

## FORECAST FOCUS



# Five Secrets of a Forecast Junkie

By Tiffany LaReau Human Numbers

Whether you're a new workforce manager or a seasoned pro, these tips will help you to hone your forecasting technique.

There is a group of workforce managers out here in the call center industry that consider the forecasting experience to be a recreational mathematic exercise. Rather than tediously poking and prodding their WFM applications along, blindly accepting whatever fate it chooses to spit out on an Intra-Day Performance report, they actively take control of their forecasts, crafting and molding the results by applying intelligence and intuitive methods specifically designed for the current temperature of the forecasting data. They treat forecast results as a living, complex organism that grows, changes, and sheds, requiring forecasting methods that grow,

*"Forecast junkies treat forecast results as a living, complex organism that grows, changes, and sheds, requiring forecasting methods that grow, change, and shed at the same rate."*

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## Three Common Forecasting Methods

There are three common forecasting methods typically used by the amateur forecaster:

### 1. Point Estimation

This translates to “just use whatever happened last time.” There is no growth rate, and no real mathematical approach, just a straight snapshot of history.

### 2. No Method

Some centers don’t forecast at all, they simply fix their service level by hiring more cheap labor (think off-shoring), or they trick it by forcing abandons when the SL goal is close to being breached.

### 3. Time-Series Analysis

There are legitimate situations where point estimation is appropriate; however, it’s usually the exception, not the rule. One that comes immediately to mind is forecasting in an emergency dispatch center, during the actual emergency. Another is holiday forecasting, especially for a day like New Year’s Eve. But Point Estimation begins to fail when used in normal day-to-day forecasting when call drivers are changing.

change, and shed at the same rate. These caregivers are forecast junkies.

The “No Method” phenomenon is really appealing to the manager whose #1 priority is cutting costs, without regard to the effect on quality scores. When there is no limit on the number of bodies that can be thrown on the phones, it becomes harder to defend the merit of a good forecast. In the centers that force busy signals to cheat the true SL result, the forecast becomes so unmanageable anyway since there are now hidden volumes from the ACD reports.

Time-Series Analysis is generally considered the most accurate approach and is the basic platform used by most WFM systems. And typically, it’s the one I always start with, too. The formula is straightforward data extrapolation:

**Step 1:** Divide last year’s volume in the year before. Results over 100% mean volume is growing, less than 100% mean it has shrunk. (See Figure 1.)

**Step 2:** Calculate each month’s % of the yearly totals to determine the monthly impact

**Step 3:** Repeat this weekly to determine the % of week index factors

**Step 4:** Repeat daily to determine the day-of-week factors

**Step 5:** Repeat by interval to determine the hour-by-hour factors.

I like Time-Series Analysis because it incorporates history into the forecast and allows me to measure my forecast performance over time. But

it’s very rare that its results alone would produce satisfactory accuracy levels. Normally some other layered adjustment (based on recent information and intelligence) or temporarily nested technique is also required to achieve comfortable forecast levels. The more things change in the center, the more complex the forecast becomes.

### The Power Forecaster’s Five Secrets

**1. Clean the data.** Another term for this is “normalize” the data. This process includes looking for abnormalities like outages, holidays, and spikes, and tagging these data sets with a special name in order to distinguish them for the regular data groups. At a recent conference I heard a vendor say that WFM software users complain that their forecasts are bad, and WFM vendors complain that the users do a poor job of cleaning the data; yet, the trend in software now is to automate the data capture to the point of eliminating the need for a human eye to ever see this data. This automation “feature” contributes to poor data-mining habits, with overly smoothed outputs. Before a forecaster can visualize trends, they have to comprehend what is actually arriving in the raw data sets. This includes looking for blocked calls, too, which hide in other reports.

**2. Forecast Handle Time.** This process is different than forecasting volume. When a new training class starts, their handle times may be longer. Plus, they may be asking their neighbors → page 3

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questions, which affect their availability, or after-call work time, potentially driving more calls to the new hires with the longer times. To compensate for this, you can apply a little curve to the normal handle time projections while new hires are in effect. Another difference is seasonality. If different types of calls arrive based on what time of year it is, then use handle times that apply to that season. Your WFM software may not automatically do this for you. Handle times can vary by time of day, day of week, season of year, weekdays vs. weekends, ratio of staff in training, etc. etc. Using identical handle times for each of these could dramatically reduce the performance of your forecasted staffing requirements. Adding multi-skill or multiple channels to the forecast group makes it even more important to track handle times accurately.

### 3. Don't let your WFM software bully you.

WFM software does not have AI so it's really only as smart as the person running it. The software has limitations, and users need to become actively involved with their vendor's forums, surveys, and calls for request enhancements.

### 4. Stay open to multiple forecasting methods.

I have a giant collection of different forecasting techniques that I rely on, and every quarter, the forecasting journals reveal new ones. We are still the pioneers in workforce management, and there is more to be discovered. Trends, weighted means, carryover, event-driven, contact rates, growth rates, regression analysis, and the list goes on. Sometimes a combination is needed, and that combination may be switched up with temporary overlays. The most interesting one I've come across lately is fertility and mortality rates, which use Census Reports to estimate annual population changes. This type of external information is very important when forecasting anything related to retirement (notice the actual FLIP that occurs in 2012 between the 65+ and 20-64 age groups? It's almost like a sci-fi plotline. (See Figure 2.)

### 5. Never measure yourself by forecast accuracy alone.

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Figure 1: Charting this as year-over-year helps to visualize the impact and rate of change

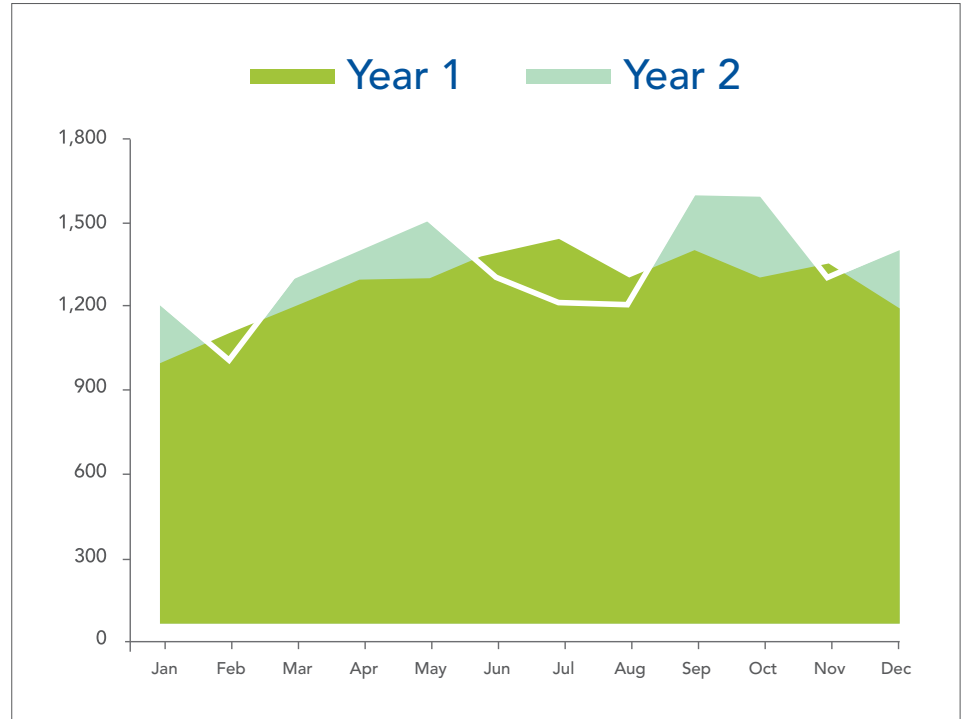
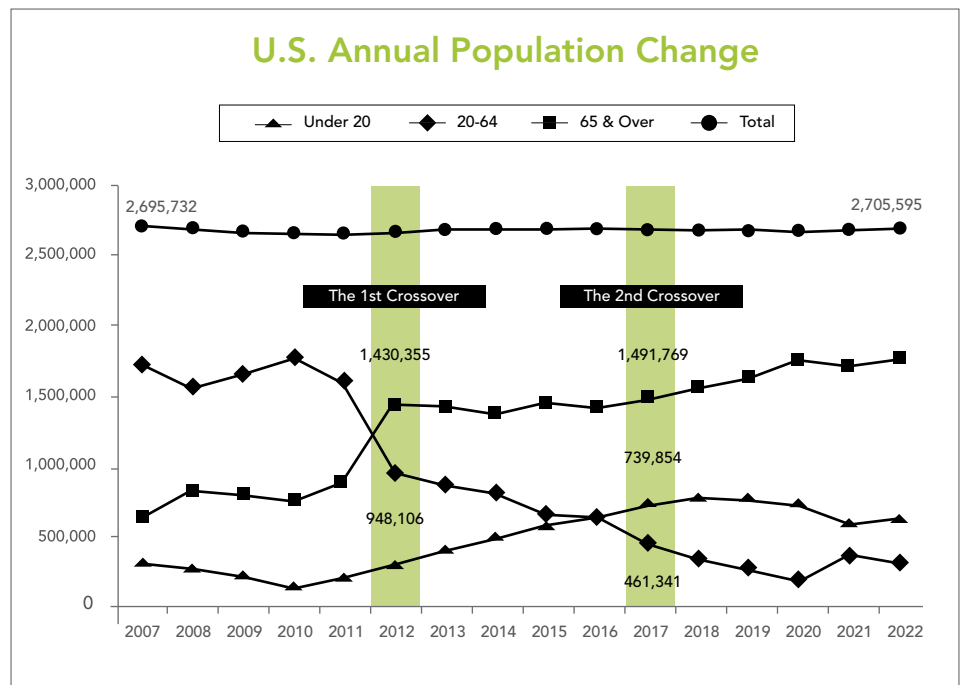



Figure 2: U.S. Census Bureau does all the work for you



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of telling the whole story. Forecast accuracy is a resulting measurement of actual vs. prediction which means the volumes either performed as expected, or did not perform as expected. It does not represent the ability of the forecaster, and it can dangerously encourage “over-normalizing” of data to bring it in line with some accuracy expectation. Also, the accuracy threshold is relative to the volume’s group size, and smaller groups need more stretch. Benchmarks are hazardous because there is no industry standard, and do not consider things like forecasting horizons and spatial granularity.

The forecast junkie is a valuable asset to an organization because they control the results, not the other way around. The best way to evaluate the forecasting is the measure their progress with milestones as an effective way to monitor and review what has been achieved. To ensure a successful outcome, look at three targets:

- Target 1: Timing & Frequency of forecasts and re-forecasts
- Target 2: Quality of Methodology (and appropriateness of choices)
- Target 3: Thorough Documentation (justifiable, and repeatable) 

## Forecaster’s Responsibility

- Be ready to make intuitive and logical decisions.
- Monitor and comprehend the raw data’s story.
- Embrace change quickly and stay organized.
- Understand the process and forecast results.
- Add value to the call center!

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