Workforce Management Basics and Options For 5 to 25

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Agenda

- Introductions and Overview
- Small Call Center Distinctives
- Basic Workforce Management Ingredients
- Excel Examples
- Alternatives/ Resources
- WIIFM
- Conclusion
- Appendix

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Introduction

- Objective
- Who Am I ???
- Who Are You???
- Inventory of Center Sizes
- Current Challenges
- You Are Not Alone!!!!!
  - On line resources
  - User groups
  - Good publications (https://swpp.org/swpp-book/
  - Consultants

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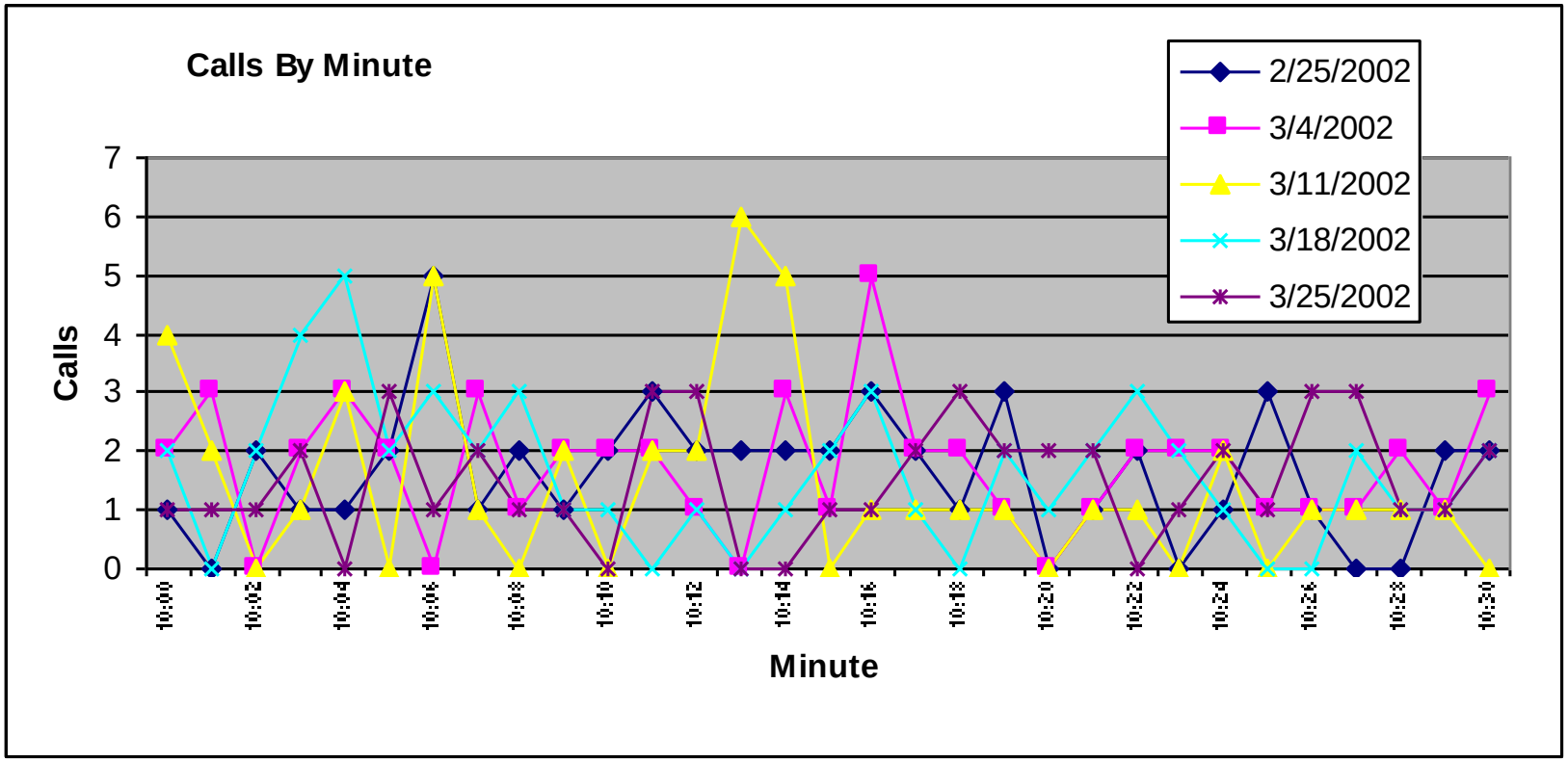
Small Call Center Distinctives

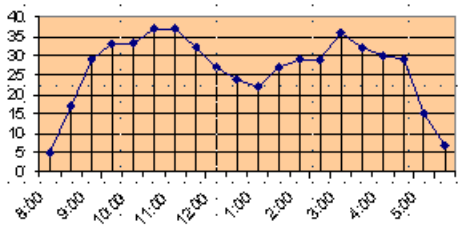
- Calls Still Arrive Randomly
- Monday's Are Still Busy
- Smaller Call Volumes Make Forecast Accuracy Difficult
- Inherent Schedule Inefficiency
- One Person Makes a ***BIG*** Difference
- Senior Managers Don't Feel Your Pain

Actual Random Call Arrival

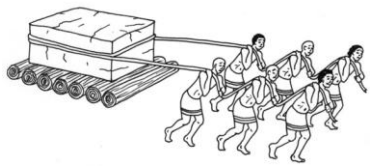


BUT……..

- Call Still Arrive Randomly
- And Monday's Are The Busiest Days
- Call Distribution is Typically



- Forecasting/Scheduling Seems Like



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There Is Good News

- You Can Apply The Same Processes As High End Automated Applications
- After Initial Setup, Daily Time Is Manageable
- Minimize Surprises
- Much Better Input To Management
- Improved Employee Equity

We have 15 agents working 8-5

Any Size Call Center

- High Degree of Confidence In Next Month
- Know Better How To Manage
  - Staff Requests
  - Unexpected Events
- Provide Data Driven Responses To Management Requests
- So What Are The Best Practice Steps??

Forecast

- Data Gathering
  - Use One Year of Monthly Data For Seasonality
    - Greater Weight For Last Three Months For Trending
    - Know The Percentage Call Distribution By Month
  - Use Four Weeks Of Weekly Data For Day of Week
  - Use Four Weeks of Interval Data for Daily Distribution
- Normalize Next Months Data
  - Non Recurring Events (Holidays/Storm Impact/ Infrastructure Issues)
  - Upcoming Events (Promotions/Products/Other)
  - Check For Aberrant Data Input (Next Slide)

Worksheet: Daily Call Volumes

July

S	M	T	W	T	F	S
			1 5281	2 4212	3 3610	4 0
5 209	6 5900	7 5531	8 5407	9 5488	10 5420	11 1110
12 910	13 5892	14 5587	15 3921	16 5512	17 5536	18 1212
19 951	20 5932	21 5590	22 5484	23 5541	24 5598	25 1231
26 993	27 6073	28 5712	29 5533	30 5591	31 5713	

NOTE: Shamelessly plagiarized from The Call Center School

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Don't Forget Shrinkage

- What's That??
  - A Measure of Lost Time Due To:
    - Daily activities: breaks/projects/call backs/training/etc
    - Monthly activities: vacation/sick/FMLA/etc
- It "Shrinks" Available On Phone Time From Theoretical To Reality
- "My Boss Will Never Buy That"
- It Is An Industry Standard Practice
- Ignoring It Means
  - Surprises
  - Headaches/Agita
  - Trips To The Boss's Office

Start With The Basics

- Systematic Approach To Identifying How Many People Are Needed For What Skill and When
- Apply Proven Industry Standards and Practices.
  - 60 calls in an hour do not arrive one every minute
  - 60 minutes/ 5 minute calls = 12 agents
  - You cannot have 100% Occupancy

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Always Check Your Input Data

- AHT
  - Is it changing/ will it change???
  - AHT change has bigger impact on staff than SL change
  - Is “Hold” time included in your AHT calculation????
- Abandon Calls
  - What Is Your ATTA? Measures caller tolerance for waiting
  - Deduct short abandon’s. Will usually show up in another interval.

Understand Your Forecasting Methodology

- Erlang C
  - Standard Starting Point
  - Hs Frailties But Useable
  - Free Macro Downloads For Excel
- Used In A Spreadsheet
  - Identify Call Loads
  - Model “What If”
  - Industry Standard Process For Decision Making
- Forecasting Is A Science And An Art

Next- Scheduling

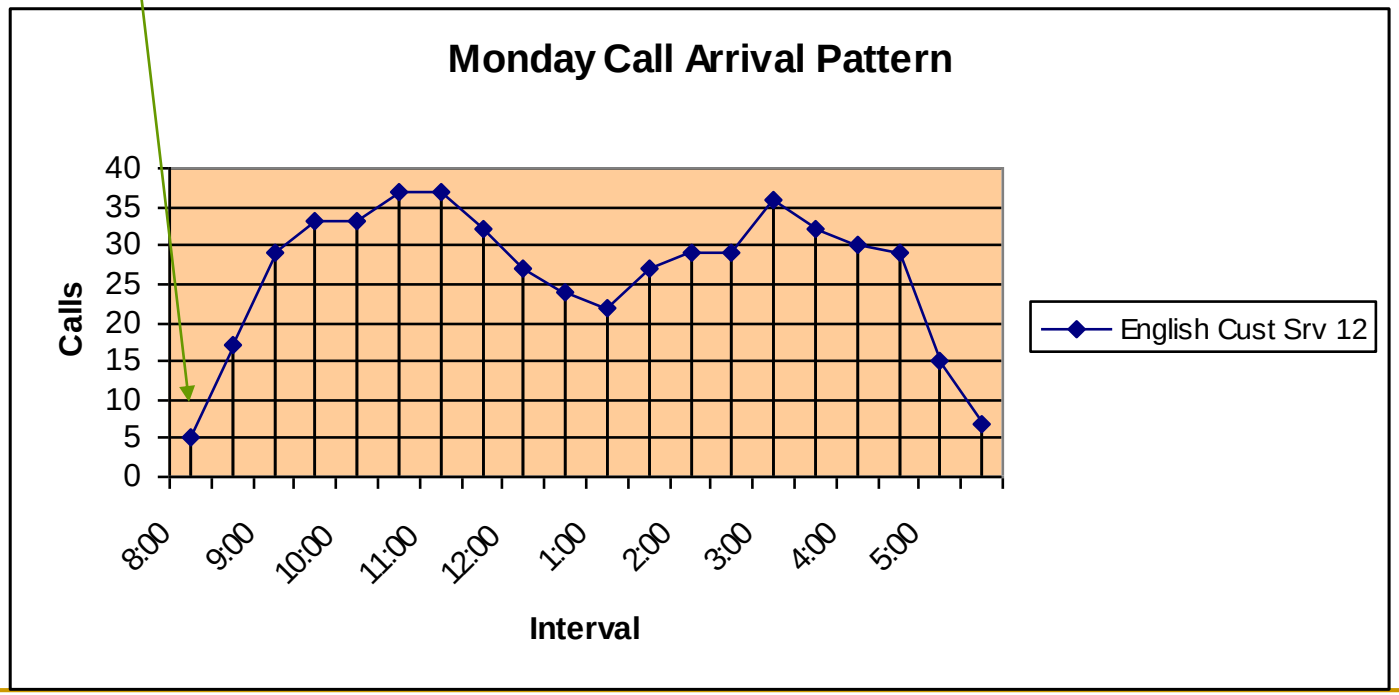
- Develop Shifts That
  - Reflect demand
  - Are manageable
  - Even with one shift-**Know** when you will have free time
- Build In Schedule Inefficiency Factor With More Than One Shift
- Assigned On Phone Time Based On Call Distribution
- Assign Breaks/lunch's Based On Business Need
- Schedule Helpers
  - Part Time FTE help you!!!
    - On site/work at home
    - Adds flexibility to your call handling
    - We have never done that. Seriously consider It. It is an industry standard practice.
  - Creative shifts (even in small centers)
  - Non call center reservists for unexpected volumes/overflow

Schedule Inefficiency

Everyone starts here

But you don't need everyone then

Inefficiency reflects this environment



Intra Day Management

- Use Schedules To Adjust For
  - Unplanned absence
  - Call surges
- Advanced Notice To Management That SL May Tank In These Hours
- Managing The Situation
- Manage Off Phone Time
  - ACD AUX/ Walk Away codes
- What About Outbound Calling Time?
  - Use a measurable work state based on your ACD

What Tools Are Available??

- Options
  - Excel based
  - Automated application
- Defining Factors
  - Cost
  - Complexity
  - Need for advanced functionality
  - Time to manage

Functionality Fine Points

- Who Imports ACD Data
  - You
    - CC Modeler/Excel/Others
    - Initial load is time consuming
    - Subsequent updates are just a daily task
  - Automated Load Applications
    - Aspect/NICE/Five Nine's/ ETC
    - Application "Talks" With ACD To Import Data
    - WARNING-ACD Vendor May Charge For Access
- What Employee Db Is Needed
  - Simple tools = simple data requirements
  - Automated applications= More detailed data elements

Excel Examples

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**Staff Planner**												
2	Assumptions		Service Level		80%		Forecast	3550		Shrinkage Planning		Type	Percentage
3			Service Level Seconds		30		Override Factor	1.00				Breaks	8.0%
4			Average Handle Time (seconds)		420		Revised Forecast	3550		Total Shrinkage	38.5%	Projects	5.0%
5												Processing	12.5%
6												Absenteeism	8.0%
7	**Interval Call Volume**											Unproductive	5.0%
8		Mon 4	Mon 3	Mon 2	Mon 1	Average	Proportion	Revised Forecast	Required Agents Base	Required Agents w/Shrinkage	Scheduled Agents	Net Staff	Forecasted Service Level
9	7:00	18				18	0.005070423	18	7	11.4	12	0.6	88.0%
10	7:30	22				22	0.006197183	22	8	13.0	15	2.0	93.7%
11	8:00	37				37	0.010422535	37	12	19.5	15	-4.5	23.2%
12	8:30	45				45	0.012676056	45	14	22.8	20	-2.8	54.3%
13	9:00	120				120	0.033802817	120	33	53.7	51	-2.7	65.6%
14	9:30	150				150	0.042253521	150	41	66.7	65	-1.7	76.8%
15	10:00	175				175	0.049295775	175	47	76.4	73	-3.4	66.8%
16	10:30	260				260	0.073239437	260	67	108.9	110	1.1	84.7%
17	11:00	257				257	0.072394366	257	66	107.3	105	-2.3	68.3%
18	11:30	240				240	0.067605634	240	62	100.8	95	-5.8	44.3%
19	12:00	180				180	0.050704225	180	48	78.0	75	-3.0	69.4%
20	12:30	169				169	0.047605634	169	45	73.2	75	1.8	88.3%
21	1:00	135				135	0.038028169	135	37	60.2	65	4.8	94.3%
22	1:30	120				120	0.033802817	120	33	53.7	50	-3.7	55.9%
23	2:00	110				110	0.030985915	110	31	50.4	50	-0.4	81.9%
24	2:30	147				147	0.041408451	147	40	65.0	60	-5.0	50.6%
25	3:00	155				155	0.043661972	155	42	68.3	65	-3.3	65.3%
26	3:30	179				179	0.050422535	179	48	78.0	80	2.0	90.8%
27	4:00	220				220	0.061971831	220	58	94.3	100	5.7	96.5%
28	4:30	200				200	0.056338028	200	53	86.2	96	9.8	99.4%
29	5:00	158				158	0.044507042	158	42	68.3	70	1.7	86.6%
30	5:30	140				140	0.03943662	140	38	61.8	60	-1.8	71.2%
31	6:00	125				125	0.035211268	125	34	55.3	50	-5.3	36.0%
32	6:30	83				83	0.023380282	83	24	39.0	32	-7.0	9.2%
33	7:00	50				50	0.014084507	50	16	26.0	20	-6.0	22.1%
34	7:30	35				35	0.009859155	35	12	19.5	15	-4.5	39.0%
35	8:00	20				20	0.005633803	20	8	13.0	13	0.0	83.9%
36	Total					3550						**End of Day**	71.0%
37													

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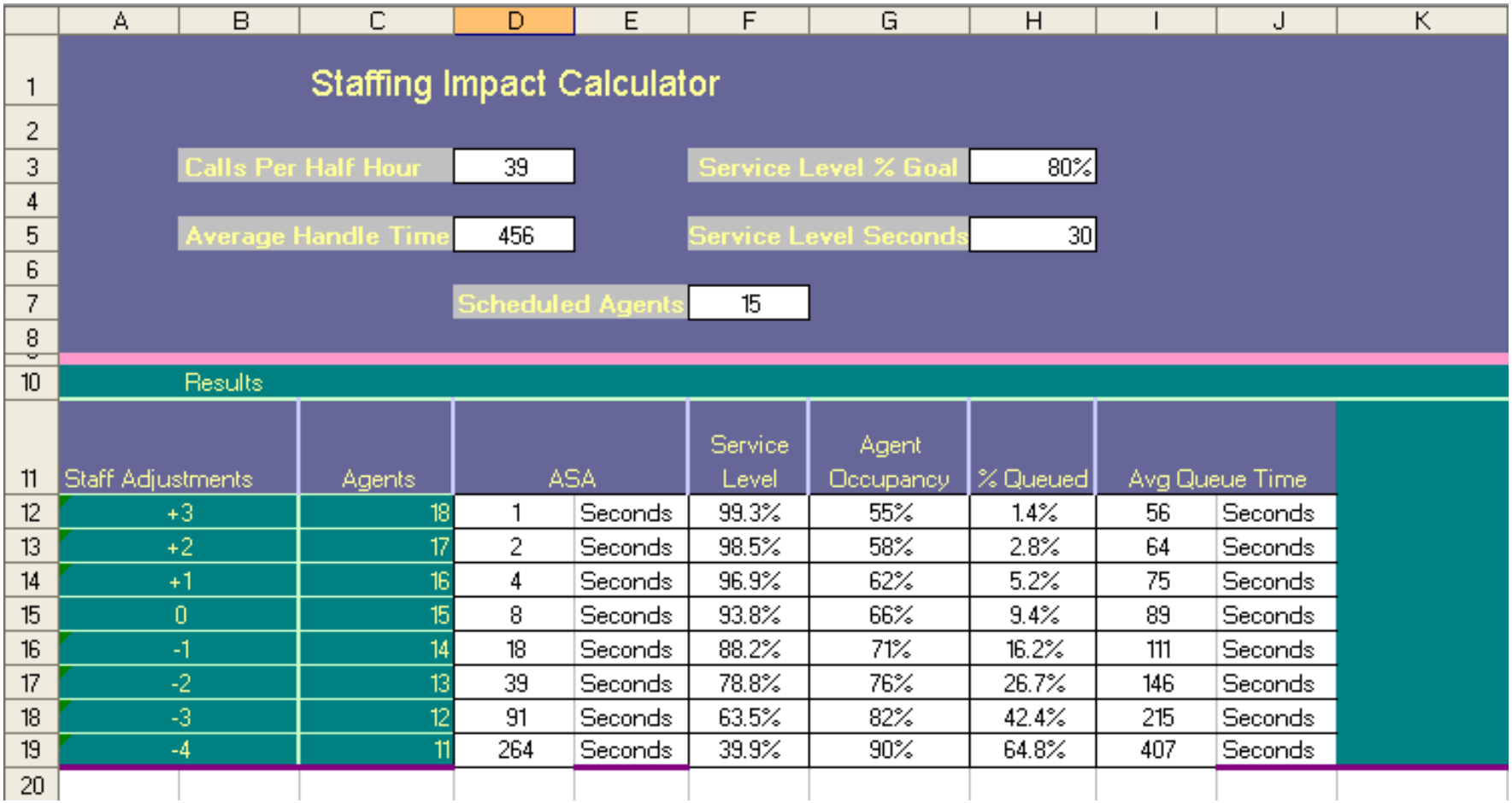
Alternatives and Resources

- Portage Communications--http://www.portagecommunications.com/
- Mitan Ltd--http://www.mitan.co.uk/mainhome.htm
- Kool Toolz--http://www.kooltoolz.com/
- Spreadsheet Scheduler--https://spreadsheetscheduler.com/
- Ansapoint---http://www.erlang.com/ansapoint.html
- http://www.erlang.com/ ----Erlang macro
- ProScheduler/LoxySofy/Seranova
- Cloud Based applications (Aspect/NICE/Verint/ InVision/Injixo/Pipkins/ Five 9's/etc)
- https://www.callcentrehelper.com/ Multi channel staff calculator

WIIFM

- Better ***MANAGE*** The Workload
- Improved Staff Management
- Better Management of Surprises
- Documented Plan For Senior Mgt
  - How you are managing
  - Why you need resources
  - What will happen “if”……

Staff Impact Calculator



	A	B	C	D	E	F	G	H	I	J	K
1	Staffing Impact Calculator										
2											
3		Calls Per Half Hour		39		Service Level % Goal		80%			
4											
5		Average Handle Time		456		Service Level Seconds		30			
6											
7				Scheduled Agents		15					
8											
10	Results										
11	Staff Adjustments		Agents	ASA		Service Level	Agent Occupancy	% Queued	Avg Queue Time		
12	+3		18	1	Seconds	99.3%	55%	1.4%	56	Seconds	
13	+2		17	2	Seconds	98.5%	58%	2.8%	64	Seconds	
14	+1		16	4	Seconds	96.9%	62%	5.2%	75	Seconds	
15	0		15	8	Seconds	93.8%	66%	9.4%	89	Seconds	
16	-1		14	18	Seconds	88.2%	71%	16.2%	111	Seconds	
17	-2		13	39	Seconds	78.8%	76%	26.7%	146	Seconds	
18	-3		12	91	Seconds	63.5%	82%	42.4%	215	Seconds	
19	-4		11	264	Seconds	39.9%	90%	64.8%	407	Seconds	
20											

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Conclusion

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Success Factors

- Give Data Driven Input
- Use Industry Standard Practices
- Maximize Use of Illustrative Tools
- Use Input From Industry Professional Organizations
  - SWPP (swpp.org)
  - NECCF (neccf.org)
- Network With Other WFMers

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APPENDIX

Some WFM Details

- Forecasting Factors and Proportions
- Interval Distribution

Factors and Proportions Spreadsheet

Calls Offered (Received + Abandoned)					Proportion		Monthly Factor
Month	Calls						Proportion/.083=Factor
Jan	12738	← Calls For January		=	0.07318		0.88
Feb	14521				0.08343		1.01
Mar	13986				0.08035		0.97
Apr	14778				0.08490	Divided By	1.02
May	13117	Divided By			0.07536		0.91
Jun	15487				0.08898	0.083	1.07
Jul	15282				0.08780		1.06
Aug	13725				0.07885	(100/12 =	0.95
Sep	16002				0.09193	Avg Proportion)	1.11
Oct	14498				0.08329		1.00
Nov	15539				0.08927		1.08
Dec	14387				0.08266		1.00
TOTAL	174060	← Calls For The Year					

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Monthly Proportion/Factor

Proportion

	Proportion
12/1/1999	0.073182
1/1/2000	0.083425
2/1/2000	0.080352
3/1/2000	0.084902
4/1/2000	0.075359
5/1/2000	0.088975
6/1/2000	0.087797
7/1/2000	0.078852
8/1/2000	0.091934
9/1/2000	0.083293
10/1/2000	0.089274
11/1/2000	0.082655

Gives you: Percentage of Total Calls for year that will be received in given month

Gives you: Relative factor to apply to current forecasting.

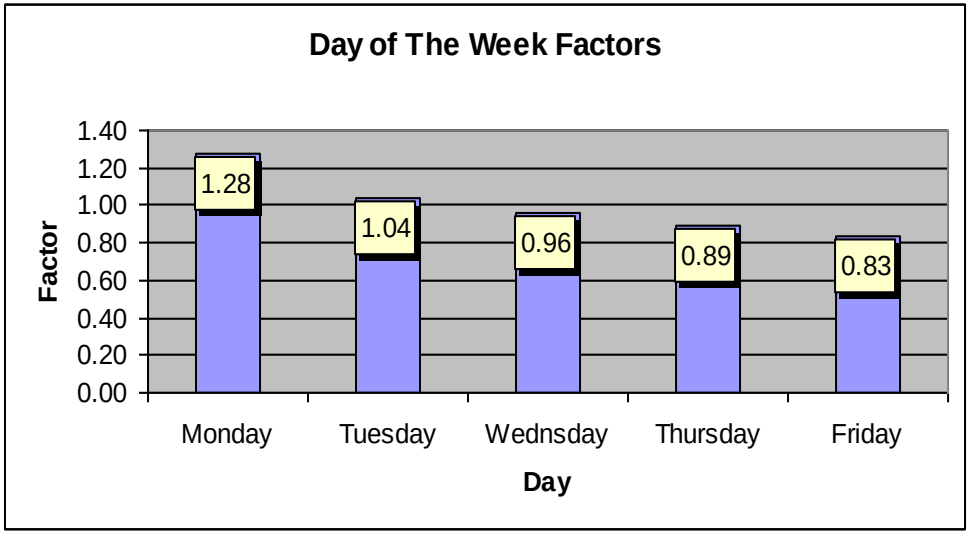
Example: Your past 4 weeks of December call Volumes show volumes of around 500 calls daily. Use difference in factors for Dec. and Jan. to lift forecast forecast (1.01-.88=.13) 500 X .13=565

Day of the Week Factor

Date	ACD Calls	Aban Calls	Calls Offered	Proportion	Proportion/.20=Factor
Monday	865	22	887	0.25562	1.28
Tuesday	697	24	721	0.207781	1.04
Wednsday	651	16	667	0.192219	0.96
Thursday	604	12	616	0.177522	0.89
Friday	561	18	579	0.166859	0.83
Totals	3378	92	3470		

Calls offered on specific day/Total Calls offered for the week. Proportion is divided by .20 for 5 day week for factor.

Example: In previous example we forecasted 8,300 calls for January. Divide that by operating days (20= 415) apply daily factor to determine day of week volume (Mon:415X1.28=531)



Interval Distribution

Now that we have a forecasted daily volume, we use the last 4 Mondays to determine how the calls will arrive over the course of the day. By averaging the last 4 weeks, we reduce exceptions in the data. This gives us a more accurate Interval Distribution pattern.

	11-Dec	4-Dec	27-Nov	20-Nov	Average	Proportion	Interval
8:00	6	6	8	14	9	0.00944	5
8:30	29	26	32	29	29	0.03220	17
9:00	40	50	65	44	50	0.05525	29
9:30	59	57	65	44	56	0.06247	33
10:00	45	57	58	65	56	0.06247	33
10:30	60	65	68	58	63	0.06968	37
11:00	62	47	85	59	63	0.07024	37
11:30	60	45	67	46	55	0.06052	32
12:00	34	39	58	55	47	0.05164	27
12:30	35	33	55	39	41	0.04498	24
1:00	40	34	42	33	37	0.04137	22
1:30	50	50	46	37	46	0.05081	27
2:00	61	36	57	43	49	0.05469	29
2:30	44	57	42	51	49	0.05386	29
3:00	60	62	68	53	61	0.06746	36
3:30	43	62	68	44	54	0.06024	32
4:00	57	43	65	41	52	0.05719	30
4:30	54	49	61	34	50	0.05497	29
5:00	27	25	23	26	25	0.02804	15
5:30	12	10	10	13	11	0.01249	7
				Total	901		

In our example, we were to receive 531 calls on Monday, here is how the calls would arrive based on our Interval Distribution patterns.

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