



dcvmn

Developing Countries Vaccine
Manufacturers Network



Biological E. Limited
Celebrating Life Every Day



**WAREHOUSE
MANAGEMENT
SYSTEM**
[SAP_WMS]





Biological E. Limited

Celebrating Life Every Day





Company Profile and History:

- Biological E. Limited (BE) India started its journey in vaccine manufacturing in the year 1962 and became the first Indian private company to enter into the vaccines business.
- BE has modern manufacturing facilities that are well equipped for sterile manufacturing of quality products. Its manufacturing facilities have been inspected by multiple regulatory agencies.
- BE has 7 “WHO pre-qualified” vaccines and is working to expand its pipeline of generic vaccines. Additionally, it is leveraging its past experience in the vaccines space to transition to developing novel vaccines. BE is the largest producer of Tetanus Vaccine in the world and leading supplier of Pentavalent Vaccine. It is also one of the leading suppliers of Polyvalent Snake Antivenom in India.
- BE is one of the leading vaccine companies in India and partners with global healthcare agencies, including the WHO, UNICEF and Pan American Health Organization in their efforts to make life saving vaccines accessible globally. BE supplies its vaccines to more than 100 countries.





Warehouse _ Shameerpeta site:





Key Challenges _ before SAP WMS implementation:

Dedicated Storage Areas

- Multiple material handling due to “Multistage labelling – Quarantine / Undertest / Approved / Rejected” and due to separate storage areas.
- Space challenge due to dedicated storage area for separate category materials like Quarantine, Approved & Rejected.
- Manual tracking / tracing of materials. [Locations are updated manually on status board].
- Human errors due to manual activity.





WMS Proposal by BioE & funding support by dcvmn:

23rd April

Received communication from dcvmn for possibility of funding for WMS

29th April

Application form Shared by BE to DCVMN

23-24th June

Meeting held in Geneva. BE Confirmed & committed implementation by Oct 2022

8th July

MOU signed off by BE and shared to DCVMN

26th Aug

DCVMN secretariat communicated to BE regarding grant of \$ 50000 for implementation of WMS in warehouse.



Project Journey...



Go Live!



STEP 5

GO LIVE (03.10.22)



STEP 4

CSV – IQ/OQ/PQ & Sops. (01.10.22)



STEP 3

Final Application - Demo Training & Cutover strategy (4th week of SEP)



STEP 2

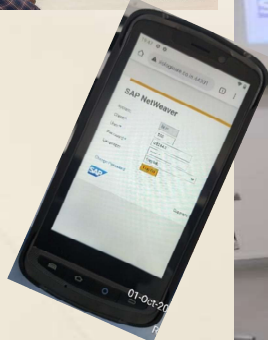
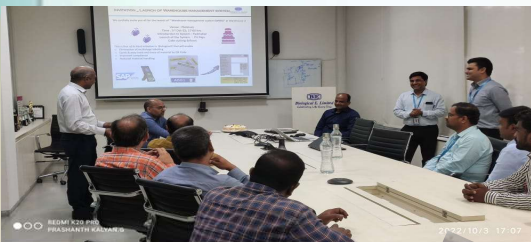
Application Development by vendor (3rd week of SEP)

STEP 1

Vendor selection : Proventech. Kick off by 3rd week of AUG .



“GO LIVE” _ 3rd Oct. :





Challenges _ during SAP WMS Implementation :

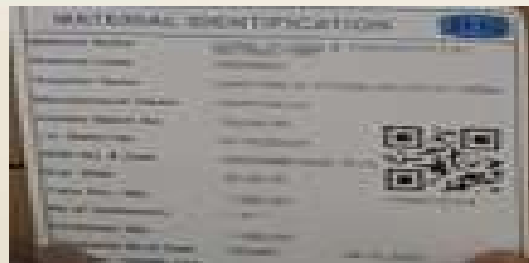
- **Data :**
 - + Correctness and completeness of master data (Material master, Bin Master) & Inventory data for uploading during cutover activity.
 - + Multiple time data verification, due to ongoing warehouse operations (to support business).
 - + Data preparation : Bin wise, pack wise data for available inventory.
- **User Acceptance Test (UAT) :**
 - + To be performed for all business scenarios including printing of labels, verify the label content etc.
- **Delivery challenges :**
 - + Network switches / Wi-Fi Access points.
- **Hand held Device (HHD) :**
 - + To ensure appropriate controls on HHD User management.
- **Post Go Live:**
 - + Stock reconciliation before and post Go Live (Category wise, AR Number wise, Bin wise).
 - + Labelling of available inventory packs with New QR code labels.



SAP WMS advantages :

COMMON STORAGE AREA

- Use of Single stage QR code label in place of multi-stage labelling.
- Easy tracking/tracing of materials since location can be traced using Handheld device.
- Elimination of Human errors.
- Reduction in material handling.
- Better regulatory compliance due to electronic controls.
- Optimum space utilization due to common storage area.




SU Inquiry	
WHS	WH2
SU	1000000576
Material	10000752
ADCF ANTIFOAM IRRAD...	
Batch	8171220115
Quantit	49.000 ML
Status	A
Approved	
Strg Typ	R01
BIN	R01
Ret.Date	10.10.2022
Mfg.Date	19.05.2021
Exp Date	15.05.2023
F3 Back	



Post Go Live.. (Single stage QR Code Label):

Before WMS Implementation: (Used Quarantine, Under test, Sampled and Approved labels for storage packs)



APPROVED	
Name of the Material	
Batch No.	
Vendor Batch No.	
Manufactured By	
G.R. No.	
Inspection Lot.No	
Approved Qty.	
Retest date/Next inspection due date	
Expiry Date	
Signature & Date	
Ref No.	

Material Name	
Material Code	
Supplier Name	
Manufacturer Name	
Vendor Batch No.	
I.H. Batch No.	
GRN No. & Date	
Exp Date	
Qty. Recd/Pack Size	
Container No.	
Prepared by & Date	
Ref. No.	



After WMS Implementation: (Used Single QR Code label, replaced with Quarantine, Under test, Sampled and Approved)



MATERIAL IDENTIFICATION	
Material Name	
Material Code	
Supplier Name	
Manufacturer Name	
Vendor Batch No.	
I.H. Batch No.	
GRN No. & Date	
Exp. Date	
Total Rec. Qty.	
No of Containers	
Container Qty.	
Prepared By & Date	
Ref. No.	



1000000523



“QR code Labels” for materials & storage bins:





Post Go Live.. (Electronic Location management):

Before WMS implementation :Manual board updating against the bin as per the status area

APPROVED MATERIAL			
Rack No	Material Code	Material Name	I.H.B N
DT01	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT02	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT03	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT04	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT05	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT06	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT07	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT08	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT09	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT10	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT11	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT12	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT13	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT14	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT15	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT16	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT17	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT18	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT19	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT20	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT21	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT22	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT23	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT24	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT25	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT26	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT27	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT28	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT29	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P
DT30	30000000000000000000	MAN CLAS 2 IN 1000 TO PUMP	817421055P

AB01 ↑

After WMS Implementation :QR code scan status against to the Bin level scan

SU Inquiry

WHIS	WH2
SU	100000000092
Material	100000767
KLEPTOSE (2-HYDROXY ...	
Batch	8171220019
Quantit	24.973 KG
Status	A
Approved	
Strg Typ	AC2
BIN	AB01
Ret.Date	
Mfg.Date	03.09.2021
Exp Date	02.09.2024
F3 Back	

AB01



Post Go Live ... (Material status identification on Hand held device):

QR Scanner SU out put



QR Status Quarantine Material Status

SU Inquiry

WHS	WH2
SU	1000000626
Material	10000782
ADCF ANTIFOAM IRRAD...	
Batch	8171220123
Quantit	10.000 ML
Status	Q
Quarantine	
Strg Typ	R01
BIN	R01
Ret.Date	
Mfg.Date	21.09.2021
Exp Date	20.10.2026
F3 Back	

QR Status Approved Material Status

SU Inquiry

WHS	WH2
SU	1000000576
Material	10000782
ADCF ANTIFOAM IRRAD...	
Batch	8171220115
Quantit	49.000 ML
Status	A
Approved	
Strg Typ	R01
BIN	R01
Ret.Date	10.10.2022
Mfg.Date	19.08.2021
Exp Date	18.08.2023
F3 Back	

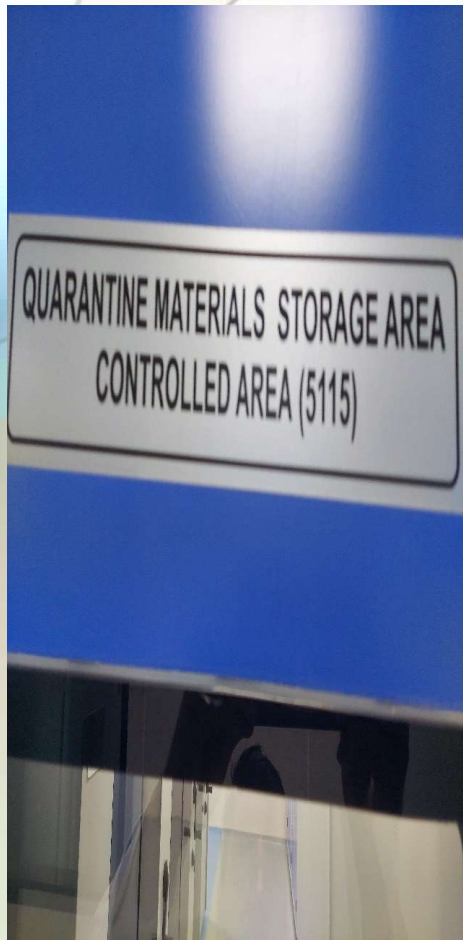
QR Status Rejected Material Status

SU Inquiry

WHS	WH2
SU	1000000528
Material	10000782
ADCF ANTIFOAM IRRAD...	
Batch	8171220109
Quantit	50.000 ML
Status	S
Blocked	
Strg Typ	AC1
BIN	AC1-01
Ret.Date	
Mfg.Date	22.09.2021
Exp Date	21.09.2023
F3 Back	



Common storage area in place of Quarantine & Approved area





Thank you