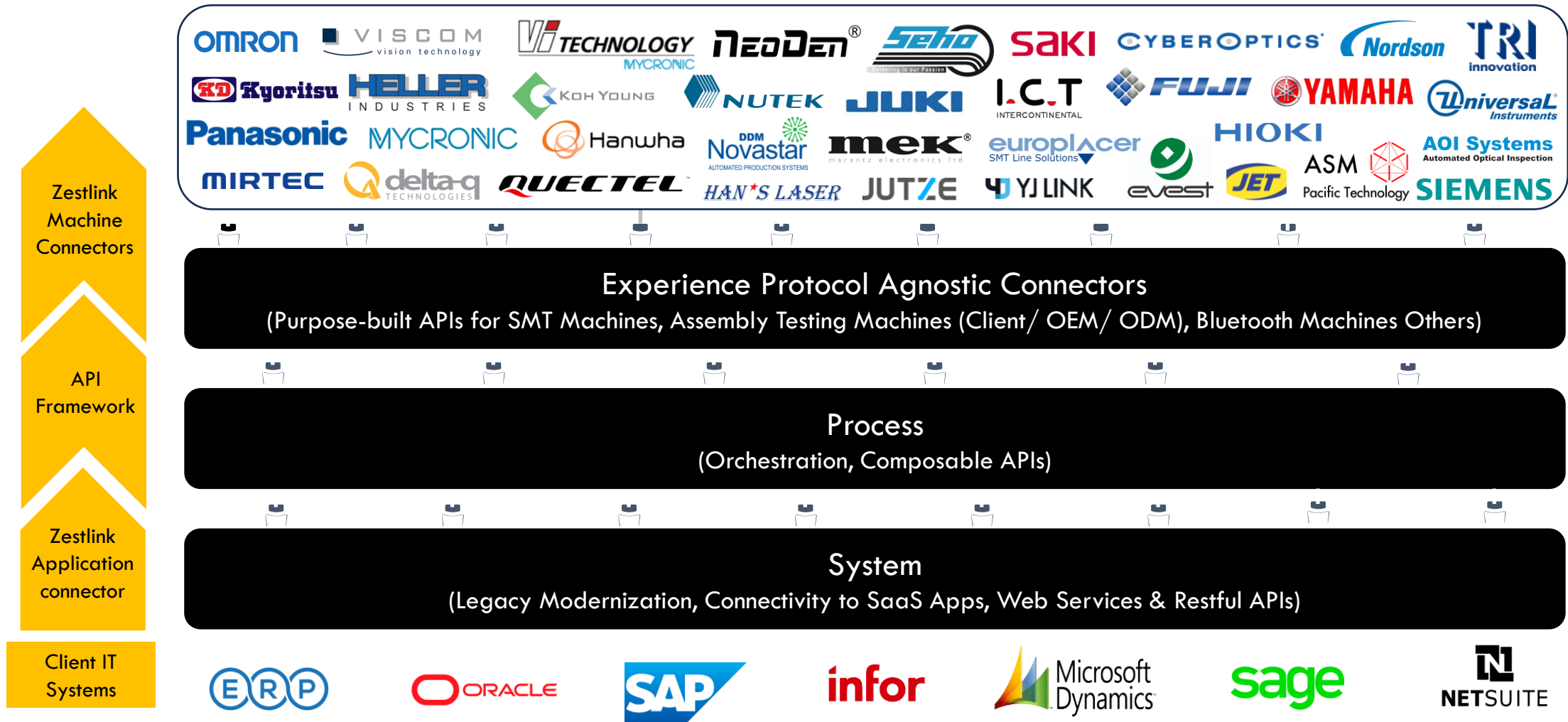


Machine Data

Ability to integrate all Model and Make of Machines in SMT, Assembly and Testing Lines. We also provide the option of having all done in our application saving you the cost of licenses but still provide all the features expected.

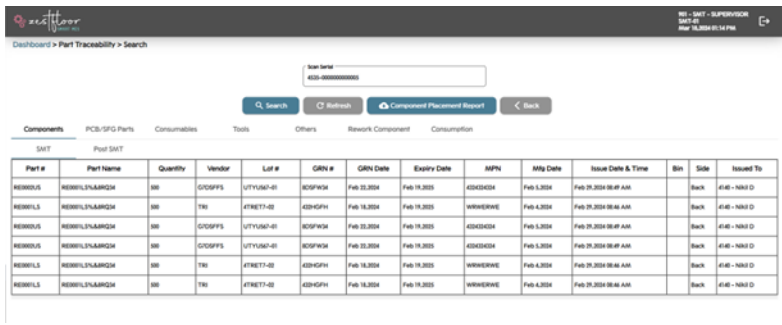


INFLUENCING THE API(LE)D CONNECTIVITY

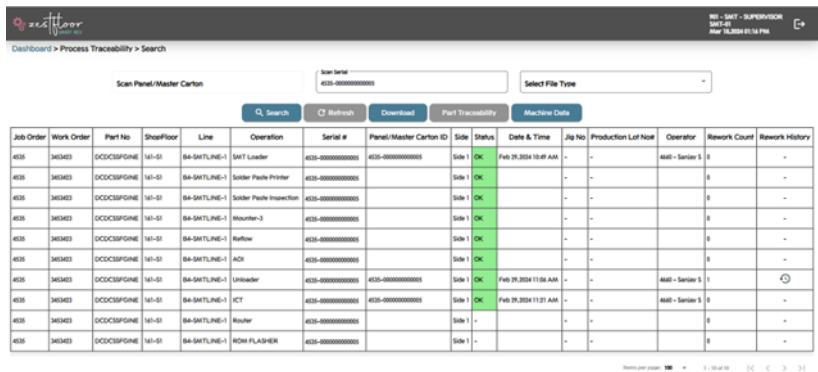


ANALYTICAL INSIGHTS

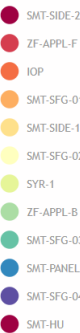
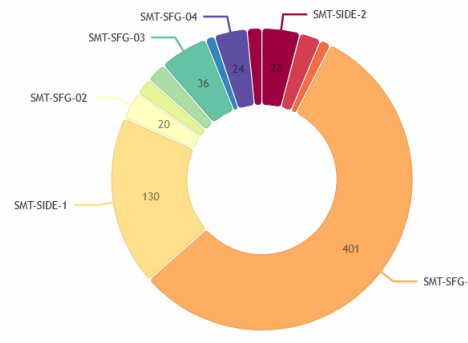
Part Traceability



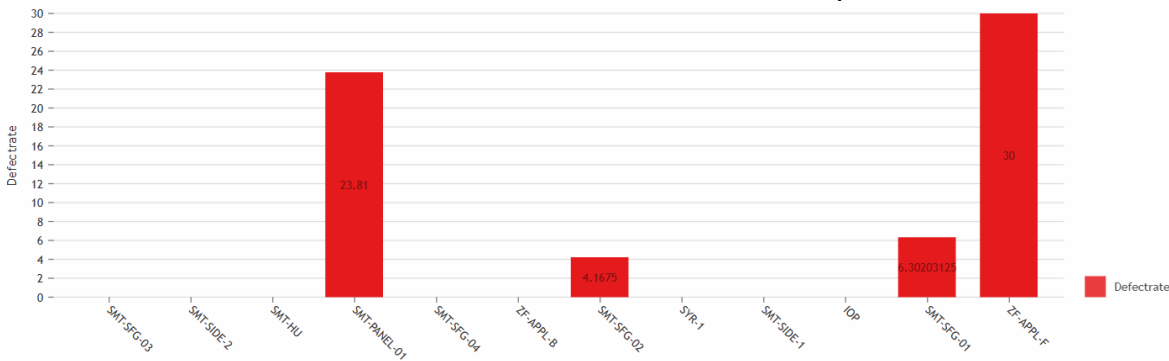
Process Traceability



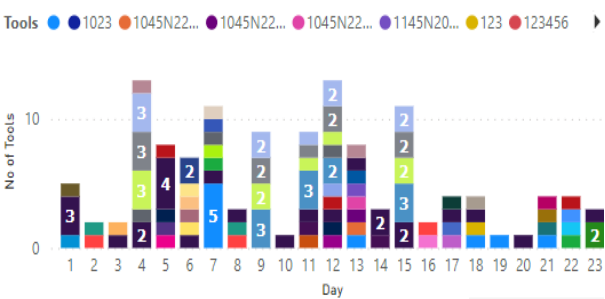
Production by Model



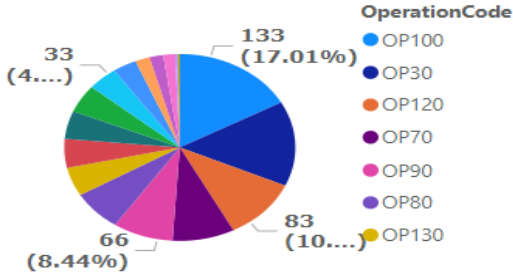
Defect by Model



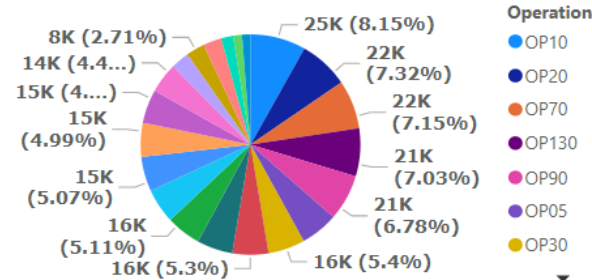
Tools Change By Day Wise



Operation Wise Rejection



Production By Machine



Key Customer Engagements – 2022-2025





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