

New Zealand Sugar Company

TEAM RACK 'N' STACK

NEW AREA MANAGEMENT TEAM FINAL PRESENTATION



Rack 'n' Stack Team Photo



NZ Sugar Distribution



Background

- Equal managed through 3rd Party Logistics provider
- Different distribution requirements
- Part Pallet Picking / Shop Orders



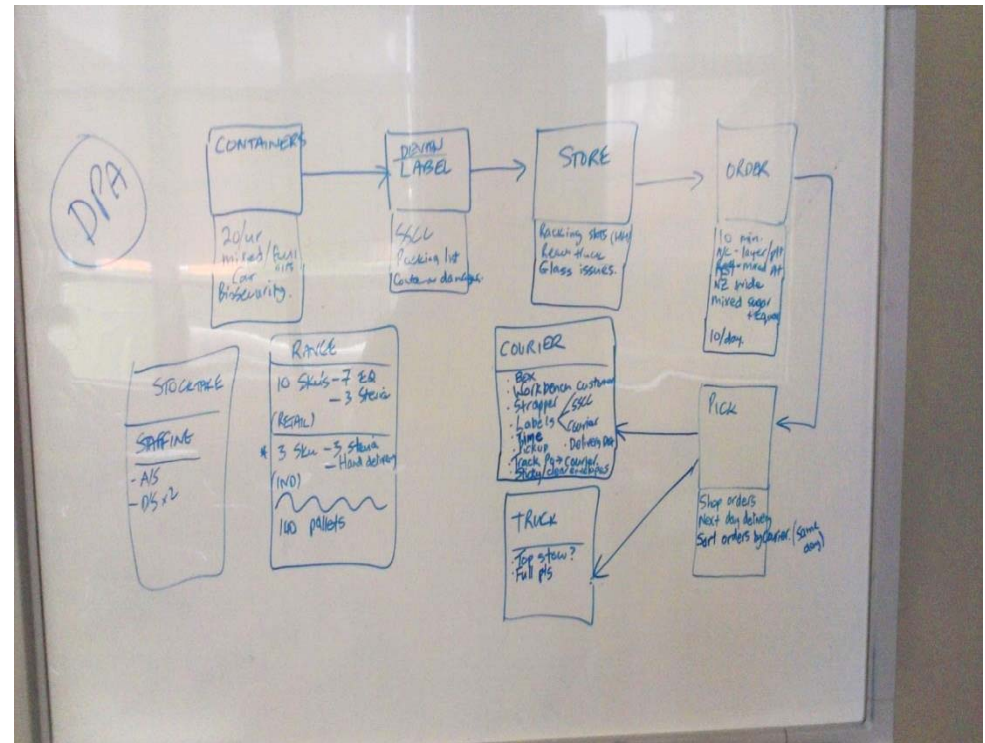
Mandate

- Design and Implement an effective plan for storing, picking & loading Equal Products
- Assess each step to ensure safe efficient routines are established with the least handling & movement
- Improve or maintain the Business Goal Aligned Performance Measures in a Sustainable manner
- Recommend further related improvement initiatives to the Leadership Team
- Complete within 12 weeks after Kick-off

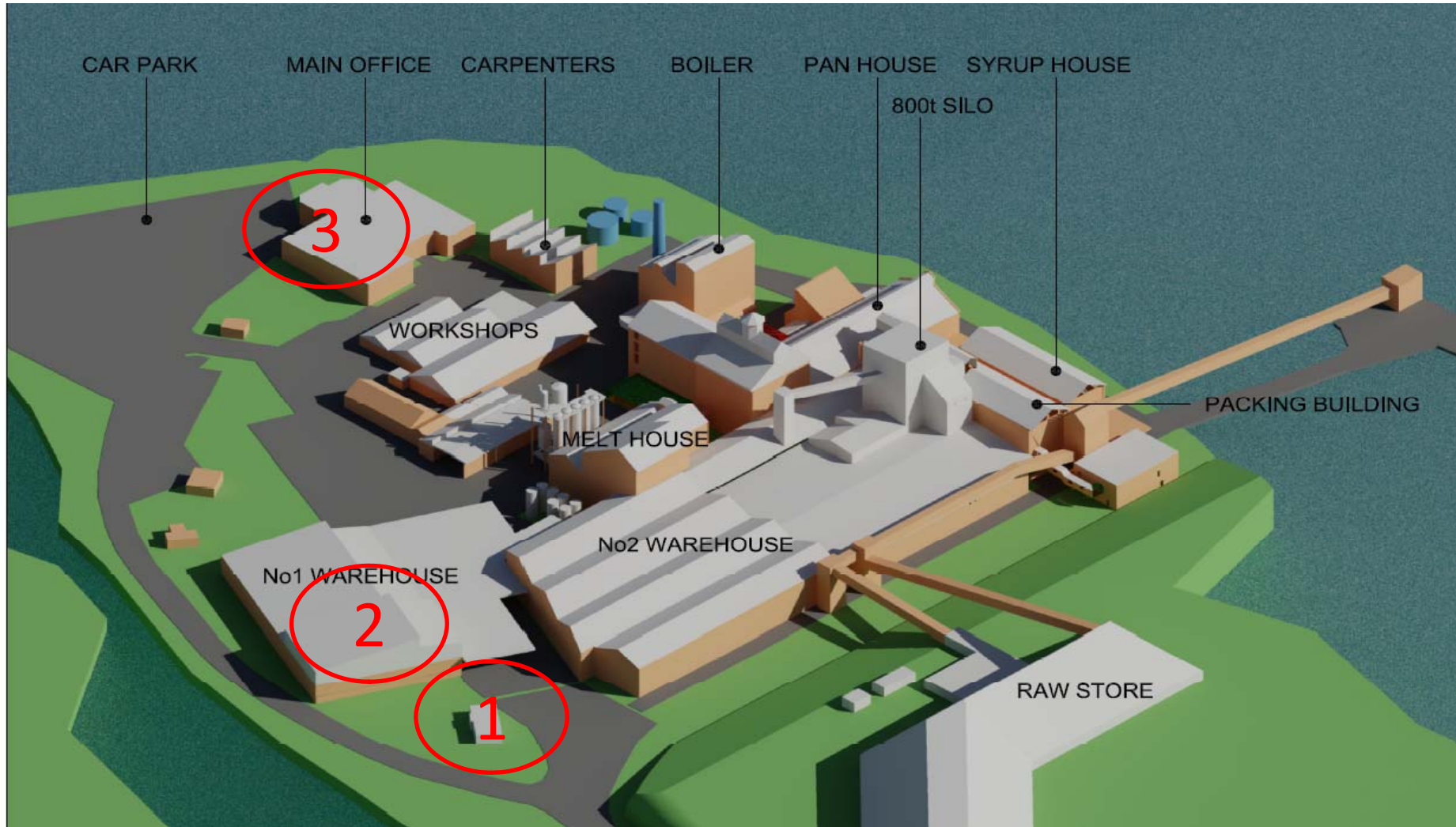


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graph TD; A[Imported containers] --> B[Devan/ label]; B --> C[Storage]; D[Inventory management] --> C; E[Customer orders] --> F[Pick order]; C --> F; F --> G[Courier]; F --> H[Truck]; G --> I[Customer]; H --> I;
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The flowchart illustrates the supply chain process. It begins with 'Imported containers', which leads to 'Devan/ label'. This then leads to 'Storage'. 'Inventory management' also feeds into 'Storage'. From 'Storage', the process moves to 'Pick order'. 'Customer orders' also feed into 'Pick order'. From 'Pick order', the process branches into 'Courier' and 'Truck'. Both 'Courier' and 'Truck' lead to the final destination, 'Customer'.



Defined Production Area – by area



1 = Customer Services

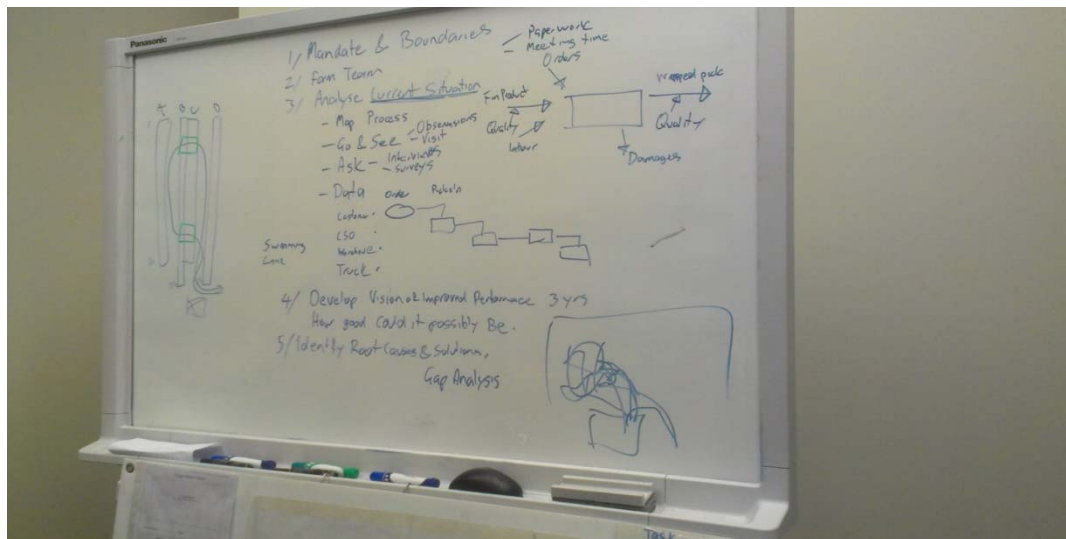
2 = Warehouse

3 = Reception



Key Milestones to achieve Mandate

- Set up work area
- Confirm picking layout
- Analyse order profiles
- Establish new order picking processes



What did this mean to us?

“Delivering the right product in the right quantity to the right customer on the right day in pristine condition”




Situation at Start – pre March 2013

- Pre 2000
 - Full pallets only
- Post 2000
 - Shop orders required
 - Small 'picking' area
 - Truck only distribution

Pick area – Dec 2012

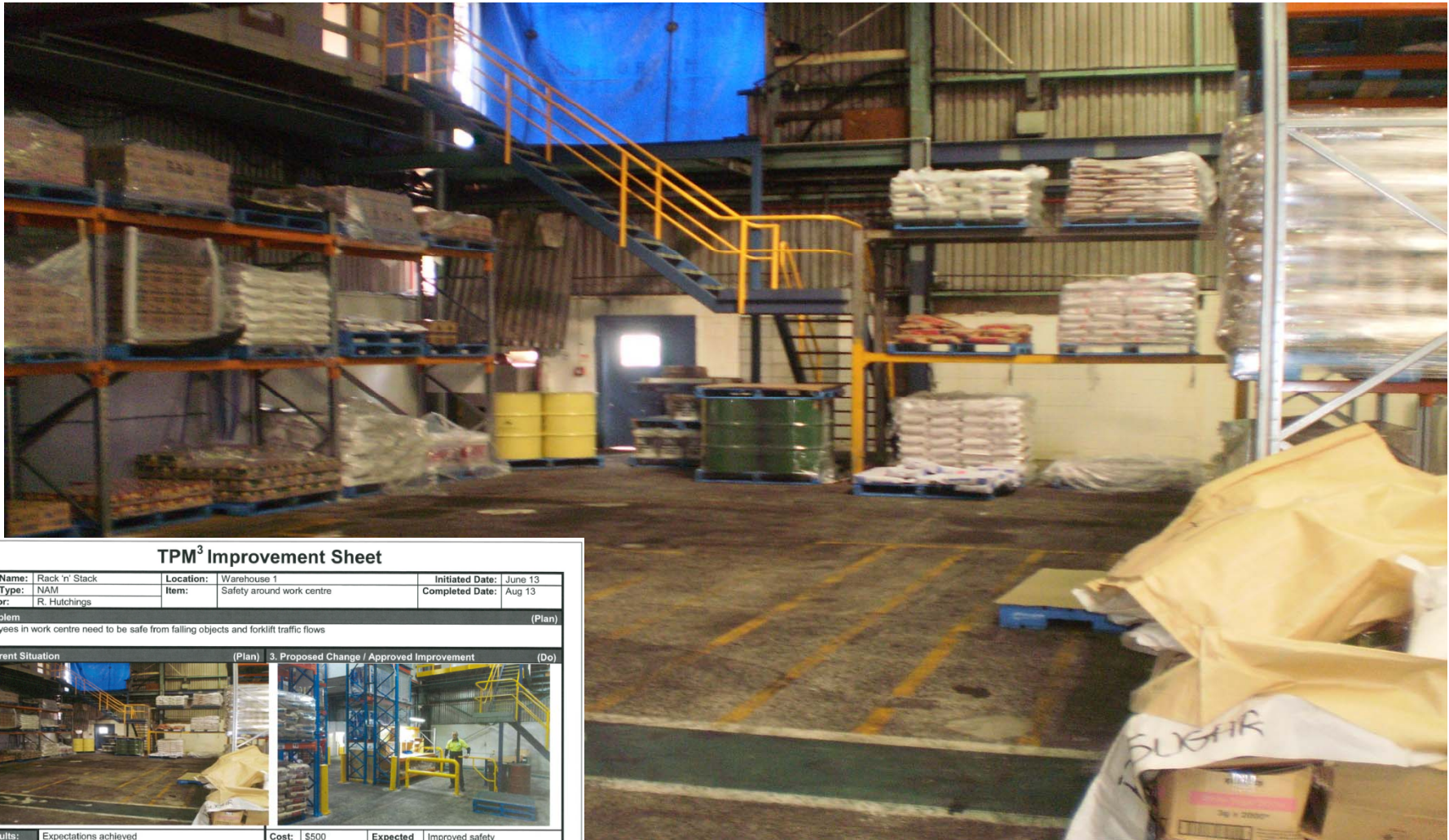


TPM ³ Improvement Sheet					
Team Name: Rack 'n' Stack		Location: Warehouse 1		Initiated Date: June 13	
Team Type: NAM		Item: Order strapping and assembly		Completed Date: Aug 13	
Initiator: R. Hutchings					
1. Problem (Plan)					
Need an area to pack and strap orders and store overnight as required.					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
Improvement Target:					
					
4. Results: (Check)		Cost: \$2000		Expected Saving: Fit for purpose work centre	
Expectations achieved					
5. Future Actions: (Act)					
Add to cleaning checklists					
CTPM Australia					
Approved by:		Shift A	Shift B	Shift C	Shift D
					

New Work Area

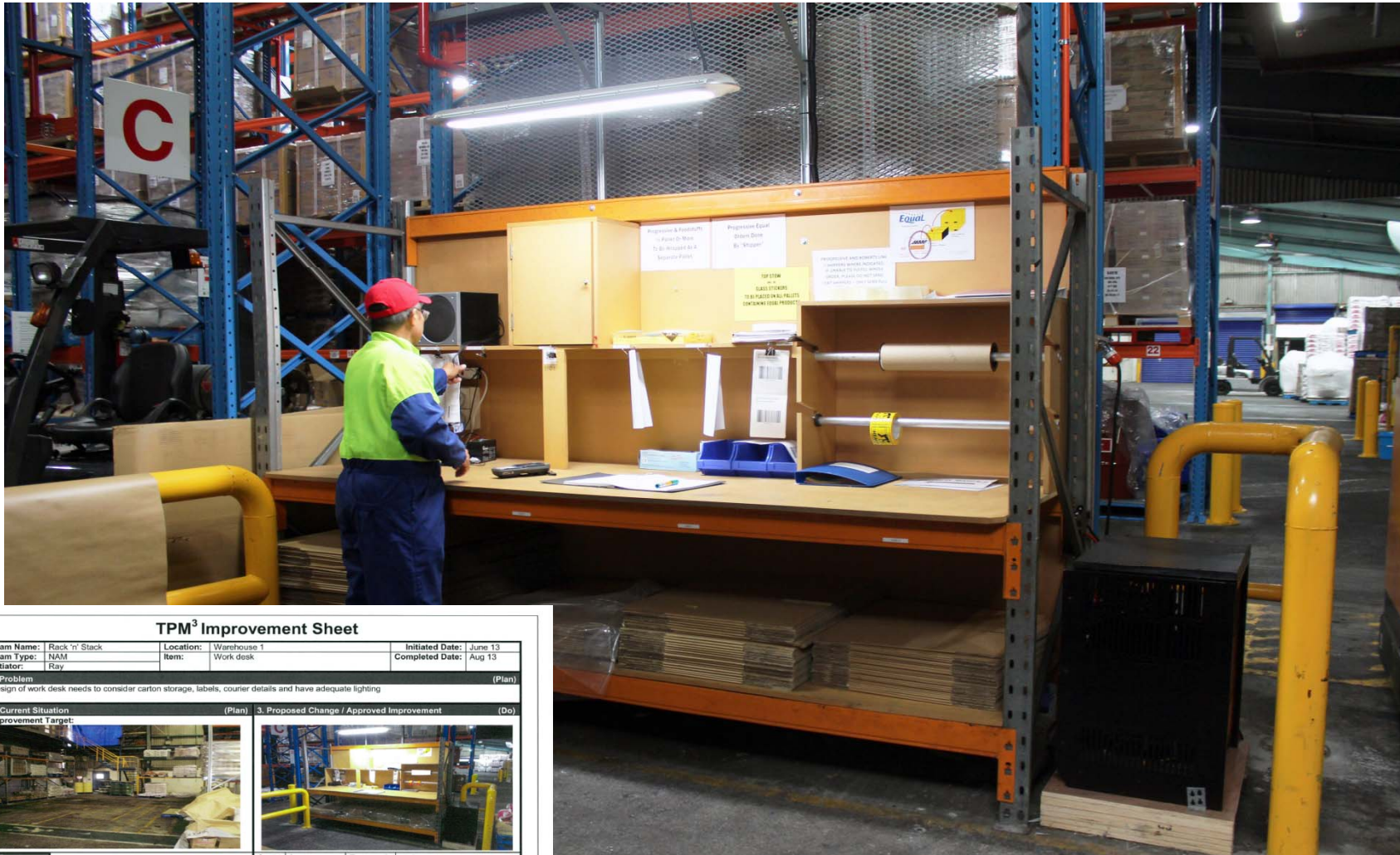


Picking Area – before photo



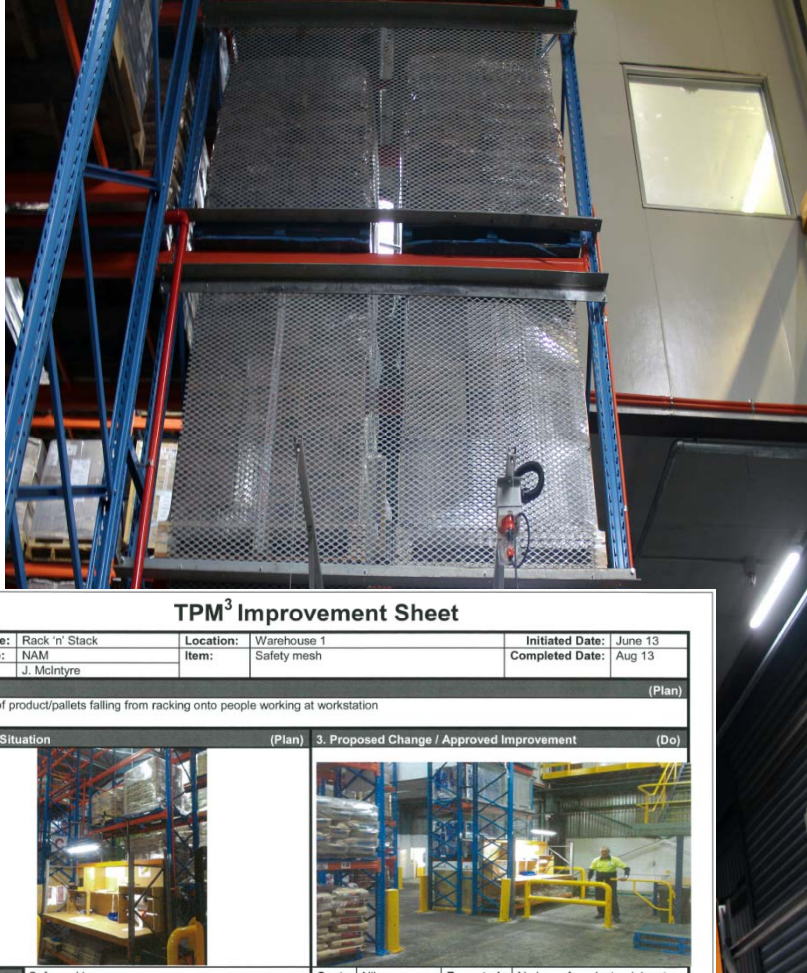
TPM ³ Improvement Sheet					
Team Name: Rack 'n' Stack		Location: Warehouse 1		Initiated Date: June 13	
Team Type: NAM		Item: Safety around work centre		Completed Date: Aug 13	
Initiator: R. Hutchings					
1. Problem (Plan)					
Employees in work centre need to be safe from falling objects and forklift traffic flows					
2. Current Situation (Plan)		3. Proposed Change / Approved Improvement (Do)			
4. Results (Check)		Cost: \$500		Expected Saving: Improved safety	
Expectations achieved					
5. Future Actions: (Act)					
CTPM Australia					
Approved by:		Shift A	Shift B	Shift C	Shift D
Page 15					

Work Desk

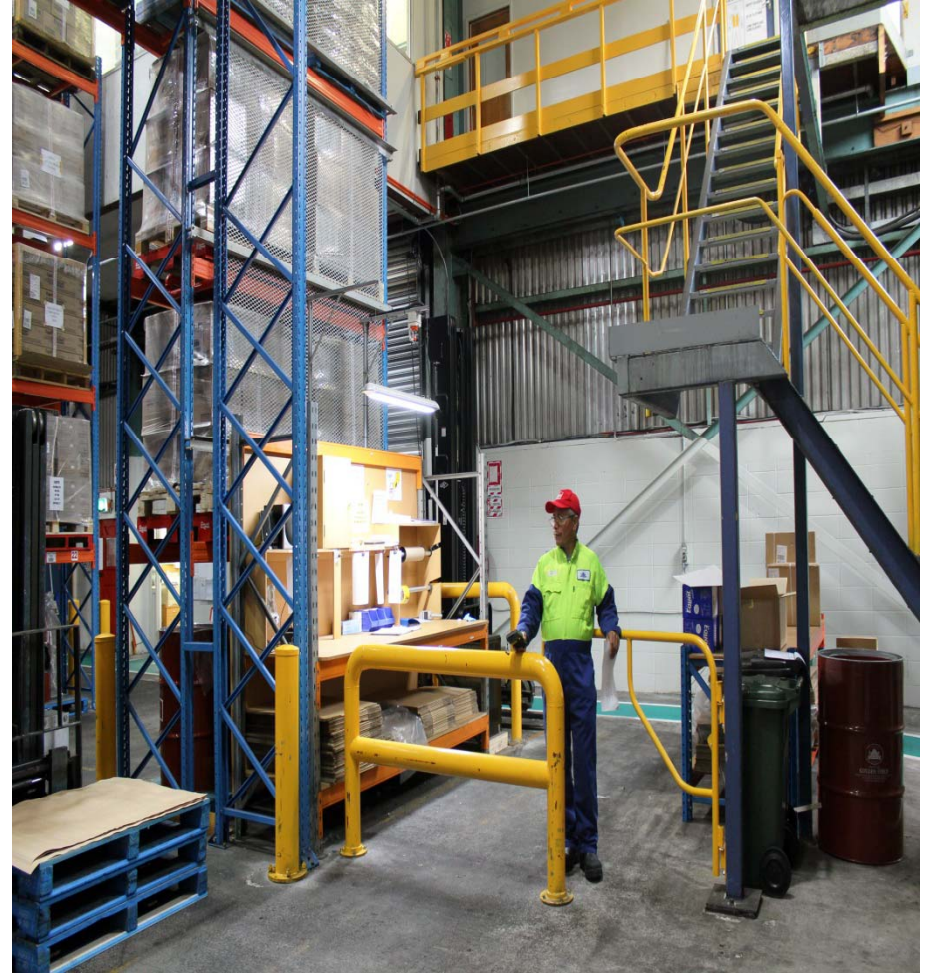


TPM ³ Improvement Sheet			
Team Name: Rack 'n' Stack	Location: Warehouse 1	Initiated Date: June 13	
Team Type: NAM	Item: Work desk	Completed Date: Aug 13	
Initiator: Ray			
1. Problem Design of work desk needs to consider carton storage, labels, courier details and have adequate lighting (Plan)			
2. Current Situation (Plan)		3. Proposed Change / Approved Improvement (Do)	
Improvement Target: 			
4. Results: (Check)	Expectations achieved	Cost: \$1500	Expected Saving: Fit for purpose work centre
5. Future Actions: Add to cleaning checklists (Act)			
CTPM Auckland			
Approved by: 	Shift A: 	Shift B: 	Shift C: 
Page 15			

Picking Area Work Centre – Safety



TPM ³ Improvement Sheet					
Team Name: Rack 'n' Stack		Location: Warehouse 1		Initiated Date: June 13	
Team Type: NAM		Item: Safety mesh		Completed Date: Aug 13	
Initiator: J. McIntyre					
1. Problem (Plan)					
Possibility of product/pallets falling from racking onto people working at workstation					
2. Current Situation (Plan)		3. Proposed Change / Approved Improvement (Do)			
					
4. Results: (Check)		Cost: Nil		Expected Saving: No loss of product or injury to people	
Safe working area					
5. Future Actions: (Act)		Nil			
CTPM Australasia					
Approved by:		Shift A	Shift B	Shift C	Shift D
					
Page 15					



Work Bench and Strapping



TPM ³ Improvement Sheet					
Team Name:	Rack 'n' Stack	Location:	Warehouse 1	Initiated Date:	June 13
Team Type:	NAM	Item:	New shop order picking area	Completed Date:	Aug 13
Initiator:	J.McIntyre				
1. Problem (Plan)					
No work station for shop orders, orders being made up using forklift.					
2. Current Situation (Plan)		3. Proposed Change / Approved Improvement (Do)			
					
4. Results: (Check)	Orders made up at one point	Cost:	\$500	Expected Saving:	Time / safety
5. Future Actions: (Act)					
CTPM Australasia					
Approved by:	Shift A	Shift B	Shift C	Shift D	
					Page 15

Glass and Recycling



TPM ³ Improvement Sheet					
Team Name: Rack 'n' Stack		Location: Warehouse 1		Initiated Date: June 13	
Team Type: NAM		Item: Storage bins		Completed Date: Aug 13	
Initiator: Ray					
1. Problem (Plan)					
Need dedicated storage bins for order assembly activities					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
Improvement Target:					
					
4. Results: (Check)		Expectations achieved		Cost: \$200	
				Expected Saving: Visual housekeeping	
5. Future Actions: (Act)					
Add to cleaning checklists					
CTPM Australia					
Approved by:		Shift A	Shift B	Shift C	Shift D
Page 15					

Reach Truck



Picking Location Set Up

- Sugar = 62 SKUs / Equal = 10 SKUs
- Fork lift access and flow
- SKU Pick Frequency
- Product groupings (brand / sugar type)
- Product weight (pallet stability)
- Glass exposure

TPM ³ Improvement Sheet					
Team Name: Rack 'n' Stack		Location: Warehouse 1		Initiated Date: Mar 13	
Team Type: NAM		Item: Stock locations		Completed Date: Aug 13	
Initiator: J. McIntyre					
1. Problem (Plan)					
Stock location required for new racking					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
					
4. Results: (Check)		Allocation of picking locations		Cost: Nil	Expected Saving: Nil
5. Future Actions: (Act)					
CTPM Australia					
Approved by:		Shift A	Shift B	Shift C	Shift D
		JJ	ST	RH	RP, RK
Page 15					



Product ID

- Pallet labelling
- SSCC labels
- Bay numbers
- Product ID

TPM ³ Improvement Sheet					
Team Name: Rack 'n' Stack		Location: Warehouse 1		Initiated Date: June 13	
Team Type: NAM		Item: Product identification		Completed Date: Aug 13	
Initiator: J. McIntyre					
1. Problem (Plan)					
Warehouse staff unfamiliar with new Equal products					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
					
4. Results: (Check)		Less time looking for product		Cost: Nil	Expected Saving: Time
		5. Future Actions: (Act)			
CTPM Australasia					
Approved by:		Shift A	Shift B	Shift C	Shift D
					
Page 15					



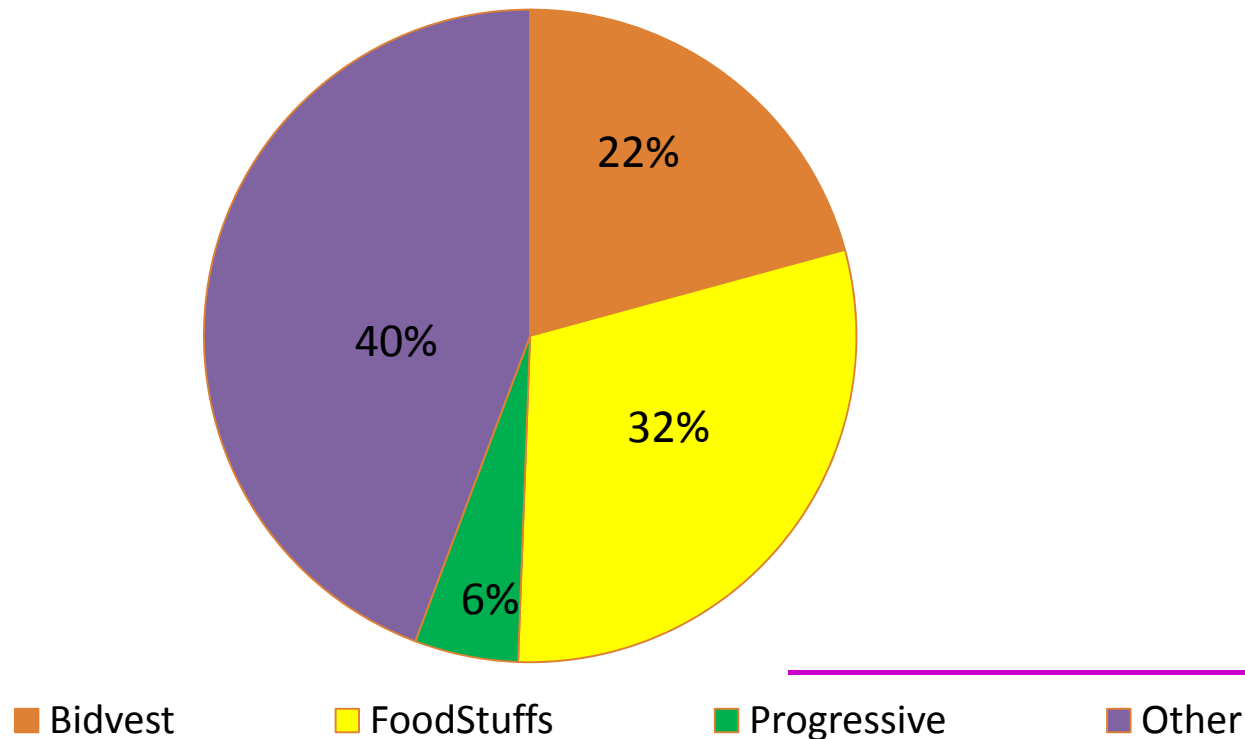
Order Analysis – Baseline pre – Equal

Average daily orders 11

Average daily products per order 3

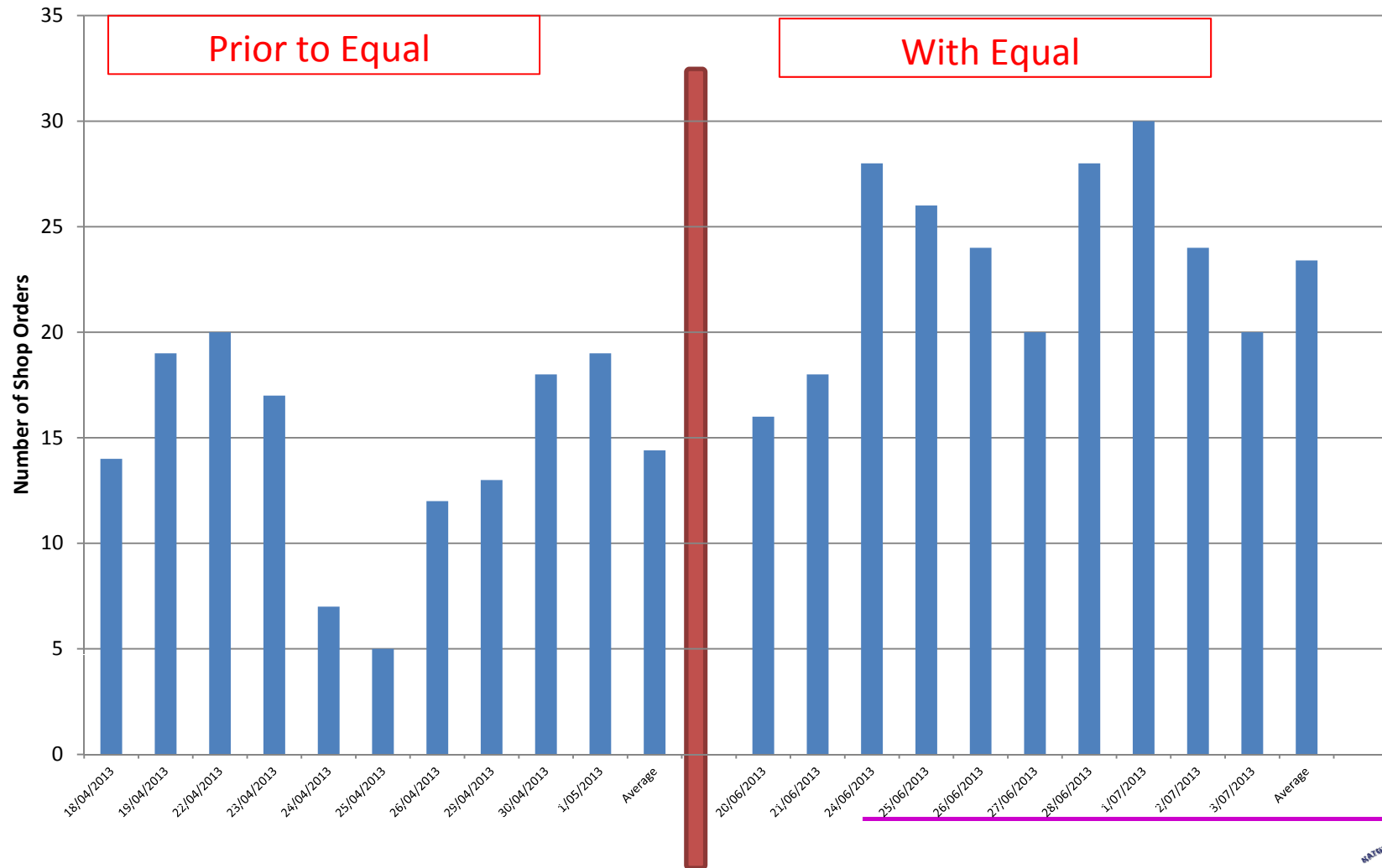
Orders greater than 1 pallet per day 3

Shop Order by Customer



New Order Analysis – with Equal

Daily Number of Shop Orders over two sample periods



Establishing New Picking Processes

- Ordering patterns
- System changes
- Scanning (track and trace)
- Set up courier deliveries



Picking Processes

There are 4 picking processes:

	Mixed	Part
Truck delivery	✓	✓
Courier delivery (new)	✓	✓

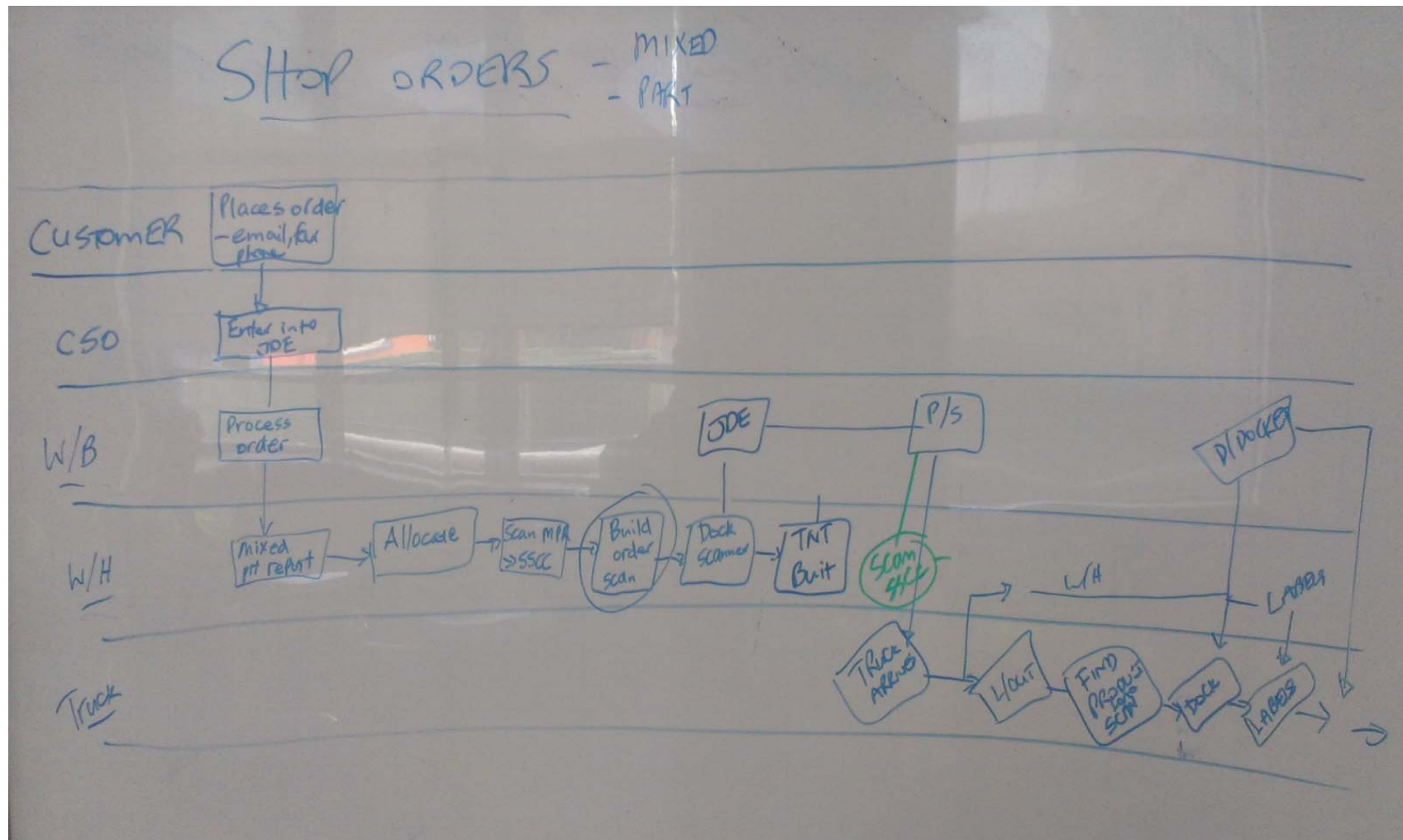


Each Process was Documented by Operators

- Some day
- 1/ ~~Take~~ Courier ~~part~~ pallet order.
 - 1/ Check online reports. 10-30 - 12-30 - 2-30
 - 2/ Get ~~part~~ ~~part~~ pallet reports from dispatch. write cust details and shipment no on slip.
 - 2/ Take scanner and select label print
 - 3/ Pick and scan product.
 - 4/ Pack order
 - 5/ Recheck scanner and wait for Product labels to Print
 - 6/ Place label on product.
 - 7/ Get Pick slip from dispatch.
 - 8/ Refresh Track Central
 - 9/ Allocate order and Refresh Track Central.
 - 10/ Reuse Scanner
 - 11/ Scan Pick slip.
 - 12/ ~~Re~~ Scan Product labels and enter Transport details
 - 13/ Recheck scanner
 - 14/ Collect delivery note from dispatch
 - 15/ Place delivery note in packing slip envelope and stick to order plus pallet label.
 - 16/ Attach Glass/Fragile/Top slow stickers
 - 17/ Take order to reception.

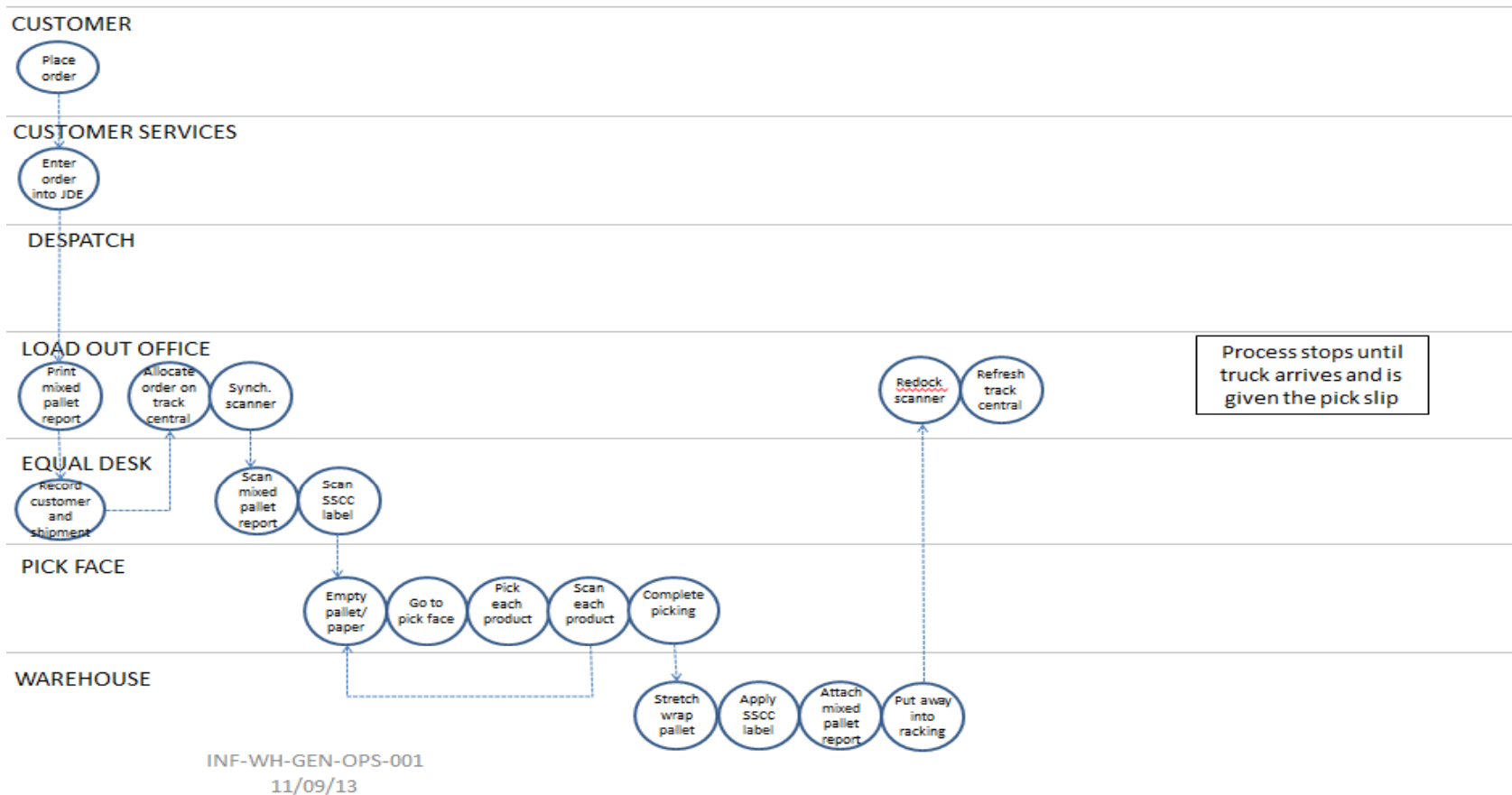


Converting notes into 'Swimming Lanes'












Truck and Mixed Order Process

Truck Process Flow – Mixed Pallet





Standard Operating Procedure – Picking Orders

Shop Orders – Overview		
<p> Safety Warning OR See Hazards table</p> <p> ShortNote</p> <p> See Tools & Materials</p> <p> General Attention Activator</p> <p> Picture/info on right</p> <p> Related SOPs, documents, etc.</p>		
Overview	Instructions & Explanations	Photos
1. Safety	<p>1.1 Consideration must be given to the safety hazards in the shop order area</p> <p>1.2 The reach truck must only be operated by trained drivers</p> <p>1.3 Take care when pedestrians are in the area</p> <p>1.4 Use correct manual handling techniques when lifting or twisting to pick orders</p> <p>1.5 Avoid hitting head on bottom beams</p> <p>1.6 All loads stored above ground level must be secure to protect cartons/bags from falling</p> <p>1.7 Be careful when handling cutters, knives and using the strapping machine</p>	Q1 Reach truck 
2. Process flows	<p>2.1 Shop orders covers 4 types of processes</p> <ul style="list-style-type: none"> Mixed pallet by courier Mixed pallet by truck Part pallet by courier Part pallet by truck <p>2.2 These processes have been mapped and are accessible in the following folder INF-WH-GEN-OPS-001</p>	Q2 Picking 
3. Track and trace	<p>3.1 The transactions for the use of the track and trace system are covered in documented SOPs.</p>	Q3 Scanning 

Document Number: **SOP-WH-GEN-OPS-010**
Issue Date: 11 September 2013

Approved by: Russell Fisher
Prepared by: Russell Fisher

Page 1 of 2
Version: 1

Shop Orders – Overview		
<p>4. Specials Notes</p>		
<p>4.1 Check dispatch information on the paperwork to confirm whether order is courier or truck.</p> <p>4.2 Couriers need to be in reception by 3.45pm</p> <p>4.3 All Progressive Equal orders are in 'shippers'</p> <p>4.4 Roberts Line Foodstuffs Equal orders are in 'shippers'</p> <p>4.5 All other Equal orders are in 'cartons'</p> <p>4.6 For Foodstuffs and Progressive – all part pallets greater than 1/2 pallet must be wrapped as a single pallet</p> <p>4.7 Couriers - maximum carton weight is 15kg</p>		Q4 Foodstuffs/ Progressive 
<p>5. Daily Routines</p> <p>5.1 At the end of each days orders:</p> <ul style="list-style-type: none"> Restock pick faces Tidy up area Empty bins Check stocks of consumables 		Q5 Bins 

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Page 2 of 2
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Picking Process in Action – Picking Orders

Business Unit: CHFG - CHELSEA FINISHED GOODS
 Shipment No: 627261
 Deliver To: 126406 ROBERTS LINE DIST CENTRE (PST)
 Suburb: PALMERSTON NORTH
 Order: 160713 90
 Promised Delivery: 28/05/14
 Promised Ship: 27/05/14
 Special Instructions: deliver on 28.05.14

PART PALLET

Carrier Number: 126660 FOODSTUFFS INBOUND LIMITED
 Shipment Status: 10 Pending
 Customer PO: 672136

**ROBERTS LINE
DIST.
P/NORTH**

Line No	Item	Item Description	UOM	Qty
8.000	50804	Chelsea Treacle 1kg (x6)	CR	32.0000
8.000	50207	Chelsea Castor 4kg (X5)	BL	7.0000
10.000	52007	Chelsea Raw 4kg (x5)	BL	15.0000
11.000	50307	Chelsea Soft Brown 4kg (x5)	BL	10.0000
12.000	62995	Chelsea Organic Raw 500g x12	BL	12.0000
13.000	62972	Chelsea Demerara 500g (x12)	CR	17.0000
14.000	63958	Chelsea Dark Cane 500g LRP	CR	26.0000
15.000	62462	Chelsea HoneyMaple Sy530g(x12)	CR	40.0000
16.000	62696	Chelsea Coffee Sugar 500g(X12)	BL	27.0000

937345



Picking Process in Action – Label and Wrap



Picking Process in Action – Scan and Load



Achieved Tangible Benefits



Achieved Intangible Benefits

- Improved Shop Order handling
- High Morale & Pride in Area Team
- Better communication
- Integrated sweetener business
- Better Product Knowledge
- Customer Satisfaction

New Zealand
Equal Product Overview
May 2013

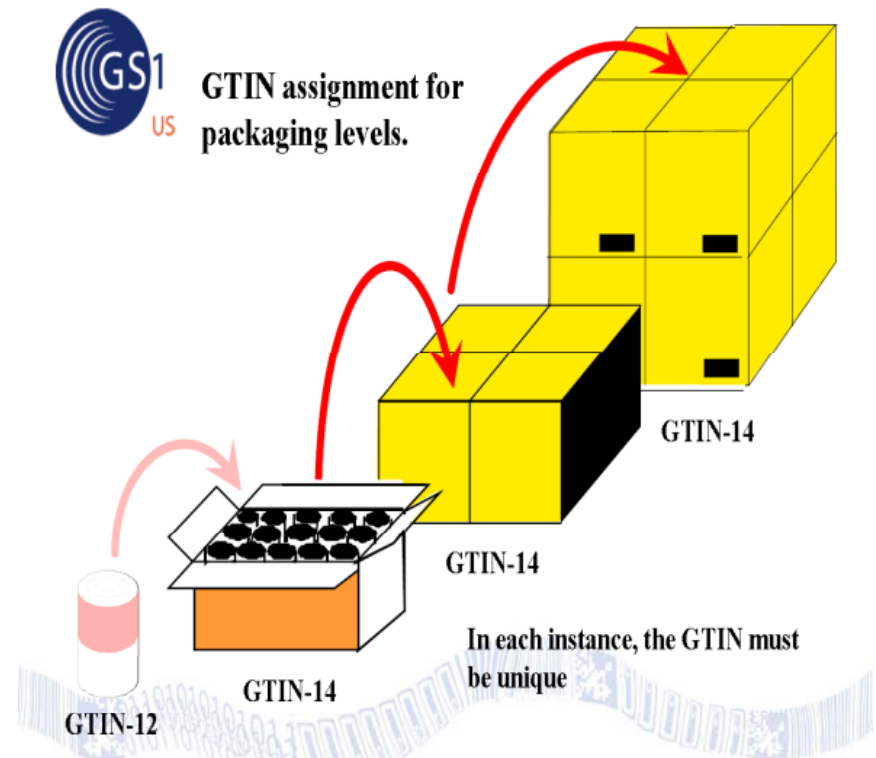


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Key Lessons Learnt – History Sheet

- Ordering priority
- Stock rotation
- Setting up for next day
- Professional training
- User friendly equipment
- Team work
- Communication



Locking in the Gains

- Racking used elsewhere on-site
- Standard Operating Procedure for training
- Four new Equal / Naturals products
- Area well maintained by operators
- New 47 day survey completed
- Dedicated pool of pallets

TPM ³ Improvement Sheet					
Team Name:	Rack 'n' Stack	Location:	Warehouse 1	Initiated Date:	June 13
Team Type:	NAM	Item:	Pallets	Completed Date:	Aug 13
Initiator:	J. Midgley				
1. Problem (Plan)					
Equal stored on Chep pallets, paying daily hire on pallets					
2. Current Situation (Plan)			3. Proposed Change / Approved Improvement (Do)		
					
4. Results: (Check)	Used existing NZ Sugar pallets		Cost:	\$150	Expected Saving:
					\$3500 - \$4000pa
5. Future Actions: (Act)					
CTPM Australia					
Approved by:	Shift A	Shift B	Shift C	Shift D	
					
Page 15					



Communicating the Teams Progress

- Mid-way Presentation held in Warehouse
 - Leadership Team weekly briefings
 - Roadblocks quickly dealt with by Leadership Team
 - Progress explained at Warehouse Team Meetings
 - Extensive Customer Briefings on the changes
 - Final Presentation very well attended
-



Mission Achieved!!

“We continue to deliver the right product
in the right quantity to the right customer
on the right day in pristine condition
at significantly reduced costs.”





