

## HS3C BI & A and COPS Collaboration

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### Summary

This document outlines the collaboration between HS3C BI & A and the COPS team. The collaboration started in September 2017 when the COPS program team reached out to HS3C BI & A with requirements to create automated tableau dashboards. At the same time BI & A team had a discussion with Rajdeep during his visit to the USA on how to bend down the cost curve going forward using machine learning and forecasting opportunities for COPS. (Team members worked on this collaboration in Appendix 1).

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### Scope

The primary scope of this collaboration was to create an infrastructure to generate automated WBR, MBR and QBR tableau dashboards for COPS internal use for all nodes/regions, i.e. including all the marketplace with data back to 2015.

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### Redshift Cluster

Considering the primary scope and future opportunities the BI & A team spun up a 4 node Redshift cluster along with providing Tableau desktop licenses for the COPS BA's. This cluster also helped in program JIYU (Oracle to Redshift migration). After this BI & A and COPS team established a weekly meeting and project plan to on-board the necessary tables into the COPS cluster. The table onboarding was prioritized based on the greatest reduction of manual effort required to create the dashboards. The overall onboarding plan can be found in the Appendix 2.

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### Workflow

Based on the scoping COPS need 3 types of workflow to support the Data engineering needs based on their work stream

- 1) **HS3C Programs tables:** Main stream of work for COPS is ASINs sent via CPP tools for manual reviews. These tables are stored in program specific redshift cluster and only store summarized data in COPS cluster.
- 2) **Booker tables:** One stream of work for COPS is via tickets/SIMs and paragon for Rule writing and other subprogram task such as TAM tickets etc. These entire tables are stored in COPS cluster.
- 3) **Manual data:** For certain process such as Quality Audits COPS uses Excel spread sheets to store the data. The entire data sets are stored in the COPS cluster using S3 Loads.

A detailed workflow with an example can be found in Appendix 3.

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### Tableau Dashboard

After the tables are on-boarded, COPS BA's created the Tableau dashboards ([link](#)) with the guidance on the design and features from BI & A team. Screen shots can be found in Appendix 4.

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### Where we stand today:

The HS3C BI & A team have created a SIM folder to intake the COPS requests for any of the new data tables. We have also provided write access to COPS BA's to create summarized tables which will be helpful in creating Tableau dashboards.

# HS3C BI & A and COPS Collaboration

## Appendix:

### Appendix 1:

HS3C BI& A Team Members:	
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### Appendix 2: Project Plan: Excel [link](#).

Priority	Program Name	Task Name	Data Source (Table Name)	HS3C BI & A owned						COPS Owned						BA Owner	PM Owner	Ops Owner
		Supplier Follow-up	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018	Not Yet Started	2017	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
		CLP Classification	ASIN_METRICS, EVENT_METRICS, REVIEW_ASIN_DETAIL	Completed	2018	Not Yet Started	2017	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
		CLP Ticketing	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018	Not Yet Started	2017	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
		Rule Writing	RPS, ASIN, DATA	Completed	2018	Not Yet Started	2017	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
2	PS	UPSC	TAMMETRICS_DOL2_CASE_DETAILS, O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	Dec-17	PILOT Launched	Dec-17	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
		Recalls	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	Dec-17	PILOT Launched	Dec-17	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
		Restatement requests	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	WIP	2018 TBO	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Investigations	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO				Mihail (C-Ops BA RO)	Corina	Andrea Onicescu	
		Copyright takedowns	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
		Andon	TAMMETRICS_DOL2_CASE_DETAILS	Completed	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
		Authority takedowns	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
		Food takedowns	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
		CMI	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
		ASIN Review	RPS, CUSTOMER, REVIEWS	Completed	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO	Not Yet Started	2018 TBO							
			RESTRICTEDPRODUCTS, RPS, ASIN, DATA, RPS, ASIN, DATA, RPS, AUDIT, RPS, RULES, RPS, RULES, METADATA, CONFIG	Completed	2018 TBO	WIP	2018 TBO	WIP	2018 TBO	Not Yet Started	2018 TBO							
3	RP		RESTRICTEDPRODUCTS, RPS, ASIN, DATA, RPS, ASIN, DATA, RPS, AUDIT, RPS, SAMPLE, ASIN, RULE, CONTACTS, RPS, SAMPLE, ASIN, RPS, AUDIT, CHANGE, RPS, AUDIT, SCHEDULE, RPS, AUDIT, METRICS	Completed	2018 TBO	WIP	2018 TBO	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Website Audits	IP, STAGE, AUDIT, ANNOTATION, SCHEDULE	Completed	2018 TBO	WIP	2018 TBO	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Tooling	HS3C PP TABLES, IP, STAGE, AUDIT, ANNOTATION, TASK, IP, STAGE, AUDIT, ANNOTATION, TASK, BATCH, IP, STAGE, AUDIT, ANNOTATION, TASK, TYPE	Completed	Feb-18	WIP	Feb-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Rule Writing	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	Feb-18	WIP	Feb-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
		ASD	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	Feb-18	Unknown	Feb-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Investigations	RESTRICTEDPRODUCTS, O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Unknown	2018 TBO	WIP	2018 TBO	Not Yet Started	2018 TBO							
				Completed	2018 TBO	Unknown	2018 TBO	WIP	2018 TBO	Not Yet Started	2018 TBO							
4	DI	DOC Review	TAMMETRICS_DOL2_CASE_DETAILS	Completed	18-Feb	PILOT Launched	PILOT Launched	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
		INSPECTIONS	TAMMETRICS_DOL2_CASE_DETAILS	Completed	18-Feb	PILOT Launched	PILOT Launched	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
		ACC	TAMMETRICS_DOL2_CASE_DETAILS	Completed	18-Mar	PILOT Launched	PILOT Launched	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
		ANALYST	O_REMEDY_TICKETS	Completed	18-Feb	PILOT Launched	PILOT Launched	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
				Completed	18-Feb	Not yet started/Need Playbook data in redshift	Not yet started/Need Playbook data in redshift	Not yet started/Need Playbook data in redshift	2018 TBO	Not Yet Started	2018 TBO				Gulam (C-Ops BA IN)	Sid	Rajeev	
		Rational Writing	Playbook	30-Aug	18-Mar	https://tr.amazonaws.com/0137360533	https://tr.amazonaws.com/0137360533	https://tr.amazonaws.com/0137360533	2018 TBO	Not Yet Started	2018 TBO							
		Rule Writing	O_REMEDY_TICKETS	Completed	18-Feb	PILOT Launched	PILOT Launched	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
5	TC	Archive Table	Archive table	30-Jun	18-Feb	PILOT Launched	PILOT Launched	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
		MANUAL CLASSIFICATION	ON, O_REMEDY_TICKETS, IN, Currently MySQL. Have raised a SIM to have the mysql table in redshift reporting cluster	Completed	18-Feb	PILOT Launched	PILOT Launched	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
		Rule Writing	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	Mar-18	WIP	Mar-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Rule Refinement	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	Mar-18	WIP	Mar-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Rationale	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	Mar-18	WIP	Mar-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Manual Classification	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	Mar-18	WIP	Mar-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
		ICCD	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	Mar-18	WIP	Mar-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
6	EPR	Subcategory Analyses	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	Mar-18	WIP	Mar-18	WIP	2018 TBO	Not Yet Started	2018 TBO							
		WEEE Manual Classification	Playbook	30-Aug	2018 TBO	WIP	2018 TBO	WIP	2018 TBO	Not Yet Started	2018 TBO							
7	PC	WEEE, Packaging, Batteries Reporting	MANUAL SOURCE ONLY	Scoping	2018 TBO	WIP	2018 TBO	WIP	2018 TBO	Not Yet Started	2018 TBO							
		Image Review	CCCD/MYSQL	Scoping	2018	PILOT Launched	2018	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
8	NAFN	Document Review	TAMMETRICS_DOL2_CASE_DETAILS, TAMMETRICS_DOL2_QUEUE_TRANSFERS	Scoping	2018	PILOT Launched	2018	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
		QA	ARBUS	Scoping	2018	PILOT Launched	2018	PILOT Launched	2018 TBO	Not Yet Started	2018 TBO							
TBO	PS	Tasks to be defined	MANUAL SOURCE ONLY	Scoping	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
TBO	CSR	SR OPERATIONS	AUDITS, OPR, AUDITS, STAGING, CONTACTS, OPR, CONTACTS, STAGING, COMPANY, OPR, COMPANY, STAGING, FINDING, REVIEWS, OPR, FINDING, REVIEWS, STAGING, SITE, DETAILS, OPR, SITE, DETAILS, STAGING, SITES, OPR, SITES, STAGING, O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
		EICC AUDITS	AUDITS, OPR, AUDITS, STAGING, CONTACTS, OPR, CONTACTS, STAGING, COMPANY, OPR, COMPANY, STAGING, FINDING, REVIEWS, OPR, FINDING, REVIEWS, STAGING, SITE, DETAILS, OPR, SITE, DETAILS, STAGING, SITES, OPR, SITES, STAGING, O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
		SR OPS INDIA	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
TBO	AGS	RULE WRITING	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
		SAMPLE REVIEW	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
		FIN AUDIT	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
TBO	OPEX	SIOCFFF/Varian	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
		SIWAN	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL, O_REMEDY_IT_ACTIVITY	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
TBO	Teens	RULE WRITING	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
		SAMPLE REVIEW	O_REMEDY_TICKETS, O_REMEDY_AUDITTRAIL	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							
TBO	AGL	RULE WRITING	MS ACCESS	Completed	2018 TBO	Unknown	2018 TBO	Unknown	2018 TBO	Not Yet Started	2018 TBO							

## HS3C BI & A and COPS Collaboration

### Workflows

#### Appendix 3: DG data flow:

CPP DG UI classifies the ASIN and sends the ASINs to manual classification. DG rule writer create rules to bulk classify the ASINs. All these data sets are shared by CPP team to HS3C BI & A via S3 and SNS notifications. HS3C BI & A loads these data into DG redshift cluster. COPS uses these data to load summarized version of these tables, which contains information about

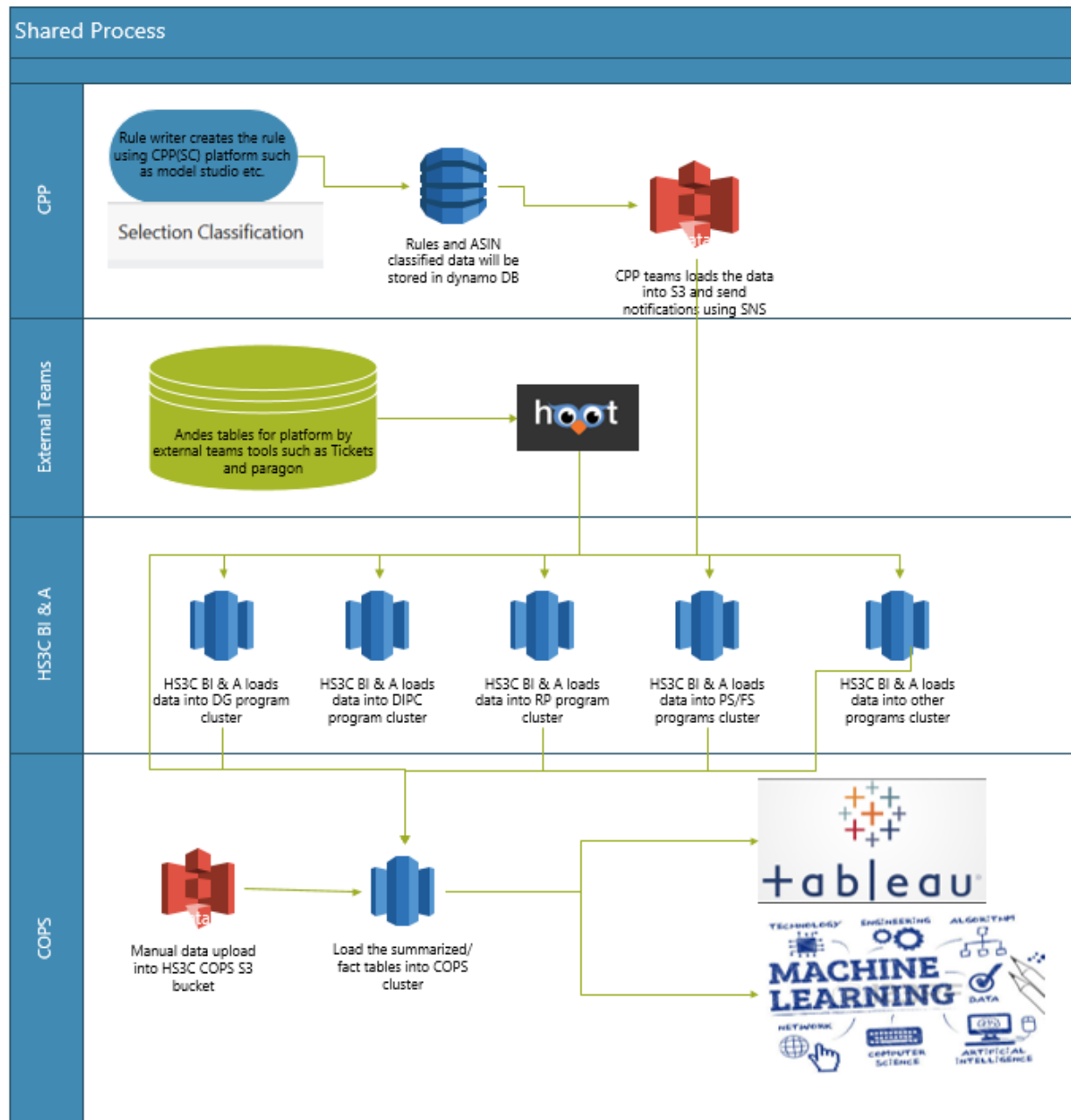
- 1) ASINs classified and their classification.
- 2) Classification Audit history
- 3) True/False positive and True/False negatives
- 4) Which team classified etc.

COPS also gets inflow in terms of tickets and paragon cases which are scoured from Andes tables to COPS redshift cluster. These data points helps in calculating metrics such as below

Dangerous Goods WBR - Week 16						
Team	Week	Week-13	Week-14	Week-15	Week-16	Callouts
Classification	Inflow	131,378	114,070	235,264	183,654	• Quality targets met at worldwide level.
	Classified	131,428	131,617	134,502	126,654	• Gated SLA BD targets are met for BLR, POL, CN and RO node.
	Pending	46,491	47,173	102,146	129,734	
	Gated SLA% (Business days) (Target: 90%) WW	81.4%	85.4%	82.5%	87.2%	
	Gated SLA% (Business days) (Target: 90%) WW (excluding IN)	97.21%	93.82%	99.12%	99.47%	
	Gated SLA% (Business days) (Target: 90%) IN MP	64.84%	73.37%	41.50%	45.96%	
	Productivity WW	122	141	176	179	
	UTC %	23.00%	19.33%	19.28%	19.05%	
	Manual Audit Accuracy (Reviewers) Target: 99.7%	99.87%	99.87%	99.87%	99.79%	
	ASIN Review -Inflow	14,000	6,146	5,484	12,298	
Easyship	ASIN Review-Classified	7,954	4,524	5,414	10,563	
	ASIN Review- Pending	6,146	1,622	70	1,735	
	Productivity	1,866	2,023	2,071	2,009	
	Order Monitoring Classification Inflow	61,112	60,716	61,311	53,154	
	Order Monitoring Classification Reviewed	29,459	35,940	46,292	39,671	
DG Issue Resolution Process (Ticketing)	Inflow	15140	14707	13365	9976	• Issue resolution process has missed its SLA for week 16 (77.45%) against the target of 90%
	Resolved	11928	10400	10878	8250	• BLR node has missed its SLA for week 16 (61.21%) against the target of 90%
	Productivity	48	43	46	33	
	SLA(Target: 90%)(10 Days)	86.24%	85.54%	84.82%	86.32%	
	TAT(Target: 10 Days)	3.2	2.7	3.3	3.5	
	Open cases	10247	9793	9951	8707	
	Open cases-Age wise breakup	Open Cases	Less than 7 Days	Between 5 & 10 Days	Greater than 10 days	
	Assigned	3614	3090	503	21	
	Pending	3019	1890	150	979	
	Researching	18	12	2	4	
Supplier Follow Up	Work In Progress	181	160	11	10	
	Inflow	1138	1304	976	2737	
	Resolved	743	770	1635	1732	
	Productivity	25	16	31	37	
	Open cases	3469	3540	4746	5837	
	TAT(Target - 14 Days)	10.4	12.6	12.3	12.1	
	Open cases-Age wise breakup	Open Cases	Less than 6 Days	Between 6 & 14 Days	Greater than 14 days	
	Merchant Action Completed	311	538	531	477	
	Pending Merchant Action	1209	2000	1648	503	
	Reopened	25	6	11	100	
CLP Manual Classification	Unassigned	0	0	0	0	
	Work-in-Progress	0	15	2	0	
	Pending Amazon Action	0	6	0	0	
	Not worked ASINs	96,129	91,567	78,797	124,505	
	Worked on ASINs	2766	2398	10729	5965	
	% CLP Regulated	27.26%	36.70%	15.57%	16.88%	
	% CLP Not Regulated	59.87%	54.96%	78.47%	80.40%	
CLP TT Resolution	% Pending	12.87%	8.34%	5.96%	2.72%	
	Quality - Accuracy Reviewer	100.00%	99.34%	99.22%	97.67%	
	FP - Non-Haz Errors	0	0	0	0	
	FN - Haz Errors	0	2	7	10	
	Cases Received	559	430	438	483	• Input: Increased in input is cause by 2nd part of DE prioritization which accounts for 51253 additional ASINs
	Ageing from create to resolve date	0.9	1.1	1.1	1.3	• Output: decrease from 10729 in W15 to 5965 in W16. This is caused by 2 main reasons:
	% of resolved cases within CLP-SLAs	100.00%	100.00%	100.00%	100.00%	• Support of DG & PS associates with CLP Exempted priority has finished PL node • CLP Exempted category was finished in PL node

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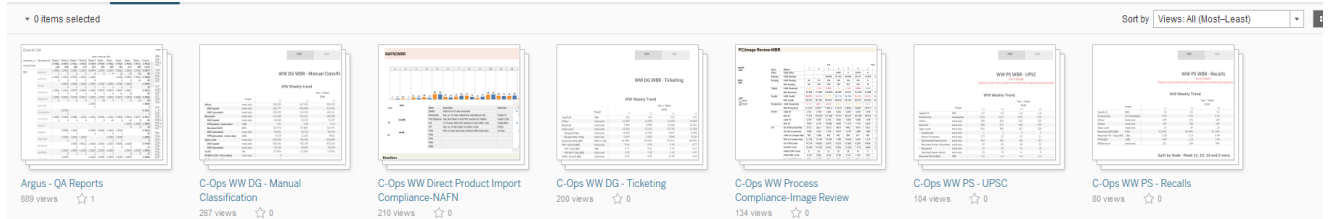
Overall data from CPP to COPS cluster:



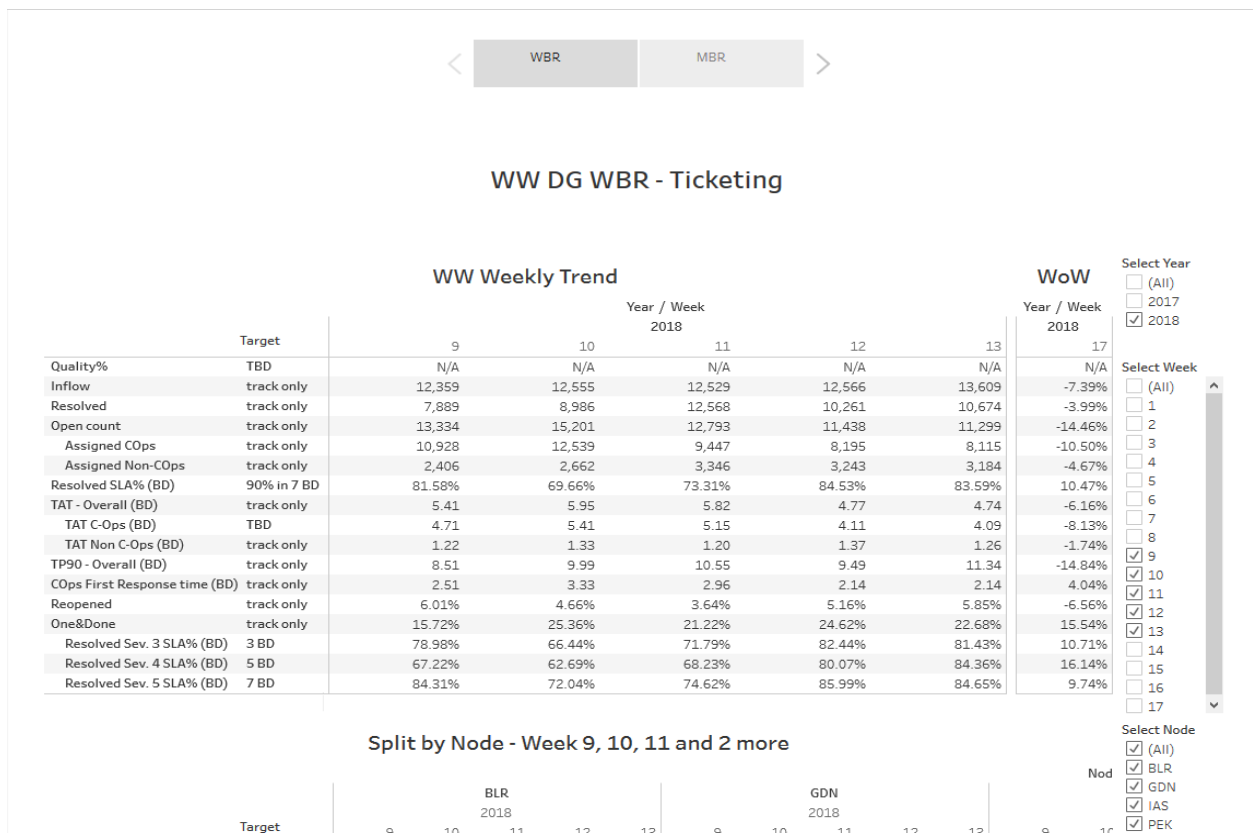
# HS3C BI & A and COPS Collaboration

## Appendix 4: Example COPS Tableau dashboard screenshot

### All WorkBooks



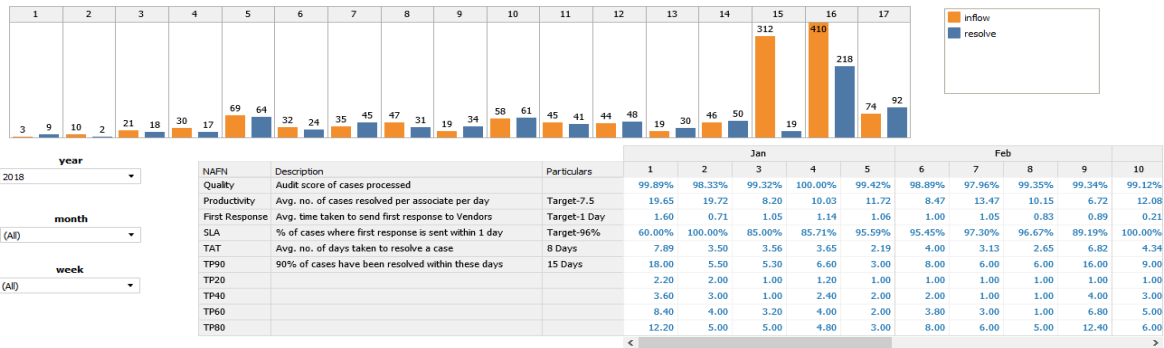
### WW DE WBR:



# HS3C BI & A and COPS Collaboration

## NAFN WBR:

### NAFN|WBR



### ending

