

Process Modeling and Simulation Overview

The Decision Integration Team of the Consistent Answers for Customers initiative simulated proposed changes to selected call centers. This simulation provides an additional level of confidence in the savings expected, in order to support the creation of a shared-in-savings implementation arrangement.

This document outlines the approach used for gathering the necessary information, creating the contact center simulations, and performing experimentation with the proposed changes to determine the optimal solution and savings possible. It details the steps required, the benefits of creating the simulation, the timeframe, and the requirements for successful completion.

High Level Description

Savings was expected from two main areas as we modify the existing call center structures:

1. An increase in the number of calls deflected to self-service, either through the IVR or the Web, which will result in a decrease in the number of CSRs required, and
2. A decrease in the number of calls which are transferred from one call center to another or which are required to make multiple calls to acquire all information needed.
3. Matching resource levels to meet proven practices service levels.

The contact centers handling the highest volume of calls will be the most likely to achieve significant savings by the three types of changes indicated above. Based on the volumes provided during the IPT, three of the call centers handle 83% of the total call volume. To further confirm the savings expectations generated during the IPT Phase and provided in the final business case, we simulated these three highest volume call centers, focusing on the impact of increasing self-service, decreasing call transfers, and meeting the target service levels. These three call centers are:

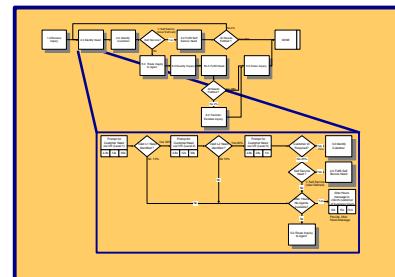
- Direct Loan Servicing Center (LS),
- Direct Loan Consolidation Center (LC), and
- Federal Student Aid Information Center (FSAIC)

Activities

Four main steps were executed in order to confirm the savings expected; process modeling, current state simulation, target state experimentation, and results delivery.

Process Modeling

Process Modeling was the first step. The Process Model captures additional detail about the existing call centers, beyond what was already captured as part of the IPT. During Process Modeling we worked with the Call Center Optimization Team to create a static, graphical representation of the current process, displayed in a work flow format. We held “discovery sessions” with subject matter experts (SMEs), including CSRs, at the targeted three call centers to create and validate these process models. The validated process model served as the blueprint, or design document, to develop the Current State Simulation Model.



Current State (As-Is) Simulation Model

Once the Process Model was validated by the SFA and Operating Partner Teams, we built the Current State Simulation Model, based on the process model information. The Current State Simulation Model provided a dynamic version of current operations. It served as a baseline and was validated against the real-world environment. In this way we ensured that the model correctly reflects how calls are currently being handled.

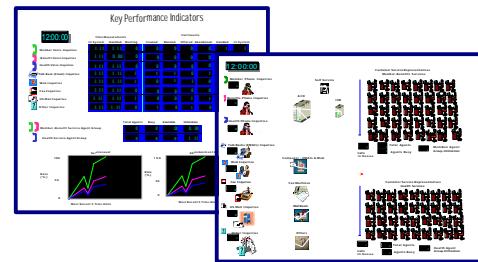
This baseline is imperative in order to accurately determine the savings that are possible once we begin to make changes to the environment.

Target State (To-Be) Simulation Model and Experimentation

When the Current State Simulation was confirmed as a baseline, we began to perform “what if” scenarios to evaluate the impact and savings associated with the proposed changes. Essentially we implemented the changes into the “simulated” call center environment. The Call Center Optimization and Central IVR Teams provided the proposed design changes, documented in the Consistent Answers CIC To-Be Operating Model.

Simulation Results

The results of experimenting with the simulation model were used as input to the implementation plan and business case. Based on the output of the simulation, design options may be selected and/or confirmed. The expected savings associated with those design options will also have a greater level of certainty and can support the creation of a shared-in-savings implementation arrangement.



Benefits

Simulating the selected, highest volume call centers, provide the following specific benefits to the Consistent Answers initiative:

- Confirm and support the expected savings provided in the final business case by creating a dynamic model of proposed systems and processes,
- Mitigate performance risk by performing operational scenario experimentation prior to actual implementation,
- Assess sensitivity by understanding how various activities within processes interact and how changes will affect overall performance,
- Promote group understanding and buy-in through the use of rigorous analysis and by demonstrating and communicating results in terms of business outcomes and Key Performance Indicators, and
- Promote better decision making through an increased understanding of the business environment.

(Note – The quality of the final analyses with the simulation is a direct consequence of the quality of client-provided and operating partner-provided data. The completed simulation model represents the data provided by SFA and the Operating Partners, and we verified the model to those data. The data are historical, projected and/or subjective quantitative data, business rules, resource types and numbers, and any other data assumptions. The validity of the model will depend entirely on the quality of the data for which SFA and the Operating Partners have full responsibility.)

Simulation Input and Results

Inbound Call Types and Handling Times: Site survey responses for call handling times and call type proportions were used as direct input into the target state model.

Call Volumes and Patterns: The target state simulation uses FY02 inbound call volumes and channel mix for the pre-attending / attending and post-attending customer interaction centers. Call patterns were determined from ACD interval reports provided by the contact centers. See the Simulation Assumptions section for a more detailed description of how call patterns were used.

Simulation Target State Volume Inputs				
	Pre %	Volume	Post %	Volume
FY02 Total Contact Volume		8,406,245		18,968,544
FY02 Inbound Calls to CSR	63.39%	5,328,718	32.22%	6,111,665
Tier1	65.00%	3,463,667	48.33%	2,953,768
Tier2	33.00%	1,758,477	51.44%	3,143,840
Tier3	2.00%	106,574	0.23%	14,057
IVR Self-Serve % of Total Contact Volume	23%	1,969,583	17%	3,311,908
Self-Serve % of Calls Offered (Sim Input)	26%		34%	
Total Calls Offered (CSR + IVR + 2% Abandon)		7,447,246		9,615,891
August '00 Volume		894,415		551,472
FY '00 Volume		6,608,638		6,547,035
Ratio to calculate monthly volume for simulation	13.53%		8.42%	
Monthly Sim Volume		1,007,913		809,969
Weekly Sim Input Vol		251,978		202,492
FSAIC	100%	251,978		
DLSC			86.0%	174,103
DLCC			14.0%	28,389

Fig. 1 Volume Inputs

Date:	8/13/2001							
Split/Skill:	PIC IOWA CITY							
Time		Avg Speed Ans	Avg Aban Time	ACD Calls	Avg ACD Time	Avg ACW Time		Aban Calls
Totals		0	13.05478764	29.56521797	3906	166.5537567	19.64183235	69
6:30	-	7:00AM	0	0	0	0	0	0
7:00	-	7:30AM	0.5	0	54	153.9629669	5.70370388	0
7:30	-	8:00AM	0.117647059	0	85	175.8352966	8.117647171	0
8:00	-	8:30AM	0.681159437	0	138	148.717392	11.115942	0
8:30	-	9:00AM	0.563157916	0	190	157.7473755	14.15263176	0
9:00	-	9:30AM	9.636363983	3.666666746	187	178.0213928	15.10695171	3
9:30	-	10:00AM	16.74869156	23.83333397	191	166.2827301	22.70680618	6
10:00	-	10:30AM	56.33135986	58.16666794	169	180.5798798	20.40828323	12
10:30	-	11:00AM	32.13732529	22.6875	284	159.7112732	15.10211277	16
11:00	-	11:30AM	14.29109573	9	292	162.6678009	16.36643791	3
11:30	-	12:00PM	19.37164688	24.20000076	261	160.6896515	24.97318077	5
12:00	-	12:30PM	26.05913925	33.25	186	188.4946289	20.67204285	8
12:30	-	1:00PM	29.79729652	29.54545403	222	159.8378448	13.89639664	11
1:00	-	1:30PM	18.63773537	16	265	166.3660431	20.69811249	4
1:30	-	2:00PM	4.186770439	22	257	170.011673	22.1789875	1
2:00	-	2:30PM	0.134715021	0	193	171.3523254	22.04663277	0
2:30	-	3:00PM	0.186868683	0	198	152.2474823	19.75757599	0
3:00	-	3:30PM	0.213114753	0	183	164.1748657	23.31147575	0
3:30	-	4:00PM	0.459302336	0	172	170.779068	31.4069767	0
4:00	-	4:30PM	0.044776119	0	134	181.3731384	24.58209038	0
4:30	-	5:00PM	1.0289855	0	69	172.6086884	34.97101593	0
5:00	-	5:30PM	0.450980395	0	51	158.2941132	21.49019623	0
5:30	-	6:00PM	0.696428597	0	56	132.8392792	26.0178566	0
6:00	-	6:30PM	0.125	0	40	182.75	26.29999924	0
6:30	-	7:00PM	2.586206913	0	29	222.2413788	1.413793087	0
7:00	-	7:30PM	0	0	0	0	0	0

Fig. 2 Sample ACD report, used to determine intra-day call arrival pattern

CSR level calculations: To determine the appropriate staffing level, the simulation first determines the hourly requirements of CSRs to meet an overall weekly target service level. As documented in the Consistent Answers To-Be Operating Model, the target service level is 80% of calls answered within 20 seconds. Figure 3 below depicts hourly resource requirements, by CIC and tier, as determined with the simulation.

Hourly Resource Requirements by Contact Center and Tier												
Pre1												
Time of Day	8	9	10	11	12	13	14	15	16	17	18	19
Monday	136	149	171	178	168	200	195	176	132	107	81	60
Tuesday	110	129	147	174	162	163	172	157	112	80	67	58
Wednesday	92	124	132	150	125	153	163	151	117	83	72	64
Thursday	96	125	138	163	140	145	149	138	105	83	61	45
Friday	96	124	118	140	114	126	132	112	89	51	34	25
											x	
Pre2												
Time of Day	8	9	10	11	12	13	14	15	16	17	18	19
Monday	62	89	106	106	107	124	109	105	77	62	50	37
Tuesday	58	65	85	81	82	79	93	85	62	49	38	36
Wednesday	63	74	66	87	71	82	91	84	67	47	44	29
Thursday	66	65	85	91	79	84	82	77	65	41	37	29
Friday	50	78	76	70	64	87	71	65	47	35	26	23
											x	
Pre3												
Time of Day	8	9	10	11	12	13	14	15	16	17	18	19
Monday	6	13	9	7	12	9	10	9	10	8	7	5
Tuesday	4	7	8	11	8	9	8	9	8	6	4	4
Wednesday	6	9	4	9	7	9	9	9	9	5	6	3
Thursday	8	8	5	7	10	5	8	11	8	6	5	5
Friday	5	7	6	8	6	7	8	8	5	5	2	2
										x		
Post1												
Time of Day	8	9	10	11	12	13	14	15	16	17	18	19
Monday	129	157	179	166	145	150	147	144	127	106	32	16
Tuesday	130	148	158	126	121	126	115	128	97	64	19	10
Wednesday	105	123	126	112	122	114	128	124	100	41	14	8
Thursday	106	119	120	124	133	146	137	122	130	48	11	10
Friday	91	124	130	127	103	110	98	91	64	41	6	6
										x		
Post2												
Time of Day	8	9	10	11	12	13	14	15	16	17	18	19
Monday	138	174	179	177	153	168	168	148	133	112	30	14
Tuesday	124	166	173	138	130	150	129	128	97	64	24	12
Wednesday	127	145	135	128	137	128	136	139	100	71	17	8
Thursday	113	127	152	127	124	133	138	135	121	69	13	8
Friday	99	141	131	132	112	130	102	113	87	42	8	6
										x		
Post3												
Time of Day	8	9	10	11	12	13	14	15	16	17	18	19
Monday	8	11	15	10	10	12	11	9	9	5	3	2
Tuesday	9	8	10	8	10	9	9	6	7	5	3	2
Wednesday	9	11	10	9	7	7	9	8	7	5	3	2
Thursday	6	7	13	7	6	7	11	10	10	3	2	2
Friday	8	12	7	8	9	11	8	5	6	2	2	2

Fig. 3 Resource Requirements

CSR Staffing Calculations: Once the hourly resource requirements are known, the actual staffing levels for CSRs are determined using an integer programming model within Excel. Using standard 5 days, 8 hour shifts (with 1 hour lunch break), the staffing model determines the minimum number of CSRs per shift (net coverage) to ensure that all hourly requirements are met. Figure 4 illustrates the difference between hourly requirements and net coverage.

Hourly Requirements								
Time of Day	8	9	10	11	12	13	14	15
Monday	62	89	106	106	107	124	109	105
Tuesday	58	65	85	81	82	79	93	85
Wednesday	63	74	66	87	71	82	91	84
Thursday	66	65	85	91	79	84	82	77
Friday	50	78	76	70	64	87	71	65
Peak Hourly Demand	124							

Net Coverage								
Time of Day	8	9	10	11	12	13	14	15
Monday	68	99	107	150	107	125	119	142
Tuesday	68	99	107	150	107	125	119	142
Wednesday	68	99	107	150	107	125	119	142
Thursday	68	99	107	150	107	125	119	142
Friday	68	99	107	150	107	125	119	142
Peak Hourly Seating	150							

Fig. 4 Hourly Resource requirements and Net coverage calculations to determine staffing levels

By adjusting resource levels, the simulation provides insight into the tradeoffs between service level and cost, as measured by % calls answered within 20 s and salary, respectively.

Pre - Attending / Attending					
Service Level	# CSRs	CSR Salary Cost	ASA	Abandonment Rate	
90%	366	\$ 9,860,300	4.3 s	< 1%	
80%	352	\$ 9,481,500	8 s	< 1%	
70%	342	\$ 9,217,400	15 s	1.60%	

Post - Attending					
Service Level	# CSRs	CSR Salary Cost	ASA	Abandonment Rate	
90%	470	\$ 12,969,800	4.8 s	<1%	
80%	447	\$ 12,327,000	11.5 s	0.01	
70%	433	\$ 11,938,300	22 s	1.80%	

Fig. 5 Target State Simulation Results Summary

Simulation Support of Share-In-Savings Consistent Answers Business Case

The simulation provides an additional level of confidence to the business case results by validating the proven practices unit costs for inbound calls. Because the simulation incorporates Consistent Answers proposed initiatives such as Contract Alignment, Enterprise Communication Management, and proven practices service levels, the staffing level estimates obtained from the model represent the appropriate level to achieve proven practice operational performance. Using these staffing levels and benchmark values for salary and benefit costs, we can estimate the total cost associated with a leading practice call center. Using total cost and FY02 contact volumes, a unit cost per contact, by tier, can be calculated and compared with proven practice unit costs used in the business case. Results of this comparison show that volume-weighted unit costs associated with inbound calls differ by approximately 7%. Therefore we can reasonably conclude that the proven practice unit costs used in the business case are valid. The results are documented below.

Inbound Phone Contact Unit Cost Calculations : Post - Attending				
Post-Attending	% of Total Costs attributed to Inbound Call Handling	Category % of Total Cost	Annual Cost	
HR: Salary, benefits	45.07%	50.57%	\$ 13,817,000	
Tier1 CSRs			\$ 6,379,200	
Supervisor			\$ 657,288	
Manager			\$ 62,829	
Tier2 CSRs			\$ 6,632,800	
Supervisor			\$ 699,584	
Manager			\$ 66,872	
Tier3 CSRs			\$ 610,000	
Supervisor			\$ 3,120	
Manager			\$ 299	
HR: Recruiting, screening, training	45.07%	4.80%	\$ 1,896,146	
Telcommunications - Phone charges	45%	5.30%	\$ 2,022,409	
Technology	45%	10.10%	\$ 3,857,718	
Telecommunications Equipment	45%	5.90%	\$ 3,258,904	
Real Estate	45.07%	5.80%	\$ 2,801,171	
Miscellaneous, Other	45.07%	16.53%	\$ 6,329,560	
Margin	100.00%	40%		
Total Costs other than Salary, Benefits			\$ 18,902,915	
Total Cost			\$ 84,878,106	

Post-Attending	Inbound Call CSRs	Annual Cost Allocated to Tier	FY02 Inbound Call Volume	FY02 Simulation Unit Cost	FY02 Proven Practices Unit Costs
Tier1	200	\$ 16,035,000	3,853,200	\$ 4.73	\$ 4.20
Tier2	222	\$ 17,127,915	3,143,040	\$ 5.10	\$ 5.85
Tier3	17	\$ 905,904	14,057	\$ 87.42	\$ 21.00

Total CSRs	447
Total Inbound Calls Handled by CSRs	6,111,665
Total Cost for Inbound Calls	\$ 31,229,915

Fig. 6 Post-Attending Unit Cost Calculations

Inbound Phone Contact Unit Cost Calculations : Pre-Attending / Attending

Pre-Attending / Attending	% of Total Costs attributed to Inbound Call Handling	Category % of Total Cost	Annual Cost
HR: Salary, benefits	90.32%	50.57%	\$ 10,721,800
Tier1 CSRs			\$ 6,204,100
Supervisor Manager			\$ 702,000
			\$ 89,000
Tier2 CSRs			\$ 3,267,400
Supervisor Manager			\$ 396,400
			\$ 42,900
Tier3 CSRs			\$ 540,000
Supervisor Manager			\$ 31,800
			\$ 2,800
HR: Recruiting, screening, training	90.32%	4.60%	\$ 1,414,764
Telcommunications - Phone charges	80%	5.30%	\$ 1,573,197
Technology	50%	10.10%	\$ 1,699,624
Telecommunications Equipment	80%	5.80%	\$ 1,751,282
Real Estate	80.32%	6.00%	\$ 2,010,416
Miscellaneous, Other	80.32%	18.63%	\$ 4,906,860
Margin	100.00%	40%	
Total Costs other than Salary, Benefits			\$ 13,334,163
Total Cost			\$ 32,863,600

Pre-Attending / Attending

Post-Attending

Pre-Attending / Attending	Inbound Call CSRs	Annual Cost Allocated to Tier	FY02 Inbound Call Volume	FY02 Simulation Unit Cost	FY02 Proven Practices Unit Costs
Tier1	279	\$ 14,857,706	3,463,087	\$ 3.78	\$ 4.20
Tier2	126	\$ 6,566,574	1,292,477	\$ 4.85	\$ 5.85
Tier3	19	\$ 830,883	106,574	\$ 11.45	\$ 21.00

Total CSRs	353
Total Inbound Calls Handled by CSRs	5,328,718
Total Cost for Inbound Calls \$	22,845,663

Fig. 7 Pre-Attending / Attending Unit Cost Calculations

Target State Cost Associated with Inbound Calls

Proven Practices Unit Costs (Business Case)	\$ 58,174,843
Unit Costs Calculated with Simulation Output	\$ 54,075,578
% Difference	7.0%

Simulation Assumptions

General

- The target state analysis includes call volume from contact centers not modeled in the current state (e.g. debt collections for post-attending and FOTW for attending/pre-attending). The analysis assumes that calls from the Debt Collections center will have the same call handling duration as calls from the Loan Servicing Center, and calls from FOTW will have the same call handling duration as calls from FSAIC.

Inbound Call Volume and Arrival Pattern:

- Analysis for current and target state scenarios was based on detailed contact center data for the July/August 2001 time period.
- Inbound phone contact volumes provided in the Consistent Answers (CA) site visit surveys are used for the current state analysis.
- Call arrival patterns are based on ACD interval reports provided by contact centers. A baseline weekly call pattern was established for each center (DLSC, FSAIC, DLCC). The simulation analysis assumes that the weekly *pattern* characteristics (e.g. Monday higher volume than Friday) remain static throughout the year, although *volumes* from week to week will vary. The simulation assumes the call pattern remains the same in the future state.
- Call volumes in the future state were adjusted to reflect fewer transfers between contact centers due to Stage 3 - Contract Alignment. See BCRP Reference Note 2.1, the CA Operating Models, and the Simulation Input and Results section for a detailed description and model input values.
- Hours of operation for all CICs are Monday – Friday, 8am to 8pm. All calls modeled in the simulation arrive during the hours of operation.

Automation:

- Automated call handling via IVR self-service was modeled using site visit survey information for the current state analysis and the CA To-Be Operating model for the target state analysis. The target state simulation represents decreased call volume handled by CSRs with the implementation of Stage 4 - Enterprise Communication Management. See BCRP Reference Note 2.2, the CA To-Be operating model, and the Simulation Input and Results section for a detailed description and model input values.

Abandonment:

- Abandonment behavior was modeled using ACD reports provided by the contact centers. The simulation assumes abandonment behavior in the target state will not change from current behavior observations. For example, callers are willing to wait longer for services such as loan consolidation and servicing than general information. We assume this will not change with any currently proposed initiatives.

Call Handling:

- Inbound call handling times provided in the Consistent Answers (CA) site visit survey are used for the current state and target state analysis. The model assumes that there will be no change in call handling duration in the target state due to any of the currently proposed initiatives.

Sample Simulation Output

SFA - Consistent

Replications: 1 Time Units: Hours

System Summary

System Average

Number Out	1,647,781.00
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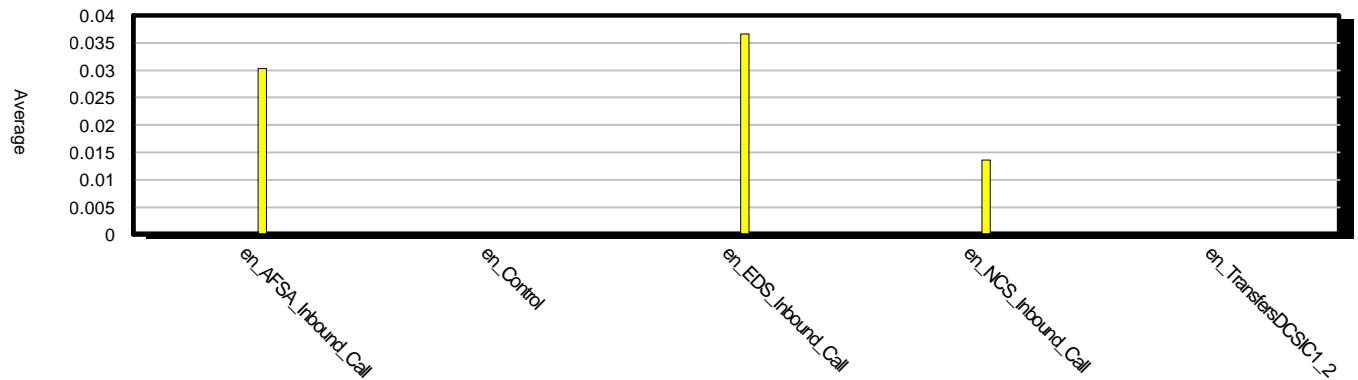
Entity

Time

NVA Time	Minimum
Maximum	

Average	Half Width	Value
Value		

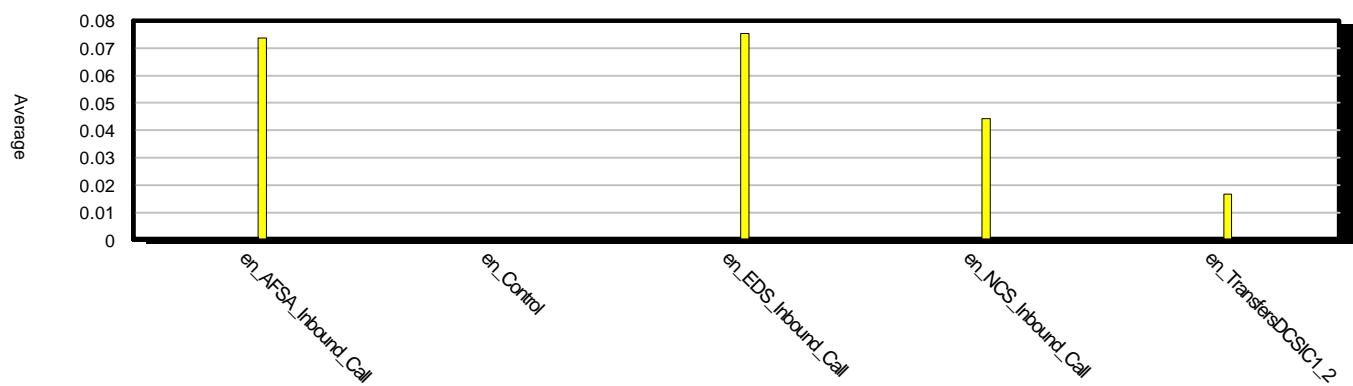
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en_Control	0.00	(Insufficient)	0.00	0.00
en_EDS_Inbound_Call	0.03664523	0.000314811	0.00	0.5974
en_NCS_Inbound_Call	0.01356781	0.000037439	0.00	0.2933
en_TransfersDCSIC1_2	0.00	(Insufficient)	0.00	0.00



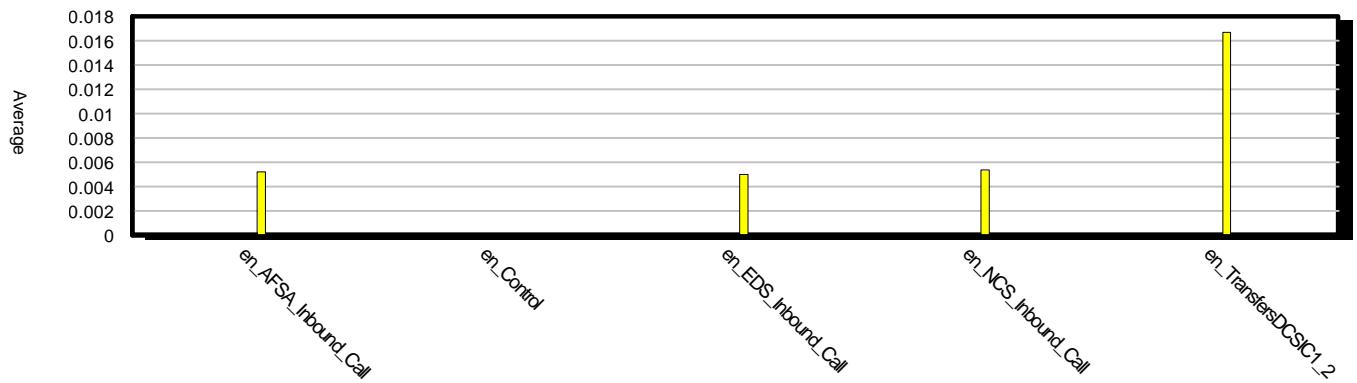
Other Time	Minimum
Maximum	

	Average Value	Half Width	Value	
en_AFSA_Inbound_Call	0.00	0.0000000000	0.00	0.00
en_Control	0.00	(Insufficient)	0.00	0.00
en_EDS_Inbound_Call	0.00	0.0000000000	0.00	0.00
en_NCS_Inbound_Call	0.00	0.0000000000	0.00	0.00
en_TransfersDCSIC1_2	0.00	(Insufficient)	0.00	0.00
Total Time				Minimum
Maximum				

	Average Value	Half Width	Value	
en_AFSA_Inbound_Call	0.07367259	0.000414983	0.00	0.7460
en_Control	0.00	(Insufficient)	0.00	0.00
en_EDS_Inbound_Call	0.07529660	0.000338872	0.00	0.5974
en_NCS_Inbound_Call	0.04432830	0.000271914	0.00	0.2933
en_TransfersDCSIC1_2	0.01666667	(Insufficient)	0.01666667	0.01666667



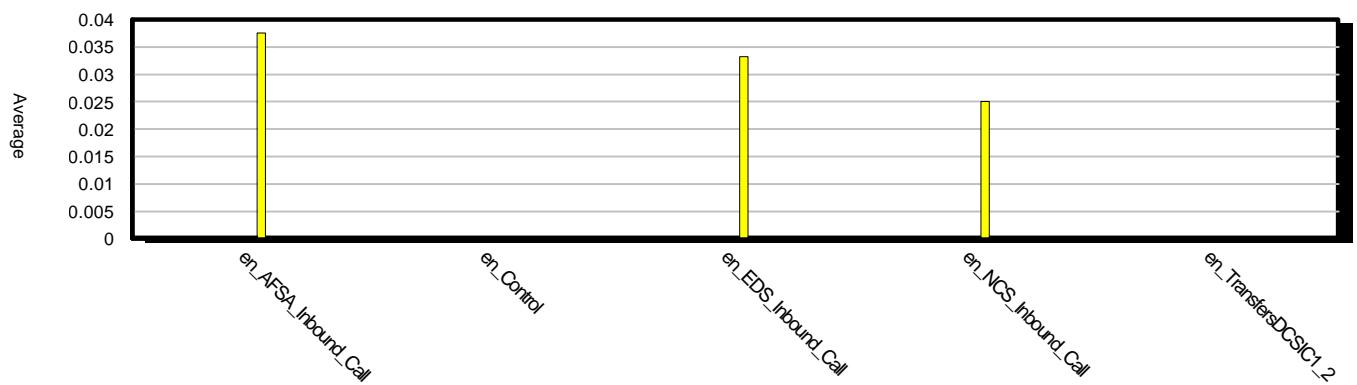
	Average Value	Half Width	Value	Minimum
en_AFSA_Inbound_Call	0.00523499	0.000022793	0.00	0.05000000
en_Control	0.00	(Insufficient)	0.00	0.00
en_EDS_Inbound_Call	0.00503306	0.000018838	0.00	0.04166667
en_NCS_Inbound_Call	0.00536341	0.000023675	0.00	0.05000000
en_TransfersDCSIC1_2	0.01666667	(Insufficient)	0.01666667	0.01666667



VA Time
Maximum

Minimum

	Average Value	Half Width	Value
en_AFSA_Inbound_Call	0.03757106	0.000224875	0.00
en_Control	0.00	(Insufficient)	0.00
en_EDS_Inbound_Call	0.03324385	0.000107946	0.00
en_NCS_Inbound_Call	0.02507903	0.000228102	0.00
en_TransfersDCSIC1_2	0.00	(Insufficient)	0.00

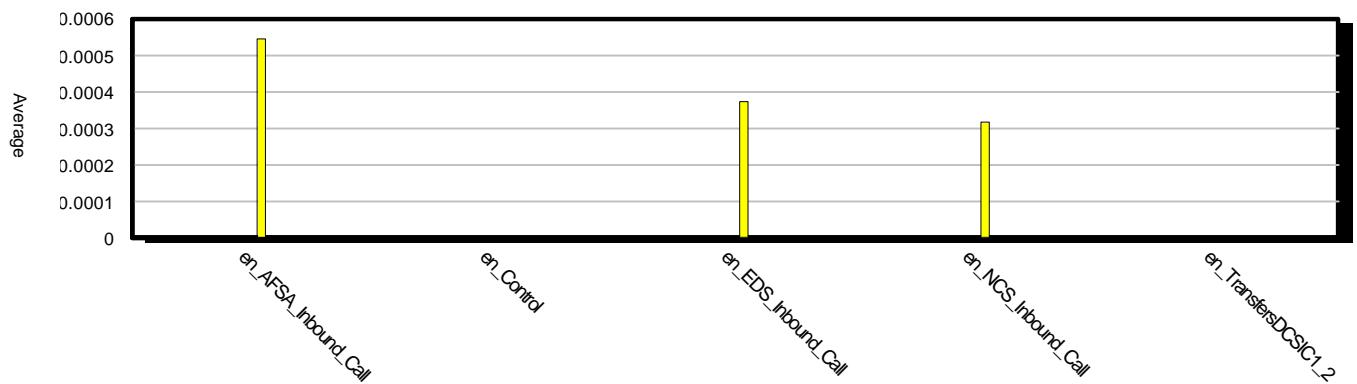


Wait Time
Maximum

Minimum

	Average Value	Half Width	Value
en_AFSA_Inbound_Call	0.00054488	0.000181330	0.00
en_Control	0.00	(Insufficient)	0.00
en_EDS_Inbound_Call	0.00037447	0.000121428	0.00
en_NCS_Inbound_Call	0.00031804	0.000102282	0.00

en_TransfersDCSIC1_2 0.00 (Insufficient) 0.00 0.00

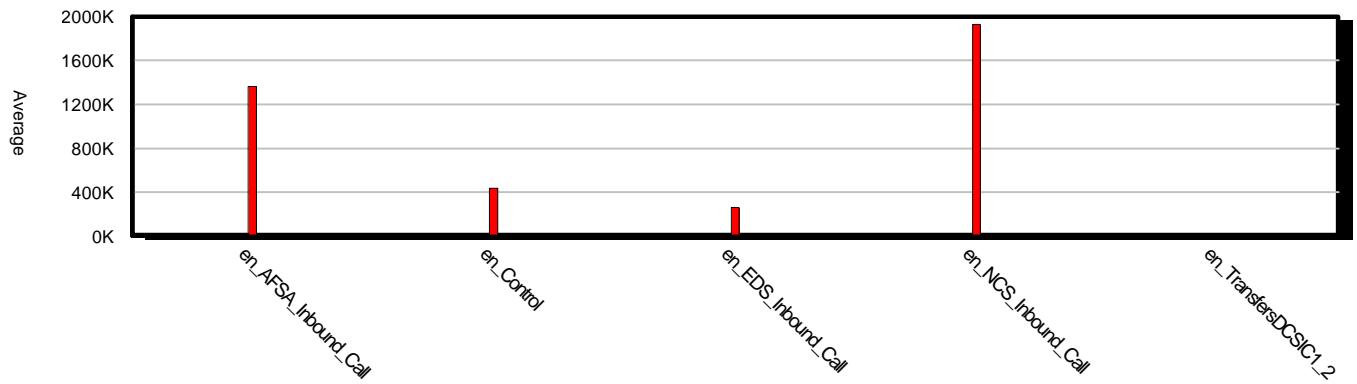


Other

Number In

Value

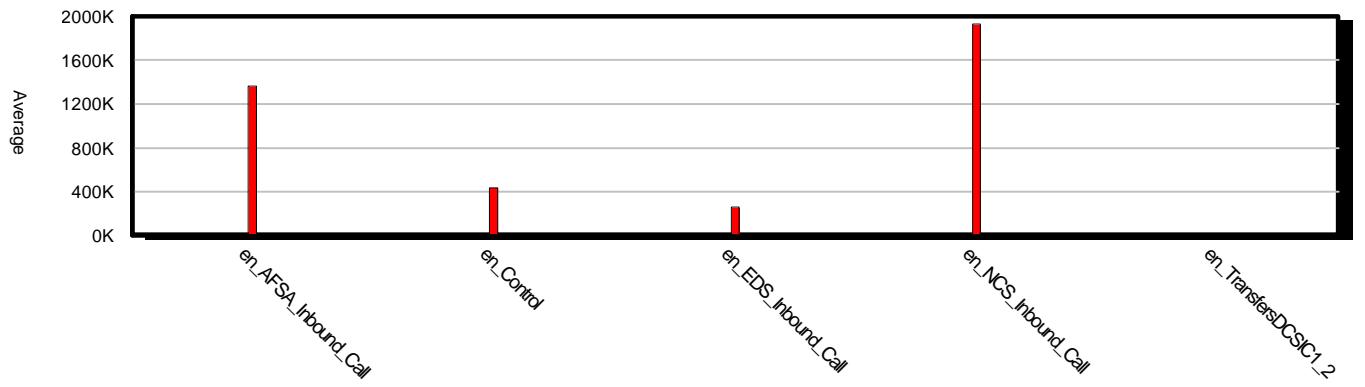
en_AFSA_Inbound_Call	1362729
en_Control	432595
en_EDS_Inbound_Call	261374
en_NCS_Inbound_Call	1932092
en_TransfersDCSIC1_2	1



Number Out

Value

en_AFSA_Inbound_Call	1362729
en_Control	432594
en_EDS_Inbound_Call	261374
en_NCS_Inbound_Call	1932092
en_TransfersDCSIC1_2	1

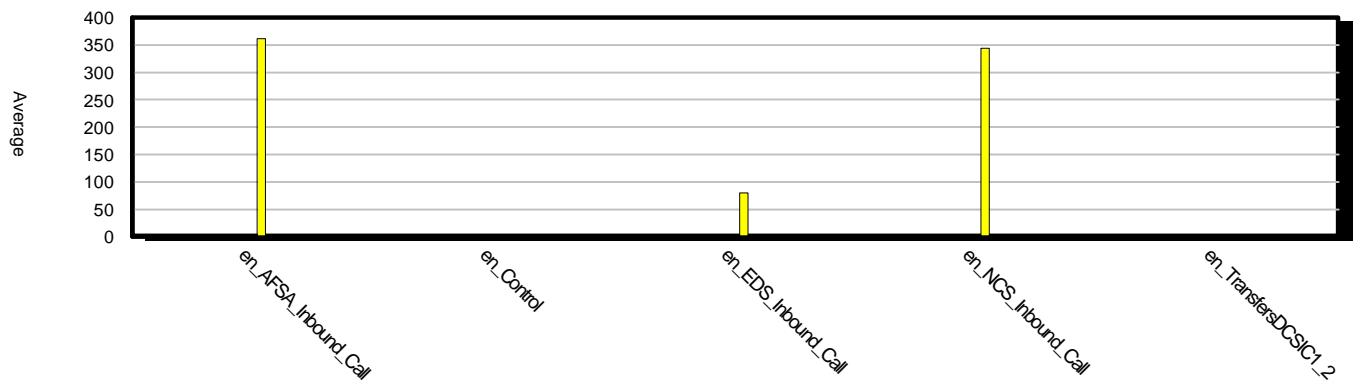


WIP
Maximum

Minimum

	Average Value	Half Width	Value
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en_AFSA_Inbound_Call	361.94	(Correlated)	0.00	1397.00
en_Control	1.0000	(Correlated)	0.00	3.0000
en_EDS_Inbound_Call	79.3576	(Correlated)	0.00	314.00
en_NCS_Inbound_Call	344.20	(Correlated)	0.00	1202.00
en_TransfersDCSIC1_2	0.00013889	(Insufficient)	0.00	1.0000



Process

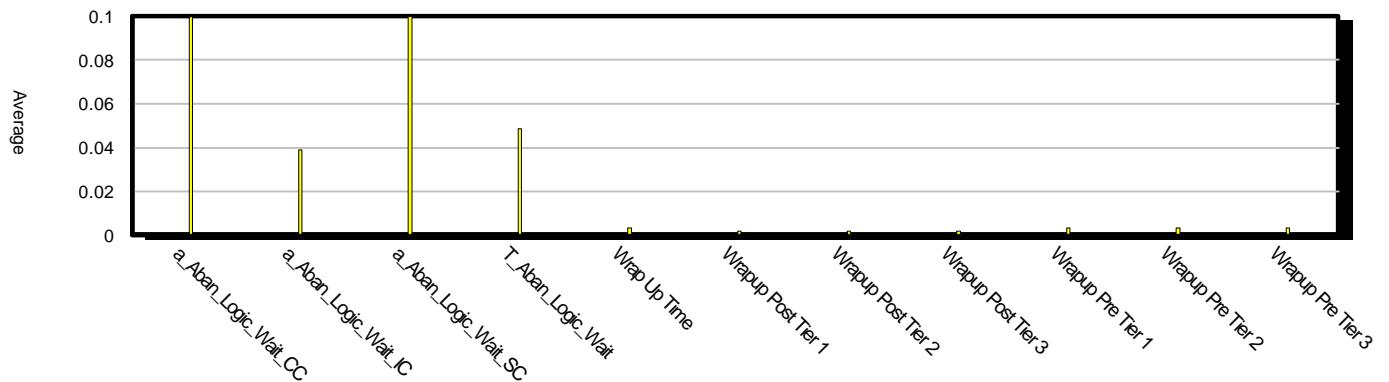
Time

NVA Time
Maximum

Minimum

	Average Value	Half Width	Value
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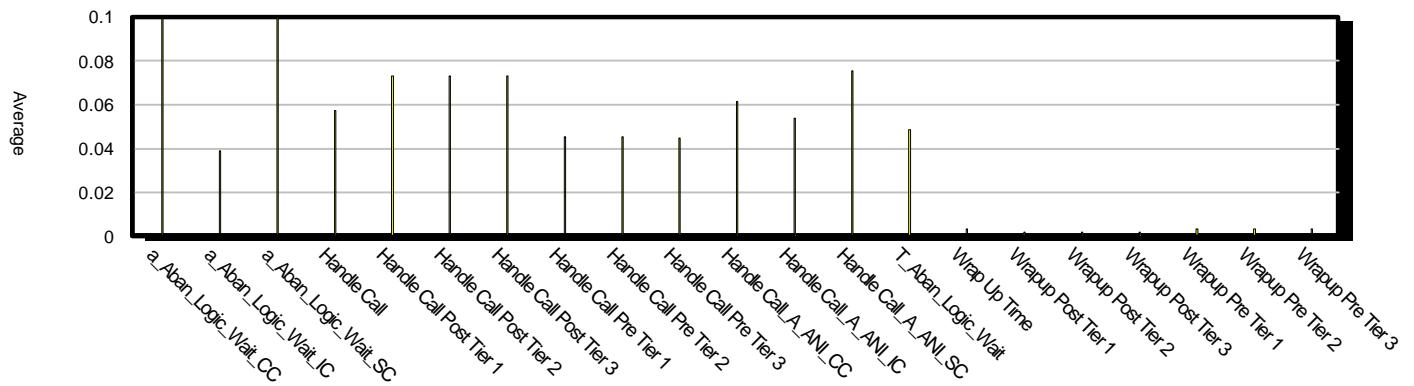
a_Aban_Logic_Wait_CC	0.0997	0.000980601	0.00653712	0.5974
a_Aban_Logic_Wait_IC	0.03880603	0.000142498	0.00252464	0.2933
a_Aban_Logic_Wait_SC	0.0999	0.000676368	0.00647313	0.7460
T_Aban_Logic_Wait	0.04867366	0.000757936	0.00193883	0.6380
Wrap Up Time	0.00319285	0.000177903	0.00	0.01942981
Wrapup Post Tier 1	0.00198915	0.000254024	0.00	0.01934275
Wrapup Post Tier 2	0.00198160	0.000211872	0.00	0.01940610
Wrapup Post Tier 3	0.00199304	0.000298608	0.00	0.01907501
Wrapup Pre Tier 1	0.00333709	0.000003497	0.00167231	0.00499456
Wrapup Pre Tier 2	0.00333484	0.000005441	0.00168117	0.00498851
Wrapup Pre Tier 3	0.00332794	0.000022200	0.00166976	0.00496507



Total Time
Maximum

	Average Value	Half Width	Value	Minimum
a_Aban_Logic_Wait_CC	0.0997	0.000980601	0.00653712	0.5974
a_Aban_Logic_Wait_IC	0.03880603	0.000142498	0.00252464	0.2933
a_Aban_Logic_Wait_SC	0.0999	0.000676368	0.00647313	0.7460
Handle Call	0.05751965	0.000721459	0.00418304	0.1645
Handle Call Post Tier 1	0.07310325	0.000274434	0.03373544	0.1569
Handle Call Post Tier 2	0.07316992	0.000215471	0.03367703	0.1572
Handle Call Post Tier 3	0.07306596	0.000906983	0.03447622	0.1521
Handle Call Pre Tier 1	0.04529054	0.000139045	0.00419680	0.1648
Handle Call Pre Tier 2	0.04540851	0.000170767	0.00433105	0.1648
Handle Call Pre Tier 3	0.04484376	0.000774316	0.00463275	0.1604
Handle Call_A_ANI_CC	0.06147917	0.000143237	0.03657089	0.1123
Handle Call_A_ANI_IC	0.05372157	0.000119429	0.00425859	0.1652
Handle Call_A_ANI_SC	0.07552706	0.000168951	0.03348377	0.1566
T_Aban_Logic_Wait	0.04867366	0.000757936	0.00193883	0.6380
Wrap Up Time	0.00319285	0.000177903	0.00	0.01942981
Wrapup Post Tier 1	0.00198915	0.000254024	0.00	0.01934275
Wrapup Post Tier 2	0.00198160	0.000211872	0.00	0.01940610
Wrapup Post Tier 3	0.00199304	0.000298608	0.00	0.01907501
Wrapup Pre Tier 1	0.00333709	0.000003497	0.00167231	0.00499456
Wrapup Pre Tier 2	0.00333484	0.000005441	0.00168117	0.00498851

Wrapup Pre Tier 3 0.00332794 0.000022200 0.00166976 0.00496507

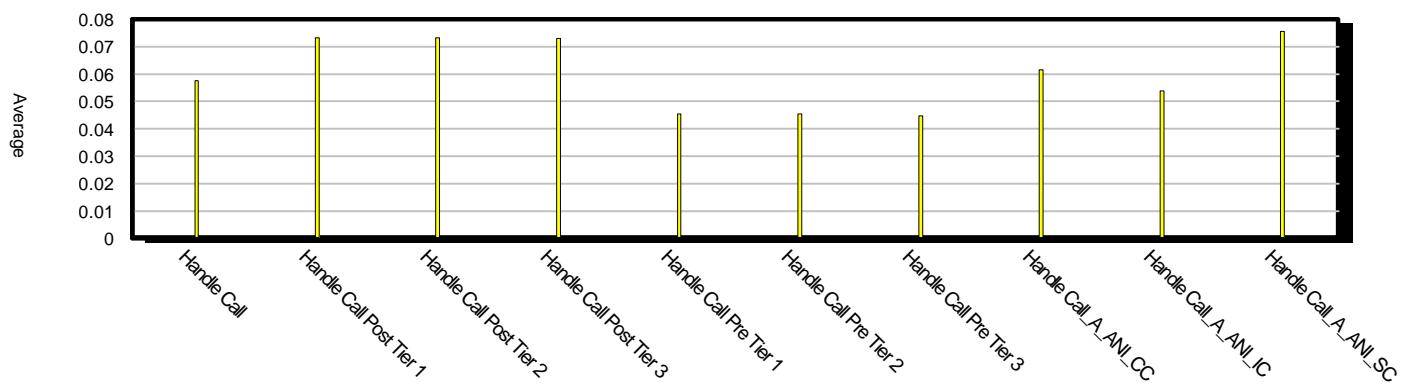


VA Time
Maximum

Minimum

Average Half Width Value

Handle Call	0.05751965	0.000721459	0.00418304	0.1645
Handle Call Post Tier 1	0.07310325	0.000274434	0.03373544	0.1569
Handle Call Post Tier 2	0.07316992	0.000215471	0.03367703	0.1572
Handle Call Post Tier 3	0.07306596	0.000906983	0.03447622	0.1521
Handle Call Pre Tier 1	0.04529054	0.000139045	0.00419680	0.1648
Handle Call Pre Tier 2	0.04540851	0.000170767	0.00433105	0.1648
Handle Call Pre Tier 3	0.04484376	0.000774316	0.00463275	0.1604
Handle Call_A_ANI_CC	0.06147917	0.000143237	0.03657089	0.1123
Handle Call_A_ANI_IC	0.05372157	0.000119429	0.00425859	0.1652
Handle Call_A_ANI_SC	0.07552706	0.000168951	0.03348377	0.1566

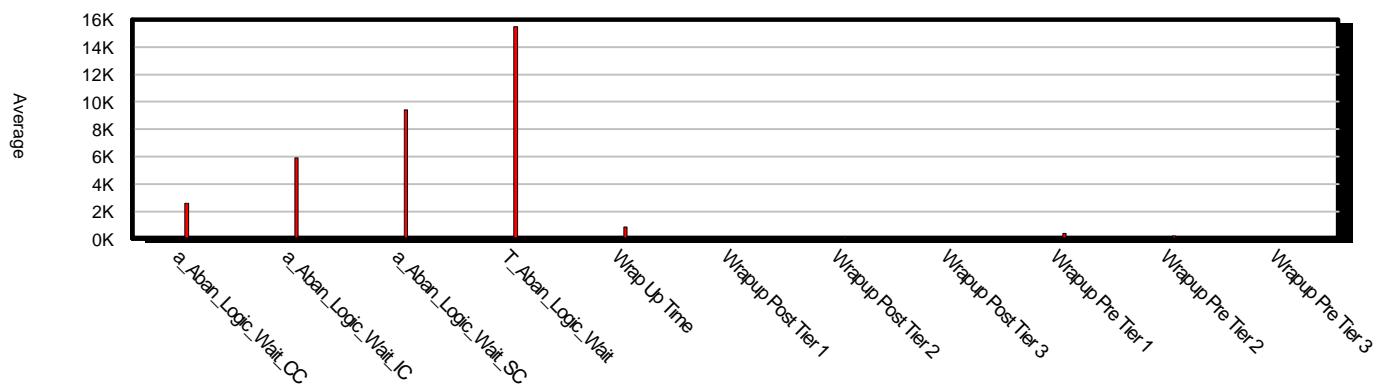


Accumulated Time

Accum NVA Time

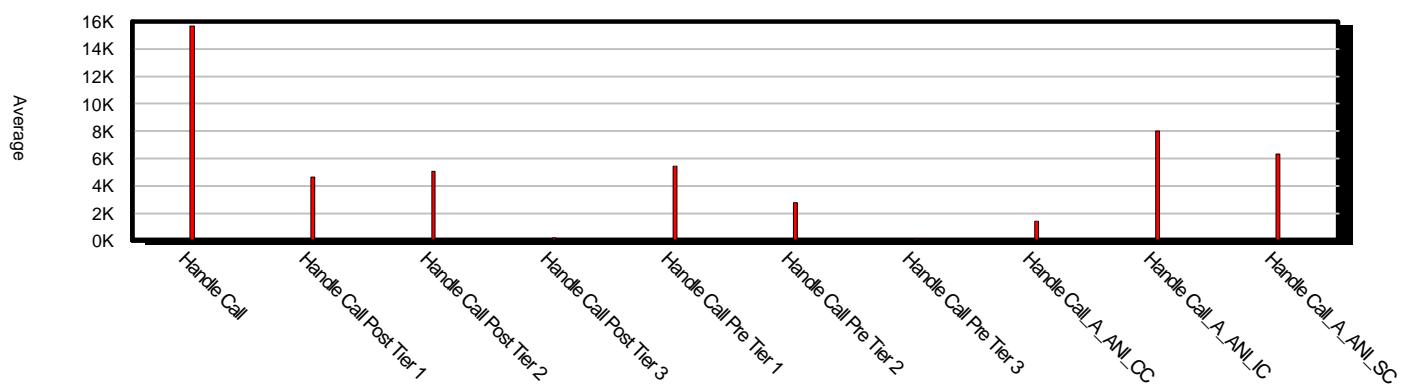
Value

a_Aban_Logic_Wait_CC	2600.35
a_Aban_Logic_Wait_IC	5921.10
a_Aban_Logic_Wait_SC	9406.30
T_Aban_Logic_Wait	15468.44
Wrap Up Time	871.00
Wrapup Post Tier 1	126.02
Wrapup Post Tier 2	136.98
Wrapup Post Tier 3	5.5187
Wrapup Pre Tier 1	402.59
Wrapup Pre Tier 2	202.71
Wrapup Pre Tier 3	11.4947



Accum VA Time

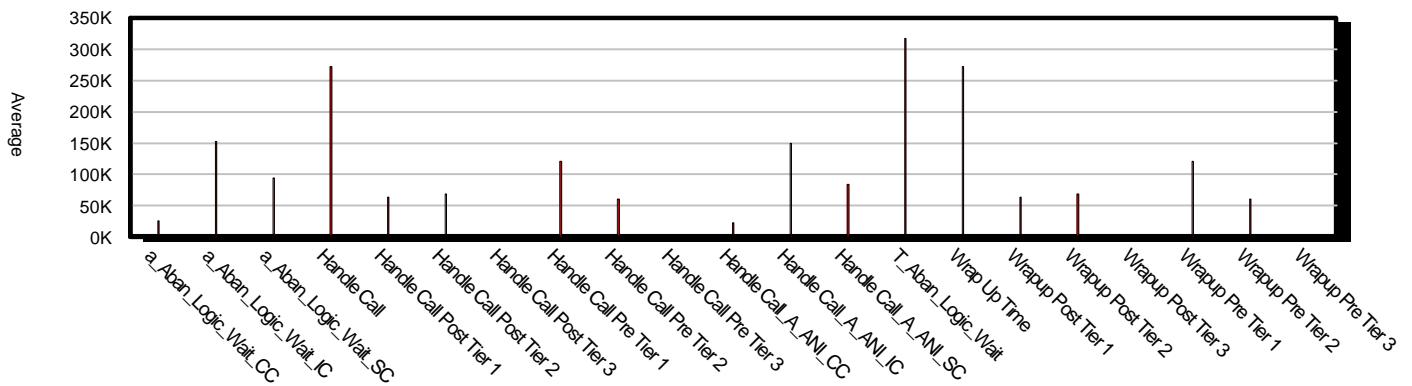
	Value
Handle Call	15691.25
Handle Call Post Tier 1	4631.38
Handle Call Post Tier 2	5058.02
Handle Call Post Tier 3	202.32
Handle Call Pre Tier 1	5463.90
Handle Call Pre Tier 2	2760.25
Handle Call Pre Tier 3	154.89
Handle Call_A_ANI_CC	1415.68
Handle Call_A_ANI_IC	8015.37
Handle Call_A_ANI_SC	6328.87



Other

Number In

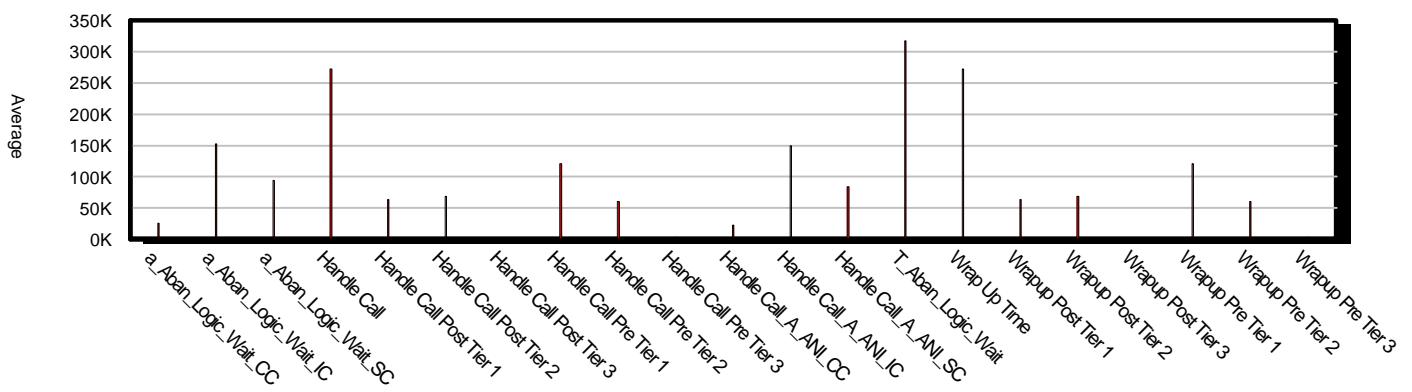
	Value
a_Aban_Logic_Wait_CC	26091
a_Aban_Logic_Wait_IC	152582
a_Aban_Logic_Wait_SC	94125
Handle Call	272798
Handle Call Post Tier 1	63354
Handle Call Post Tier 2	69127
Handle Call Post Tier 3	2769
Handle Call Pre Tier 1	120641
Handle Call Pre Tier 2	60787
Handle Call Pre Tier 3	3454
Handle Call_A_ANI_CC	23027
Handle Call_A_ANI_IC	149202
Handle Call_A_ANI_SC	83796
T_Aban_Logic_Wait	317799
Wrap Up Time	272798
Wrapup Post Tier 1	63354
Wrapup Post Tier 2	69127
Wrapup Post Tier 3	2769
Wrapup Pre Tier 1	120641
Wrapup Pre Tier 2	60787
Wrapup Pre Tier 3	3454



Number Out

	Value
a_Aban_Logic_Wait_CC	26091
a_Aban_Logic_Wait_IC	152582
a_Aban_Logic_Wait_SC	94125
Handle Call	272798
Handle Call Post Tier 1	63354
Handle Call Post Tier 2	69127
Handle Call Post Tier 3	2769
Handle Call Pre Tier 1	120641
Handle Call Pre Tier 2	60787

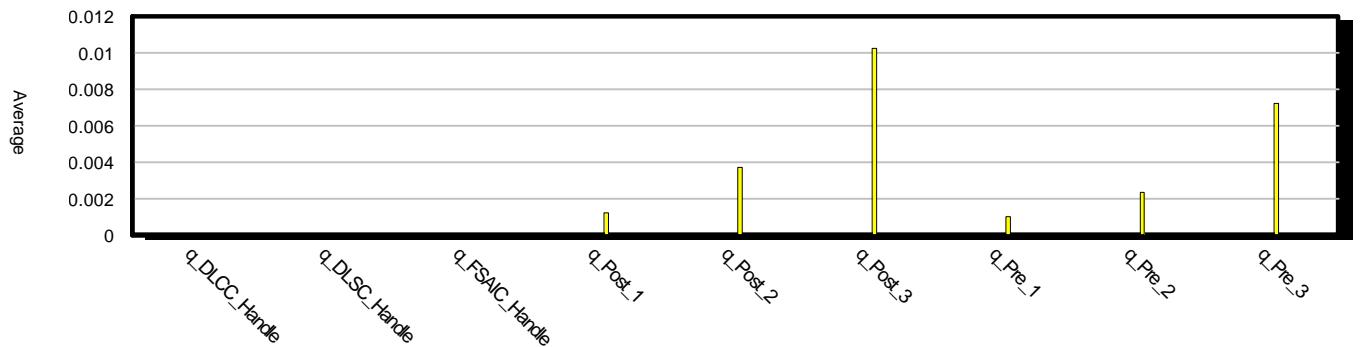
Handle Call Pre Tier 3	3454
Handle Call_A_ANI_CC	23027
Handle Call_A_ANI_IC	149202
Handle Call_A_ANI_SC	83796
T_Aban_Logic_Wait	317799
Wrap Up Time	272798
Wrapup Post Tier 1	63354
Wrapup Post Tier 2	69127
Wrapup Post Tier 3	2769
Wrapup Pre Tier 1	120641
Wrapup Pre Tier 2	60787
Wrapup Pre Tier 3	3454



Queue

Time

Waiting Time	Average Value	Half Width	Value	Minimum
Maximum				
q_DLCC_Handle	0.00	0.0000000000	0.00	0.00
q_DLSC_Handle	0.00	0.0000000000	0.00	0.00
q_FSAIC_Handle	0.00	0.0000000000	0.00	0.00
q_Post_1	0.00123110	0.000602131	0.00	0.1073
q_Post_2	0.00373118	0.001274816	0.00	0.1487
q_Post_3	0.01025900	0.002445481	0.00	0.1368
q_Pre_1	0.00102282	0.000448700	0.00	0.07681076
q_Pre_2	0.00237205	0.000708005	0.00	0.0905
q_Pre_3	0.00724373	(Correlated)	0.00	0.07068177

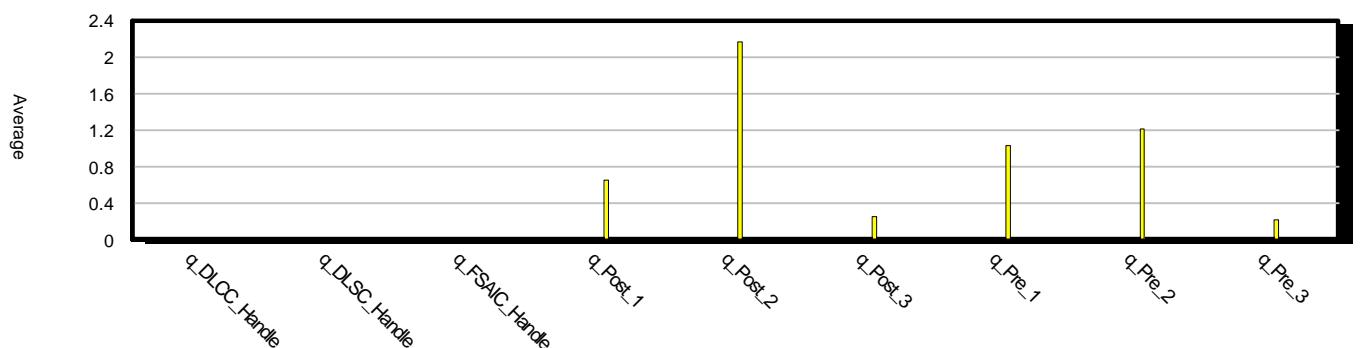


Other

Number Waiting
Maximum

Average Value Half Width Value

q_DLCC_Handle	0.00	(Insufficient)	0.00	0.00
q_DLSC_Handle	0.00	(Insufficient)	0.00	0.00
q_FSAIC_Handle	0.00	(Insufficient)	0.00	0.00
q_Post_1	0.6515	0.362007992	0.00	74.0000
q_Post_2	2.1658	1.05116	0.00	86.0000
q_Post_3	0.2543	0.114183958	0.00	9.0000
q_Pre_1	1.0326	0.624635473	0.00	65.0000
q_Pre_2	1.2130	0.629729212	0.00	39.0000
q_Pre_3	0.2238	(Correlated)	0.00	8.0000



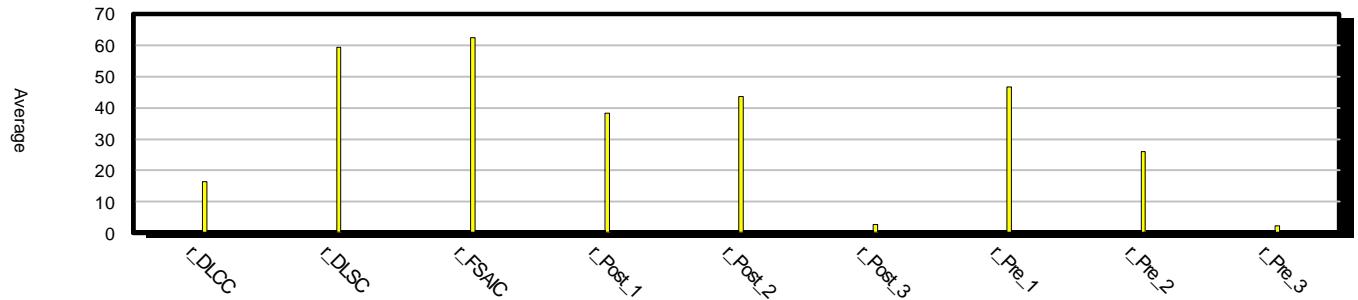
Resource

Usage

Number Busy
Maximum

	Average Value	Half Width	Value
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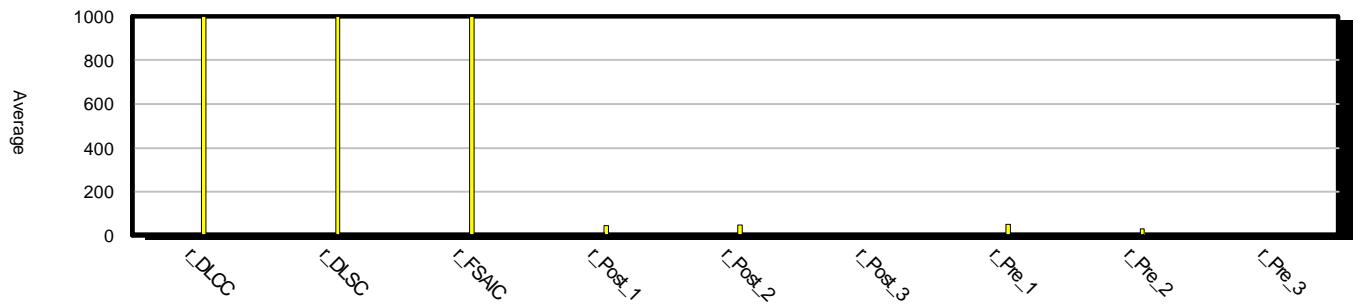
r_DLCC	16.3875	(Correlated)	0.00	70.0000
r_DLSC	59.2827	(Correlated)	0.00	246.00
r_FSAIC	62.3485	(Correlated)	0.00	227.00
r_Post_1	38.3400	(Correlated)	0.00	157.00
r_Post_2	43.5581	(Correlated)	0.00	159.00
r_Post_3	2.7706	(Correlated)	0.00	15.0000
r_Pre_1	46.6884	(Correlated)	0.00	170.00
r_Pre_2	25.9812	(Correlated)	0.00	106.00
r_Pre_3	2.2956	(Correlated)	0.00	11.0000



Number Scheduled
Maximum

	Average Value	Half Width	Value
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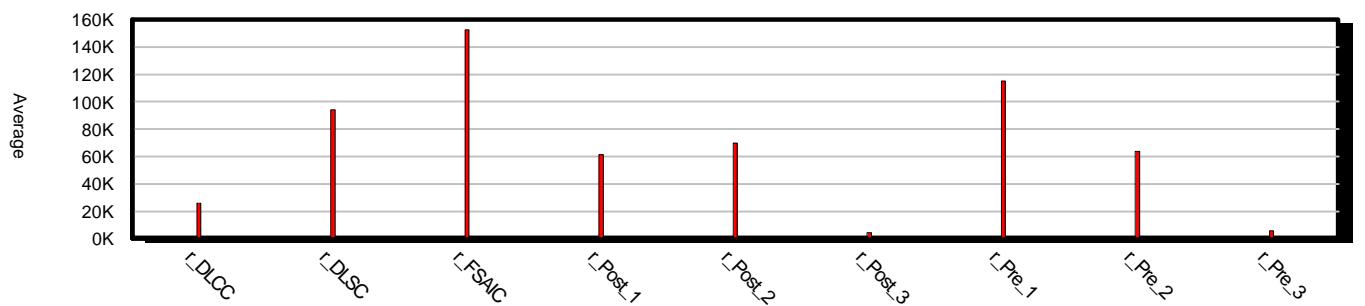
r_DLCC	1000.00	(Insufficient)	1000.00	1000.00
r_DLSC	1000.00	(Insufficient)	1000.00	1000.00
r_FSAIC	1000.00	(Insufficient)	1000.00	1000.00
r_Post_1	44.2376	(Insufficient)	0.00	157.00
r_Post_2	48.5473	(Insufficient)	0.00	159.00
r_Post_3	3.9494	(Insufficient)	0.00	15.0000
r_Pre_1	51.2556	(Insufficient)	0.00	170.00
r_Pre_2	29.5073	(Insufficient)	0.00	106.00
r_Pre_3	3.1652	(Insufficient)	0.00	11.0000



Number Times Used

Value

r_DLCC	26091.00
r_DLSC	94125.00
r_FSAIC	152582.00
r_Post_1	61254.00
r_Post_2	69557.00
r_Post_3	4439.00
r_Pre_1	115238.00
r_Pre_2	63953.00
r_Pre_3	5691.00

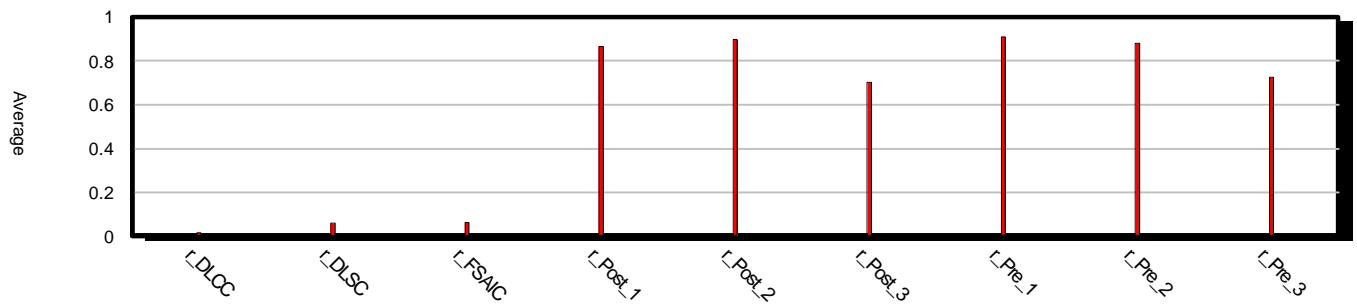


Scheduled Utilization

Value

r_DLCC	0.01638747
r_DLSC	0.05928272
r_FSAIC	0.06234855
r_Post_1	0.8667
r_Post_2	0.8972
r_Post_3	0.7015
r_Pre_1	0.9109
r_Pre_2	0.8805

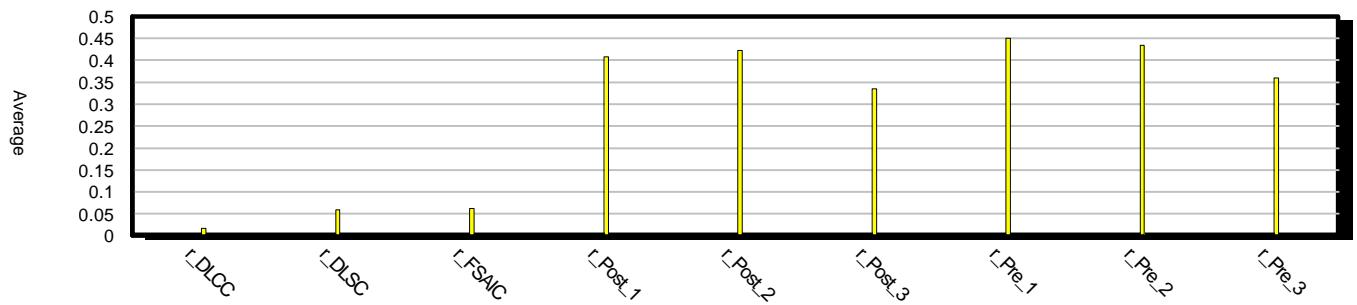
r_Pre_3 0.7253



Utilization Maximum Minimum

	Average Value	Half Width	Value
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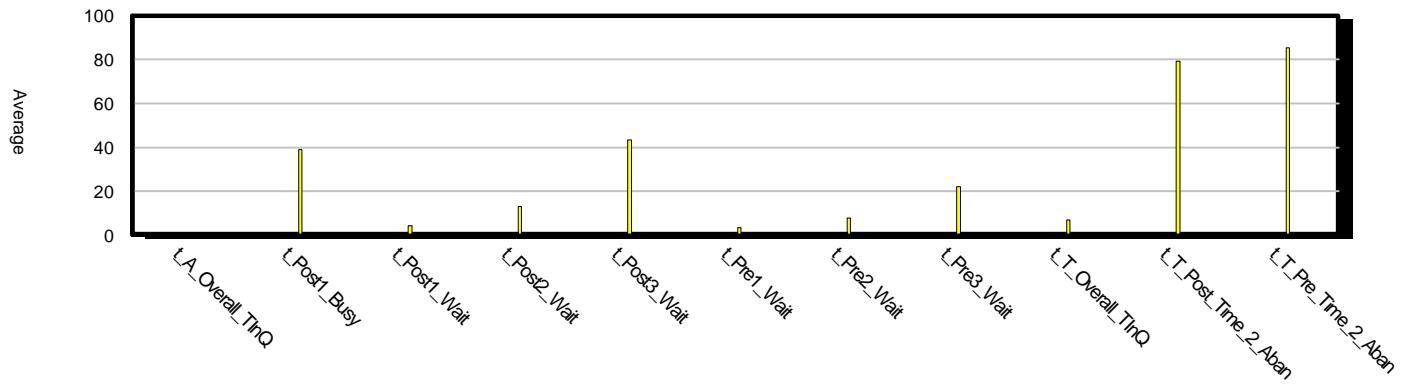
r_DLCC	0.01638747	(Correlated)	0.00	0.07000000
r_DLSC	0.05928272	(Correlated)	0.00	0.2460
r_FSAIC	0.06234855	(Correlated)	0.00	0.2270
r_Post_1	0.4076	(Correlated)	0.00	1.0000
r_Post_2	0.4226	(Correlated)	0.00	1.0000
r_Post_3	0.3342	(Correlated)	0.00	1.0000
r_Pre_1	0.4507	(Correlated)	0.00	1.0000
r_Pre_2	0.4342	(Correlated)	0.00	1.0000
r_Pre_3	0.3594	(Correlated)	0.00	1.0000



User Specified

Tally

Expression	Average Value	Half Width	Value	Minimum
Maximum				
t_A_Overall_TInQ	0.00	0.000000000	0.00	0.00
t_Post1_Busy	38.7958	(Correlated)	0.00	149.00
t_Post1_Wait	4.1452	2.12582	0.00	386.12
t_Post2_Wait	12.9015	4.39500	0.00	535.37
t_Post3_Wait	43.2873	10.92812	0.00	613.16
t_Pre1_Wait	3.3040	1.53948	0.00	272.46
t_Pre2_Wait	7.8499	2.60976	0.00	291.58
t_Pre3_Wait	22.0768	4.68553	0.00	196.51
t_T_Overall_TInQ	6.9486	1.72947	0.00	613.16
t_T_Post_Time_2_Aban	79.1353	(Correlated)	0.00	513.05
t_T_Pre_Time_2_Aban	85.2917	(Correlated)	37.1677	325.72



Counter

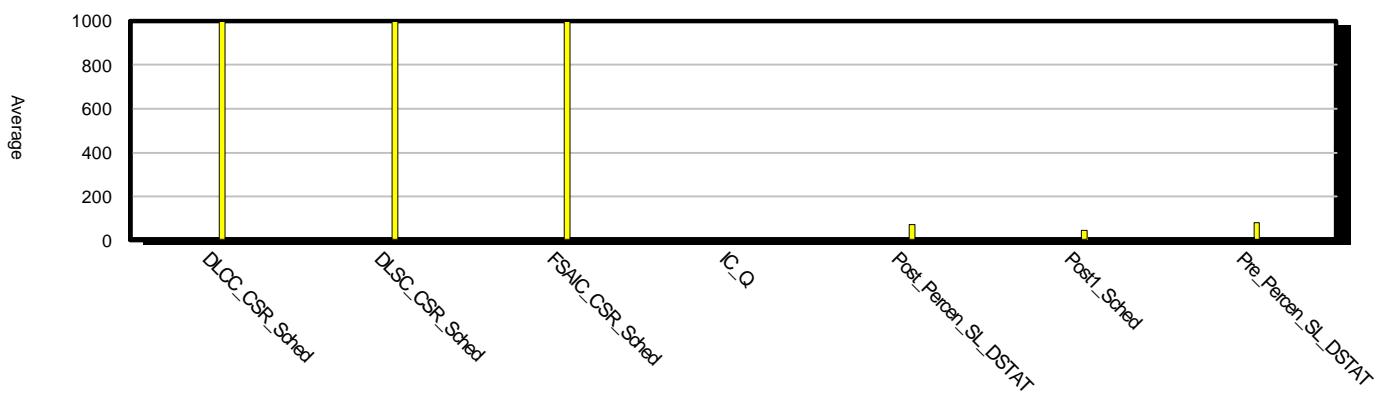
Count	Value
c_A_Ans_SL	272798.00
c_A_CC_Aban_Logic	26091.00
c_A_CC_Abandon	0.00
c_A_CC_Ans_SL	26091.00
c_A_CC_Escalated_Calls	0.00
c_A_CC_Handled_CSR	26091.00
c_A_CC_IVR	787.00
c_A_CC_No_Wait	26091.00
c_A_CC_Offered_CSR	26091.00
c_A_CC_TotCalls	26878.00
c_A_CC_Xfer_Call	6672.00
c_A_IC_Aban_Logic	152582.00
c_A_IC_Abandon	0.00
c_A_IC_Ans_SL	152582.00
c_A_IC_Escalated_Calls	0.00
c_A_IC_Handled_CSR	152582.00

c_A_IC_IVR	28769.00
c_A_IC_No_Wait	152582.00
c_A_IC_Offered_CSR	152582.00
c_A_IC_TotCalls	181351.00
c_A_IC_Xfer_Call	9170.00
c_A_SC_Aban_Logic	94125.00
c_A_SC_Abandon	0.00
c_A_SC_Ans_SL	94125.00
c_A_SC_Escalated_Calls	0.00
c_A_SC_Handled_CSR	94125.00
c_A_SC_IVR	16927.00
c_A_SC_No_Wait	94125.00
c_A_SC_Offered_CSR	94125.00
c_A_SC_TotCalls	111052.00
c_A_SC_Xfer_Call	5506.00
c_A_Total_Calls	319281.00
c_A_Total_Offered_CSR	272798.00
c_T_Aban_Logic	317799.00
c_T_Ans_SL	277652.00
c_T_CC_IVR	9555.00
c_T_CC_Offered_CSR	18816.00
c_T_CC_TotCalls	28371.00
c_T_IC_IVR	65388.00
c_T_IC_Offered_CSR	186228.00
c_T_IC_TotCalls	251616.00
c_T_Post_Abandon	1089.00
c_T_Post_Answer_In_SL	110845.00
c_T_Post_Handled_CSR	130688.00
c_T_Post_IVR	67962.00
c_T_Post_No_Wait	94218.00
c_T_Post_Offered_CSR	131571.00
c_T_Post_Tier1	63205.00
c_T_Post_Tier2	67164.00
c_T_Post_Tier3	319.00
c_T_Post_TotCalls	199533.00
c_T_Post1_Aban_Logic	150.00
c_T_Post2_Aban_Logic	527.00
c_T_Post3_Aban_Logic	206.00
c_T_Pre_Abandon	1346.00
c_T_Pre_Answer_In_SL	166807.00
c_T_Pre_Handled_CSR	184882.00
c_T_Pre_IVR	65388.00
c_T_Pre_No_Wait	139530.00
c_T_Pre_Offered_CSR	186228.00
c_T_Pre_Tier1	120641.00
c_T_Pre_Tier2	60787.00
c_T_Pre_Tier3	3454.00
c_T_Pre_TotCalls	251616.00
c_T_Pre1_Aban_Logic	512.00
c_T_Pre2_Aban_Logic	580.00
c_T_Pre3_Aban_Logic	254.00
c_T_SC_IVR	58407.00
c_T_SC_Offered_CSR	112755.00
c_T_SC_TotCalls	171162.00
c_T_Total_Calls	451149.00
c_T_Total_Offered_CSR	317799.00

Counter 1 0.00
Counter 2 0.00
Counter 3 0.00

Time Persistent

	Average Value	Half Width	Value
DLCC_CSR_Sched	1000.00	(Insufficient)	1000.00
DLSC_CSR_Sched	1000.00	(Insufficient)	1000.00
FSAIC_CSR_Sched	1000.00	(Insufficient)	1000.00
IC_Q	0.00	(Insufficient)	0.00
Post_Percen_SL_DSTAT	71.1537	(Insufficient)	0.00
Post1_Sched	44.2376	(Insufficient)	0.00
Pre_Percen_SL_DSTAT	79.4773	(Insufficient)	0.00



Other

	Average Value	Half Width	Value
t_A_CC_Handle	221.31	0.475018606	131.90
t_A_CC_Offered_Period	108.71	(Insufficient)	0.00
t_A_CC_SL_Period	54.1662	(Insufficient)	0.00
t_A_CC_Time_InQ	0.00	0.000000000	0.00
t_A_CC_Total_Time	271.33	0.490209702	171.81
t_A_CC_Wrapup	50.0199	0.123613246	30.0699
t_A_IC_Handle	164.53	0.452576583	15.0589
t_A_IC_Offered_Period	635.76	(Insufficient)	0.00
t_A_IC_SL_Period	68.7498	(Insufficient)	0.00
t_A_IC_Time_InQ	0.00	0.000000000	0.00

t_A_IC_Total_Time	176.53	0.452668254	22.9452	604.61
t_A_IC_Wrapup	11.9971	0.010964215	6.0128	17.9870
t_A_SC_Handle	272.09	0.404341834	120.72	567.92
t_A_SC_Offered_Period	392.19	(Insufficient)	0.00	1382.00
t_A_SC_SL_Period	55.8330	(Insufficient)	0.00	100.00
t_A_SC_Time_InQ	0.00	0.0000000000	0.00	0.00
t_A_SC_Total_Time	272.09	0.404341834	120.72	567.92
t_A_SC_Wrapup	0.00	0.0000000000	0.00	0.00
t_rCC_Busy	16.5333	(Insufficient)	0.00	64.0000
t_rlC_Busy	61.9667	(Insufficient)	0.00	209.00
t_rSC_Busy	59.5000	(Insufficient)	0.00	236.00
t_T_Post_Handle	272.03	0.958975949	121.24	1029.78
t_T_Post_Max_1	43.9000	(Insufficient)	0.00	157.00
t_T_Post_Max_2	48.3750	(Insufficient)	0.00	159.00
t_T_Post_Max_3	3.8000	(Insufficient)	0.00	15.0000
t_T_Post_Offered_Period	542.60	(Insufficient)	0.00	2006.00
t_T_Post_SL_Period	43.8213	(Insufficient)	0.00	100.00
t_T_Post_TInQ	9.4940	3.40423	0.00	613.16
t_T_Post_Total_Time	288.91	3.40753	121.54	1367.51
t_T_Post_Wrapup	7.3841	0.923706533	0.00	168.61
t_T_Pre_Handle	163.16	0.383471086	15.1085	593.17
t_T_Pre_Max_1	51.1667	(Insufficient)	0.00	170.00
t_T_Pre_Max_2	29.4333	(Insufficient)	0.00	106.00
t_T_Pre_Max_3	3.1500	(Insufficient)	0.00	11.0000
t_T_Pre_Offered_Period	768.03	(Insufficient)	0.00	2598.00
t_T_Pre_SL_Period	45.4303	(Insufficient)	0.00	100.00
t_T_Pre_TInQ	5.1494	1.86507	0.00	291.58
t_T_Pre_Total_Time	180.32	1.89180	23.2484	743.71
t_T_Pre_Wrapup	12.0102	0.009364684	6.0111	17.9804

Output

	Value
2B_Auto	29.5579
2B_SL	87.3672
2B_Vol	451149.00
DLCC_Aban_Rate	0.00
DLCC_SL	100.00
DLCC_Wait_Avg	0.00
DLSC_Aban_Rate	0.00
DLSC_SL	100.00
DLSC_Wait_Avg	0.00
FSAIC_Aban_Rate	0.00
FSAIC_SL	100.00
FSAIC_Wait_Avg	0.00
Post_Aban_Rate	0.8277
Post_Auto	34.0605
Post_AVG_Time_2_Aban	79.1353
Post_SL	84.2473
Post_Vol	199533.00
Pre_Aban_Rate	0.7228
Pre_Auto	25.9872
Pre_AVG_Time_2_Aban	85.2917
Pre_SL	89.5714
Pre_Vol	251616.00

SFA_AsIs_SL

100.00