

The Service Level Group's Better Contact Center Series

What You Must Know About Agent Occupancy & Why



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Agent occupancy is the **most important** concept for call center managers to understand, appreciate and be able to clearly explain to everyone in their organization. Unfortunately, it is also a concept that is **often misunderstood** and misapplied. Even if you have a full appreciation for occupancy, it can be difficult to pass along to the rest of the organization.

We often get requests for an "optimum" occupancy rate or for ideas on how to "improve" agent occupancy. Although, we typically shy away from providing "one-size-fits-all" call center goals, in this case, it's easy – there isn't one. To better appreciate this, it is important to understand that agent occupancy is a direct outcome of several call center inputs. It's like using simple math ($2+2=4$) – if you make even the slightest change to the inputs (the "2s"), your result will not equal the original "4."

Before we jump into exploring the details behind the inputs, it is important to understand the definition. Simply put, agent occupancy is the average amount of time agents spend on calls either while "occupied" talking to customers or in an after-call work state.

The inverse of agent occupancy is agent idle time – or the amount of time agents spend sitting, waiting for the phone to ring. Sounds simple, and it is, but sometimes something is lost during the translation, and goals or expectations around occupancy are developed.

Idle time is a reality in every call center. The larger the call center, the less idle time required to meet a given service level objective – in a larger answering group, agents will become available to take calls more frequently, resulting in less idle time. We developed the tables in this article to help illustrate how occupancy varies depending on the size of the answer group. The tables show the results of an Erlang program used to determine the number of agents required during a half-hour period to meet the service level objective in the upper left-hand corner. Details on the table's categories are outlined below:

Inputs to the Erlang program are:

Call volume: The number of calls expected to be offered to the group in the half-hour. (Volume)

Call handle time: The average of the sum of talk, hold and after-call work (AHT) for each call.

Outputs from the Erlang program are:

Minimum number of seated agents: The minimum number of agents needed for the entire half-hour to meet the **service** objective (Staffing Req).

Average speed of answer (ASA): The expected average call answer speed if the minimum agents required are staffed.

Agent occupancy: The average amount of time agents will be occupied in direct support of customers shown as a percent with the inverse being idle time. (Occupancy Rate)

- o Occupancy related results from Table 1:
 - The bottom row of the chart reveals a need to have eight agents available for an entire half-hour to answer the 25 calls within the service level objective. The agent occupancy result is 59 percent – in other words, the eight agents will be talking to customers or in an after-call work state an average 59 percent of the time.
 - It's easier to understand when you look at the inverse – agent idle time (in this case, it's 41 percent). At the end of the half-hour, if you were to total the idle time, you would find that each of the eight agents were idle 41 percent of the time, just over 12 minutes per agent.
 - In contrast, the top row of the chart shows that 119 agents are needed to handle 575 calls with an average occupancy of 91 percent. The inverse is 9 percent idle time or about 2.5 minutes per agent.
 - When expanded for an entire day, the chart shows that the agents in the smallest call center will be idle an average of two hours for every seven hours of phone time compared to only 35 minutes of idle time in the large center.

(Table 1 — 90/30 SLO)

Service Level % 90 Answered in: 30 secs.				
Staffing Req	Volume	AHT (secs)	ASA (secs)	Occupancy Rate
119	575	340	7.8	91%
65	300	340	8.2	87%
45	200	340	8.6	84%
18	70	340	11.1	73%
8	25	340	13.4	59%

The previous example clearly illustrates the impact size has on a call center's occupancy rates – the larger the center the higher the occupancy. Holding handle time and service level constant, smaller call centers will ALWAYS require more idle time (lower occupancy) when compared to larger centers. This same dynamic exists in large centers with segmented teams or skill groups – the smaller the volume the more idle time is needed (required) to meet the same service level objective. If you manage a small call center or team that is meeting its call-answering objectives, you've probably been asked by others in the organization why agents are just "sitting around." **The answer is in the occupancy.**

Another "input" that influences a call center's occupancy result is the service level objective chosen (answering X percent of calls in Y seconds). The next two tables have the same inputs as Table 1, but the outputs are reflective of the adjustments made to the service level objective:
 In Table 2, the service level objective is adjusted to become more aggressive and the resulting occupancy rates are lower. More idle time is now required to be built into the process to accommodate for the increased objective.

(Table 2 — 90/10 SLO)

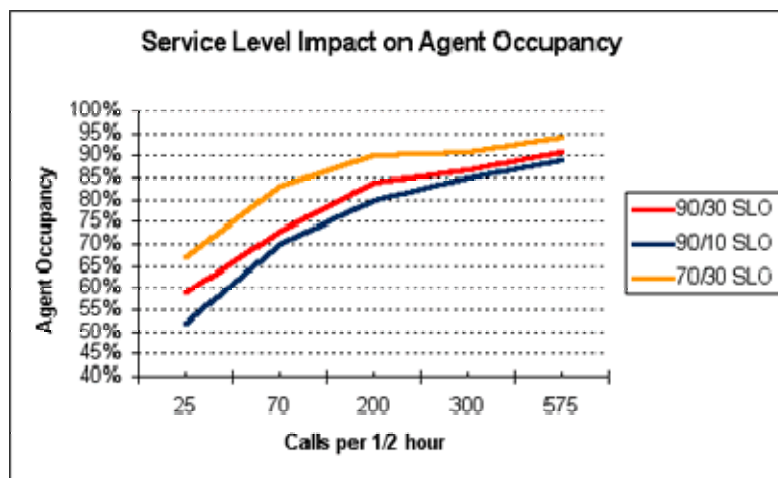
Service Level % 90 Answered in: 10 secs.				
Staffing Req	Volume	AHT (secs)	ASA (secs)	Occupancy Rate
122	575	340	3.6	89%
67	300	340	4.1	85%
47	200	340	3.8	80%
19	70	340	5.7	70%
9	25	340	4.7	52%

In Table 3, the service level objective is adjusted to become less aggressive and the resulting occupancy rates are higher. Less idle time is now required to be built into the process because of the lower objective.

(Table 3 — 70/30 SLO)

Service Level % 70 Answered in: 30 secs.				
Staffing Req	Volume	AHT (secs)	ASA (secs)	Occupancy Rate
115	575	340	23.2	94%
62	300	340	24.4	91%
42	200	340	32.1	90%
16	70	340	45.2	83%
7	25	340	39.1	67%

In both examples, the required occupancy rate is directly influenced by the desired service level objective. Because of this fact, it becomes challenging for call centers with different service objectives to effectively benchmark things like agent efficiency rates and even agent turnover rates. When staffed properly, call centers with more aggressive service level objectives will **ALWAYS** have more idle time when compared to the same size center with a lower service objective. The chart below is a summary of all three table's occupancy results:



In summary, the agent occupancy you can expect in your call center will be directly influenced by the call volume, the call handle time and your desired service level objective. The only way to influence the occupancy rate is to make a change to the inputs or put another way, if you're managing to an occupancy objective, it's most likely at the expense of one of the inputs (another objective). An environment that attempts to manage to objectives that are actually in contention often finds itself unnecessarily reacting to things that are, in fact, beyond its control.

About the Author:



As a seasoned industry executive, popular speaker and highly regarded consultant, Tim Montgomery has guided thousands of contact center agents and leaders to improve individual and team performance, and exceed operational objectives. Drawing from these interactions and his extensive real-world experience, Tim founded **The Service Level Group** to help contact centers leverage the competitive advantages they have right at their finger tips. During his career, Tim has held a variety of leadership positions – everything from Call Center Manager to Vice President of Sales and Operations. His hands-on contact center leadership experience was fine-tuned by working for three of the most celebrated service companies in the world – **USAA, The Coca-Cola Company and The SCOOTER Store**. Prior to founding **The Service Level Group**, Tim spent three years as a Consultant, Seminar Leader, and Technology Advisor with **Incoming Calls Management Institute (ICMI)**. Tim's expertise in customer service and contact center operations allows him to lead a wide range of consulting engagements for companies in a variety of industries. His consulting partners have included some of the most recognized companies in America - **AIG, Lifetouch Publishing, Mitsubishi Motors, Premera Blue Cross, Deluxe Printing, Allstate, Kodak, Liberty Mutual, Cinergy, Meguiar's and The Gartner Group**. Tim has written articles and whitepapers on a variety of management, customer service, and call center topics and has been featured in many global publications. Tim earned both his BBA in Accounting and MBA degrees from degrees from the University of Texas @ San Antonio. Tim can be reached directly at TimM@ServiceLevelGroup.Com