

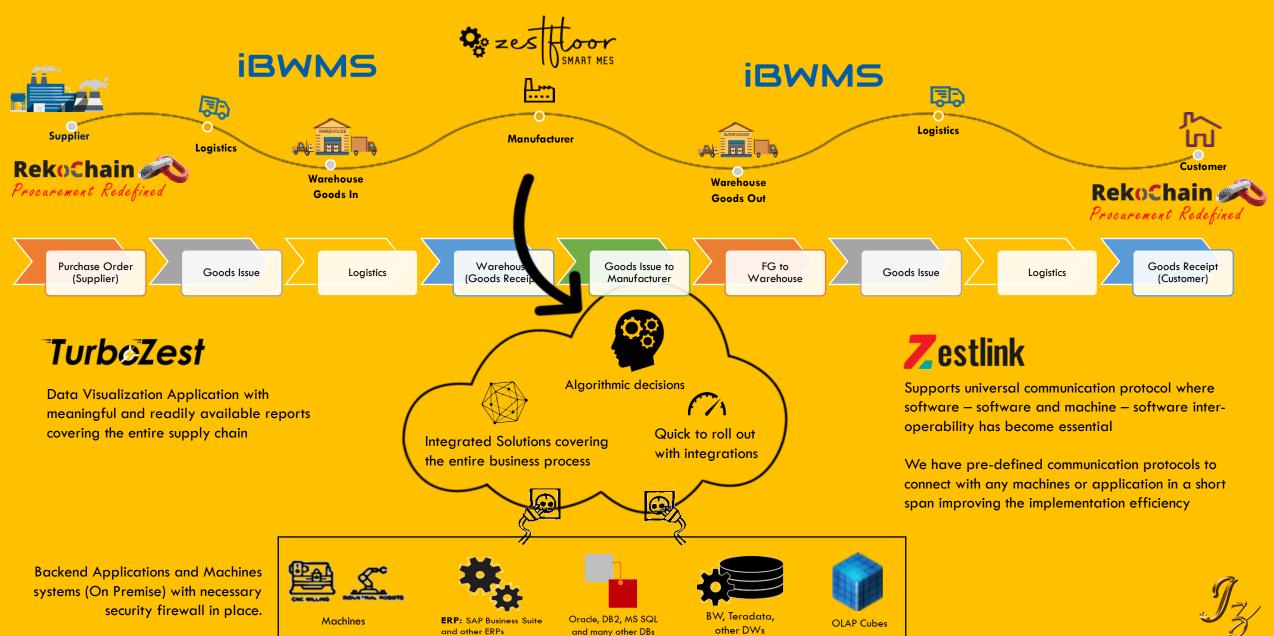
zestfoor SMART MES

DRIVING THE ENTIRE SUPPLY CHAIN





IZ SUITE – PRODUCT PORTFOLIO



ZESTFLOOR

- 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.





CHALLENGES

Coordination between multiple, dispersed and disconnected Machine Makers

With many Models and Machines in place both in SMT and Assembly. It is always challenging to connect and have a seamless data flow digitally recorded in the system.

Lack of Connectivity

Lack of Connectivity with Machines or Applications involved in the overall business processes which is from Inward to Dispatch.

Streamlined operations and Process automation

Predominant paper based records and manual processes are not streamlined and thereby, records pertaining to testing, tracing products, particularly during a recall and reconciling accounts and transactions end up being costly and time-consuming.

Connect to ODM/ OEM Machines to ensure the data flow.

Testing or Pairing systems in particular where the IMEI or serial numbers are generated has to be integrated and connected in Realtime to support Traceability and data flow

Lack of Product Traceability

TRACEABILITY

A major challenge in traceability is ambiguous product information resulting from logging vague and uncertain product characteristics that are hard to trace.

Onerous and Costly 'data reconciliation processes'

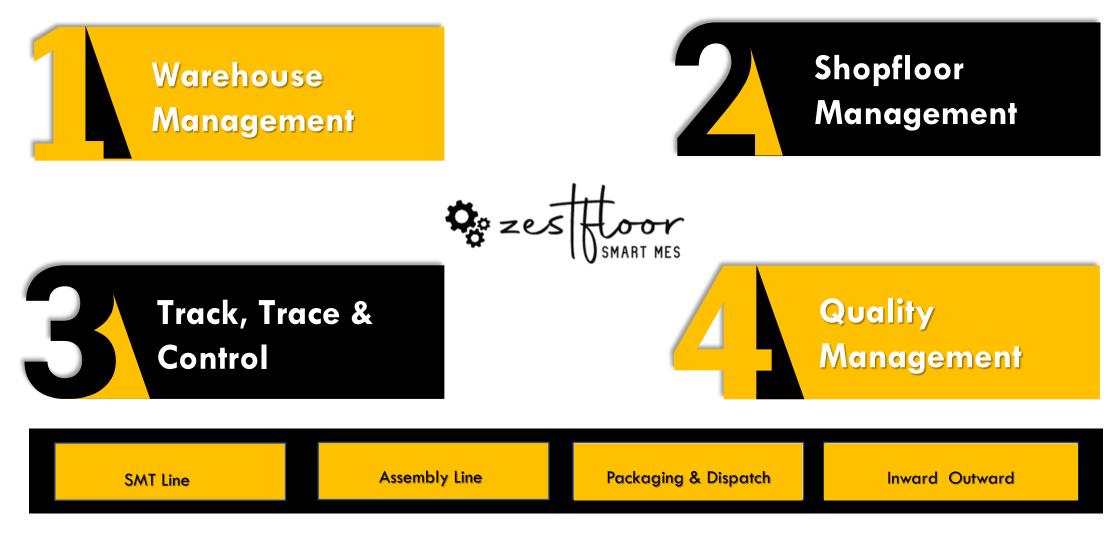
Supply Chain in general result in a large amount of duplicative data and involve huge efforts in the tracking and reconciliation from start to finish.

Bringing in Transparency in Business

Transparency is a key factor which propels the businesses on a steady state model. Bringing in consensus among all stakeholders in a network is important.

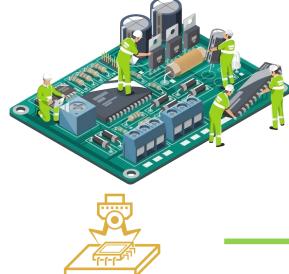


ZESTFLOOR





FEATURES



SMT Line

- Inventory tracking of Components at each stage of Issue
- Kitting Control (follows the FIFO/ FEFO strategy)
- Setup Verification and Process control, FAI to all quality parameters taken into consideration.
- Solder Paste Management, Stencil and other tool management
- MSD Control
- Route Control with every stage tracked
- Rework and Repair management
- Integration Protocols with all Machine Makes including ICT, RF, Routers and other Machines.

Material identification and Tracking starts from Inward,

Warehouse Layout (Virtual Plotting) Storage Sections Storage positioning Storage Type Dock Management



Assembly Line

- **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 Jig verification and Strokes.

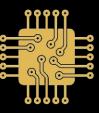
٠

- Integration with ODM/ OEM machines/ systems to get the throughput for seamless interlock at every process
- Ability to extract data from Bluetooth testing machines against MAC ID and IMEI and relate it to the serial number.
 - Supports Auto as well as Consumer Electronic industry end to end.



Packaging Line

- Pairing to Mono box/GB carton for complete traceability till the very last component.
- Generate labels of all sizes and requirements for Packaging.
- Integrate with Label printers and scanners.
- Detailed Quality module to capture the testing (100% sampling or Random sampling with respect to time or quantity) is supported.
- Generation of labels against GB/ Carton/ Pallets and movement to Warehouse (Dispatch) against Delivery.



MES ON INDUSTRIAL 5.0

Human Centric Approach - Our

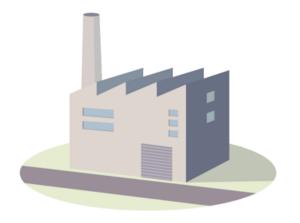
Products has always evolved with the intention of keeping human resources. We have consciously developed solution to support the automation process where needed thereby the gaps can be addressed without any impact to the human resource or blending the technology to the needs of the business processes.

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.

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.



COMPLETE AUTOMATION





0CR

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.





Traceab ility 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.



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(LED) CONNECTIVITY





ANALYTICAL INSIGHTS

Part Traceability

9 205	toor Pathone 200	sth.										1 - 54417 - 18 17-61 17 19, 2004 (LIPERVISOR ICSA PAR
					5000 Sector 10	Saa lend 435-annoonaan							
Compone	eta POB/SEG Parta	Consumation		Q Search	C Refe		ergeneret Planerer		€ Beck				
1AIT	Pust SWT	Consumation				in the correct	in cran						
		Quantity	Vendor	Lote	GRN#	GRN Dele	Expiry Date	MPN	Milg Date	Issue Date & Time	Bin	Side	Issued 1
SAIT Part #	Post SMT			1	1			1	Mila Date	Issue Date & Time	8in	Side Back	Issued 1
DAT Part #	Post SWT Pert Name	Quantity	Vendor	Lore	GRN#	GRN Dete	Expiry Date	MPN			Bin		-
DAT Part # RESIDENT	Plat SMT Part Name REXXVII.3%ABR3H	Quantity	Vendor Grosves	Let #	CRN #	GRN Date Feb 32,304	Expiry Date Feb 19.3035	MPN 4060404	Fe0 1.3034	Feb 29, 2014 (8),49 A.M.	Bin	Back.	4140 - NIKITO
TAUT Part # REDUCTUS REDUCTUS	Post SWT Part Name REXETLSNABROM REXETLSNABROM	Quantity 505	Vendor G/G9745 TW	Let # VTYU62-81 4THET7-02	CAIN # BOSFWOI 423HOFH	GRN Date Px6 32,3054 Px6 18,3054	Expiry Date Feb IX.2025 Feb IX.2025	MPN 40000000 WRINEDWIE	Feb 1.3034 Feb 4.3034	Pels 29, 2024 (BLHT AM) Pels 29, 2024 (BLHT AM)	Bin	Back Back	4140 - NIRJED 4140 - NIRJED
1AIT	Past SWT Pert Name RECORTLSNARROAM RECORTLSNARROAM RECORTLSNARROAM RECORTLSNARROAM RECORTLSNARROAM	Quantity 585 585 585 585	Vendor Grosvys Tec Grosvys	Lot # UTYU62-81 4THET7-02 UTYU562-81	GAIN # BOSFWSH 423HOFH BOSFWSH	GRN Date Peb 32,3004 Peb 18,3004 Peb 18,3004	Expiry Date Feb 11,3035 Feb 11,3035 Feb 11,3035	MPN 4D4D4D4 WRHEIMME 4D4D4D4	Peb 1.3034 Peb 4.3034 Peb 3.3034	Feb 27, 2024 38,47 A.M. Feb 27, 2024 38,49 A.M. Feb 27, 2024 38,49 A.M.	Bin	back back back	4140 - NAU D 4140 - NAU D 4140 - NAU D

Process Traceability

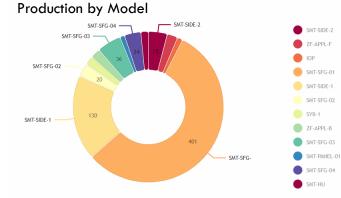
SMT-SIDE-2

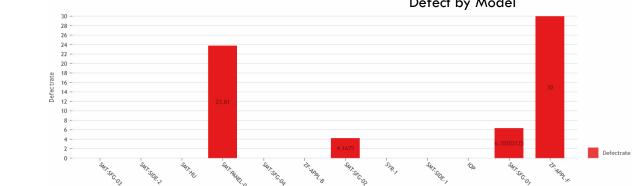
SMT-SFG-02

SMT-HU

€ zeš	ftoor													901 - SM(T - SUP SM(T-01 May 10,2024 01.5	F+			
Dashboard	> Process '	Fraceability >	Search															
Scan Panel/Master Carton						5can Serial 4535-000000000	Select File	lype	·									
Q, Search C Refresh Download										Part Traceability Machine Data								
Job Order	Work Order	Part No	ShopFloor	Line	Operation	Serial #	Panel/Master Carton ID	Side	Status	Date & Time	Jig No	Production Lot No#	Operator	Rework Count	Rework Histo			
1535	3453423	DCDCSSFGINE	147-57	84-SMTLINE-1	SMT Loader	4535-000000000000	4535-000000000005	Side 1	сĸ	Feb 29,2034 10.49 AM			4640 - Saniay S	0				
635	3453423	DCDCSSFGINE	147-57	84-SMTLINE-1	Solder Paste Printer	4535-000000000005		Side 1	οк					0				
1535	3453423	DCDCSSFGINE	167-57	84-SMTLINE-1	Solder Paste Inspection	4525-0000000000005		Side 1	ск					0				
635	3453423	DCDCSSFGINE	147-57	B4-SMTLINE-1	Mounter-3	4535-0000000000005		Side 1	ск									
635	3453423	DCDCSSFGINE	147-57	B4-SMTLINE-1	Reflow	4525-000000000005		Side 1	сĸ									
635	3453423	DCDC55/GINE	147-57	84-SMTLINE-1	ADI	4535-000000000005		Side 1	сĸ					•				
635	3453423	DCDCSSFGINE	147-57	84-SMTLINE-1	Unicader	4535-000000000005	#535-000000000005	Side 1	œ	Feb 29,2034 11:56 AM			4660 - Sanjay S	1	•			
635	3453423	DCDCSSFGINE	147-57	84-SMTLINE-1	ICT .	4535-000000000005	4535-000000000005	Side 1	сĸ	Feb 29,2034 11:21 AM			4660 - Saniay S	0				
1525	3453423	DCDCSSFGINE	147-57	84-SMTLINE-1	Router	4535-000000000000		Side 1	•					0	1.1			
635	3453423	DCDCSSFGINE	141-51	84-SMTLINE-1	ROM FLASHER	4535-000000000000		Side 1						0				

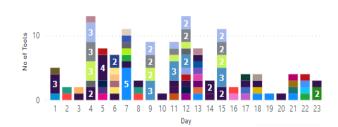


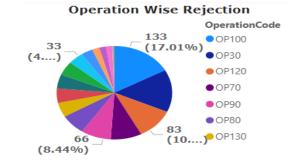




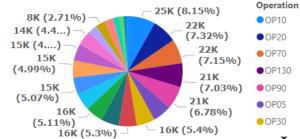
Tools Change By Day Wise







Production By Machine



Defect by Model

KEY CUSTOMER ENGAGEMENTS – 2022-2023





















AX15[®] global automation

















Osrim Committed. Competent. Consistent. Sahasra







Intelizest





