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Call Recording & Workforce Optimization Solutions

VirtualObserver COMMUNITY

Executive Whitepaper:

Solving Challenges In Enterprise Workforce Management

Understanding The Challenges At Hand

Contact centers are the primary means by which many businesses interact with their customers. The often toll free call is an opportunity to create a lifelong relationship with that customer. How that call is handled then has become increasingly important. Progressive business executives, as a result, are increasing their investments in the people and the technology that support that phone call and other types of transactions such as email, chat and back office functions.

Every contact center has someone focused on attempting to answer calls or emails in as timely a fashion as possible, or within specific service level guidelines, with the resources at their disposal. They are attempting to deliver designated service and manage the cost of providing that service. This person is practicing workforce management. They need to match the workload to the available workforce to meet service goals, while minimizing cost and report on the results. How well they accomplish that is the fundamental challenge facing the center. The execution of this effort directly impacts customer service levels and the bottom line profitability of the company, especially in revenue producing environments.

Resource planning managers are trying to have the right number of agents on the phones at the right time, throughout each day. Having too many agents on the phone is unproductive and expensive in terms of payroll expense. Too few agents increase hold times, reduces customer satisfaction, increases telecommunications expenses and may result in lost revenues and even lost customers. The objective is to be properly staffed at each interval throughout each day. Attempting to accomplish this via paper or using spreadsheets is a daunting if not impossible challenge due to a number of factors.

Workforce Management: Basic Challenges

Before we present how Virtual Observer Community WFM enables managers to run their center more cost effectively while increasing the level and consistency of customer service, let us explore the basic challenges the workforce manager faces. They are confronted with an overall challenge of meeting service objectives while minimizing the associated personnel or payroll cost associated with processing those transactions at the designated or targeted grade of service.

Complex Calling Patterns

Call arrival patterns typically vary by time of day, day of week, seasonality or other market driven influences such as invoicing, catalogue mailings, advertising or even weather depending on the type of business. Some businesses may have fairly flat call volumes and average handling times however the nature of contact centers, business in general, the global economy, and the internet all tend to create a more dynamic calling environment that needs to be keenly understood to accurately forecast and properly dimension across the day.

Forecasting how much work there is to process is not simply how many calls do we get on Monday but plotting how those calls arrive into the day on Monday, Tuesday, etc, depending, market conditions, week of the month, time of year, marketing campaigns or any one of the myriad of factors that impact customer behavior.

Random Nature of Call Arrival into Intervals

It is important to understand that calls or emails or chat sessions, do not arrive sequentially into the contact center but arrive randomly into the half hourly interval. This means that the workforce manager simply cannot determine the number of agents they need by queue, activity or group, by a linear calculation.

An example of an inappropriate staffing calculation is:
125 calls/half hour times the 180 second average handling time plus 30 seconds wrap up time per call = 26,250 seconds work time/60 = 437.5 minutes work/ 30 (minutes in the half hour) = 14.58 staff required to take all the calls.

The random nature of the arrival of calls and the subsequent development of staff levels to account for this reality is widely documented. In 1909, Agner Krarup Erlang published his first work: *The Theory of Probabilities and Telephone Conversations*. Erlang was a pioneer in the study of telecommunications traffic and, through his studies, proposed a formula to calculate the fraction of callers served by a village exchange who would have to wait when attempting to place a call to someone outside the village. He gained worldwide recognition for his work and in the 1940's, the *Erlang* became the accepted unit of telecommunication traffic measurement.

His Erlang C calculation, and more modern versions of it, is still in use by many of the modern workforce management applications available, including Virtual Observer Community WFM, to determine headcount requirements by half hour at a designated grade of service.

This random nature of call arrivals complicates matters further and requires some level of sophistication by workforce managers to address this fact. Erlang is fairly easy to find and can be built into spreadsheet calculation rather easily. However it is also well known that Erlang C does not properly dimension headcount in multi-skilled agent populations which are easily 75 % of the existing contact centers in North America. Cross training your agents allows them to log into multiple queues simultaneously and this creates more efficient call handling by your agent population. Thus, Erlang must be modified -- or it overstates the required staff that is required in multi-skilled agent populations. (Virtual Observer Community WFM produces both Erlang and a proprietary modified Erlang calculation to account for this shortcoming.)

Complex Work Rules

Forecasting call workload and arrival patterns by day, time of day, day of week, week of month and time of year, aside from marketing and market conditions can be challenging as we have outlined. Generating headcount to address the forecasted volume by interval can be challenging as well but is not impossible using manual approaches. Erlang and various

modified calculators are available. Managing shifts and agents however against the required heads per interval is really the beginning of the end for even the most capable Excel based analysts.

Let's say you have a 12 or even a 24 hour operation M-F, and are open on Saturday from 8 to 5. There may be a 6 - 3 shift, a 7- 4 and so on. You may also have part time shifts and split shifts or 4 day 10 hour work shift in the center. (Many paper driven operations limit the number of shift types they may consider because it is simply too complex to consider. This decrease in options results in vastly less efficient schedules.)

If we assume that a manager is able to accurately predict the call load and arrival pattern, they need to determine through Erlang C or some other algorithm how many agents they need to staff by half hourly interval throughout the day, throughout the week to meet the designated grade of service. At this point they must assess the available shift types while considering the number of agents they have, who can work each shift type, and optimally mix these to have the right number of people on the phones throughout the day to meet service and control cost. They must also factor in break and lunch requirements to properly staff throughout each day throughout the week for which they are creating a schedule.

The analyst now is seeking to stagger agents shifts into each queue to coincide with the dynamic call volume and service level targets to create a schedule for the week that works as well for Monday as it does for Thursday, or that works as well for the first week of the month as for the last, depending on how often you change schedules. They also need to assign breaks and lunches and consider any other events like training time or meetings at this point. That assumes that these items are known in advance.

One can imagine now how all of this begins to sort of sift through the hands of even the most talented analysts as they begin to consider multiple queues, service levels, multiple shift types, which days and weeks and off-the-phone type events.

Agent Limitations

Agents are a widely competed-for resource. They have limits as to what they and government regulations demand you can do from a scheduling perspective. The reality for contact centers across the globe is that the competition for effective agents and the cultures of the locale, industries, and businesses limit the flexibility of the agent population and negatively impact the efficiency of the schedules.

This means that most agents work the same schedule every day for a week, or two or a month before they ever consider or are eligible to change to a new schedule. Very few centers have agents that flex their schedules every day. This inflexibility limitation must be optimized against the needs of the business. It is critical then that the workforce manager understand and measure the inherent inefficiency so they can migrate to more effective yet acceptable behaviors with the agent population. The business must understand the viability of capturing

the opportunity that more flexible schedules represent in terms of controlling cost and delivering service.

This is exactly where workforce managers and workforce management solutions, like Virtual Observer Community WFM, enable the centers to manage the complex nature of the overall problem in a timely, accurate and more intelligent manner.

Unplanned behaviors

Sometimes regardless of the plan either your agents or your customers do not act as you expected. You may have accurately forecasted the workload, generated solid requirements and created as efficient as a schedule as possible given your constraints and fail to deliver service or control cost.

Anomalies in call volume and average handling times or unplanned employee absences can derail the most bulletproof plans. In centers that do not have an automated, integrated workforce management solution like Virtual Observer Community WFM, recognizing that trend in workload or agent behavior is a challenge. Creating and communicating a new plan to proactively address that recognized trend is nearly impossible in environments where workforce management tools are not part of the operating culture of the center.

A Closer Look at the Workforce Management Challenge

Workforce managers are trying to:

- Forecast the workload by analyzing and leveraging similarly previous call patterns and market conditions
- Determine staffing levels by interval throughout the day at a designated service level by call or media (email, fax, etc.) type
- Optimally mix the use of the available shift types to meet the staffing requirements
- Assign these shifts to agents considering their skills availability and preferences for work

Workload and Headcount Forecasting
Here is a very simplistic, one-dimensional representation of what an analyst is trying to accomplish as it relates to call volume forecasting. The goal is to predict how many calls will arrive in each half hour or fifteen minute increment, depending on the type ACD.

Call Volume
Now consider that this is only one day, for one type of call. Typically forecasts and schedules are generated for a week or a month or a quarter. To get to this point the analysts have had to review historical data from the ACD reporting mechanism or email server or both, enter it into a spreadsheet, by activity, and through either some level of manipulation or analysis arrive at the estimated volume for this day, time of day, day of week, week of the year etc.

Virtual Observer Community WFM integrates seamlessly into your phone system and automatically collects and stores the data that can be intelligently sliced, diced, combined and manipulated for forecasting purposes for larger modeling and more accurate forecasting purposes.

This described scenario assumes that this is a “normal” Monday. Note that the call average handling time also fluctuates throughout the day, by call type, and must be calculated accordingly. By multiplying the volume of work times the average handling time the analyst tallies the total expected workload. The analyst should also be considering outside factors and any impact that marketing might have on volume and average handling times to accurately forecast.

Next, the analyst needs to figure out the headcount required to address the activity at a given grade of service. A linear calculation will not produce appropriate headcount due to the random nature of call arrivals as we described previously.

So after a workforce manager predicts the future scheduled activities volume i.e. calls for each interval, throughout each day. Then, based on the desired grade of service (% of calls answered within so many seconds or average speed of answer) generate headcount requirements by interval throughout the week, month or quarter as seen in the below graphic.

This process may appear straight forward with one call type and limited hours of operation. If one has multiple types of calls, offers different service level objectives by type of call or by time of day, as they should in the generation of headcount requirements the process can become even more complicated. The adoption of skills based routing by the ACD manufacturers creates and even more complex blend of headcount requirements generation. If an agent can take 3, 4 or even five types of calls it is critical that they be accounted for in the plan according to the needs of the business and calling patterns of the various types of activities. It is highly unlikely that manual methods can address this level of complexity.

If one considers the impact of new media channels generated by the introduction of ecommerce such as e-mail and chat, one has an extremely complex problem in an often rapidly changing environment.

Schedule Optimization

Next the workforce manager has to generate a schedule to come as close to the headcount requirement as possible. Typical spreadsheet users use three or four different shift types and stagger the start times, break and lunch assignments as best they can to match the headcount requirement profile. These users tend not to complete evaluations such as measuring the impact of adding another type of shift to see if it is a better match to the requirements. They rely on a limited number of shift types for simplicity which reduces the efficiency of the result. They will then assign a particular shift to an agent depending on a variety of factors including agent preferences and availability.

The agents, in an ideal world for the contact center, are very flexible and will come and go based on the demands of the business. That is to say, that if, we could bring an agent to work for one half hour and send them home, we would always have the exact number of agents we need to address our calls at the desired grade of service, assuming we could accurately dimension the call arrival patterns and the workload.

The fact that we cannot schedule in this fashion means that we have to complete a very complex analysis of what types of shifts we do have available for “optimization” against the interval headcount requirements. In the majority of cases it is not a matter of what shifts should we use, but rather what shifts do we have today that we have to use. This is exactly the kind of rapid analysis that an automated integrated solution like Virtual Observer Community WFM so elegantly performs. A chip is the perfect tool for completing the iterative process of schedule optimization, considering every possible shift combination option to meet the requirements profile as close as is “calculatingly” possible, minimizing over and understaffing throughout the schedule period.

Virtual Observer Community WFM will go on to intelligently assign the optimized shifts to the agents. It rapidly evaluates each agent’s ability and/or eligibility to work a certain shift and assigns the shifts within those guidelines. Virtual Observer Community WFM also enables the user to consider the impact on schedule efficiency of adding new shift types into the mix or

adding part-time agents. The manual user has no where near this level of sophistication and is vastly limited by comparison.

Advanced Workforce Management Challenges
Workforce managers tend to leverage their investments in integrated tool sets such as Virtual Observer Community WFM by completing more advanced analysis and executing timely intraday management functions that are typically unavailable in manual environs.

Below are some descriptions of more key features and benefits that Virtual Observer Community WFM brings to the contact center workforce manager.

What-if Analysis
Workforce managers are often asked the difficult question of "what if" we doubled our call volume, or our other site went down, or we expanded our hours of operation or they want some concrete data on how many agents they really need. Manual environments lack the tools to begin to address thee types of questions beyond the surface. How long does it take your center to generate a budget today? Virtual Observer Community WFM brings a very rich tool set to not only answer these type questions but even more complex issues like what skills should we be training our agents with today? Or, what if we added 4/10 shift types, how much more efficient would we be? These are areas where Virtual Observer Community WFM really shines and brings invaluable operational data to the business to enable more informed strategic and tactical decisions. This is especially valuable to outsource agencies.

Virtual Observer Community WFM has extended "what-if" analysis to include an analysis of what skills your agents should possess. This is valuable in centers where agents can take multiple types of calls and can save hundreds of thousands of dollars.

Managing Overhead or Shrinkage
Let's address another area where Virtual Observer Community WFM brings significant value to its users. Contact centers everywhere average 30% "shrinkage" or more of their available workforce daily.

Shrinkage is defined as any activity for which the agent is being paid where they are not processing transactions or taking calls. This includes sick time, break time, jury duty, vacation etc. So in order for the contact center to schedule 30 agents, they have to staff approximately 40.

It is critical, then, to track the information relative to shrinkage very aggressively. Manual methods do not enable the centers to manage shrinkage to the degree required for effective operations. It is difficult to manage when your customers are going to call so the real opportunity for the contact center to manage lies within agent management. In a manual environment it is unusual for managers even to know what their shrinkage values are let alone manage to them. Virtual Observer Community WFM's built-in tool set aggressively tracks shrinkage factors and enable managers to create more accurate plans based on those factors.

Intraday Management
Manual environments also face a difficult intraday management challenge. What if the customers are not acting as you expected today? Calls or average handling time is up by 23%, how do they respond? Once the schedule is out there, by the time a new manual adjustment is completed it is probably too late. In this case managers in the center are probably "chasing their service levels" throughout the day by reassigning agents to the areas with the most calls in queue. This approach is stressful on all personnel especially the agents and is typically minimally effective.

Virtual Observer Community WFM's intraday management tools will recognize the current day's trend and give the managers visibility into how the current schedule will handle the new dynamic. It will even reforecast the rest of the day given that days current data. Virtual Observer Community WFM enables the managers to quickly modify agent's schedules to maintain service level and systemically and automatically informs the agents of those changes via an imbedded and secure email system. Your contact center just went from chasing service level to a paperless workforce management strategy.

It is clearly doubtful then that all of the factors we have discussed here have been taken into consideration in manual environments. Virtual Observer Community WFM enables more accurate forecasting through advanced modeling. It maximizes the opportunity for schedule efficiency within the constraints of your unique culture driving optimal performance and agent productivity. In addition Virtual Observer Community WFM includes timely intra-day management reports and re-forecasting capabilities that enable proactive, rapid response to changing customer behavior that are simply not available in manual environments.

Agent Adherence – the Elephant in the Room and Increased Agent Productivity
Virtual Observer Community WFM brings one other very high impact component to controlling cost and that is increasing agent productivity while maximizing service level delivery.

It is well documented across the call center industry that in centers where agent adherence to their schedule is not monitored and reported that they are where they are supposed to be, doing what they are supposed to be doing, a generous 80-85 percent of the time. In centers where agent adherence is monitored these same agents will adhere to their assignments 90 – 95 percent plus of the time.

If we translate this into paid hours versus productive hours the impact of just this one component is staggering. **This very conservative and well documented metric, reporting agent adherence could add 10% more productive hours from your existing staff.**

In a center that has 100 agents that translates into adding ten agents without hiring a single person. What if you have 200 agents and your agents are where they are supposed to be 70 percent of the time? It is truly staggering and the benefits from investing in Virtual Observer

Community WFM and placing all of the complex features and capabilities aside discussed up to this point make for a very compelling return on investment.

Reactive Management and Agent Morale

The inefficiencies of manual workforce management methodology also have another impact. They force the center into a reactive mode, as we have said, and disrupt the expectations of the agents. The result of limitations of manual methodologies is a negative impact on morale that could increase agent turnover.

Virtual Observer Community WFM's Web based solution is also making another significant impact with the delivery of sophisticated yet easy to use agent self service capabilities. Agents are now able to see their schedules from home, request vacation, set up their preferences and swap shifts all through a familiar Web browser. This facilitates rapid communications regarding the workforce management plan, empowers the agents to feel in control of their lives thus increasing agent satisfaction and possibly mitigating turnover.

Increasing Complexity of Transactions

The introduction of new channels into the customer contact center, i.e. fax, e-mail and web chat have created an even more complex problem for analysts trying to match workforce to workload. Centers that are debating the value of workforce management technology should consider the rapid evolution of contact centers and enable their analysts now to indoctrinate them into the science or workforce management technology.

This should give the reader some sense of the risk associated with manual workforce management methods. It should also point out why the best run customer service organizations in the world have wrapped their cultures tightly around workforce management technology and detailed the business processes associated with using the tool. The impact of deploying Virtual Observer Community WFM in your contact center is more consistent and higher levels of customer service delivery or more satisfied customers, decreased expenses and happier agents.

Primary Virtual Observer Community WFM Benefits

Having the right number of people available, with the right skills, at the right time produces these primary benefits:

- Controls Payroll Related Expenses (60 –70 percent of center costs)
- Increases the Level and Consistency of Customer Service
- Maximizes Employee Resources and Productivity
- Decreases Telecommunications Costs
- Maximizes Revenue Generation (in revenue producing environments)

Practical Applications of Virtual Observer Community WFM

Measure the real and quantifiable impact of decreasing hold times for customers by 3 seconds per call over millions of calls through more accurate forecasting or more efficient scheduling, or both.

Most Excel based analysts are not able to consider the optimal placement of break and lunch assignments in their schedules. If this simple optimization results in 100 more calls a day being taken at every site, what would that impact in a revenue world where calls are worth $7.00 per call or $220.00 per call?

Imagine if you could measure the cost of increasing or decreasing the service level grade at a given call volume in a matter seconds? What if a system would roll-up forecasts and schedule data and allow the users to quickly and efficiently recognize intra-day trends in the center?

All these features, and many others, are delivered with the most basic of Virtual Observer Community WFM's features. Virtual Observer Community WFM delivers very timely and seamless capability beyond forecasting and scheduling that includes:

- ACD Data Reporting & Tracking
- Special Day Information
- Extensive "what-if" Analysis
- Agent Adherence Data
- Daily Operational Reports
- Exception Reporting
- Agent Self Service

The breadth of information and integration is extensive and simply put today's modern contact center cannot function effectively without Virtual Observer Community WFM.

Secondary Benefits of Virtual Observer Community WFM
Secondary advantages are often just as compelling and present benefits that justify, on their own, your investment in Virtual Observer Community WFM. These are many and include:

Administrative Time Savings – In large complex environments the tasks associated with completing a forecasting, scheduling and accounting cycle are often dispersed across dozens of individuals. Automating the scheduling process allows for timely completion of tasks and utilizes fewer resources.

Creates a Paperless Environment – Imagine communicating with agents not only regarding their schedules but exceptions to their schedules. Agents can complete shift trades, request vacation and you can even set up rules for auto approval of certain requests based on your unique culture. Instant messages and notifications will go directly to their desktop and they will be able to view pending request and notice when they are approved, or not. The implications here are quite broad and are only limited to the user's imaginations.

Cohesive Strategy – When multiple resources complete planning, often decisions are made without consideration for other groups or the impact on customer service. Workforce management software facilitates a cohesive strategy and delivers multiple views to the analysts and management. This can dramatically impact overall performance and efficiency.

Promotes Proactive Management – Manual methods are reactive in nature and by the time new customer trends are recognized, and a new plan is completed, the opportunity is often lost and possibly even the customer.

Improves Agent Moral – Poor workforce planning and a reactive management style result in stressed agents. Schedules that are generated and assigned based upon employee preferences and availability also improve moral and may *increase retention*. Virtual Observer Community WFM's powerful web based tools and agent self service modules are giving agents greater control over their schedules and performance management further improving morale.

Improved Hiring - Extensive "what-if" capabilities allow management to hire agents where most needed.

The ROI Analysis

Contact us and we will walk with you through this process to determine your exact payback potential with your investment in Virtual Observer Community WFM based on the improvements in areas we discussed in this whitepaper.

It is well documented by third parties, Virtual Observer Community WFM users, and consultants that **investments in WFM result in reductions in payroll of 10 -20 percent achieved through a variety of features. This example uses a very conservative 7.5 percent increase in Efficiency. Adherence alone often results in increased efficiency above 20%.**