

A d v a n c e d T o p i c s

The Contact Center Decision Making Cycle

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There is a powerful new concept called “Enterprise Analytics” that has been introduced to contact center operations over the last few years. This concept leverages robust mathematical technologies, such as mathematical optimization, simulation modeling, and forecasting techniques against the big picture contact center decisions that we are so often asked to analyze (without the time to do it!). Basically, Enterprise Analytics is the application of engineering principles and technologies to contact center enterprise performance monitoring, forecasting, scenario development, plan development and evaluation, business risk analysis, and ultimately, strategic decision making.

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I’ve spent a fair amount of time thinking about Enterprise Analytics and the way that contact center organizations make decisions. So, what is the “standard” decision making process?

I spoke with some call center planners and executives, along with our Vicki Herrell, and think that this next statement rings pretty true: the contact center operation is 90% reactive and 10% proactive, when it comes to making decisions. We, as an industry, tend to first notice something is broken, and then we work to fix it. Our decisions are made out of necessity most of the time.

Certainly, some decision making comes from an idea generated somewhere in the organization. However, for most organizations there is a standard way of making decisions. If you apply a little more rigor to the process than is probably formalized in our individual operation, decision making probably follows something like this:

1. **Monitor the operation.** Forecasters often “re-forecast” as the contact center environment changes. Often, through this process, operational changes are first noticed.
2. **If there is a change, determine the likely scenario (or better yet, scenarios).** The decision to “reforecast” is often a decision itself. Deciding that an operational change is worthy of a reforecast is often the equivalent to saying that the operational plan needs to be changed as well. The best organizations (not most) will look at the range of possible forecasts, and not one static forecast.
3. **Develop new plans for all scenarios.** From a reforecast or a new forecasting scenario, new hiring plans, staffing levels, and budgets need to be determined.
4. **Make a decision.** What is the new plan?
5. **Repeat.**

Can We Improve this Process?

Contact center analytic technologies have been available for some time to help with the various steps in this decision making process. These technologies have been developed separate of each other, and it has only been recently that the computing horsepower exists to run these sophisticated modeling technologies together. But our industry now has a fair amount of experience with this comprehensive approach.

It is in this comprehensive approach that normal statistical or optimization models become “super models” able to answer strategic business questions from forecast to budget optimally in minutes.

These technologies enable better decision making; but the business processes that surround them are as important as the technologies. I’ll discuss each of the technologies and the business processes together.

The Four Enterprise Analytics Business Processes:

1. Automated Forecasting and its Appropriate Role

Most of the time, call center organizations view forecasting as a process that simply develops new handle time and volume forecasts. Any differences between forecast and actual are considered “error.” Leading organizations view this very differently.

Forecast “error” doesn’t mean that the forecast analyst is wrong, instead they view error as variance to the baseline (the forecast is the baseline) and an item to be explored. Is the business environment different?

Has the operation changed something? Are the mix of calls different because of some mailing?

Similarly, the best organizations forecast — using sophisticated but common forecasting algorithms — more important metrics than just handle times and volumes. They also know that it is as important to forecast shrinkage, attrition, wage rates, etc...

2. Automated Variance Analysis

Traditionally, forecast variance has been an exercise in budget compliance. Variance has served to crack that whip and make sure nobody spends too much.

However, leading operations view variance as something to be investigated. What happened to cause this variance? A series of questions need to be answered:

- Is it a mistake? Was there a math error when developing the forecast?
- What is the root cause? What is the reason, internally (the operation) or externally (the market environment), for the variance?
- Is this variance expected to be part of a long-term trend or is it a single event?
- Can the operation control this variance?

By answering these questions, variance analysis gives operations managers the best chance to develop scenarios for analyses.

3. Developing Response Plans

The best planners have two weapons available to them. They have a way to determine what will happen under any planning scenario and they have the ability to automatically and optimally develop new plans in response to any changes.

We have all heard a lot about the technologies that bring these two analytic weapons to reality. Discrete-event simulation allows any contact center analyst to accurately answer what-if questions like:

- If volumes keep increasing above plan, what will be my service levels?
- If attrition climbs, will we be OK?
- Should I combine workgroups?

Integer Programming is the best mathematical method to determining the operation's best plan given any change in the business environment. It answers the question: given my changes (volumes and/or handle times and/or shrinkage, etc.), what is my best hiring and overtime plan that minimizes the number of resources, but still hits my service goals?

It is only recently that these two technologies, discrete-event simulation and integer programming, have worked well together and the power of these is easy to see. Leading contact centers can quickly and accurately perform what-if analysis (simulation) as well as quickly and optimally determine their best business response (integer programming).

4. Enterprise Performance-Risk Outcome Matrix (EProm)

Given that leading organizations can quickly and accurately plan for any possible scenario, they also have the ability to determine what would happen if they were to plan wrong! These technologies allow a different take on the planning process — they allow us to monitor and optimally plan for business uncertainty.

EProm is a technique that enables good decision making in an uncertain business environment. If you believe that your forecast could be one of several possible forecasts, it is best to cost each of the scenarios out using simulation and integer programming. But it is also important to cost-out the real possibility of making the wrong business decision.

By doing this, you measure forecast error by business risk. That is a powerful piece of contact center analysis!

Strategic Action

By automating this decision making cycle, strategic decisions are no longer any big deal. Instead, they occur as a regular part of the way of doing business.

Business decisions are developed knowing both the uncertainty and the best response given the uncertainty.

Strategic risk analysis is the natural outcome of this process.

We have recently developed a white paper on this process. If you are interested in a copy, please visit our website at: www.BayBridgeTech.com/articles.

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