

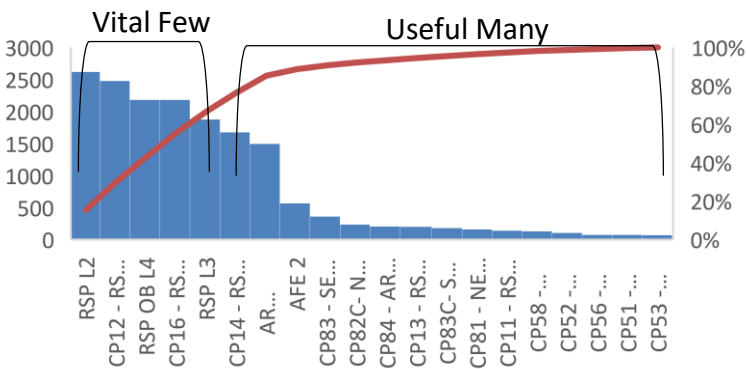
Global RME Jam Program

SYR1 Jam Analysis Jun 1 – Aug 31 (2024)

Analyzing a small sample from (Jun 1 – Aug 31) the top five (5) equipment subareas with the highest OEE faulted hours were, ARSTOW, PACKLINE, AR FIELD, ARSAW and RECEIVE. The top five (5) Alarm faults matched the subarea presented by the OEE dashboard, with a slight higher alarm indications. As seen on *table 1* and *chart 1*. (Reference Appendix page 2 & 3)

Top 5 Subarea	Faulted Hrs.
ARSTOW	14008
PACKLINE	1700
AR FIELD	1621
ARSAW	1407
RECEIVE	714

Faulted Hours Chart



Alarm Faults Pareto

When analyzing the total volume of units and comparing to SEV/HIE events, the amount of incidents reported is in correlation to the sites total volume that get's processed in those areas. In particularly, the AR INFEED, SHIP area had the most volume which correlates to the highest incidents area. (Reference Appendix page 5 & 6)

Area	Total Units
SHIP	1,071,852,002
AFE 1	336,319,884
AFE 2	241,275,028
RSP	107,261,488
PACK	82,246,785

Throughput Chart

Top 5 Equipment	SEV/HIE Events
AR INFEED	22
SHIP	8
AFE 1	5
AR RCV	4
AR ARSAW	3

SEV Events Chart

❖ **Safety Incident:** An AA experience an injury on July 21, 2024 while working on the stow station 2317. A tote came onto the back of the sled at a slant, becoming stuck. While attempting to unjam the tote they felt a sharp pain in their right shoulder and lower back. (Reference Appendix page 7)

Take Action

- Physical site audit will be conducted on **October 8 and October 9**
 - Audit the 5 (ARSTOW, PACKLINE, AR FIELD, ARSAW and RECEIVE) area/subarea of faulted hrs. by Jam
 - Conduct the 6 Jam PCA verification of completion (Reference Appendix page 8)
 - 4 Best Practices has been identified to support the site with Jam reduction (Reference Appendix page 8)
 - Conduct a brief closing meeting of the physical audit with all follow ups (if any)
- Physical site audit of the STOW STATION (Incident Reported)
 - Verify that area is clean of labels and that RME is consistent with PM maintenance (Reference Appendix page 7)
- 3 Months of Program Management support for the site
 - Goal to focus on the top 5 faulted problem areas (use the 80-20 rule)
 - Come up with actions to support site with faulted problem areas
 - Virtual SYR1 Jam Support chime group will be created. The purpose of the group will be to support SYR1 and add any additional support teams to help the site improve
 - Biweekly meetings will be established for site support and progress updates

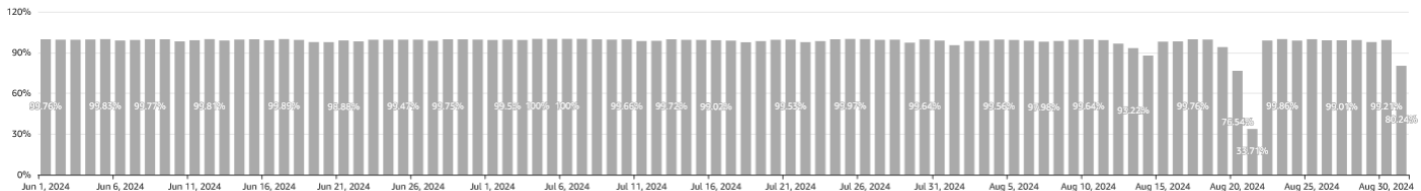
Appendix

OEE Faulted (Jams)

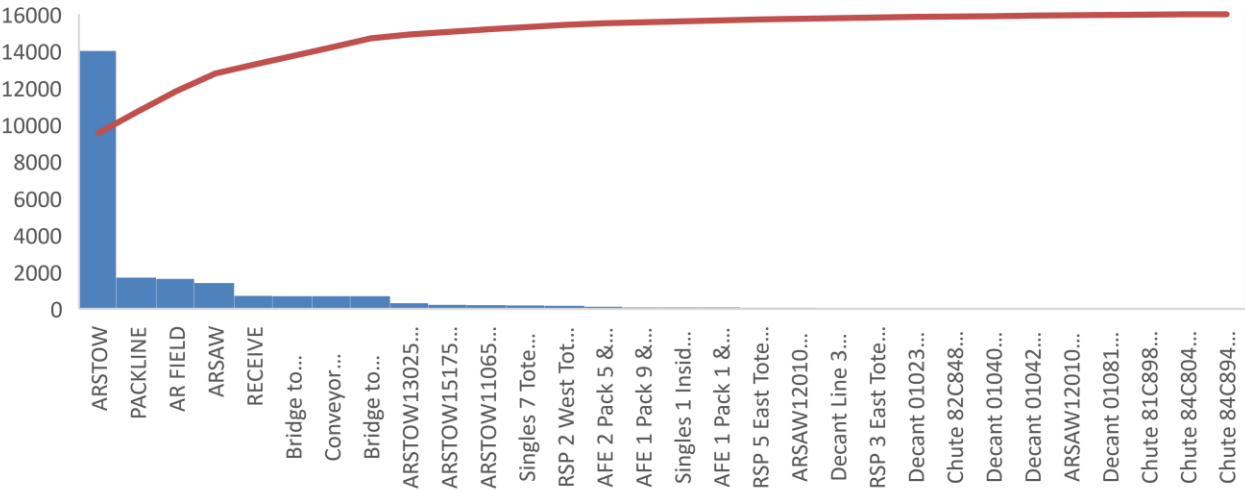
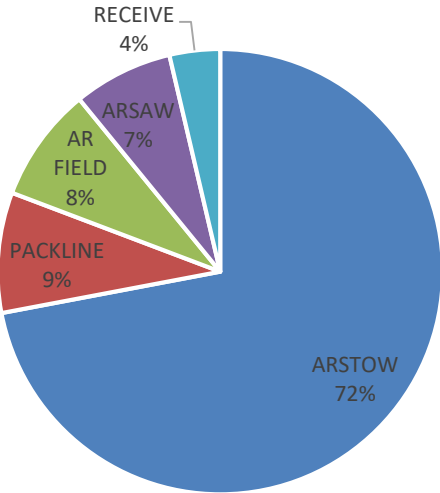
FAULTED

NETWORK FAULTED	FAULTED TIME (HRS)
99.05%	23,840.64

NETWORK FAULTED - CHRONOLOGICAL



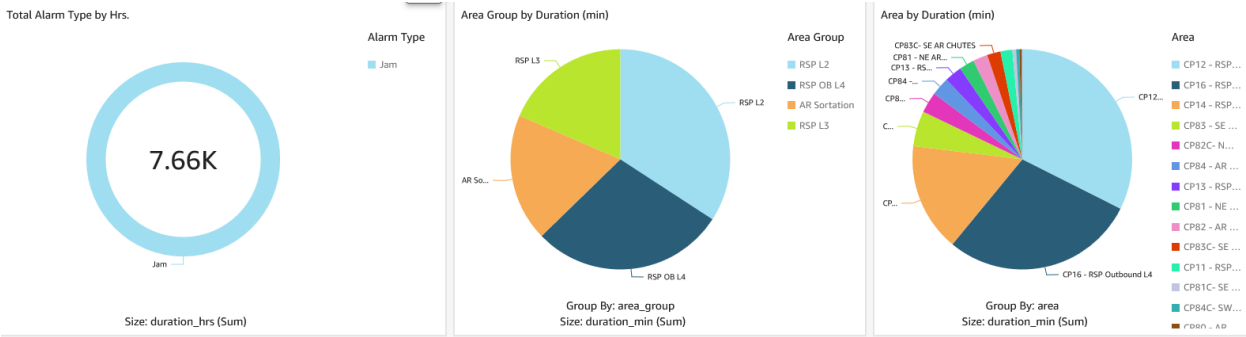
Top 5 Subarea	Faulted Hrs.
ARSTOW	14008
PACKLINE	1700
AR FIELD	1621
ARSAW	1407
RECEIVE	714



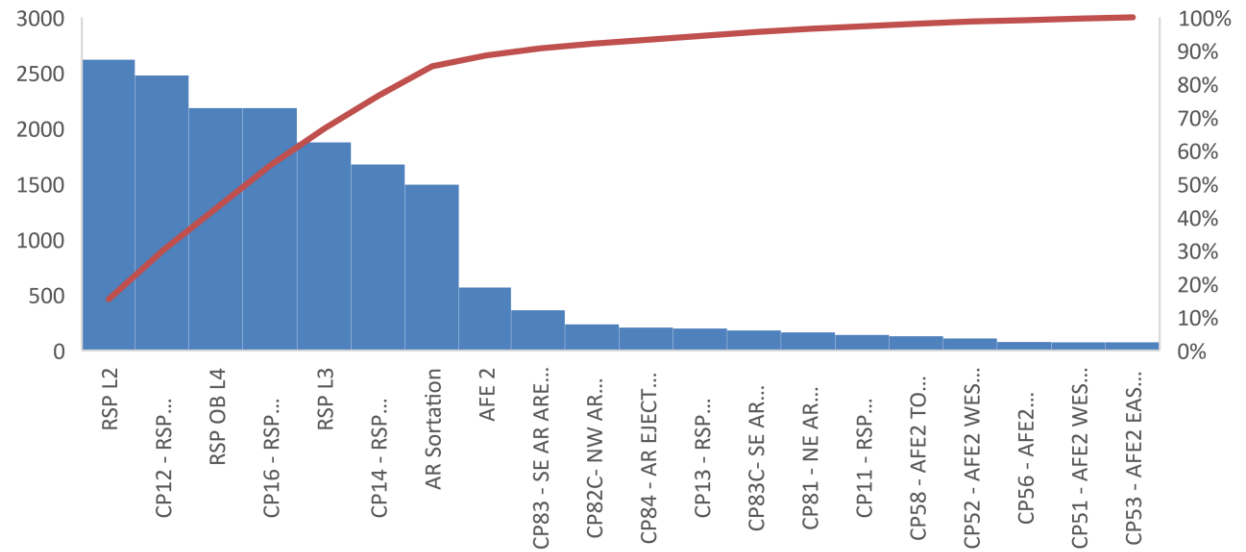
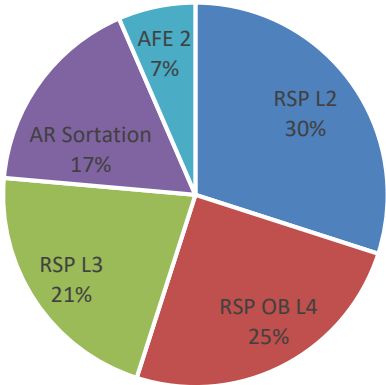
ARSTOW	14008	ARSAW	1407
Bridge to ARSTOW 13165	699	RSP 2 West Tote Stack Conveyance Merge	172
Bridge to ARSTOW 13065	696	RSP 5 East Tote Stack Conveyance Merge	62
ARSTOW13025 Divert Right	308	ARSAW12010 Zone2	56
ARSTOW15175 Divert Left	218	RSP 3 East Tote Stack Conveyance Merge	50
ARSTOW11065 VRC	202	ARSAW12010 Zone1	31
PACKLINE	1700	RECEIVE	714
Singles 7 Tote Infeed Gravity	181	Decant Line 3 Takeaway to Inbound Merge	53
AFE 2 Pack 5 & 6 Takeaway	114	Decant 01023 Takeaway	43
AFE 1 Pack 9 & 10 Takeaway	85	Decant 01040 Takeaway	35
Singles 1 Inside Totes	84	Decant 01042 Takeaway	35
AFE 1 Pack 1 & 2 Takeaway	79	Decant 01081 Takeaway	29
AR FIELD	1621		
Conveyor 81C700	696		
Chute 82C848 & 82C849	36		
Chute 81C898 & 81C899	22		
Chute 84C804 & 84C805	17		
Chute 84C894 & 84C895	16		

Appendix

Alarms Faults



Top 5 Subarea	Fault Duration Hrs.
RSP L2	2618
RSP OB L4	2183
RSP L3	1875
AR Sortation	1493
AFE 2	569

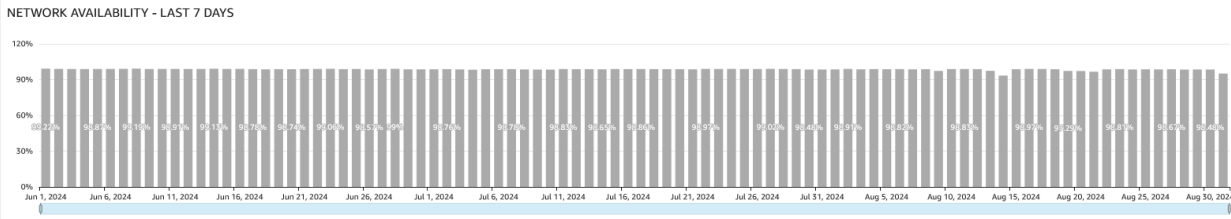


RSP L2	2618
CP12 - RSP Outbound L2	2477
CP11 - RSP Inbound L2	141
RSP OB L4	2183
CP16 - RSP Outbound L4	2183
RSP L3	1875
CP14 - RSP Outbound L3	1676
CP13 - RSP Inbound L3	199
AR Sortation	1493
CP83 - SE AR AREA L1	361
CP82C- NW AR CHUTES	235
CP84 - AR EJECT CHUTES L1	208
CP83C- SE AR CHUTES	181
CP81 - NE AR AREA L1	164
AFE 2	569
CP58 - AFE2 TO PACKOUT EAST	129
CP52 - AFE2 WEST CENTER SIDE	108
CP56 - AFE2 SORTER L1	77
CP51 - AFE2 WEST SIDE L1	74
CP53 - AFE2 EAST CENTER SIDE	74

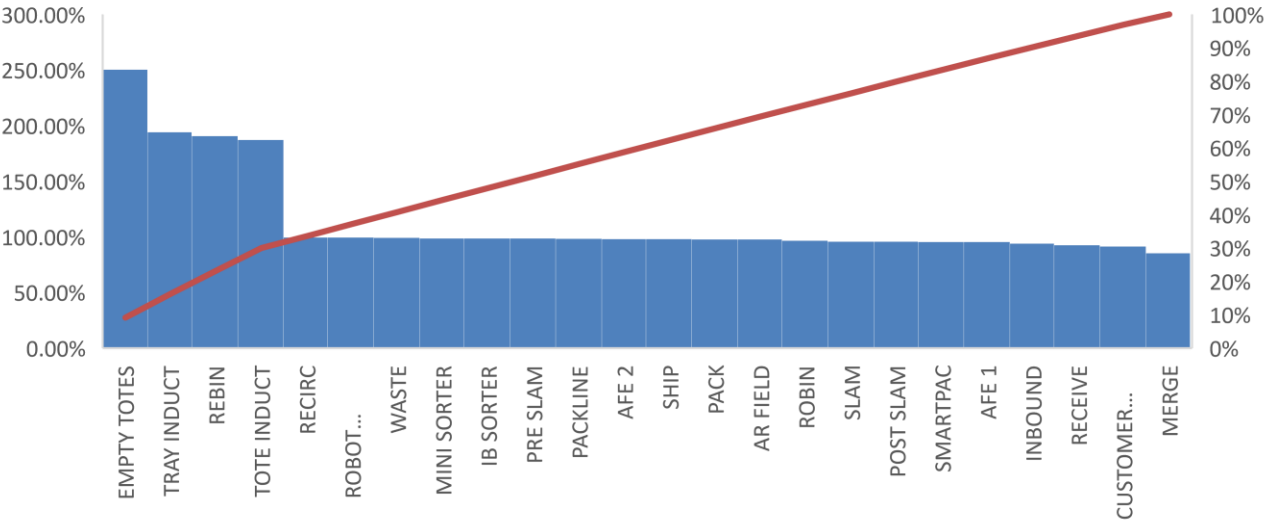
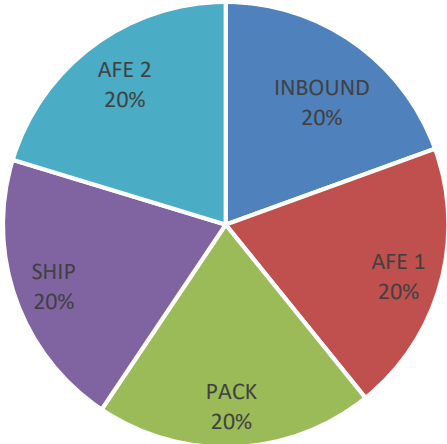
Appendix

OEE Availability

NETWORK AVAILABILITY(AVG)	PRODUCED	STARVED	FAULTED	IDLE	BLOCKED
98.76%	29.68%	52.54%	1.23%	10.62%	5.91%



Top 5 Area	OEE Availability
INBOUND	94.01%
AFE 1	95.29%
PACK	97.62%
SHIP	98.00%
AFE 2	98.04%



Area	OEE availability
INBOUND	94.01%
CUSTOMER RETURN	91.35%
RECEIVE	92.48%
EMPTY TOTES	97.47%
IB SORTER	98.60%
WASTE	99.19%
AFE 1	95.29%
EMPTY TOTES	76.74%
TOTE INDUCT	87.75%
TRAY INDUCT	94.61%
REBIN	96.97%
MINI SORTER	98.67%
PACK	97.62%
SMARTPAC	95.30%
SLAM	95.74%
PACKLINE	98.26%
PRE SLAM	98.58%

SHIP	98.00%
POST SLAM	95.69%
ROBIN	96.40%
AR FIELD	97.58%
ROBOT PALLETIZINC	99.29%
RECIRC	99.54%
AFE 2	98.04%
EMPTY TOTES	76.19%
MERGE	85.23%
REBIN	93.61%
TRAY INDUCT	99.39%
TOTE INDUCT	99.42%

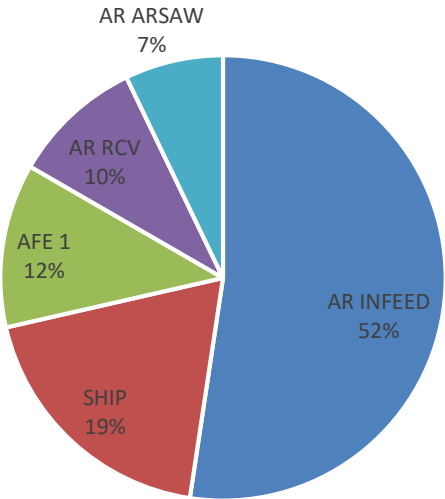
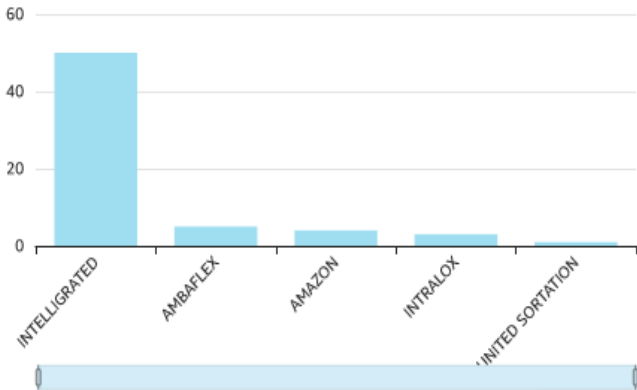
Appendix

SEV/HIE Events

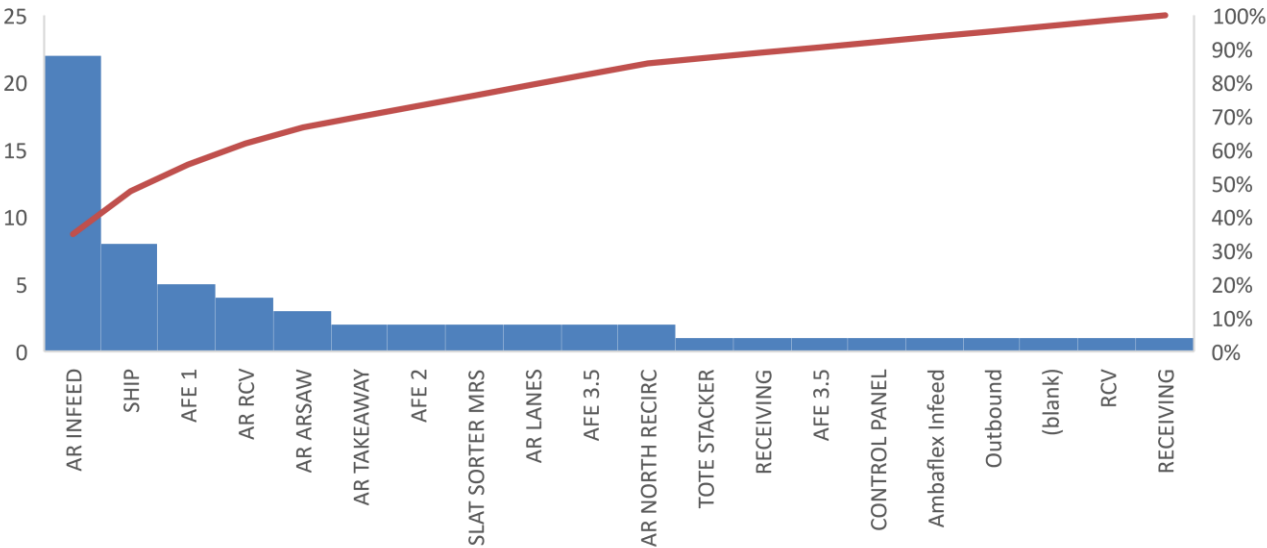
SEV Primary Cause Index

primary_cause	trouble_ticket	rolled_volume	lph
null	2	0	0
Design Defect	3	0	19
Design defect	1	0	180.55
Loose Product/Amnesty/Spill	5	0	103.15
MCM-induced failure	2	0	0
Operational Issue	39	0	0
Operational issue	7	0	131.36
Original OEM Installation Error	1	0	643
Total	63	0	1,446.81

Total SEV by OEM



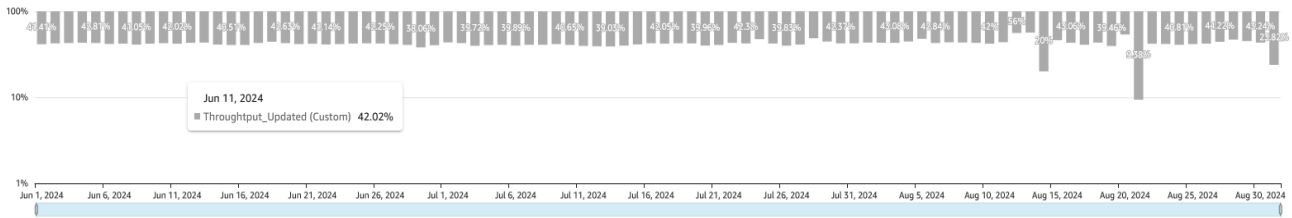
Top 5 Equipment	SEV/HIE Events
AR INFEED	22
SHIP	8
AFE 1	5
AR RCV	4
AR ARSAW	3



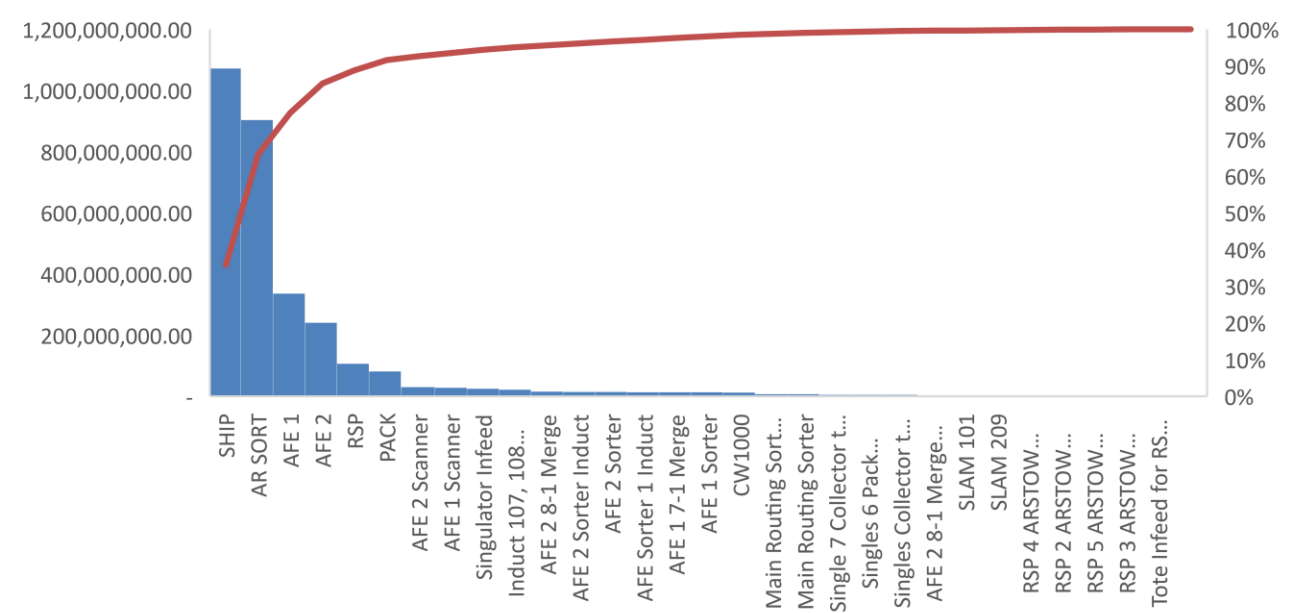
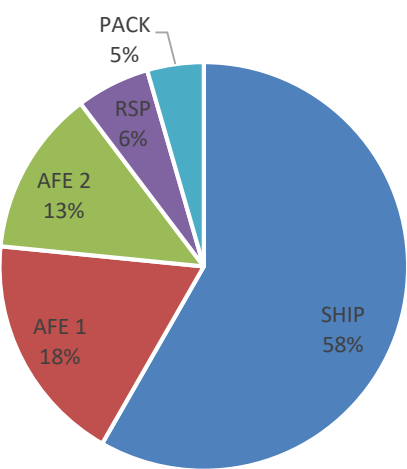
AR INFEED	22
AMAZON ROBOTICS SYSTEMS, ZONE 1, LANES, INFEED 01 NORTH, 81010 CP81	1
AMAZON ROBOTICS SYSTEMS, ZONE 1, LANES, INFEED 01 NORTH, 81015 CP81	3
AMAZON ROBOTICS SYSTEMS, ZONE 1, LANES, INFEED 01 NORTH, 81025 CP81	2
AMAZON ROBOTICS SYSTEMS, ZONE 1, LANES, INFEED 01 NORTH, 81030 CP81	6
AMAZON ROBOTICS SYSTEMS, ZONE 1, LANES, INFEED 01 NORTH, 81035 CP81	1
SHIP	8
SHP.BOT.1; LANE 01; BELT CONV; (Alias_Des); CP80	1
SHP.BOT.2; LOOP SIR; BELT CONV; (Alias_Des); CP82	1
SHP.BOT.3; LOOP SIR; BELT CONV; (Alias_Des); CP83	1
SHP.BOT.3; SIR; ACTIVE ROLLER BELT SORTER; (Alias_Des); CP83	1
SHP.BOT.4; LOOP SIR; BELT CONV; (Alias_Des); CP84	1
AFE 1	5
EMPTY TOTE SYSTEM, AFE 1 TO EAST SIDE, LANE 01, 49025 CP49	1
EMPTY TOTE SYSTEM, AFE 1 TO EAST SIDE, LANE 02, 49160 CP49	3
EMPTY TOTE SYSTEM, AFE 1 TO EAST SIDE, TOTE STACKER	1
AR RCV	4
AMAZON ROBOTICS SYSTEMS, ZONE 2, LANES, RCV SORTER TO KO, 11205 CP11	1
AMAZON ROBOTICS SYSTEMS, ZONE 5, LANES, RCV SORTER TO KO, 02220 CP02	1
AMAZON ROBOTICS SYSTEMS, ZONE 5, LANES, RCV SORTER TO KO, 17200 CP17	1
AMAZON ROBOTICS SYSTEMS, ZONE 5, LANES, RCV SORTER TO KO, 17203 CP17	1
AR ARSAW	3
AMAZON ROBOTICS SYSTEMS, ZONE 2, LANES, ARSAW 2107 TO RSP INBOUND, 12620	1
AMAZON ROBOTICS SYSTEMS, ZONE 3, LANES, ARSAW 3108 TO RTG SORTER, 14215 CP14	1
AMAZON ROBOTICS SYSTEMS, ZONE 3, LANES, ARSAW 3108 TO RTG SORTER, 14235 CP14	1

Appendix

Throughput Total Units (Site Volume)



Area	Total Units
SHIP	1,071,852,002.00
AFE 1	336,319,884.00
AFE 2	241,275,028.00
RSP	107,261,488.00
PACK	82,246,785.00



SHIP	1,071,852,002.00
AR SORT	903,564,269.00
Singulator Infeed	25,171,690.00
CW1000	12,787,894.00
Main Routing Sorter Scanner	7,407,293.00
Main Routing Sorter	7,346,098.00
AFE 1	336,319,884.00
AFE 1 Scanner	28,250,741.00
Induct 107, 108 Merge Takeaway	22,036,782.00
AFE Sorter 1 Induct	14,063,590.00
AFE 1 7-1 Merge	13,931,673.00
AFE 1 Sorter	13,689,439.00
AFE 2	241,275,028.00
AFE 2 Scanner	30,797,890.00
AFE 2 8-1 Merge	15,626,809.00
AFE 2 Sorter Induct	15,328,683.00
AFE 2 Sorter	15,124,272.00
AFE 2 8-1 Merge Lane 3	2,506,500.00

RSP	107,261,488.00
RSP 4 ARSTOW Entry Scanner	1,630,516.00
RSP 2 ARSTOW Entry Scanner	1,600,852.00
RSP 5 ARSTOW Entry Scanner	1,554,880.00
RSP 3 ARSTOW Entry Scanner	1,549,861.00
Tote Infeed for RSP 4 ARSTOW	1,397,682.00
PACK	82,246,785.00
Single 7 Collector to AR North	5,444,677.00
Singles 6 Pack Takeaway	5,280,836.00
Singles Collector to AR North	5,158,423.00
SLAM 101	2,202,599.00
SLAM 209	2,141,788.00

Appendix

Safety Incidents

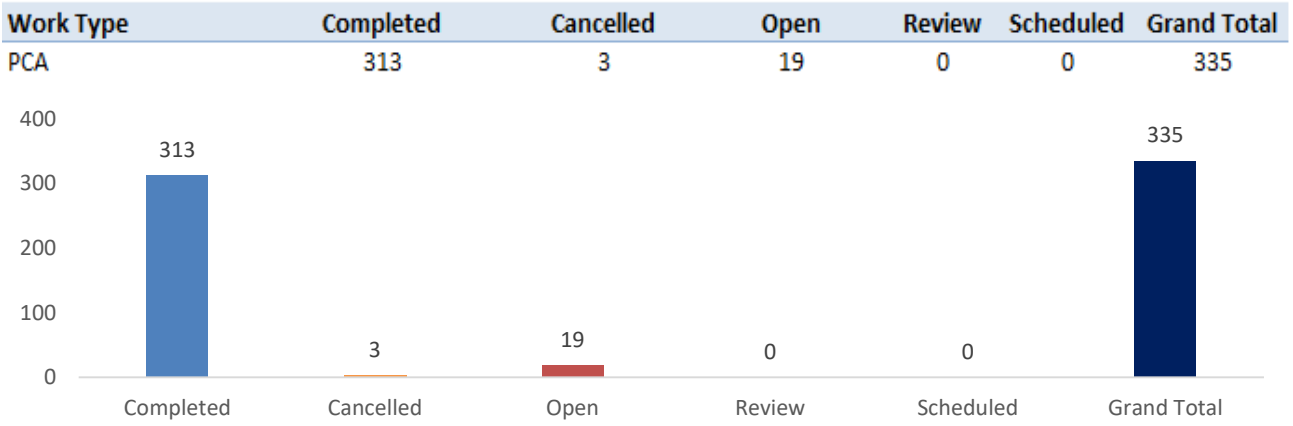
Case Number	Site	Date	Injury Location	Description
SYR1-24-1024	SYR1	Jul 21, 2024	Stow Station	<p>On 07/21/2024/at 8:55 AM an AA working in Stow suffered an injury to their lower back/right shoulder when AA said the tote came onto the back of the sled slanted becoming stuck so they attempted to unjam the tote to slide it down into the front of the sled and while doing so, felt a sharp pain in their right shoulder and discomfort in their lower back. . The AA reported for treatment on 07/21/2024 at 09:27 AM with 7/10 pain. Leadership was notified of the incident by the associate and proceeded to the treatment location. The AA received onsite treatment and returned to normal path. During the investigation, the AA stated they were following standard work at the time of the incident. At the time of the incident, the AA had been working in Stow, which is their home path, for 1 hour. The AA was hired on 06/27/2024 and works on the DL4-0700 shift. The AA was not working overtime at the time of the incident. The associate was not working in a path which requires job rotation. Job rotation was not found to be a contributing factor. The AA is trained in the path in which they were working at the time of the incident. The AA trained in Stow on 07/02/2024 using module # Nike Stow Day 3. Review of training material was conducted and deficiencies were not identified. Training was not found to be a contributing factor. The work area was reported by the associate as being organized at the time of the incident. The AA stated they were using the correct tools for the process. The correct tools for the process were available. The tools were found to be in safe working condition. Area readiness was not found to be a contributing factor. The AA was working with/near the following equipment: yellow tote at ARStow station 2317. The following deficiencies were found within the equipment: Tote came in at an angle onto back of sled getting stuck/wedged . Machinery and equipment were found to be a contributing factor. During the investigation, the AA stated that they were wearing the proper PPE for the task at the time of the injury.</p>

Appendix

Network Initiatives

Applicable PCA's for JAM	WO's	Attachments
CONV.TRANSNORM	Status	
PCA-PCA - Bulk Flow conveyor transition gap	Completed	1
PCA-PCA – Gen11 AR Amnesty Trap Project	Completed	1
PCA-PCA - Belt Edge Protection bulk flow bed	Completed	1
AFE3.5.1.		
All IQZF Intell-Q 100% Full PE Check PCA	Open	9
AR.ZONE		
Ambaflex Overheight Protection bar PCA	Completed	19
RWC4 Infeed Bracket Width Change PCA	Completed	1

➤ The table below represents a total of applicable PCA's for SYR1. JAM PCA's accounted for **29%** of overall PCA's.



Potential Best Practice	Description	Image
Double Roughness Injector Belt	This best practice aims for the installation of a dual friction belt on the induct station of the site. The injector belt improves efficiency and reduce “JAM” caused by parcels sliding on the standard belt.	
Transition Plate for Jam Detection	This project aims to detect stuck parcels between the transition plate and the belt. The detection starts as soon as the blockage happens, this allows for the prevention of any damage equipment	
SLAM – HazMat Camera Cover	Introduction of new types of packages, SIOCs and SIOBs especially on Single Packs (small types of products) led to jams at the entrance of the Scale. After investigation it was figured out, that distance between Metering belt and the Scale is higher than in other places due to Hazmat camera installed below.	
AFE3.5 Performance Improvement	The implementation consists on increasing the ECCs speeds and reducing the waiting timers. Special emphasis is given to jams, since several actions have to be performed in order to avoid them from occurring	