Measures of WFM Team Success

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A frequent question from workforce management (WFM) professionals is “how do I measure the success of the WFM team?” This is a challenge since WFM does not work in isolation but is an integral part of the entire deliver of service from the contact center. Some would say the service level or ASA is the ultimate metric to use while others argue that WFM has little control over whether operations follows the plan, whether the schedule options people are hired for produce a good match to the requirements, etc. There is no single answer that can address the wide variety of roles that WFM teams are asked to play. Some focus entirely on forecasting and scheduling which others might add real-time adherence management, ACD routing script management, development and delivery of reports, etc. However, basic forecasting, scheduling and managing the intra-day changes needed to match the staff to the workload seem to be in virtually every WFM team’s area of responsibility.

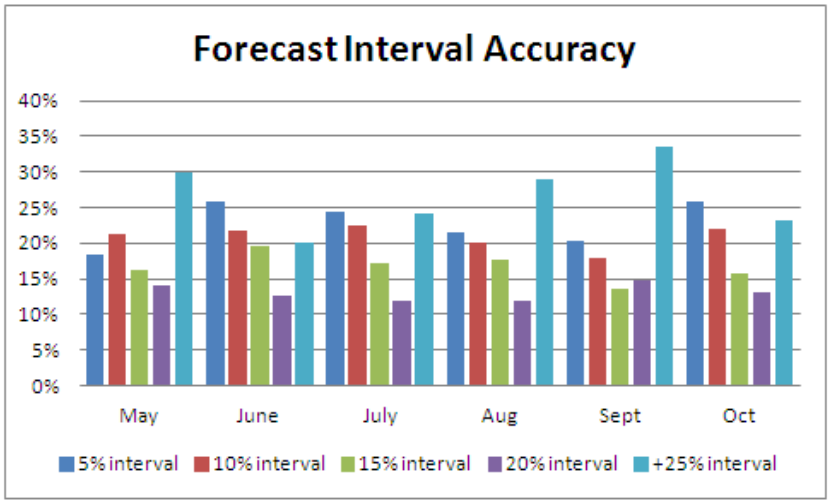
The Call Center School offers the following as the four basic metrics that can be applied to get a good picture of the WFM team’s success. These are designed not just as a scorecard for the WFM operation, but to provide the analysis tools needed to identify opportunities for continuous improvement in managing the staffing resource. Knowing that the process is not as good as desired isn’t enough – the team must have the mechanisms to see exactly where the problems are occurring so that they can be more readily analyzed and improved. As expected, not all of these recommended metrics are totally within the control of the WFM team. They involve the operations team, human resources and others. It is the ultimate delivery of the “right number of staff, in the right place, with the right skills, at the right time to meet customer demand with quality and reasonable cost control” that is the goal.

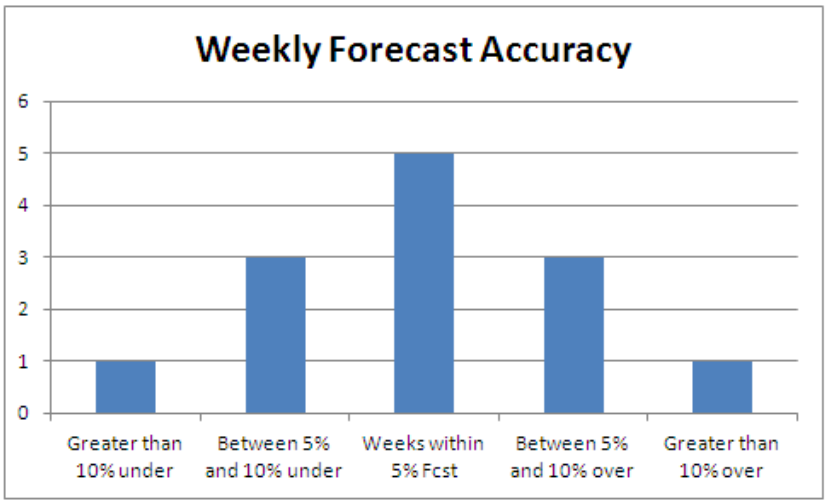
1. **Forecasting accuracy** – As the foundation of the entire WFM process, the forecast must take center stage in measuring the success of the team and the individuals who are responsible for the forecast. The operations team has a role here in ensuring that any anomalies in the actual workload are identified for cause so that future forecasts are better able to accommodate and predict these drivers. Communication with departments that drive activity for the contact center is also key to predicting the impacts of such things as marketing campaigns, mailings, billing cycles, etc. Full understanding of what makes customers and staff behave differently from usual is essential to improving the accuracy of the forecast in many cases. There are three major elements to consider:

- **The elements of the forecast** – the volume of work units (call volume, emails, chats, white mail, etc.) and the average amount of time required to complete each unit (AHT) as well as the total workload (volume multiplied times AHT). While it is common for centers to analyze the call volume forecast, it is less common to see analysis of the AHT. Both are equal partners in the workload calculation and should be analyzed separately as well as combined to help identify opportunities for accuracy improvement. For example, TCCS has worked with centers where the AHT is relatively steady across all time frames and others that double from morning to night shift. That begs the question of why AHT is doubling across the day. Is it a function of less supervision, more new hires in unattractive shifts, customers calling with more difficult problems when they have time to talk, something else, or a combination of effects? Digging into that type of question can not only improve the accuracy of forecasting the actual workload in each time period of the day, but can also help in identifying opportunities to reduce AHT through other measures.

- **The time frame over which the forecast accuracy is analyzed** – monthly, weekly, daily and/or half-hourly. Analyzing accuracy at the monthly or weekly level serves as a reasonable scorecard but does little to help the analyst discover where the forecast may be consistently over or under the actual demand. Analysis at the interval level is required to focus attention on those elements of the forecast that can be improved. This kind of analysis is a bit like measuring service level or ASA over long periods. There can be rather dramatic fluctuations within that period that offset each other making the overall average look good. But dealing with wide swings at the daily or half-hourly interval level puts an unrealistic demand on the operations team. The goal is a consistent level of accuracy not an average level over time.

- **The methodologies for analyzing the accuracy** – percent variation, standard deviation of the variation and correlation coefficient to identify pattern anomalies. The percent that the actual varies from the forecast (forecast minus actual divided by forecast) is the most commonly used analysis of forecasting accuracy. At the interval level, it is also a pretty accurate picture. One method for analyzing the percent variation is to provide it in charts similar to the ones provided below:

- 

- 

- Where there is a wealth of data to analyze, it is helpful to have an easier way to put a finger on the pulse of the accuracy over a long period and that is best found by calculating the standard deviation of the variation percentages. A small deviation is desired rather than wide swings in the variation and this will show up even if the average variation seems quite small. Another tool to analyze the variations over time is the correlation coefficient which analyzes the patterns from one period to another. The correlation coefficient analysis can be applied to the variation percentages but is probably most useful when applied to the arrival patterns of work volume and the changes in AHT over the intervals. It compares two periods to see if the patterns are a match or not. For example, the typical Monday might adhere to a relatively consistent pattern, but the correlation analysis may reveal that one particular Monday varies in pattern even if the total volume of workload is within normal boundaries. This would suggest that further understanding of what happened on that Monday is useful. This level of detail is also critical to determining which historical data is “normal” and which is not when deciding to allow the data to average into the history kept for forecasting. Data which is outside of an acceptable range should be considered for adjustment, storing separately as a sample of a particular repeatable event, or even being discarded as an anomaly unlike to reoccur.

2. **Scheduling efficiency** – sometimes referred to as schedule inflexibility – This measures how effectively the scheduling plan has matched the number of agents available to handle the work to the required staffing based on the forecast workload and the shrinkage assumptions. The ability to make a perfect match of staff to requirements is subject to the limitations in the schedule options the WFM analyst has to work with and the creativity of applying the flexibility that is available to the process. It can also be influenced by whether the shrinkage assumptions are detailed by interval or applied as a consistent percentage of loss across all periods. Where there are no part-time staff and rigid rules about scheduling (i.e., days off must be consecutive, breaks must be at a certain interval, etc.), it is difficult to match the constantly changing demand. Keeping this mismatch as low as possible ensures the best utilization of the personnel resource, more consistent speed of answer for customers, more consistent occupancy levels for staff, and minimal cost. Knowing where the mismatches are occurring can help WFM look at more creative ways to work within the rules in place, but also encourage the entire operation to identify new shift types to consider, hiring options to be offered, etc. If the forecast is reasonably accurate and the schedules match up to that forecast reasonably well, the intra-day chaos of constant adjustments can be minimized. The calculation requires the following elements:

    - **Total required bodies in chairs** based on the forecast in #1 above plus the assumed shrinkage adjustment. (Where a skill-based routing configuration is in place, the output of a sophisticated algorithm is needed to identify the requirements across all skill combinations while in a traditional single-skilled assignment situation, basic Erlang C will be acceptable.) The shrinkage percentage assumption can be added in each interval to raise the bodies in chairs requirement to the number that is actually needed on the schedule so that absenteeism and other factors can occur without impacting the service delivery.

    - **Total scheduled staff** in each period. This is the staff scheduled including the shrinkage assumption not yet covered by the schedule elements. For example, looking at a schedule for next week, the expectations for vacations and training might already be in the schedules but daily absenteeism would still need to be a shrinkage assumption. In a single-skilled environment this will be relatively easy to determine, but more complex in skill-based configurations where a single agent may be capable of serving more than one type of call at any moment in time. (If preferred, the shrinkage can be deducted from the scheduled staff rather than added to the required bodies in chairs.)

    - **Total variation of scheduled staff compared to required staff -** all extra and short staff totals by period. When the “overs” and “unders” are added together, the total for the period is divided by the total requirements for that

period. The result is the percent of variation that is caused by the mismatch of staffing to requirements. (A standard deviation analysis of the variances can be done if the over and understaffing numbers are converted to percentages of variation by period. When the staffing requirements by period vary significantly by day or week or time of day, the raw numbers of staff variance will provide an inaccurate result.)

- **Analysis period** - This is generally analyzed at the day or week level although analysis of the patterns of variations intraday can be effective in determining trends of mismatch.

3. **Operational effectiveness** – This measures the ability of the WFM and Operations teams to identify and adjust to the situations that develop within the week and day so that the staffing levels are as near ideal as possible in each period and the speed of answer goal (Service level or ASA) is met as consistently as possible. The following elements are needed:

    - **The revised bodies in chairs requirement** by period based on the actual workload (volume and AHT). This is the calculated staffing requirement once the true workload is known after the fact.

    - **The actual positions staffed** for each period – This is the true bodies in chairs by period or the number of agents who actually logged in and were available for work. (In a single-skill environment, this is easily reported by the ACD, but in skill-based environments may be an estimate based on allocation of staff by skill.)

    - **The forecast speed of answer** by period – When the forecast is created and the staffing model applied, a forecast for the speed of answer for each period can be calculated. This is the expectation if the work arrives exactly as predicted and the staff follows the plan perfectly.

    - **The actual speed of answer** by period – Once the actual workload and staffing are known, the ACD typically reports the actual speed of answer for that period.

    - **The total variation of staffing and speed of answer results** - (plus and minus) for each period as well as the standard deviation and correlation coefficient to identify pattern anomalies. This is where everything comes together. Regardless of the accuracy of the forecast or the efficiency of the planned schedule, when the day arrives, the whole center does what it can to make adjustments to deliver the speed of answer goal. Measuring the actual results in terms of the speed of answer variation and the match of the actual staffing to the final requirements will identify where the challenges occurred so that they may be more readily analyzed for possible improvements.

4. **Employee satisfaction with the WFM process** – like any operation within a contact center, customer satisfaction is a key element of judging performance and for the WFM team the customer is operations including the agents and supervisory staff. Regular employee satisfaction surveys should be conducted to measure the operations team's satisfaction with such WFM processes as:
    - Shift choices available
    - Shift bidding/assignment process fairness and effectiveness
    - Time off management fairness
    - Schedule adherence management fairness
    - Willingness of the WFM team to accommodate requests

When all of these elements have been analyzed, the WFM team should have a good picture of not only the current level of performance but where the opportunities are to focus attention for improvements. This level of analysis can also be used to support the business cases needed when schedules need to be more flexible, coordination between WFM and other teams are lacking, or employee retention is a challenge.

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