

Video Anomaly Detection System - User Research Report

Background

Video Anomaly Detection System: An AI powered interface that notifies users of incidents on site, allowing them to shorten response time, ensure an appropriate response is taken, and to review events over time.

Through this generative user research effort, we want to gain an understanding of the daily workflows of future users, and how the Video Anomaly Detection System would fulfill their needs and fit into their incident response processes.

Objectives

- Understand what systems and processes users from various departments currently use for incident monitoring and response.
 - Differentiate between the needs of on-the-ground onsite users and higher-level managerial/admin users.
 - Discover regional and cultural differences that we need to consider in the design and development of this global tool.
 - Outline what metrics users value around video detection, and what they use those metrics to inform.
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Methodology

This study consisted of group and individual generative research interviews, held online over Chime. The sessions consisted of asking participants to answer questions on their workflows, experiences, and frustrations, or walking through their processes



via screenshare. This allowed a deep-dive into the working experiences of our users to answer the above objectives.

Findings

Investigation process

Notification

Loss prevention teams are informed of theft and safety incidents through a combination of word-of-mouth and online tools. For workplace violence incidents, LP is informed by the HR team onsite to further investigate. Possible theft incidents (Code 5s) are primarily detected by FCQuality and Kibana, which calculate when there is discrepancies in inventory numbers, otherwise directly by associates coming forward with suspicions. Security incidents can also be notified to LP from receiving CMS reports that the onsite security team submits. The Mumbai-based team uses their own unique process of being informed by a security specialist that constantly monitors video feeds, or by physical security personnel doing onsite patrols. WHS (Workplace Health and Safety) onsite personnel are primarily notified of incidents directly from an associate witness reporting to them.

Most participants report their LP teams being short-staffed, so a single LP team member can be the only one covering a site at any given time. This means that there is a high likelihood the on-duty LP will be busy and can miss important notifications. We should carefully consider the amount of time we expect users to respond to an incident alert.

Investigation

Investigations into thefts or safety incidents by LP consist of cross-referencing multiple online tools to track the movement of product and associates. FCResearch is a primary tool for displaying the movement history of inventory that flows through Ops facilities, and what associates have touched. They also are informed by Lenel when there are security alarms onsite. LP teams then will nearly always use Milestone to find video footage of incidents in the locations and time frames that they have researched.



Offline investigation strategies primarily consist of interviewing associates involved in an incident, which LP specialists must submit and receive approval from management to conduct. They will also physically investigate locations onsite, or engage with HR or security teams to exchange information.

Since LP teams spend time-consuming effort cross referencing multiple different applications, integrations should be a priority in VADS. The more valuable information we can pull from other investigation tools, the less manual work will be required for LP teams.

Storing and tracking investigations

The tracking mechanisms LP teams use to collect and store data is highly variant to the individual team's decided workflow. One team uses a Microsoft Excel GSO template to compile evidence and report. AMER-based teams use CMS to report incidents that come to their attention, but vary in the amount of update tracking or robust evidence they attach to the CMS case. It seems CMS cases can be unreliable in containing the full extent of data related to the case.

A common factor between them, though, is using an internal shared drive to store large pieces of data like video footage. In the UI, we will need to constantly consider how performance will be affected both in displaying and downloading large pieces of video footage.

Communicating/Closing

Often incident data needs to be handed over to outside law enforcement or legal personnel. Most participant LP teams use new flash drives to give evidence to these outside parties. The Singapore team instead burns evidence data onto a disc because of the risks of viruses flash drives pose. We must ensure that since the video footage presented in VADS can and will be used for legal cases, date, time, and location must be explicitly visible with integrity maintained. For communication internally within Amazon, LP teams will use common communication channels like Chime and email.

The total length of an investigation from notification to closure can range greatly from a day to a few weeks. The LP participants commonly thought of WIM incidents as being closed relatively quickly, with disciplinary action being the closing factor. For theft incidents or long-term threats, investigations could take a longer time to find



and compile evidence. There are often incidents that are ambiguous if they can be considered 'closed.' In VADS, we should anticipate that LP teams could re-open an anomaly investigation or have the investigation be open for a long period of time.

Tools and applications

Since LP teams split their attention between a large number of applications throughout the day, we must be careful in adding another tool that users will need to constantly monitor.

- Email: most participants explained that their email inboxes are often full and need to be emptied routinely. Email would not be an effective way to inform LP teams of important notifications, as they will either get lost or take time to view.
- Chime: unanimously used and thought of for quick responses
- Austin: WHS-exclusive tool to track WHS incidents
- Tableau: WHS uses to display metrics and generate a daily business report
- DigDug(?): application used to monitor stow interactions, cameras exist at every AR station
- Lenel: first notification of physical security alarms
- RightCrowd: answering requests
- Facility Manager
- Loss Prevention portal: ARIES cases, Code 5s, perform audits
- India Security and Loss Prevention portal: India SLP team uses to perform 8 daily audits
- INLSP Audit Tracker System: perform audits, track action plans
- Microsoft Excel: one LP team uses a GSO template to compile investigation evidence
- FCQuality: Inventory quantity adjustment records, used to identify discrepancies in inventory numbers
- FCResearch: full inventory movement interactions of an item by its ASIN
- Kibana: Identifies missing pack items, LP will export this data into a CSV to cross reference with video
- CMS: View open incident reports and submit new reports, view trending activity in nearby facilities
- Milestone VMS

For most LP teams, Milestone is used completely reactively for investigating incidents after they have happened. In an attempt to be proactive, the CT team has a monitor



that constantly displays the video feed of their site's parking lot. The India LP team has also implemented their system of Virtual Guardian Response, which includes a dedicated security officer constantly monitoring video. All teams that I spoke with are currently in the process of onboarding or setting up Milestone for their sites.

Integration with Milestone to inherit Views (private/public) and/or mapping would be essential to not force users to duplicate effort in logically grouping cameras. The new naming convention as defined by SIG is logical but too complicated to quickly locate the camera you're looking for. Some LP specialists who've had the time or initiative set up their own camera groupings in the Views panel, but many don't.

The Singapore LP team still uses a paper copy of all video camera names, even with a relatively small number of cameras in their sites. The CT team used to use a paper copy before implementing the mapping feature within Milestone. We can't expect all facilities to quickly adopt the Milestone mapping or views features, so we must organize the large number of cameras so users are able to quickly find and identify a specific camera in VADS.

For screenshots of the above tools, see Appendix.

Reporting

The amount of routine reporting varies greatly among the participants; from one team only producing reports for one-off requests, to another team weekly creating an in-depth report with analysis by a business intelligence analyst. For India SLP teams, audits are a significant part of their daily workflows in compiling incident metrics to report upwards. They also receive a daily security report, and reports for losses per business vertical. The NJ team performs WBRs and MBRs outlining theft incidents with dollar amounts, WIM incidents, missed audits, and LP work hours. They include YTD (year to date) values in these reports to track their progress to yearly goals. We should consider YTD as a possible data point to display in VADS metrics/reports. The Singapore team produces the most robust reports out of the participants, with a security risk analyst creating an in-depth report, focusing on 6 main incident types as well as COVID reporting.

There are audits some LP teams go through to manually go through all video camera views to ensure all of them are working properly. The ability for VADS to detect when



a video camera is malfunctioning, with a discolored image or something blocking a view, would be a helpful addition to an anomaly use case. Further, an integration with IT services would be convenient for users to quickly submit a ticket.

For more information on the metrics and reports that participants are tracking, as well as use cases for anomaly detection, see specific meeting notes.

User contexts

Mobility

Both LP managers and specialists spend a majority of their time in front of a laptop or desktop computer, but specialists can spend more time offline doing investigations onsite depending on the incidents that occur. For important notifications, we can safely rely on LP managers as a backup when specialists are not actively on a device. Most LP teams have individual phones on hand that they use for Chime and/or email. Although many participants noted their phone as the quickest way to alert them when they are not in front of a computer, we must carefully consider how we can preserve work/life balance of users concerning mobile notification.

Device

Window sizes varied among the participants when sharing their screens, within the bounds of a laptop or computer. Most of the participants indicated that they work from both a laptop and a desktop computer, but not on a tablet-sized device. We must ensure that VADS is highly responsive to accommodate the range of window sizes between small laptops and large desktops.

Participants used a mix of light and dark modes in their desktop and browser applications, with expert tech users setting dark mode on their operating system and for specific web applications. There should be a setting within VADS that allows users to set their view to light or dark mode, to accommodate their preferences and physical contexts on-demand. Development should be able to detect a user's operating system setting for light or dark mode and default to that.

All participants used a Windows operating system (many applications LP uses are likely only available on Windows). 2/4 participants used Chrome as their preferred



browser, 1/4 used Firefox. We should ensure that we test VADS on a variety of browsers.

Considerations

Global

Low connectivity

Both sessions with Binoy/Vinod in India and HaoJun in Singapore had some internet connectivity issues while in the meetings. We need to ensure that this application gracefully handles low connectivity, especially with the high bandwidth that video playback takes up. Also, a consideration for developers to make internet usage as efficient as possible.

Localization

We should implement a localization framework to default to locale standards, but allow users the choice to change. Although standard locale conventions like time and date format, language, etc. make sense to have defaulted for users, I noticed some participants choose to use United States conventions instead of their non-US locality. Having choices accommodates diverse nationalities and residence situations.

Vocabulary

Throughout the sessions, I noted vocabulary differences between and among the AMER teams and APAC teams. These include so far:

- Video cameras vs CCTV
- Facility vs site
- Cart vs trolley
- Package vs parcel
- Metrics vs reports: Needs to carefully title the page in VADS that will house data visualizations

Throughout the UI, we need to carefully consider what vocabulary to use for certain items so that they can be more universally understood. In the cases of not having a clear universal term, we can turn to localization functionality to use terms standard for each locale.



Video cameras

A consistent pain point among participants and their use of Milestone is the lack of sufficient camera coverage of their sites, and the low quality of cameras that they do have. A few participants have noted their efforts to try and get more cameras onsite, since they have no view of incidents that happen outside of their cameras' ranges. For locations such as bathrooms, there would never be a video camera monitoring. This affects LP teams' ability to investigate incidents and collect concrete evidence they can present in legal cases.

Since it would be impossible to detect all onsite anomalies through VADS, we should take time to consider how users will combine reports of incidents detected through VADS and incidents detected through their other means to produce a combined total report. In essence, we can't present our data visualization as the complete number of anomaly-type incidents that happen onsite, but rather a subset that the video cameras are smart enough to detect.

Another consideration to deep-dive into is the effect on associates with the transition away from physical in-person presence of security personnel vs remote monitoring through video cameras. Participants have noted concretely that they find associates will follow less safety guidelines and perform more thefts when there isn't a security presence watching them in person. With sites relying on more video monitoring, should we expect more incidents of safety violations and thefts?

Multiple departments

Since VADS will have a wide user base from departments of Security, LP, WHS, EAP, Dangerous Goods, etc., there will be some anomaly types that multiple departments will be both interested in. For example, a chemical spill could interest Security, LP, WHS, and EAP. For these detected anomalies, how will we decide which department users to send a notification to? Which one of them would be required to acknowledge the notification? The Singapore SLP team noted a large pain point of not having visibility into some of the incidents the Security team deals with onsite. The loss of visibility into incidents onsite impedes LP's ability to report and learn from these incidents. We should bias toward more instead of less visibility into incidents so that each department can be informed of incident types that they have a stake in.





Worldwide
Operations
Security

Documentation

 [Meeting recordings](#) (links expire Dec 31, 2022)

 [Video Anomaly Detection System - User Research Plan](#)

[Video Anomaly Detection System wiki](#)

[Video Anomaly Detection System- BHAG](#)

[Video Analytics Use Cases/Requirements Consolidated](#)

[UX Design Task Tracker - Kendra Raczek](#)

Appendix

1

1a

FC Quality - Inventory Adjustments

Inventory adjustments details (FCPickCompleteService) involving BDL3 from January 11, 2020 to January 17, 2020

Pages: 1 2 3 4 5 6 7 8 9 10 Next (Total rows: 9734. Total pages: 98. Rows per page: 100)

Adjustment Date	FC	Application Name	Inventory Owner Group Id	Inventory Owner Group Name	Container Id	GL Product Group	ASIN	Processed By	Reason Code	Quantity	Item Cost	Cost Estimate	Last Updated (UTC)
2020-01-11	BDL3	FCPickCompleteService	1163724	wangvijla_us_42497876215	P-5-B732U644	Home	X0029UUS6J		M	1	0.0	7.85	2020-01-11 08:23:52 UTC
2020-01-11	BDL3	FCPickCompleteService	1490256	smilely_457466156	P-5-C265G046	Kitchen	X001YYYE7		M	1	0.0	5.13	2020-01-11 08:53:54 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-5-C6298817	Home Improvement	B00D2K367		M	1	13.34	0.0	2020-01-12 05:01:42 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-6-B429K540	Dvd	B07GRLPX12		M	1	38.0	0.0	2020-01-11 09:05:53 UTC
2020-01-11	BDL3	FCPickCompleteService	1029000	AlfCool_32031317315	P-6-C571H996	Wireless	X0029RL1CL		M	1	0.0	8.63	2020-01-12 09:43:54 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-8-B518T042	Toy	B00HWDOPQM		M	1	16.5	0.0	2020-01-12 00:08:01 UTC
2020-01-11	BDL3	FCPickCompleteService	1256666	ZHSolution_19279759702	P-8-C804E287	Digital Accessories 2	X001MSJ87		M	1	0.0	2.09	2020-01-12 05:48:42 UTC
2020-01-11	BDL3	FCPickCompleteService	2127910	A16JUD51Q0ASF4_FBA	P-9-B444Y648	Beauty	B07PG3DR87		M	1	0.0	39.3	2020-01-12 05:14:41 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-9-B8321146	Apparel	B00553XM06		M	1	24.49	0.0	2020-01-11 08:32:23 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-5-B7722724	Beauty	B01407CJ1		M	1	6.56	0.0	2020-01-11 22:34:29 UTC
2020-01-11	BDL3	FCPickCompleteService	888720	JMNA_41436988405	P-5-C659H875	Beauty	X0015240M3		M	1	0.0	14.99	2020-01-11 17:04:21 UTC
2020-01-11	BDL3	FCPickCompleteService	15625	BIGPLYSORTS_1260502961	P-6-B698X582	Toy	X001R058TF		M	1	0.0	12.02	2020-01-11 13:19:39 UTC
2020-01-11	BDL3	FCPickCompleteService	385155	Chacoberry_13221805615	P-7-C505H232	Pet Products	B07H2HSLK3		M	1	0.0	10.46	2020-01-11 15:15:40 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-7-C951W147	Kitchen	B0113UJ2E2		M	1	10.09	0.0	2020-01-11 15:47:45 UTC
2020-01-11	BDL3	FCPickCompleteService	1228927	ALI_HengHao_16274557602	P-6-C080B255	Home	X0026EC4XP		M	1	0.0	15.23	2020-01-11 15:07:12 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-6-C956B743	Grocery	B0760B3415		M	1	9.72	0.0	2020-01-11 13:13:05 UTC
2020-01-11	BDL3	FCPickCompleteService	665236	RPCorporation_34064913305	P-7-C668H534	Home	X001KL306J		M	1	0.0	6.06	2020-01-11 19:20:10 UTC
2020-01-11	BDL3	FCPickCompleteService	652732	CQRgearz_39971658805	P-8-B604T296	Sports	X0027BCQ03		M	1	0.0	22.22	2020-01-11 18:05:17 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-9-A908Y214	Pet Products	B00L3O2956		M	1	5.81	0.0	2020-01-11 17:00:49 UTC
2020-01-11	BDL3	FCPickCompleteService	952289	Talcum_home_decor_27144832515	P-9-C848X328	Beauty	B081DJHTC		M	1	0.0	16.88	2020-01-11 18:15:19 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-5-B646X202	Outdoors	B07HGQDHR7		M	1	6.3	0.0	2020-01-12 03:52:39 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-5-B646X202	Outdoors	B07HGQDHR7		M	1	6.3	0.0	2020-01-12 03:52:58 UTC
2020-01-11	BDL3	FCPickCompleteService	1373464	YYTech_34223571702	P-5-C313A806	Wireless	X00241GB5H		M	1	0.0	7.78	2020-01-12 05:52:41 UTC
2020-01-11	BDL3	FCPickCompleteService	881421	MGM_Nutrition_40863304805	P-5-C941B329	Drugstore	X001MFHZHJ		M	1	0.0	13.74	2020-01-12 02:14:04 UTC
2020-01-11	BDL3	FCPickCompleteService	1134530	IBREK_42008367115	P-7-B375F664	Wireless	X0026HWOLN		M	1	0.0	4.82	2020-01-12 06:10:45 UTC
2020-01-11	BDL3	FCPickCompleteService	332705	LongRun_LLC_997305151	P-7-B555W180	Grocery	X002C284DR		M	1	0.0	5.91	2020-01-12 05:36:42 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-8-C786C661	Pet Products	B0005DQH64		M	1	5.49	0.0	2020-01-12 07:51:47 UTC
2020-01-11	BDL3	FCPickCompleteService	2556559	A153270BALILTP_FBA	P-5-B0422113	Electronics	X002BETISH		M	1	0.0	6.05	2020-01-11 15:05:30 UTC
2020-01-11	BDL3	FCPickCompleteService	1	Amazon	P-6-B235Y966	Baby Product	B0783HNNHT		M	1	99.0	0.0	2020-01-11 18:59:56 UTC





1b

LP Loss Prevention Portal x FC Quality - Inventory Adjustme... x [BDL3] Pack-Item-Missing-AFE - x B09JQMjHXY | FCResearch x +

Not secure | fcresearch-na.aka.amazon.com/BDL3/results?s=B09JQMjHXY#inventory-history-nav

Apps LP LP Portal FCResearch Pod Review AA Tracking Quip Kibana LP Pick Short Workplace Incident... ADAPT Other bookmarks

FCResearch

Showing 1 to 100 of 506 entries

Search B09JQMjHXY

Inventory History

Start date: 03/02/2022 End date: 03/09/2022 Search

Too many results found. Some results are not shown.

Date (EST)	OP	RS	ASIN	FNSku	FCSku	LPN	Quantity (+4)	Person	Old Bin	New Bin
2022-03-09 16:09:20	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-5-E942Y047	
2022-03-09 16:09:20	M		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-5-E942Y047	tsX05nsbc4t
2022-03-09 16:05:54	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-6-C915H039	
2022-03-09 16:02:54	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-8-C592F599	
2022-03-09 16:00:39	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-8-B690X128	
2022-03-09 15:50:50	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-6-C152G265	
2022-03-09 15:48:28	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-5-C068A910	
2022-03-09 15:12:09	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-7-F100Q229	
2022-03-09 15:02:59	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-9-D542R793	
2022-03-09 14:42:27	R		B09JQMjHXY	B09JQMjHXY	ZZTHLTUO37		1		P-7-F100Q229	

PROFILE (none) Refresh Settings

SECTIONS

- Product
- Purchase Order
- Purchase Order Items
- Receive History
- Shipment
- Inventory
- Inventory History
- Container History
- Container Details
- Employee
- Carton General Information
- Carton Contents
- SSCC Information
- Items in Multiple Cartons
- Vision Tunnel
- Problems
- Problem

Type here to search

4:11 PM 3/9/2022

1c

LP Loss Prevention Portal x FC Quality - Inventory Adjustme... x [BDL3] Pack-Item-Missing-AFE - x B09JQMjHXY | FCResearch x +

atlas-kibana.corp.amazon.com/app/kibana#/dashboard/12513be0-8cf2-11eb-9349-9920c6cb09b2?_g=(refreshInterval:(display:Off,pause:if(value:0),ti...)

Apps LP LP Portal FCResearch Pod Review AA Tracking Quip Kibana LP Pick Short Workplace Incident... ADAPT Other bookmarks

kibana

Dashboard / [BDL3] Pack-Item-Missing-AFE Full screen Share Clone Edit Auto-refresh Last 7 days

warehouse_id:BDL3

gl_product_group_name: "gl_wireless, gl_electronics, gl_video_games, gl_camera, gl_pc" Add a filter + Actions

Pack Item Missing Over Time

Sum of quantity

timestamp per 3 hours

Pack Item Missing Total Defects

907 Sum of quantity

Pack Item Missing by Process Path

Sum of quan

Process Path

BDL3 AFE Quality Dashboard

Count

Count

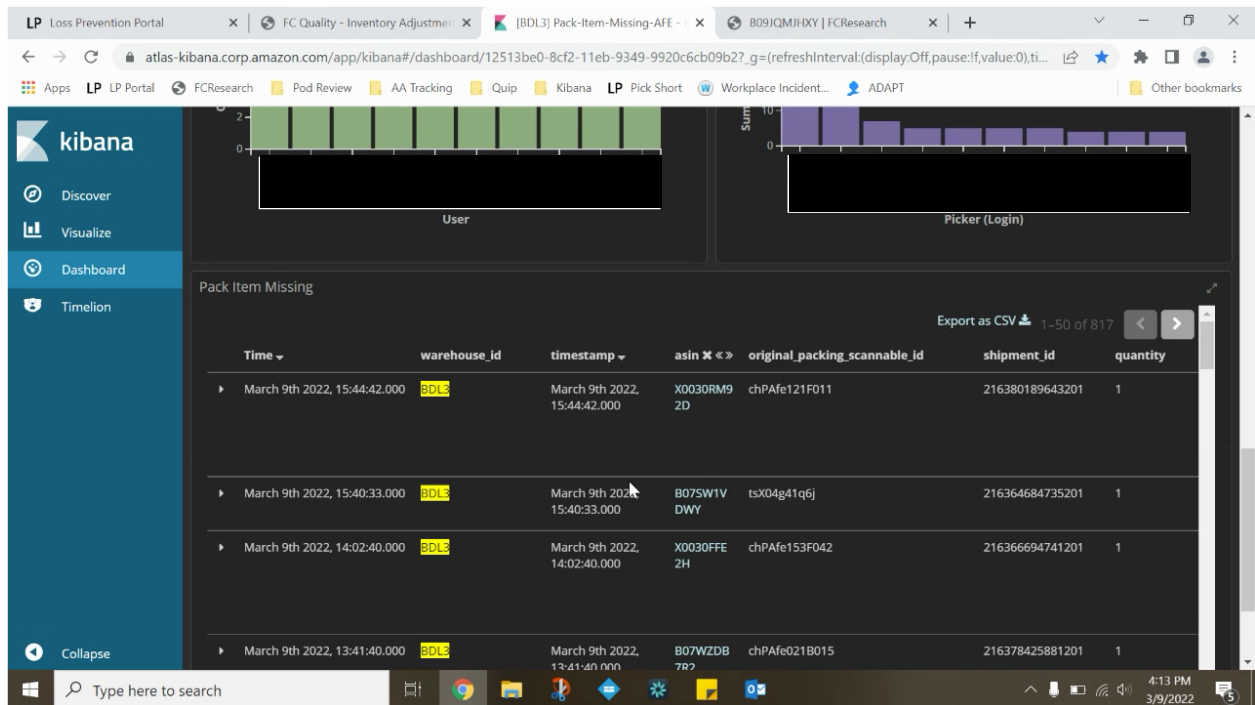
Type here to search

4:12 PM 3/9/2022





1d



1e

The screenshot shows an Amazon Loss Prevention investigation form titled 'Case Approval - (BDL3) - (faimccal) - Excel'. The form includes a header with the Amazon logo and 'Global Security' and 'Loss Prevention' text. Below the header is a table with columns: Date of Incident, Time of Incident, Location of Incident, Description of Incident, Item Description (ASIN), QTY, Total Value, Was Video Saved?, and Additional Notes. The table contains one row of data for an incident on 2/21/2022 at 13:48hrs until 13:51hrs at Pick Station 2355. The description of the incident states that two Apple AirPods (B09JQLNWT) were selected from bin P-3-00692A2 during their assigned Pick duties and placed the items on to of their work station. The item description is 'Apple AirPods (3rd Generation) (B09JQLNWT)' with a quantity of 2 and a total value of \$358.00. The 'Was Video Saved?' column is marked 'Yes'. The 'Additional Notes' column contains '\$179.00 each'. The form also includes a section for 'POI' (Person of Interest) with fields for 'Logistics' and 'Date reviewed with HR'. The bottom of the screen shows a Windows taskbar with the search bar and several application icons.

Date of Incident	Time of Incident	Location of Incident	Description of Incident	Item Description (ASIN)	QTY	Total Value	Was Video Saved?	Additional Notes
2/21/2022	13:48hrs until 13:51hrs	Pick Station 2355	On 02/21/2022 at 13:48hrs, [redacted] selected two Apple AirPods (B09JQLNWT) from bin P-3-00692A2 during their assigned Pick duties and placed the items on to of their work station. [redacted] was not assigned to pick Apple AirPods from this bin location. At 13:51hrs, [redacted] concealed the two Apple AirPods inside of her backpack.	Apple AirPods (3rd Generation) (B09JQLNWT)	2	\$358.00	Yes	\$179.00 each



1f

Case Approval - (BDL) - (ramccal) - Excel

Inventory History

Date (EST)	OP	RS	ASIN	FNSku	PCSKU	LPN	Quantity (-Z)	Person	Old Bin	New Bin	Old Owner
2022-03-02 10:03:36	D	M	B09JQL3NWT	B09JQL3NWT	Z2TP5XSA7X		1	[redacted]	P-5-0069G242		Inventory
2022-03-02 10:03:28	D	M	B09JQL3NWT	B09JQL3NWT	Z2TP5XSA7X		1	[redacted]	P-5-0069G242		21536188510

FCResearch showing two Apple AirPods missing from the bin after [redacted] moved them on 02/21/2022

Camera 1 - 2/21/2022 13:40:14.275

Camera 1 - 2/21/2022 13:50:14.687

app.chime.aws is sharing your screen. Stop sharing Hide

10:27 3/9/2022

1g

Milestone XProtect Smart Client

Live Playback Search System Monitor

XProtect

Views

Search views and cameras...

Main Entrance

Maps

Parking Lot

RME CAM

Workforce Staffing

Private

Smart Wall

Cameras

Overall View Page 001

app.chime.aws is sharing your screen. Stop sharing Hide

10:27 3/9/2022





Worldwide
Operations
Security

1h

FC Quality - Inventory Adjustments | 8072FC9QD4 | FCResearch | LP Loss Prevention Portal

lossprevention.amazon.com

Reports | Research | Investigations | Operations | Resources | External Links

ARES Research Items

9 Not Completed 0 In Progress

ATHENA Secondary Screening - Past 7 Days

FC	Legit	Secondary Screenings
BDL3		15
BDL3		13
BDL3		11
BDL3		10
BDL3		10

MARINER - Newest Reports

Site Type	Report	Upload Date
FC_ALL	2022 Q1 Engagement Survey Responses	2022-03-01

LP Sage - Most Recent

- Aviation Security Specialist - View 1 day ago
- Loss Prevention Specialist - View 2 days ago
- Loss Prevention Manager - View 6 days ago
- Loss Prevention Specialist - View 9 days ago
- Regional Loss Prevention Manager (Level 6)- Vendor Flex - View 12 days ago

Code 5 Items

16 Open 0 In Research

BDL3 Assignments (10) [change site](#)

FC	Assignment	Frequency	Due Date
BDL3	Daily Key Inventory Audit - ONE IN 8 HOURS	Daily	2022-03-10
BDL3	AMER Guard Company Performance Audit	Weekly	2022-03-12
BDL3	Loss Prevention Donations Process Audit	Weekly	2022-03-12
BDL3	AMER Trailer Audit - Security 2020	Weekly	2022-03-12
BDL3	RLPM Site Visit	Quarterly	2022-03-31
BDL3	AMER Fraud Audit	Monthly	2022-03-31
BDL3	AMER Access Control Audit	Quarterly	2022-03-31
BDL3	AMER Code 5 Standard Validation Audit	Monthly	2022-03-31
BDL3	AMER LP BUILDING AND COMPLIANCE REVIEW AUDIT	Monthly	2022-03-31
BDL3	AMER Satellite Phone Test	Bi-annually	2022-07-01

Showing 1 to 10 of 10 entries

Previous 1 Next

app.chime.aws is sharing your screen. [Stop sharing](#) [Hide](#)

1i

FC Quality - Inventory Adjustments | 8072FC9QD4 | FCResearch | LP Loss Prevention Portal | Case Management Portal

lossprevention.amazon.com/cms

Case Management Portal | Menu | Search | Report Builder | Alerts | Forms | Investigation Standards | Settings

Did you know? - You can now download the Voluntary Associate Statement and Witness Notes Forms by selecting them in the "Investigation Standards" menu above.

Recent Activity

Loading...

[Customize](#) | [Refresh](#)

My Current Reports (1)

Report #	Date Created	Type	Location	Status	Value	Options
2022-105492	Mar 8, 2022	WM Event - Assault	BDL3	Open	\$0.00	Edit Delete

app.chime.aws is sharing your screen. [Stop sharing](#) [Hide](#)

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2

2a

The screenshot shows the 'lossprevention.amazon.com' dashboard. The top navigation bar includes 'Reports', 'Research', 'Investigations', 'Operations', 'Resources', and 'External Links'. The main content area is divided into three sections:

- ARIES Research Items:** Shows 0 Not Completed and 0 In Progress items.
- ATHENA Secondary Screening - Past 7 Days:** A table with columns FC, Login, and Secondary Screenings. It lists 6 entries for ABE8 with 4, 3, 3, 3, 3, and 3 screenings respectively.
- ABE8 Assignments (8):** A table with columns FC, Assignment, Frequency, and Due Date. It lists 8 assignments for ABE8, including 'Fence Line Audit - 2nd Shift Security - DUE IN 9 HOURS', 'AMER Visitor and Vendor Badge Audit - Security - DUE IN 9 HOURS', 'AMER Access Control Audit', 'AMER Illumination Audit', 'AMER Swag Portal Inventory audit', 'MDF Access List Review', 'RLPM Site Visit', and 'AMER Satellite Phone Test'.

At the bottom, there is a 'MARINER - Newest Reports' section showing a report for 'FC_ALL' titled '2022 Q1 Engagement Survey Responses' with an upload date of 2022-03-01.

2b

The screenshot shows the 'LP Case Management Portal' interface. The top navigation bar includes 'Main', 'Search', 'Report Builder', 'Alerts', 'Forms', 'Investigation Standards', and 'Settings'. The main content area is divided into four sections:

- Recent Activity:** A list of recent events, including 'Misc. Policy or Standard Violation - Failure to Clear Screening at TEB9' (7½ hours ago), 'Misc. Policy or Standard Violation - Failure to Clear Screening at TEB9' (7½ hours ago), 'Employee Misconduct - Suspicious Activity at TEN1' (9 hours ago), 'Misc. Policy or Standard Violation - Failure to Clear Screening at TEB9' (10½ hours ago), and 'Misc. Policy or Standard Violation - Failure to Clear Screening at TEB9' (12½ hours ago).
- Awaiting Approval (2):** A table with columns Report #, Submitted, Type, Location, User, Value, and Options. It lists 2 reports for ABE8, both with a value of \$0.00.
- My Current Reports (4):** A table with columns Report #, Date Created, Type, Location, Status, Value, and Options. It lists 4 reports for ABE8, all with a status of 'Submitted' and values ranging from \$20.69 to \$2,135.14.
- CMS Mini Reports (1):** A table with columns Report #, Date Created, Type, Location, Value, Status, LP Owner, and Options. It lists 1 report for ABE8, with a status of 'Under Research'.



2c

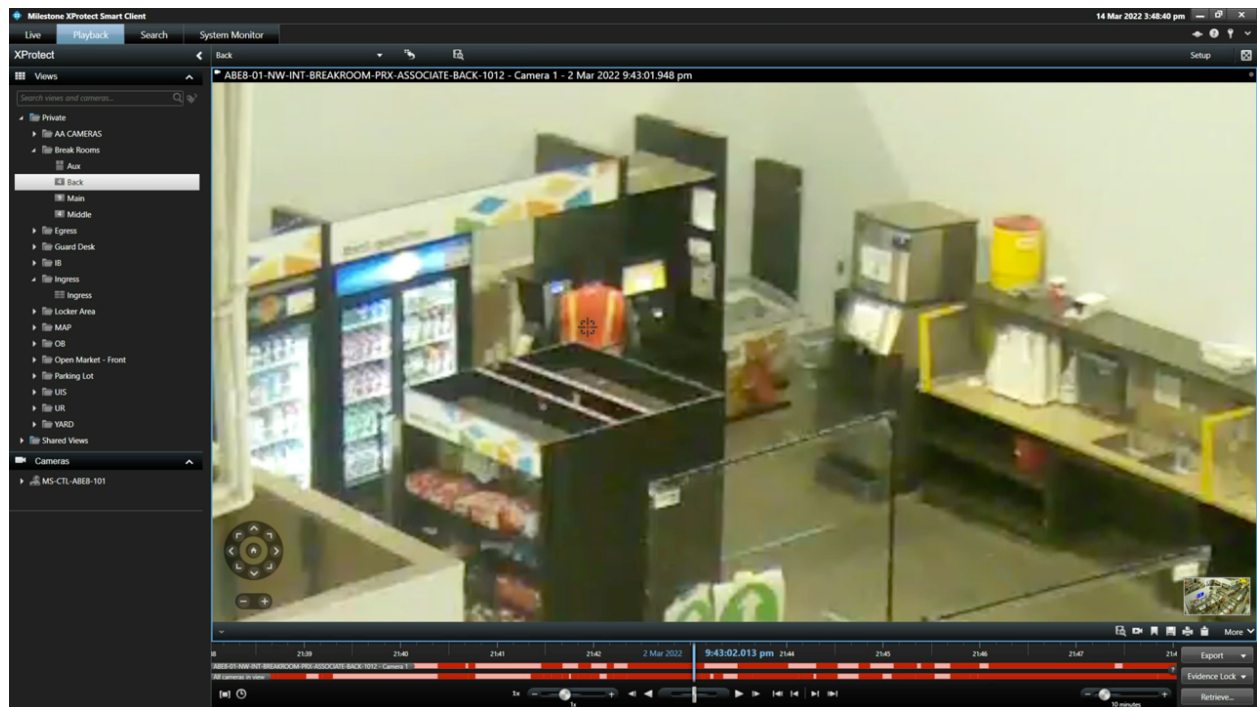
Field	Value
ASIN	B08WYMG75
FNSku	X0034FVETZ
Title	JBL Clip 4: Portable Speaker with Bluetooth, Built-in Battery, Waterproof and Dustproof Feature - Black (JBLCLIP4BLKAM) (Renewed)...
Binding	Electronics
Publisher	
Vendor Code	
Weight	0.86 pounds
Dimensions	2.68 x 6.93 x 5.24 IN
List Price	
Expiration Date	
Asin Demand	Demand for B08WYMG75
Sortable	true
Conveyable	true
Very High Value	false
Master Case	false
FCSku Scope	FNSKU
Sales Forecast	0.0
Sales History	0.0

2d

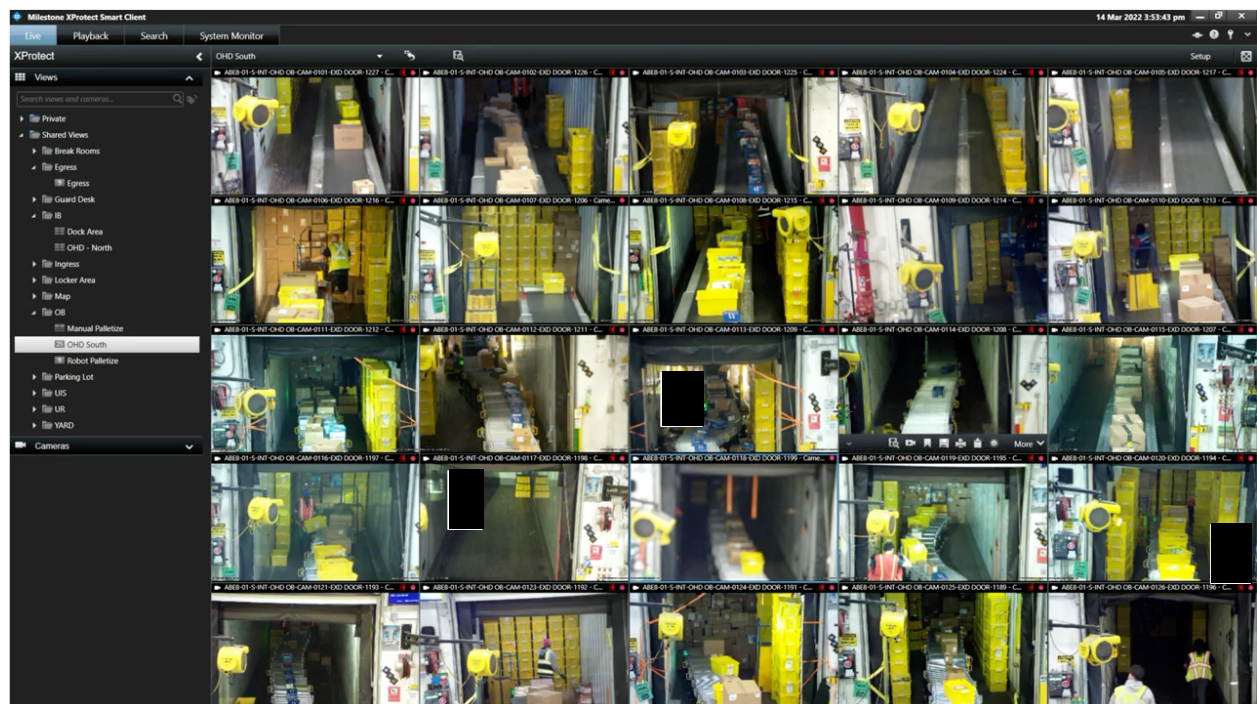
Date (EDT)	Deleted inventory	ASIN	FNSku	FCSku	LPN	Quantity (-4)	Person	Old Bin	New Bin	Old Ow
2022-02-15 07:34:47	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		4	zjamhahn	csXPFDC7KH		trans
2022-01-30 14:49:27	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX0ej0mid9	trans
2022-01-30 14:49:22	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	tsOpx09Short	cvOpx09Belt	trans
2022-01-30 14:30:32	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	csXPD98ZRBj	tsOpx09Short	trans
2022-01-30 14:29:56	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX01c24bc7	trans
2022-01-30 14:29:51	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX0ej0mid9	trans
2022-01-30 14:29:50	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX0ej0mid9	trans
2022-01-30 14:29:48	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX0ej0mid9	trans
2022-01-30 14:29:47	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX0ej0mid9	trans
2022-01-30 14:29:45	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX0ej0mid9	trans
2022-01-30 14:29:44	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX0ej0mid9	trans
2022-01-30 14:29:43	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX0ej0mid9	trans
2022-01-30 14:29:39	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX01c24bc7	trans
2022-01-30 14:29:37	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	csXPD98ZRBj	cvOpx09Belt	trans
2022-01-30 14:29:36	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	csXPD98ZRBj	cvOpx09Belt	trans
2022-01-30 14:29:35	M	B08WYMG75	X0034FVETZ	ZZTKK2197R		1	dc-owl	cvOpx09Belt	tsX01c24bc7	trans



2e



2f



3

3a

IN Security & Loss Prevention (INSLP) | Home | My Site | About | Toolkit | Additional | Signed in as [redacted]

Edit an existing audit

Warehouse:

Audit date:

S.No	Audit type	Recovery amount	Comments	
1	Pick Cart Audit			Remove
2	Pick Cart Audit			Remove

[Add Audit](#) [Submit](#) [Back to Summary](#)

To report a problem or feature request, click [here](#)

3b

INSLP Audit Tracker System | Signed in as [redacted]

Perform Audit

March 2022

W	Sun	Mon	Tue	Wed	Thu	Fri	Sat
10			1	2	3	4	5
11	6	7	8	9	10 BOM5 - FC	11	12
12	13	14	15	16	17	18	19
13	20	21	22	23	24	25	26
14	27	28	29	30	31		

Navigation: [today](#) [<](#) [>](#)



3c

Manage Action Plan

[Export to Excel](#) Search:

Region	Cluster	Site	Binary	Severity	Status	Assigned To	DeadLine	ECD	Auditor Comments	Att Doc (if
EAST	EC2	HYDI	Camera Audit	Critical	Not Started	aaalladi	2018-09-28	2018-09-28	CCTV is showing errors for 2 cameras, vendor has been aligned for rectification	
EAST	EC2	HYDG	Inbound audit - Shipments	High	Not Started	aaalladi	2018-10-03	2018-10-03	This procedure is not happening. the DC handle 3000 - 500 volumes everyday that makes it difficult to follow this process	

3d

Dashboard

[Download](#)

Region	Type	Scheduled Audits	Total Audit Scheduled Till Date	Completed Audits	Pending Audits
EAST	FC	3	3	2	1
	LM	26	21	21	5
	MM	2	2	2	0
	PNFC	9	7	8	1
NORTH	FC	10	7	7	3
	LM	30	18	16	14
	MM	8	6	6	2
	PNFC	11	7	8	3
	RC	1	1	1	0
	FC	5	5	4	1
	LM	27	12	11	16



3e

Site Results : 2022 - BOM5

Audit Details :

Audited Date	Audit Type	Schedule Type	Auditor
2022/03/11	FC	REGULAR	vinokhat

2022 - BOM5 is 97.7% Compliant

Critical	High	Medium	Low	N/A	Repeat	Compliance Score
0	0	1	0	0	0	97.7%

Site Summary :

Category	Parameter	Severity	Comment	Repeat?
----------	-----------	----------	---------	---------

3f

Milestone XProtect Smart Client

3/16/2022 10:19:25 AM

Live Playback Search System Monitor

XProtect

Views (0)

Cameras (46)

- BOM5-00-E-INT-DOCK-CAM-DOCK 1 2 3-INTER...
- BOM5-00-E-INT-DOCK-CAM-DOCK 1 2 3-INTERNAL-1745: E
- BOM5-00-W-INT-DOCK-CAM-DOCK 01-INTER...
- BOM5-00-W-INT-DOCK-CAM-DOCK 01-INTERNAL-1701: BC
- BOM5-00-W-INT-DOCK-CAM-DOCK 02-INTER...
- BOM5-00-W-INT-DOCK-CAM-DOCK 02-INTERNAL-1702: BC
- BOM5-00-W-INT-DOCK-CAM-DOCK 03-INTER...
- BOM5-00-W-INT-DOCK-CAM-DOCK 03-INTERNAL-1703: BC
- BOM5-00-W-INT-DOCK-CAM-DOCK 04-INTER...
- BOM5-00-W-INT-DOCK-CAM-DOCK 04-INTERNAL-1704: BC

Cameras

- MS-CTL-BOM5-101
- ms-nvr-bom5-101
- BOM5-00-E-INT-FLOW OB-CAM-REBIN
- BOM5-00-E-INT-INT PERIMETER-CAM
- BOM5-00-E-INT-KICK OUT-CAM-XXD 5
- BOM5-00-E-INT-STAIR-CAM-VRC-LIFT
- BOM5-00-E-INT-STAIR-CAM-VRC-LIFT
- BOM5-00-E-INT-WH DEALS & PS-CAM
- BOM5-00-N-INT-DOCK-CAM-DOCK 21
- BOM5-00-N-INT-EXD DOOR-CAM-EX
- BOM5-00-N-INT-HRV-CAM-PATHWAY

9:58:08 AM Getting sequence data on camera 'BOM5-00-N-INT-FLOW OB-CAM-REBIN-AREA-1022 - Camera 1' failed. Getting sequence is not allowed.

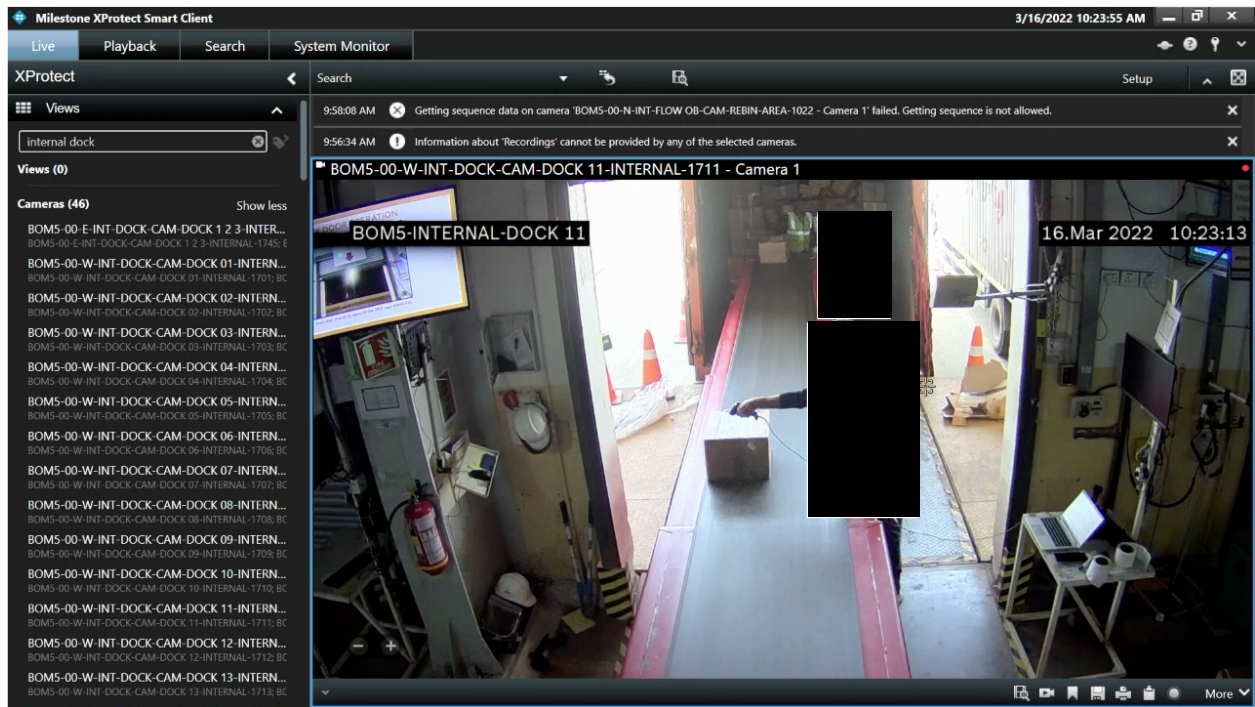
9:56:34 AM Information about 'Recordings' cannot be provided by any of the selected cameras.

BOM5-00-N-INT-FLOW OB-CAM-REBIN-AREA-1022 - Camera 1



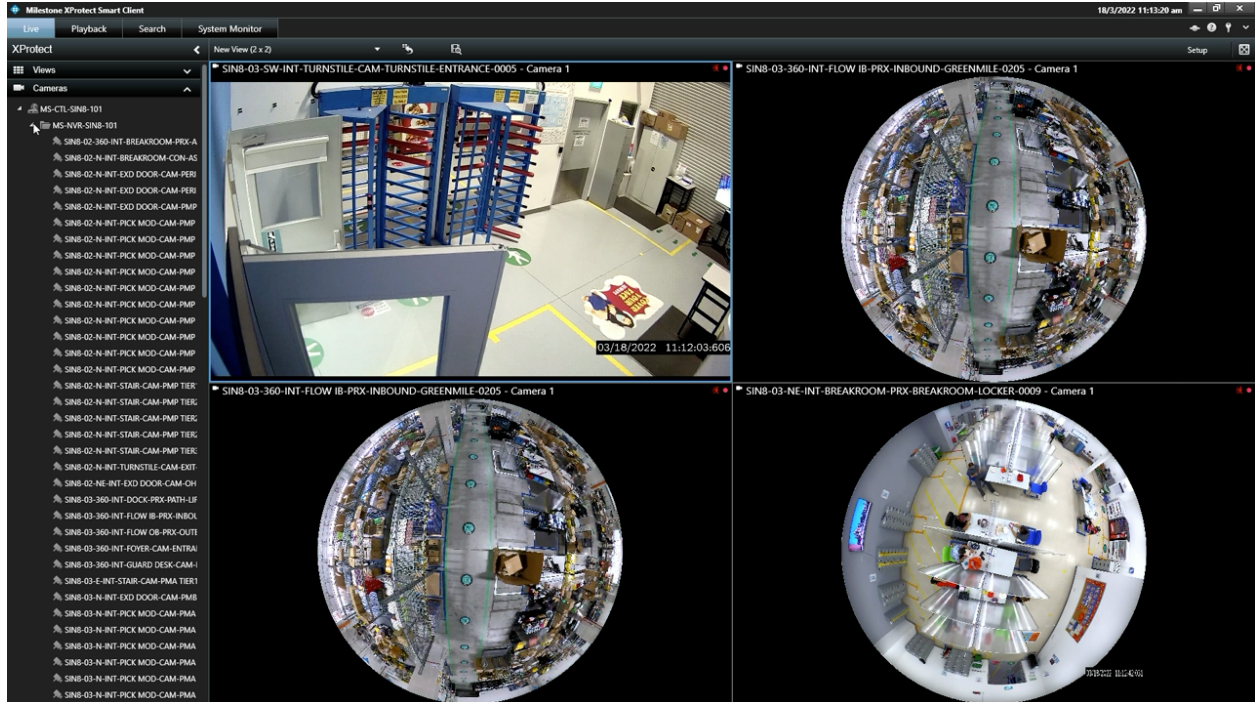


3g

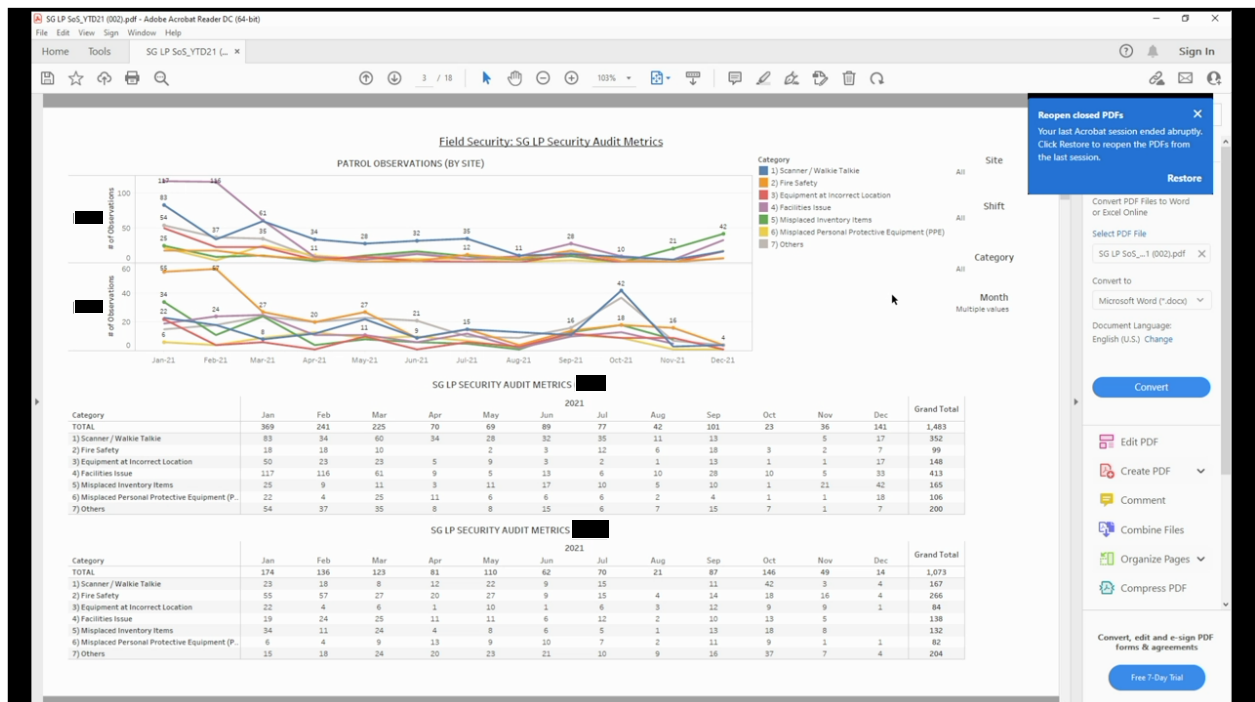


4

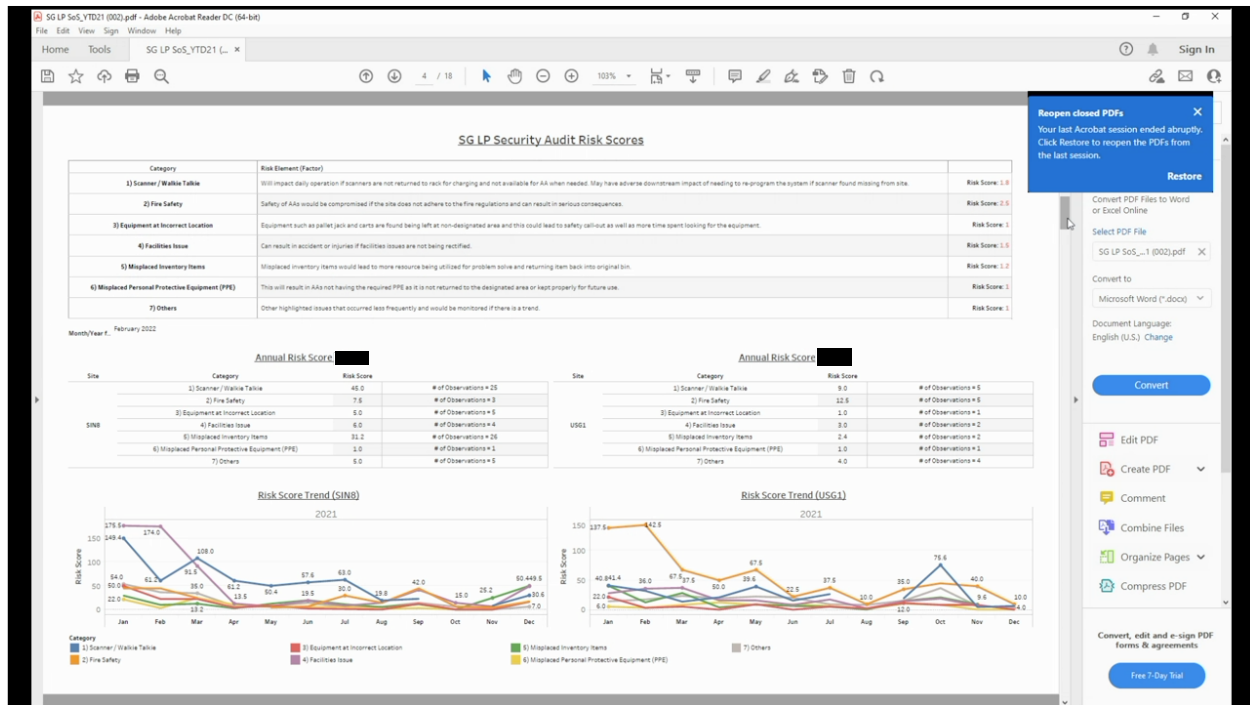
4a



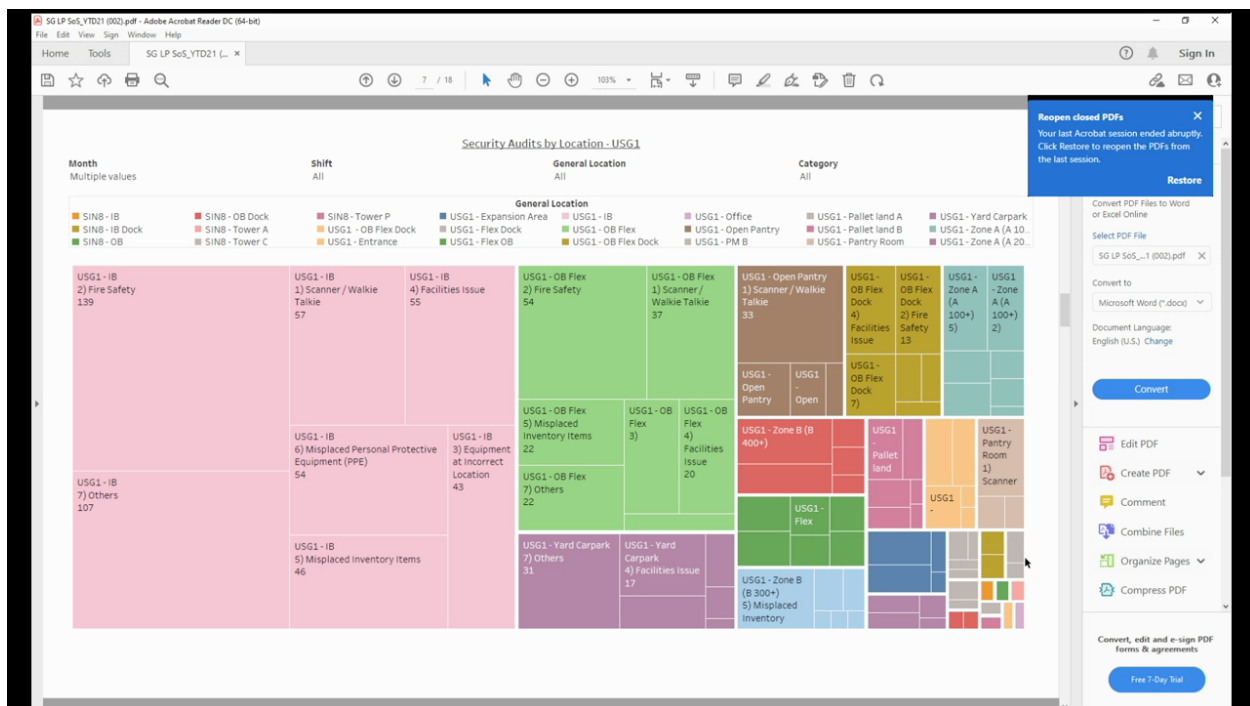
4b



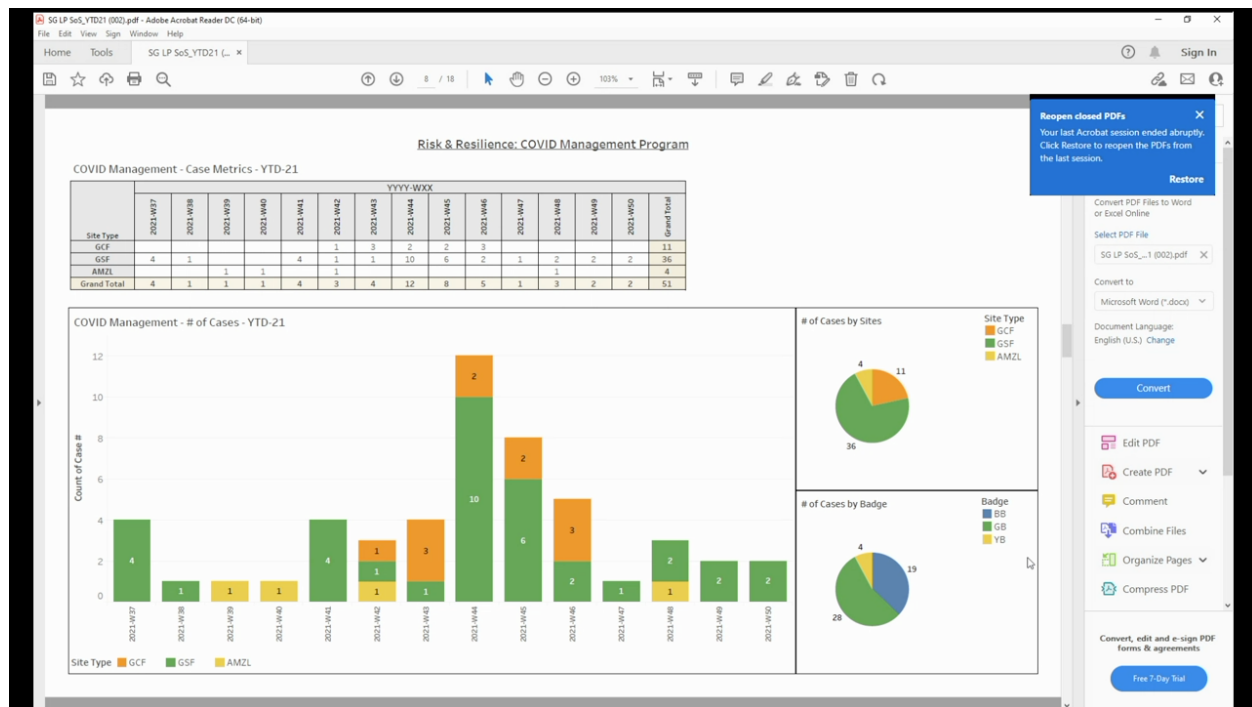
4c



4d



4e



Meeting-Specific Notes

LP (Loss Prevention)

Mar 9, 2022 North Haven, CT (BDL3)

John [REDACTED] LP Manager, NAFC AR
 Scott [REDACTED] LP Specialist, FC Support
 Noah [REDACTED] LP Specialist, FC Support
 William [REDACTED] LP Specialist, FC Support

Meeting recording

- Majority of work dealing with product theft, otherwise supporting security incidents, engagement with managers and associates, interviews with associates. Potential product thefts are identified as Code 5s.
- Incident process: a few days to a few weeks for an investigation
 - Informed of thefts through monitoring 3 applications, WIMs through word of mouth from HR



- Investigate thefts by combing through timestamps of product movement, cross-referencing with Milestone video. Takes a long time to investigate, 10-30 min looking into video to find some of them a false alarm (wasted time)
- Fill out case report through Microsoft Excel, a collection of evidence, images, video
- Send case report to LP manager for interview approval, LP manager sends to regional for further approval.
- Coordinate with HR to schedule interviews with associates involves (1 hr each)
- For thefts >\$50, LP needs to file a police report and hand over data/video evidence
 - In Milestone, video is retained for 2 weeks. This can cause issues in investigating WIM reports of incidents that happened earlier, since LP no longer has access to video footage.
 - Each LP specialist responsible for preserving video evidence. Video files are stored in one of two shared drives: one for LP only, and one that is shared between LP and HR (for WIM incidents).
 - Prosecution will receive evidence through a flash drive
- Video valuable in investigating WIM incidents
- Tools and applications: 4-5 open at any given time
 - DigDug(?): application used to monitor stow interactions, cameras exist at every AR station - participants vouched for the potential for these cameras to be used in anomaly detection
 - Camera system is separate from Milestone's camera system
 - Lenel: first alerted of alarms
 - RightCrowd: answering requests
 - Loss Prevention portal (1h)
 - Microsoft Excel (1e)(1f): Create case report with information, image evidence for theft investigations. LP outlines each tracked movement of the item per row.
 - Milestone: always have up on one monitor as a reference. This LP team has been using Milestone for 6 months, after having used SASD. Initially John dreaded having to learn a new application, but has found it so useful that he wished they had used it "since the day we launched." The real-time playback functionality has been an immense time savings for the team. Team is currently in the process of completing camera



mapping ([1g](#)). Previously they used a 50-page paper version to find the cameras you want to look at.

- CMS ([1i](#)): Though it is possible to log updates long-term in CMS, this LP typically does not. For WIMs that evolve, they might simply create a new CMS case and link them together.
- 3 main applications for theft investigations:
 - FCResearch ([1b](#)): inventory interactions of an item by its ASIN
 - FCQuality ([1a](#)): Inventory quantity adjustment records
 - Kibana ([1c](#))([1d](#)): Missing pack items, LP exports data into a CSV to cross reference with video
- Loss prevention acts as a “redundancy to make sure security is doing their job”
- Major frustration: video is used completely reactively, this LP team has a monitor up with parking lot video cameras in an attempt to catch incidents proactively.
- Notifications/mobility
 - LP specialists spend most of the time on a computer/laptop at their desk, otherwise physically walking around the site for investigations
 - Use phone only for Chime, don’t have email on phone
 - LP specialists required to have phone onsite
 - Would prefer an application sending notification on phone rather than email
 - Email inboxes fill and need to be cleaned once a week - not a good place to send important notifications
 - Consideration: work/life balance - when you’re off work, you shouldn’t be looking at email/Chime
 - If urgent enough of an alert, John will answer a phone call even when off work - suggested an automated call as an option
- Graffiti tours: security guards walk through bathrooms (no camera coverage)
 - Pain point: having to go through video footage of ~13 different time periods to find one individual involved in bomb threat writings
 - Functionality for VADS: ability to change playback speed if users need to scrub through unmarked timeline
- “Metrics” thought of as a term for anomaly use cases, rather than data visualization
- Team doesn’t do a lot of routine reports, but does do one-off requests:
 - Exit times through screening during peak, requested by third party/legal representatives



- Video analytic use cases:
 - Detecting when a video camera is malfunctioning/black/has something blocking view
 - Difficult but very useful: detecting when an item moved from a bin (seeing when item was there and when it was not)
 - Using DigDug(?) AR station cameras to monitor and detect suspicious movement of items in stow
 - Perimeter breaches: doors being left open, etc.
 - Leaks from hoses, sinks, etc.
 - Smoke
 - Traffic jams in parking lot
 - Facial recognition: though aspirational, team suggested it would greatly reduce time spent contact tracing through video and Lenel interactions

Mar 14, 2022 Florence, NJ (ABE8)

Matt [REDACTED] LP Manager, FC

Rob [REDACTED] LP Specialist, FC Support

 Meeting recording

- Nothing is stored in this facility, so things move very fast and thefts can be missed or misclassified
- Daily tasks/responsibilities
 - LP manager: review emails ("couple hundred" each morning), weekly metrics (thefts, WIMS, audit completion, employee hours)
 - Meetings: daily onsite team, regional LP, 1-1s, engagements, job interviews
 - Since short-staffed, LP manager will often be the only LP covering and will do the on-the-ground specialist tasks (reviewing footage to investigate thefts, incidents), open market theft, review trans-ship report, handle any WIMs/security guard issues that come up throughout the day
 - LP specialist: review emails, check open CMS cases to follow up, check open code 5 cases & research, check ARIES cases
- Time spent in front of computer
 - LP manager: 80-90% of time in front of computer/laptop, otherwise doing interviews, engaging with associates



- Uses phone often for Chime and email, rarely RallyPoint
 - LP specialists: >95% of time in front of computer doing investigations
- Tools and applications:
 - Loss Prevention portal ([2a](#)): ARIES, audits, Code 5s
 - CMS ([2b](#)): open incident reports, trending activity in nearby facilities
 - FC Research ([2c](#))([2d](#)): search ASIN of suspected theft product, linked to product listing on amazon.com, see log of inventory history, then investigate associate status, time on FCLM ([Fulfillment Center Labor Management](#)) and look over video footage
 - Milestone VMS ([2e](#))([2f](#)): very reactive, used in investigations similar to FCResearch
 - Rob has gone through and sorted cameras into logical nested groupings (i.e. "Break Room", "Locker Area", etc.) to make it easier to find specific cameras. There are two folders users can put these categorizations into: Private Views or Shared Views. Shared views are available to anyone who has access to the facility on Milestone. Rob has copied his private view folders into the shared views for others to use.
 - Cameras used to have "plain English" names until about a year ago when SIG renamed all to their own convention
 - Rob currently working on the mapping feature for his site, finds it helpful to select cameras from map view, appreciates the tooltip video to confirm if it is the correct camera before selecting
 - ABE8 has >300 cameras, nearly impossible to proactively catch an incident by looking through cameras
 - Big pain point: low number of cameras, low quality of cameras
 - Lenel: investigate movements of persons involved in incident
- Incident process
 - Notification: WIMs verbally or Chime from HR, theft from Code 5 notification or associate coming forward with suspicion, CMS reports submitted from security
 - Often immediate notification after incident happens, but short staffed so incidents without someone on shift might not be seen until next shift
 - Investigation: FCResearch, Milestone, Lenel, interviews



- LP team shared drive for storing image/video evidence for open investigations, then will upload to CMS report if the incident is true
 - Length cases stay open: WIMs short (within a day or two), thefts longer to collect evidence and get interviews approved (1 week → a couple months)
 - Communicating incidents:
 - Law enforcement: LP contacts Amazon legal before handing over evidence to law enforcement, orders brand new flash drives to store & give evidence
 - Internal Amazon legal or other entities: via Chime or shared drive
 - 'False alarms' for thefts happen all the time
 - Low video coverage onsite is a pain point where LP cannot see common touchpoints for thefts (UIX robotic sorter area only has 10% coverage)
 - Once a week a WIM report turns out to not reach the considered level
- Metrics & reporting
 - WBR by Matt every Monday morning: theft cases (YTD), dollar amounts, Amazon product thefts, WIMs (YTD), mental health WIMs (YTD), SEV1/2s (YTD), audits missed (Security, LP) (YTD), LP specialist hours (expected vs worked), open recs & status
 - <30 min to collect since it's routine
 - Daily deep dive by Matt: WIMs, theft cases, turnstiles working, callouts - prepared for 9am meeting
 - One-off Quips requested by regional, Matt 1-on-1 more in depth WBR to regional
 - One-offs can take longer to collect since they're unexpected
 - Sources: CMS mostly for incidents, MyTime for hours, LP portal audit tool, hiring portal for recs
 - Actions: tracking progress to yearly goal, training and resources for mental health WIMs, learn from other site's successes and failures
- Proactive efforts
 - Rob weekly reviews cameras to detect if they are working properly and submit a ticket to IT if needed, will catch some safety compliance issues and report them (inappropriate parking, etc.)
 - In addition to monthly required audit



- Application used before Milestone would detect when camera not working and auto-cut a ticket to IT, but Milestone does not
- LP team currently uses an application to detect if the number of trucks in yard exceeds a certain threshold - didn't get more information on

Mar 15, 2022 Mumbai, India (BOM46/BOM5)

Binoy [REDACTED] Sr SLP Manager, AMZL

Vinod [REDACTED] SLP Manager

 Meeting recording

- Daily responsibilities: 70% Loss Prevention, 30% Security
 - Manager level
 - Receive daily security report: video cameras functioning, assets functioning, any incidents in previous day, thefts
 - BDW (Basic Data Warehousing) report: different loss type verticals for SCs, FCs, Last Mile - leads to coaching/training
 - WBR, MBR, audits
 - Site level
 - Investigation into losses
 - 2 security specialists doing video monitoring
 - 8 daily audits (+ 1 monthly audit) ([3e](#))
 - HRV Inward Audit: for high value shipments, security guard manually counts number of items received from a truck vs what the sender claimed to have sent
 - Orphan Recovery: document and recover partial or damaged items
 - Pick Cart Audit: mismatch between quantity physically picked from HRV high value inventory cage vs quantity that was supposed to be picked
 - Scrap Audit: monitor that none of inventory, shipments, etc. get included in scrap to be thrown out
 - Slam/Kick Out Audit: shipment is kicked out if it's weight deviates from expectation >10%, done at kick out stations
 - Vendor Returns Audit: shipments from vendor supposed to be sent vs received



- Sweeping Audit: walk through site to identify any packages that are not in their correct locations or are idle/unattended
 - VGR Audit: security specialists monitoring video and responding
- VGR (Virtual Guardian Response system): optimization of security guards with the use of video. Originally, Binoy's facility used security guards being physically present onsite to prevent theft incidents. The facility has 40-50 docks, with one guard covering 3 docks. Since they didn't have enough guards to fill these positions, these guards would have to cover up to 10 docks. Instead, they now have 1 out of 2-3 security specialists onsite in a control room monitoring video. Since every dock has 2 cameras, 1 specialist covers 80 cameras, which reduces the cost for security headcount onsite. The specialist reports their findings to 2 onsite responders on the floor via radio.
 - Associates tend to perform more safety violations when there is no physical presence watching them
 - Opening of dock door must be communicated to security specialist and recorded
- FCs are more standard process-oriented than SCs
- Video analytic use cases:
 - Associates standing on pallets
 - Picking trolleys going into the dock areas (they should stay within their designated areas)
 - People climbing into the yard from a dock and vice versa
 - Drivers and loading associates having prolonged conversation or exchange products- seems like a prominent issue in these facilities. In India, facility personnel will take the driver's key and put it into a key box, as well as exchange paperwork. Those two interactions should be the only ones between drivers and facility associates.
 - Associates not wearing appropriate colored jackets in their designated areas
 - Count shipments coming out of truck - reduce manual work to see if there are quantity discrepancies
 - VPM (virtual and physical mismatch): difference between number of packages logged in system vs physically loaded into truck - a large issue for this team, more commonly in SCs than FCs



- Using cameras that capture conveyor belts through truck doors - each dock has 3 cameras with different angles
- Unlike UK facilities, there is a gap between the back of a truck and the opening facility door in Indian facilities. Because of this open area allowing people to pass through, there is a higher likelihood of theft via moving the package during the loading/unloading process.
- Someone unauthorized opens doors/shutters
- Reduce package damage:
 - Stacking pallets higher than regulation
 - Associates throwing packages carelessly, often because they are rushed
 - CPT (critical pull time) time truck is required to leave the dock
 - Too many packages stacked in yard or dock causes product to fall
- Tools and applications:
 - Facility Manager
 - Milestone VMS ([3f](#))([3g](#)): their sites have just recently been onboarded to Milestone, in the early stages of mapping
 - India Security and Loss Prevention portal ([3a](#)): perform 8 daily audits
 - INLSP Audit Tracker System ([3b](#))([3c](#))([3d](#)): perform audits, track action plans

Mar 17, 2022 Singapore (SIN16)

HaoJun [REDACTED] Program Manager, S&LP, PS

 [Meeting recording](#)

- Daily responsibilities:
 - KinHeng (S&LP Manager) is in charge of most of the onsite activities, but HaoJun covers that role when KinHeng is not there.
 - Three main pillars of work:
 - Security and Loss Prevention: trespassing, loitering, etc.
 - Safety (WHS) protocols: spillage, trolleys, ladders, etc. not being stored in the correct places, noncompliance with safety rules. Minor oversights like these can lead to associate injury



- COVID management: enforcing local policies onsite, currently transitioning to lighter protocols - with low physical coverage, policies are hard to enforce
 - Time online vs offline: Since KinHeng deals with more work onsite, he usually spends 50-70% of his time in front of a computer, but this could range down to 10% if there is a significant incident happening onsite. The other portion is spent offline doing investigation tasks or managing incidents around a site. Since HaoJun and Glen are not based on site, they spend a majority of their time in front of their laptops. The implication of this is that although an onsite S/LP Specialist or Manager may miss a notification on the computer, having higher-level management as a backup would ensure incidents are responded to in a timely manner.
- Singapore operations facilities are unique in that there are only 3 sites: 1 Prime, 1 Ultra Fast Fresh, and 1 AMZL. The team's main pain point is that their S&LP team of 4 is tasked with managing all 3 of these sites. The majority of physical security manpower covers the Prime site, while the other 2 have limited presence of security personnel as a deterrent because of the lack of manpower. This leads to incidents having a delayed response. A yellow-badge site security specialist is onsite during the daytime to respond to emergency incidents. For the night shift, there is a security officer team lead that will be monitoring escalations from GSO.
- Incident process:
 - This S&LP team is informed of security and safety incidents by word of mouth through the operations team or associates, safety officers, yard marshal, etc. They communicate via radio to the LP team and the LP team sends the response officer to the site to respond. If an incident is low-impact, the safety officers onsite will handle the incident themselves. For high-impact incidents like workplace violence, the LP team will fill out a WIM report and escalate to GSOC and internal leadership.
 - A pain point of the LP team is that there are incidents that happen onsite that the operations team or security manages, but does not inform LP. In these cases, onsite teams usually only reach out and inform LP when they need access to CCTV footage. For the others, the LP team loses visibility into all of the incidents that happen onsite.



- The LP team uses CMS to report a basic version of an investigation, with some essential pictures as attachments. Since CMS is unable to store large amounts of data, the team has a shared drive to store CCTV footage, images, statements, and other raw evidence.
- To hand over image or video evidence to law enforcement, the LP team burns data onto discs rather than flash drives since there have been concerns by legal of flash drives having a danger of containing viruses. Law enforcement officials might also be onsite sitting with an LP team member reviewing footage that they are interested in.
- How long investigations stay open: for most incidents, it takes within 24 hours to gather initial statements and CCTV evidence. Then further investigation and engagements with HR and subject interviews start occurring on the 2nd day.
- Investigations can be inconclusive to be called “closed.” It may take 3 days to 1 or 2 weeks for HR to settle the facts of the case. During this time, the POI will be suspended while the investigation is happening.
- Tools and applications:
 - Milestone (4a): camera names given by SIG are hard for this LP team to quickly navigate and find a specific camera. The LP team will manually go through all the different cameras in Milestone to find the view they are looking for. For the onsite security officers, they have a paper printout that lists all of the camera names and views so they can identify the name of the camera they need to view in Milestone.
 - Number of cameras per site: Prime up to 100, USG1 Fresh about 60, DFE1 AMZL 45
 - Only the FC site is working on corp net and uses Milestone. For the other two, LP needs to physically go onsite to link their laptops to get access to the camera system.
- Reports/Metrics (4b): weekly report sourced from security officers patrolling onsite, recording findings in their duty phone. The LP team’s security risk analyst then ingests these metrics and creates an extensive report analyzing the raw data (4c)(4d). The area that takes the most time in reporting is COVID management (4e). The LP team is notified of COVID cases in person or through the ERC. The security officers then investigate into contact tracing through Lenel access records and video cameras.
 - Main categories:
 - Scanner/walkie talkie misplaced



- Fire safety compliance
- Equipment at incorrect location
- Facilities issues
- Misplaced inventory items
- Misplaced PPE (personal protective equipment)
- Video analytic use cases:
 - Spillage: usually in bathrooms or break rooms
 - COVID: although not a permanent issue, it would be helpful to this team currently to detect noncompliance like social distancing, mask wearing
 - Associates carrying parcels out of certain specified areas

WHS (Workplace Health and Safety)

Mar 11, 2022 Baltimore, MD: Use case generation meeting

Yvette [REDACTED] Regional Manager, WHS

No meeting recording

- WHS is concerned with injuries, violence, and all health & safety incidents that happen onsite. Most commonly these incidents include dropping boxes, back strains from carrying boxes, packages falling from unloading trucks, falls, and workplace violence. WHS is interested in a broad array of incidents, and shares responsibility and communication with Security and LP teams.
 - Since many incidents have shared interest from WHS, LP, Security, Environmental, we will need to consider what department(s) of users to send notifications out to in VADS for response, or for what video anomaly types to be visible.
 - Initiatives: reduce 1. Strains and sprains, 2. Reduce being struck by items
 - Injured associate affects lost time and productivity \$, brand reputation
- Process of incident notification and management:
 - When a health emergency happens like a seizure, other associates or leadership nearby will group up around the individual to help. If there are no associates around, this can cause a delay in responding to a medical emergency, which is where video camera detection would be most useful. WHS is notified of incidents by an associate then coming to AM CARE ([Administering Medical Care to Amazonians Responsibly and Effectively](#)), wherein WHS communicates through radio for medical



response onsite or contacts EMS. A WHS personnel then stays with the individual until medical services arrive.

- For alert notification, participant thought of Chime messaging as the quickest form of communication, and that email would produce a slower response.
- Tools and applications used by WHS:
 - Milestone VMS: Used to investigate an incident after it has happened for footage evidence. In the participant's sites, there is a frustration from the lack of camera coverage, making proactive and reactive response more difficult. They are actively working with LP to install more cameras.
 - Tableau: Display metrics and generate a daily business report. Seemed to dislike using Quicksight for metrics and reporting. Since WHS does much of their data collection and reporting through Tableau, it might be preferred to integrate VADS data here instead of having a separate dashboard.
 - Austin: WHS-exclusive tool to track WHS incidents. Site-based permissioning, will store video footage from Milestone as evidence in the Austin case. WHS manually enters in case information into Austin.
- Participant's mental model of the term "metrics" doesn't align with the dashboard feature of VADS - we should instead use "reports" or alternative for data visualization features
- Video analytic use cases:
 - Crowd detection
 - Falling objects
 - Associates falling: sudden movement followed by stillness
 - Objects/packages out-of-place
 - When a lane is blocked - prevents rushed work with uneven package distribution
 - Presence of blood
 - If video cameras could have sound detection, detecting sounds like gunshots or loud booms of falling objects.