

## FORECAST FOCUS



### Service Level vs. Average Speed of Answer

By Tiffany LaReau Human Numbers

*Service level can offer a more accurate indicator of a center's accessibility—but be aware that report integrity can be tainted.*

A service goal represents your customers' experience of the length of time it takes to answer their call. It is impractical to look at every call's time to answer on an individual basis, so service goals are collected as a group for varying interval durations.

There are two popular service goals in most call centers today: Service level and average speed of answer (ASA). Service level is the superior choice because it includes both answered and abandoned callers. ASA only looks at answered calls, and uses the MEAN averaging, which produces a watered-down result that hides the variances. Since we are responsible for representing all of our callers in our reports, we should make the effort to include all of them.

The best way to demonstrate why service level is so strong and ASA is so weak is to trace the progression of calls during an actual interval span (see Figure 1).

**The assumptions for the snapshot in Figure 1 include:**

- 15 calls in 5 minutes, each row represents a single call.
- Handle time = 94 seconds
- Five scheduled agents, one called in sick, one on break (40% shrinkage)
- Single-skilled routing, assigning calls to next available rep.
- When the interval begins, one agent is wrapping up a call from previous interval.

Notice that the finished time on Call #1 is the same as the answer time on Call #5 because that was Alex's next call to handle.

For this 5-minute interval, the average speed of answer comes out

to be 20.7 seconds, which seems really good.

Out of the 15 calls offered, 4 were abandoned, so they are excluded from the ASA calculation. The remaining 11 answered calls average out to 20.7 seconds. To calculate this, add all of the values and divide by the sum of the individual values, including zero values for calls answered instantly (see Figure 2).

To get a slight improvement on the ASA math, you can also use Call Delay Bucket reports, which draw the viewer's attention to the calls that are outside of the threshold, instead of allowing those calls to be disguised inside the simple average. It's also useful to reveal the Max Delay time that the customers are feeling. (See Figure 3.)

This report does a pretty fair job showing 46% of the callers were beyond the acceptable 20-second threshold; but it's still incomplete because abandons are not exposed.

Service level, on the other hand, does include abandoned calls in its calculation. Since 4 out of the 15 callers abandoned, the abandonment rate was 27%. This 27% is taken right off the top of the service level, then the remaining answered calls are considered (Figure 4).

The formula is to divide the number of callers answered within the threshold limit of 20 seconds (e.g., 6) by the total number of calls offered (e.g., 15). Using this calculation, both the answered and abandoned populations are counted. When the service report is authentically telling you what your customers are living through, it will become easier to correlate this to other important metrics like patience tolerance levels and quality scores.

If your center happens to need more than five agents at a time, then you probably don't have the luxury of breaking down each individual call assigned to each individual agent. But these results

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stand up over the test of time, with larger intervals, across multiple days, and across multiple weeks. The smaller groups with lower occupancies and less abandons actually benefit more by using service levels, since the weight of each individual call is so high.

The piece that is not linear is the idea that a certain ASA is relative to a specific service level goal. These two metrics can never be correlated precisely, even with similar traffic patterns, because the variations in assumptions is too volatile, with each assumption holding a different impact level. But it is safe to assume that lower volume days will see more stretch between each metric because of the occupancy rates. So the trend for each is similar in nature, although it's not exact.

### Avoid Committing Service Level Fraud

Selecting service level over ASA may be a hard thing to overcome in an established center; especially if managers have been achieving ASA goals with the current headcount, but are unable to achieve similar service level results with that same number of people. There are three things to avoid if you want to keep your service level reports legitimate:

**1. Omitting blocked calls is wrong.** This includes forced busy calls, and blockage from having insufficient trunks. The calls-offered formula should include answered, abandoned, blocked and forced-busy calls. A forced busy occurs when the caller is instantly given one option: to hang up and call back

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Call-by-call snapshot for 5 minutes (Figure 1)

Call #	Arrive Time	Answer Time	Speed of Answer	Call Disposition	Finished Time	Note
1	12:00:02 AM	12:00:02 AM	00:00.0	Alex is next avail agent - he gets call	12:01:36 AM	Eddie is on call from prev. interval
2	12:00:15 AM	12:00:15 AM	00:00.0	David is next avail agent-he gets call	12:01:49 AM	
3	12:00:58 AM	12:01:01 AM	00:03.0	Eddie gets call when he becomes avail	12:02:35 AM	Michael is unavailable - still on break
4	12:01:03 AM	Abandoned	-	Caller abandoned after 15 sec.	-	
5	12:01:09 AM	12:01:36 AM	00:27.0	Alex is next avail agent - he gets call	12:03:10 AM	
6	12:01:16 AM	12:01:49 AM	00:33.0	David is next avail agent-he gets call	12:03:23 AM	
7	12:01:29 AM	12:02:35 AM	01:06.0	Eddie is next avail agent - he gets call	12:04:09 AM	
8	12:02:03 AM	Abandoned	-	Caller abandoned after 48 sec.	-	
9	12:02:20 AM	Abandoned	-	Caller abandoned after 45 sec	-	
10	12:02:38 AM	12:03:10 AM	00:32.0	Alex is next avail agent - he gets call	12:04:44 AM	
11	12:03:14 AM	12:03:23 AM	00:09.0	David is next avail agent-he gets call	12:04:57 AM	
12	12:03:32 AM	12:04:09 AM	00:37.0	Eddie is next avail agent - he gets call	12:05:43 AM	
13	12:03:49 AM	Abandoned	-	Caller abandoned after 50 sec	-	
14	12:04:33 AM	12:04:44 AM	00:11.0	Alex is next avail agent - he gets call	12:06:18 AM	
15	12:04:47 AM	12:04:57 AM	00:10.0	David is next avail agent-he gets call	12:06:31 AM	

ASA Results (Figure 2)

**15 calls offered** Here's the formula:  
**4 calls abandoned**  $\frac{0+0+3+27+33+66+32+9+37+11+10}{11} = \frac{228}{11} = 20.7$   
**11 calls answered**

Call Delay Buckets (Figure 3)

0 to 0	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	60+
5	1	1	3	0	0	1

Service Level Results (Figure 4)

<b>Answered Calls</b>	<b>11</b>
<b>Abandoned Calls</b>	<b>4</b>
<b>Abandon %</b>	<b>27%</b>
<b># Calls answered in &gt; 20 sec</b>	<b>6</b>
<b># calls offered</b>	<b>15</b>
<b>Service Level</b>	<b>40%</b>
<b>Calls Answered in 20 sec ÷ Total Calls Offered = SL %</b>	
<b>6 ÷ 15 = 40 %</b>	

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later. Finding blocked calls from insufficient trunks may require looking at more than one report, but these are really important to the measurement, especially in an outsourced call center when there is less centralized control.


**2. Watering down the service level result by excluding abandons is wrong.** This calculation is known as: percentage of calls answered within X seconds divided by the percentage of calls answered. It will produce a much more positive result, but these results are misleading because it does not include the entire population. The calculation cheat is slight—just replace the divider of calls offered with calls answered, so be on guard for this kind of trickery.

**3. Excluding the “fast” abandons is wrong.** Some managers justify that it is ethical to exclude any call that abandons within the same threshold as the service level goal. So, for example, if the goal is 80% within 30 seconds, any caller that abandons in 30 seconds or less is removed from the total calls offered. This is an unacceptable way to measure service results because fast abandons still represent the calling population. Hiding these from the metric result will make it harder to identify other types of problems. Even abandons that happen in less than five seconds could be an indication of some weird IVR trouble, or an odd reason that really

needs further investigation and correction instead of being covered up.

But just because something is wrong doesn't mean it's not happening. I saw a recent posting by a call center director on a users forum asking how the group felt about excluding abandoned calls that were less than the service level target from their summaries, when there were penalties for not making the service goals. Within 24 hours there were 10 replies in favor of excluding these calls, and five replies were in favor of excluding all abandons.

In a call center culture that blocks calls, forces busy signals or has willingly accepted abandoned calls to be removed from their reports, service level fraud can still easily be avoided by simply documenting a detail note describing the alteration on each report that includes this metric. It's better to take the high road on this, rather than chancing a bad reputation when it comes to report integrity.

The service level goal exists because of the desire to deliver a certain grade of accessibility from our agents to our customers. The grade that we have assigned to it should be driven by our mission statement, our competitors and our customers' expectations. If the service level goal is wrong and misstated, then it's time to build a case to justify changing it rather than trying to adhere to goals that your center has outgrown. 

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Online Resource

This issue is available online at: [October 2010, Contact Center Pipeline](http://www.contactcenterpipeline.com/t-CCP201010.aspx)

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