

Snapshot

*Call Center Management to
Create Performance Advantage*

A Member Supported Research Program & Industry Forum

On May 19 - 20, 1999 the Wharton Financial Institutions Center held its Spring Call Center Forum meeting in Tampa, Florida. Following the success of last year's meeting in San Antonio where we combined our normal research discussions with visits to member sites, we again structured the two day meeting around the Wharton research program and visits to members' facilities. We are grateful to Chase Manhattan Bank and Bank of America for their support in helping to host the May meeting and their hospitality in organizing visits to their Tampa facilities.

The two site visits included executive overviews and then tours designed to illustrate the application and execution of specific management strategies. The Chase site in Tampa services their credit card customer base while the Bank of America site focuses on general consumer and business banking customers. The range of products and customers represented by these two sites reflects the broad nature of the Forum membership. From its inception, the Call Center program research mandate has emphasized the value of learning from the diversity of experiences in Call Center management across various segments of the financial services industry.

The research discussion portion of the meeting followed our usual pattern of highlighting findings from on-going research initiatives, engaging the group in discussion of issues raised and seeking direction and advice for future projects. Central to the research forum concept is the partnering with member firms in particular initiatives where the on-going interaction between Wharton faculty and industry executives not only enriches the research but provides practical value to the participating firm. Over the several years of the Forum's existence, the research agenda continues to evolve with new projects emerging from the meeting discussions. In the May meeting, several new initiatives were introduced and partnering opportunities described.

What follows is a brief "snapshot" summary highlighting the two day event. Relevant academic working papers and other materials related to the Call Center Forum are available at the project web-site at <http://fic.wharton.upenn.edu/fic/wfic/forum.html>

Our next meeting of the Call Center Forum is tentatively scheduled for December 2 - 3, 1999 in Philadelphia.

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Bank of America Site Visit

John Pataky, Senior Vice President
James F. Walters, Senior Vice President
Bank of America

Our hosts from Bank of America included Jim Walters and John Pataky who provided an overview of their national call center network and the specific activities within the Tampa facility. Jim began with a description of their increasingly integrated network of consumer and business banking call centers (exclusive of specialized centers for cards, mortgages, securities, etc.). By linking centers together and centralizing routing decisions, they are gaining new flexibilities in staffing and facilities management. With distributed routing capabilities they have found, for example, there is no need to maintain 24 x 7x 365 schedules in all centers. By identifying call types in the central VRU, more targeted routing can be done matching representative skills and customer needs throughout the system.

Defined career paths through increasingly complex call types and customer segments is a critical element of the new Bank of America call center model in Tampa.

John Pataky described the Tampa facility's evolution from the old model of common CSR skill sets, a "one size fits all" service standard and a limited sales capability towards the new model where technology is facilitating a much more targeted service capability. By

structuring their intelligent routing on a matrix of call types and then matching to CSR skill levels, service delivery becomes more effective and selling becomes targeted. Continued refinement of customer information data and segmenting strategies will further enhance their ability to appropriately match CSR skills with customer needs.

These changes have also resulted in a re-design of human resource management practices and performance metrics. Defined career paths through increasingly complex call types and customer segments is a critical element of the new model. Average handle times become not a performance measure but rather a diagnostic tool to better understand requirements for different call types and/or customer segment needs. New training in retention management is part of a corporate determination to build in a broader base of accountability for relationship retention and growth.

The Call Center Forum Research Agenda

Patrick T. Harker
UPS Professor & Chair
Operations & Information Management
The Wharton School

Pat Harker opened the research portion of the meeting describing the evolution of the Call Center Forum and led a discussion on future directions. The Call Center Forum is completing its third year of activities (July to June program year) and as the industry has evolved, so too has the research agenda. Much of the initial effort was focused on operating efficiency and production issues.

The research program recognizes that efficient service delivery requires an integrated view of technology, process and people.

How should we think about capacity? What are appropriate abandon rates? Early on though it became clear that the goal of efficient service delivery is less a pure operational question and more appropriately an integrated view of applied technology, business process and people management. The various research initiatives over the past several years have continued to probe these three elements and focused on better understanding the linkages.

In the general discussion it was agreed that these are the right themes but the evolution of the business is creating a new dimension worthy of study: the place of call centers within the broader delivery strategy. Specific issues are being raised around how to think about the whole question of channel integration. In this context, the discussion turned to the concept of “customer efficiency,” where the emphasis is on maximizing the efficiency each customer can provide in all his or her channel interactions.

As one participant noted, knowing that certain customers always call for balance information prompted them to include this information to this subset up front, before prompting for VRU choices. The result: a more efficient VRU interaction and a customer whose needs are efficiently satisfied.

Customer Loyalty and the Value of Service

Noah Gans
Associate Professor
Operations & Information Management
The Wharton School

Noah began with a review of the Forum’s early discussions on service, which focused on speed to answer (ASA) statistics and relative benchmarking among the firms. His current work attempts to expand the notion of service to other dimensions and link to an outcome, customer loyalty. To better understand the link he has been developing a mathematical model to characterize the trade-offs between service quality and customer retention.

The model is built on the premise that each call in the center achieves a level of service as defined by waiting time, problem resolution and personal attention. Each of these interactions builds in the mind of the customer leading to a cumulative effect on loyalty, and ultimately retention. In his presentation this empirical model was used to explore two broad questions:

- *How does the level of service affect the duration of customer loyalty or the probability of defecting to a competitor?*

- *How do other factors affect customer loyalty?*

Research on human decision making suggests that consumers think of service providers categorically as either good or bad suppliers. For a variety of reasons they are unable to, or do not, think in terms of fine gradations. As the model demonstrates, and particularly in commoditized product environments, there is indeed a strong retention response to improvement in quality but the real impact occurs (the curve steepens) only beyond a certain base-line level of expected or average service. How one gets to this “sweet-spot” involves a trade off with expenses and an understanding of the relative profit potential from a given customer segment.

There are, of course, other factors that affect loyalty and need to be included in any management strategy. Switching costs are important barriers to customer defection and affect loyalty. It’s useful to also think in this regard how a negative switching cost (i.e. a payment to incent switching) is used to manage the customer loyalty equation. On the other hand, it was also noted that perhaps technology tie-ins such as PC-Banking and personal financial software can create higher switching costs.

Finally, prior beliefs about the supplier and its competitors can have an equally important effect on loyalty. Interestingly, it is also true that their beliefs are most malleable when a supplier is thought to be “average,” the case for most consumer banks. This strongly implies that investing in strengthening brand image or segment driven positioning strategies will have relatively high pay-offs in the industry. The challenge, of course, is to deliver on the differential positioning strategy.

The service model developed by Gans empirically demonstrates that improvements in service quality lead to strengthened customer loyalty.

Noah next led a group discussion on the broader question of what is good service quality. The responses varied but generally revealed an increased appreciation of the need for segment or customer level differentiation. At the same time, it was also agreed that the primary and driving factor was efficient problem resolution, “having someone empowered (and knowledgeable) to fix my problem.” As discussed, another view of this is reflected in Lorna Doucet’s work demonstrating that matter-of-fact or emotionally neutral CSR behaviors lead to more efficient interactions and greater levels of customer satisfaction.

Lastly, it was also noted that increased customer contact is positively associated with retention. As one participant noted, “Defecting customers more often than not do not call to complain.” Outbound retention calls are increasingly used to leverage this part of the loyalty equation. As was seen later during the tour of the Chase facility, a number of institutions have taken these functions to highly sophisticated levels.

Managing Technology Investment Decisions

Lorin Hitt
Associate Professor
Operations & Information Management
The Wharton School

Lorin Hitt began by describing his work in studying the role of information technology on firm level performance. This research is motivated in part on the well documented “technology paradox” which states that despite increased investment interest in IT within the U.S. service sector, (and other areas of the economy as well), there is little or no discernible impact on total productivity. Digging deeper into the data, Hitt and others find more positive correlations but more importantly, significant variation among firms. His work to date has focused on what can be learned about management practices as a differentiating factor in the successful application of IT.

The case analysis of PC-Banking illustrates the shortcomings in basing IT decision criteria exclusively on traditional cost and projected revenue metrics.

Lorin’s recent work examined the role of IT decision processes in U.S. banks as one critical management practice. Based on a best-practices framework for technology decision processes, Lorin and his colleagues find that in the banks studied there was a generally consistent pattern of strengths and weaknesses. Seen as a series of steps, the overall process begins with idea generation,

followed by evaluation, approval, resource allocation, project management and ends with project review. The results of their field research showed that the banks were generally quite good in structuring and managing the idea generation phase, working through systematic approval processes and the traditional project management function. Where the banks tended to exhibit relative weaknesses were in the areas of project evaluation, resource allocation, and post-project review. As discussed with the group these three areas are closely related. The fact that project evaluations tended to be largely limited to accounting projections was seen to be problematic for many new information based applications, e.g., Internet. The uncertainty around the financial projections then leads to less confidence in ultimately prioritizing projects and allocating necessary resources. Lastly, the tendency to focus exclusively on financial measures limits the effectiveness of any post-project reviews and misses the opportunity to evaluate other important outcomes.

As Lorin noted, these issues are not confined to the banking industry but reflect the need for more sophisticated performance metrics that go beyond DCF analysis to capture the range of issues related to IT investments. The new methodologies become especially important as firms invest in new technologies, distribution vehicles, etc. where the future outcomes are less predictable or certain. Lorin’s case analysis examining the decision processes and outcomes of investment in PC-Banking illustrates this latter point. Many of the cost and revenue assumptions used to evaluate the investment in PC-Banking systems were never realized, but examining the banks’ data more broadly, unanticipated benefits around the value of PC banking customers were discovered.

The point made was that by thinking more broadly about original project objectives and then rigorously evaluating the ultimate outcomes, different and more appropriate business strategies may emerge.

The paper describing this latter research, co-authored by Lorin Hitt and Frances Frei, is available on the Center's web-site under the title "Do Better Customers Utilize Electronic Distribution Channels: The Case of PC Banking" (#99-21). The broader research on IT design processes will soon be available from BAI, who sponsored the research initiative.

IT Decisions Process in Call Centers

Patrick T. Harker
UPS Professor & Chair
Operations & Information Management
The Wharton School

Paul O'Malley
Vice President, Electronic Commerce Group
Key Bank

In a continuation of the dialogue on IT investments, Paul O'Malley shared with the group the IT investment process within Key Corp's Electronic Commerce Group. Pat Harker then led a further discussion on new methodologies and approaches to IT project evaluation.

Paul first described Key Bank's "virtual" nationwide call center network with four physical sites managed as one logical entity. The IT decision process for this environment includes a mix of call center and IT managers and a series of committee structures: a Project Review Committee, a Financial Review Committee and a Business Process

and Analysis Committee. The IT decision process at Key Bank is tightly aligned with the strategic plan such that tactical decisions are systematically evaluated against the business strategy. While financial metrics are important, the approval process includes evaluation of non-financial objectives from both customer and internal perspectives.

Real option analysis is an effective tool to explicitly recognize that some IT investments add value by providing the option to do something in the future you might otherwise be precluded from doing.

Following a more detailed presentation on the elements of the Key Bank process, Pat Harker led a discussion on the role of performance metrics in evaluating IT investment decisions. The basic message was that IT strategy decisions require more complex analytical tools than those historically employed. In this context he described the use of real option concepts to be incorporated with NPV assessments. This allows the explicit recognition that some investments may add value by providing the option to do something in the future you might otherwise be precluded from doing. He further illustrated how decision trees can help structure the uncertainties associated with new IT investment decisions and the use of scenario planning to integrate key uncertainties into possible futures. Lastly, in addressing the tendency to evaluate individual decisions in an isolated manner, Pat discussed how portfolio management techniques can be used to optimize the mix of IT investments relative to strategies and goals. In leading-edge firms, this latter function is often seen as the primary responsibility of the IT steering committee.

These new tools, used in a variety of industry and firm level environments, are increasingly viewed as critical elements of IT management processes.

Impact of Learning and Turnover on Staffing Decisions

*Noah Gans
Assistant Professor
Operations & Information Management
The Wharton School*

Noah Gans next discussed his recent work in evaluating the impact of incorporating CSR learning and turnover experience into longer term scheduling and hiring decisions.

Through the application of dynamic programming models, he attempts to build on current call center practices in two ways:

First, the model captures two sources of CSR variation. CSRs with longer tenure tend to be more productive and exhibit lower turnover rates. Whereas CSRs with shorter tenures tend to be slower and experience higher turnover. Second, the model is designed to incorporate the common scheduling tools used for short term staffing decisions, such as software offered by TCS, IEX, etc., and incorporates this into the longer term analysis. Rather than basing staffing plans on estimated number of FTEs required to handle forecasted call volumes, the model uses the scheduling software to explicitly represent the costs of alternative staffing decisions – beginning with regular compensation; and then overtime; and finally outsourcing options – to address needed capacity. The model then chooses the optimal staffing plan that minimizes cost.

For environments where spare capacity is available (and thus at a lower marginal cost), the simpler hiring schemes do fine and there is

little value to the more complex analysis incorporating CSR learning and turnover profiles. This appears to hold true for a range of theoretical mixes of CSR profiles. However, as attested to by the group, most current call center environments run with limited spare capacity. In these environments, the model demonstrates that the simpler hiring schemes can lead to costly misestimations. The clear message is that there is real value in utilizing the more complex methodology to track employee populations and incorporate CSR learning and turnover explicitly into long term staffing strategies.

For typical call center environments with limited space capacity there is real value to incorporating CSR learning and turnover data into long term staffing models.

Following a discussion of these findings and business implications, Noah described his goal of deepening our understanding of the impact of CSR learning on staffing decisions.

The current model demonstrates the benefits generally but to add more exact parameters he will be looking for data at the individual call level. Specific data on individual handle time based on call type, time of day, queue length, etc. coupled with similar data on abandons appears to be available from the newer generations of reporting software. Incorporating this type of data with his theoretical queuing models will allow us to begin addressing questions around what drives handle times, measuring the effects of call type, CSR learning, fatigue, status of the queue, etc. Similarly, the detailed abandonment behavior will permit the analysis of what drives abandonment and potentially

measure the impact of differentiated interventions such as messages received while on hold.

As with the other research initiatives, forum members were encouraged to contact Peter Burns or Noah about their interest in partnering on this work. As with all such projects, research results will be generalized for the Forum and in subsequent publication, but individual firms will have the opportunity to evaluate their proprietary results directly with the research team.

Information Search Strategies

Lorna Doucet

Assistant Professor

Department of Business Administration

University of Illinois at Urbana-Champaign

Andrea Singer

Vice President

Chase Manhattan Bank

Andrea Singer and colleagues at Chase have been working with Lorna Doucet on the development of a new research project on CSR behaviors. In her earlier work on the emotional quality of CSR behavior, Lorna demonstrated that informational responsiveness results in better service quality, customer satisfaction and efficiency. The next question to be addressed is where do service representatives go to get the information they need to be efficiently “informationally responsive”?

Andrea opened the discussion with an outline of the business case driving this initiative. As she pointed out, the basic skills of entry level workers are declining while the complexity of jobs is increasing and customers are becoming more demanding. In this context how we provide the right information to CSRs and in the most effective manner is critical to

meeting the business challenge. Better understanding of how CSRs develop search strategies, navigate amongst alternative information sources and interact with their colleagues in the process are all key elements of the management challenge.

The research design calls for an elaboration of a theory of search strategy and then tests the theory in an organizational setting. The foundation for the theory is based on the mix of people and technology driven interactions and a codification of the characteristics of information media, ie., accuracy, clarity, cost, etc. This phase 1 period is currently under way and will be based on structured interviews with CSRs in a variety of business environments, from traditional account servicing to inbound sales to more complex product/customer segments.

High performance CSR's also appear to be most adept at utilizing on-line help systems.

The first round of one-hour interviews with 32 employees in Chase's Houston Center was recently completed and the results are currently being analyzed. Some very preliminary results shared with the group included the finding that while the range of information sources is broad, on-line help is clearly seen as the best information source. It also appears that using on-line help systems is an acquired skill. High performance workers are more adept at navigating the system and finding the right answers. These higher performing CSRs will use their discretionary time to learn and update their search skills. In the general discussion it was interesting to

hear of the variety of management approaches to the acquisition of on-line help skills. One firm noted that they have built into their schedules a specific 15-minute block at the beginning of each shift to allow reps to explore on-line help and check updates.

The remainder of the discussion focused on information interactions with managers, customers, “expert” colleagues, and the use of personal notes. With personal notes, for example, it was observed that the existence of lots of notes on a desk was often seen as a sign of “expertise” by the surrounding representatives. The question arises as to whether this information was current or perhaps even appropriate.

These and other elements of the information search process will be explored in the detailed research. As a next step, Lorna will be looking for several partnering firms to broaden the range of interview subjects. With much of this work hopefully completed in the summer, she expects to begin phase 2 in September, testing a resulting theory of search strategies through surveys, behavioral logs and performance measurements in multiple organizations. Firms wishing to work with Lorna and assist in this research should contact Lorna directly or Peter Burns at Wharton.

The Quality of Jobs and Mobility Opportunities for Call Center Workers

Larry W. Hunter
Assistant Professor
Management
The Wharton School

Chip Hunter closed the research discussions with an outline of his continuing work in

examining job content and directions in call center environments. In this new initiative, Chip and his colleagues at Wharton will focus on call center jobs in the financial services industry while his colleague at Cornell, Rosemary Batt, will lead a similar effort in the telecommunications industry. This work is being funded by a multi-year research grant from the Russell Sage and Rockefeller Foundations.

As an overview, Chip noted that for employees in call centers on-line work can be tedious and emotionally exacting. Poor work design or dead-end jobs may also result in lower service quality and/or high rates of turnover and absenteeism. How, then, can employers provide cost-effective service delivery while maintaining a skilled and motivated workforce? Exploring this question empirically is the central objective of the new project.

Can employers use career ladders to provide cost-effective service delivery while maintaining a skilled and motivated workforce? This is the central question to be addressed in Chip Hunter’s new research.

Chip and the rest of the team are looking to identify best practice approaches to managing the Call Center workforce. One set of research questions focuses on understanding how skill requirements vary across distinct customer segments and service bundles. Under this broad question, the research team will work to identify appropriate mixes of computer skills, social interaction and negotiating skills, and knowledge of products

or services. The team will then study how different ways of meeting these skill requirements in turn affect retention, service quality and efficiency

A second line of questions investigates how work and career ladders should be designed around these skill requirements. Can employers structure jobs so that employees are motivated to utilize their skills fully and to remain committed to the organization? How can employers capitalize on investments in training and the existing skill-base of their employees, and how can employees develop challenging careers in customer service and sales? What mix of management strategies and incentives allow employees to continually learn and upgrade their skills and take on increasingly complex customers and products? Some companies, for example, are developing best practice models of skill-based job ladders that capitalize on investments in employer training and allow for flexible deployment of employees within and across business units or subsidiaries. The research will examine the viability of alternative skill and career development strategies.

Chip and his colleagues are ready to partner with several of the firms represented in the Forum to complement the similar effort in the telecommunications industry at Cornell. Ideally, partner firms in financial services will have at least some of the following characteristics:

- ❑ Multiple call centers
- ❑ A mix of customer segments served through call centers

- ❑ Some outsourcing of sales or service
- ❑ Varied approaches to jobs and work organization across or within the center.

The researchers will require some access to employees (through interviews and a survey) and to company records (to track career moves, and to examine performance, for example) in order to accomplish their research aims. The intent is to minimize the intrusiveness of the research and keep all data confidential; no firms or individuals will be identifiable as a result of the research. The research is beginning in summer 1999 and the team hopes to present results both in individual settings with partner organizations, and to the Forum in upcoming meetings.

Member firms interested in exploring participation should contact Chip Hunter directly or Peter Burns at the Financial Institutions Center.

Chase Manhattan Bank Site Visit

Gene Marshall, Senior Vice President
Mike Jones, Vice President
Chase BankCard Services, Inc.

The Forum meeting in Tampa concluded with a tour of Chase's credit card call center site in Tampa. The visit was organized by Gene Marshall, the Tampa site manager and included a presentation by Mike Jones on their advanced Automatic Number Identification (ANI) applications. The tour highlighted the use of ANI applications and included a separate presentation on the

evolution of their specialized customer retention unit.

ANI application at Chase can be used to route calls and provide customer specific VRU scripts based on customer types.

Chase BankCard Services are supported by a networked call center environment with multiple access points to each installation. Intelligent routing delivers calls to the most skilled next available agent and the system has the capability to move volume among call centers.

The technology architecture aims to link traditional telephone and IT applications to provide strategic servicing advantages. These integrated solutions include information based routing capabilities, enhanced MIS and data mining opportunities and unique applications of ANI. Chase attains about a 50% hit rate on their ANI application and has devised a number of processes to improve capture of appropriate numbers. The use of ANI in the VRU and at the CSRs desktop for security verification has led to reduced CSR handling time, reduction in call center related fraud and improved customer satisfaction. ANI applications can also be used to route calls and provide customer specific VRU scripts based on customer information and preferences.

Lastly, the ability to link ANI with the evolving history of a customer's contacts enriches the account database and enhances both future marketing/service initiatives and fraud detection capabilities.

The separate presentation on Chase's customer retention unit traced the evolution of the team's initial efforts in 1993 to the advanced level of sophistication today. Their segmentation strategies were initially developed in 1997 and since then, the unit has greatly expanded segmentation variables enriched by a wealth of behavioral and transaction detail routinely captured. A range of options including balance consolidation offers, reactive pricing, line increase opportunities and other product benefits and features has led to dramatic increases in save rates from those customers most highly targeted for retention.

**1998 – 1999
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