User Experience in the Contact Center

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Abstract

Designing user interfaces for contact center systems presents both unique challenges and opportunities for user experience professionals. Based on years of experience working with the contact center domain, the author shares insights and presents proven tactics for creating optimized systems.

This white paper will help readers to:

• Determine what makes designing for contact centers different from a more typical user-centered design process (e.g., for websites or applications).
• Understand how to approach the design of contact center systems on their own, based on tactics shared and lessons learned.
• Explore unique design considerations for the contact center environment.
• Identify the ramifications of design changes within this particular domain – including the likelihood of parallel changes in culture and business processes.

Author's Background

Dr. Robert Schumacher, Managing Director for User Centric, has more than 20 years of experience in corporate and academic environments. He has worked for telecommunications, new media, Internet, and travel-related companies. Dr. Schumacher has designed user interfaces for dozens of applications, devices, and services, and also taught courses in user interface design. He wrote the Ameritech Standards for Graphical and Character User Interfaces, and is the inventor of two patents (with additional patents pending), including a patent on the design of document browsers. The author has particular expertise in developing metrics for user performance and then working those metrics into financial models and business cases.

Dr. Schumacher’s expertise:

• Experience developing user interfaces for multiple contact centers for Fortune 100 companies, which involve thousands of agents handling millions of calls per year
• User interface design, business process improvement, prototyping and evaluation of contact center applications, document delivery systems, and web applications
• Graphical, character and phone-based user interface standards
• Cost/benefit analysis of user performance; metrics design and development; business case financial modeling
• Experimental design, statistical analysis, and human factors research methodologies
Introduction

As the scale of contact center operations increases, it is becoming a primary area of focus and opportunity for the field of user-centered design. One large Internet services provider is typical of the effort and investment that organizations are willing to invest in their contact centers. Beginning with just one center in 1995, this service provider built a network across the country including eight contact centers with over 200 technical support agents who handle an average of 1.3 million calls monthly.

This domain has an inherent complexity that should not be underestimated. Designing user interfaces for contact centers is a balancing act that involves the ability to weigh multiple considerations, issues, and pressures. Usability professionals must be aware of some vital factors before they can design interfaces that are suited to the tasks of a contact center end user.

The body of the paper will address the following five key concerns that are essential to advancing the user experience:

1. What makes designing for contact centers different?
2. How to get started: Understanding the contact center user
3. What role does training play in enhancing the user experience?
4. Design considerations for contact centers
5. How does designing within this domain result in culture change?

The Contact Center Challenge

You must approach the design of contact center systems somewhat differently than you would approach the design of more typical user interfaces, such as websites or applications. Although the core design principles remain the same, specific business and user issues that warrant a more specialized and detailed approach.

1. What makes designing for contact centers different?

The following distinct differences must be taken into consideration to succeed within this domain.

- **High volume transaction environment** – The contact center is different from other environments because of its transactional nature. Not only are there numerous service agents, but each agent may take scores of calls during each shift. The result is thousands of customer interactions per day across each center. In many ways, contact center workers are more like high-tech assembly workers than “garden-variety” users of a commercial website.

- **Potential for impact** – Because of the scale (people X transactions) of a contact center operation, the potential for small design changes to have profound user and business impacts increases substantially. What some might interpret as minor modifications (e.g. reduce the type font) can result in significant perturbations in performance, and more importantly, ramifications to the business. Average changes of 10 seconds per contact may not seem like much in a three-minute contact, but in large contact center environments, such a change can add millions of dollars of cost per year. To be successful, design changes must adhere to the “Do No Harm” principle. Testing for change impact is necessary.
• **Interdependence** – Unique to the contact center design is the notion of one person (the user) controlling the interaction, but another person (the caller) directing. When we design, we typically think of one person interacting with an application; however contact center agents have someone directing them to interact with the application based on some external (e.g., the caller’s) goal. The design needs to satisfy the needs of the contact center user as well as the needs of the caller – in spite of the fact that goals are often hidden and out of alignment. Designs must anticipate what callers will say and design for the next step. For example, a caller simply wants their bill balance, but while providing that information, the agent – because he needs to meet a quota – offers to open a credit application.

• **Demands of multiple systems** – The average contact center service representative computer’s desktop is often more “cluttered” than a typical user’s. Applications need to accommodate a complex conversation that is a byproduct of the customer negotiation. The technology environment in which most contact center agents work, however, is not state-of-the-art. From a cognitive standpoint, agents often have to remember different methods for finding and entering information brought about by the inherent inconsistencies of multiple applications. Designs must take a longer-term view and map out a plan for cross-application consistency, which may mean making sub-optimal near-term choices for eventual positive returns.

• **Business issues** – Usage of applications by contact center agents are sometimes driven by organizational pressures. For example, if a sales group wishes to promote a certain product, agents – often the most malleable part of the “system” – absorb the brunt of the change. Designs must account for the organizational realities and shifting business priorities.

• **Performance pressures** – Agents are often under severe management pressure. Contact center managers expect agents to meet pre-determined performance criteria (for example, take 60 calls per day and sell 25 widgets). Management scrutinizes call handling time, sales figures, adherence, and error rates. The agent’s living is determined to a large extent by the design of the user interface; applications can either facilitate or impede an agent’s ability to get commissions. Designs that seek to maximize both organizational goals as well as personal performance goals succeed.

• **Expert behavior** – Contact center agents are expert users. They rapidly over-learn their interactions to the point observers watch in amazement. Experts benefit from having more information at once rather than less. A critical mistake is to discount the expert and design for the novice. In contact centers, novices become experts very quickly. Design for the expert; support the novice. Good design helps create experts.

• **Design control** – Although contact center management may often be tempted to allow more seasoned agents design systems, this is a dangerous practice. “Experts” often make poor design decisions due to over-learned behavior and an inability to verbalize their actions. Furthermore, many studies have shown that content experts are not user interface design experts. Design according to solid task analysis, user interviews, and recognized design practices.

• **High costs of training** – Because the business demands expertise by agents, training costs are high. It is difficult for organizations to reduce these costs as long as the average turnover rate (typically between 25-40%) for agents is

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sustained. Design to reduce training costs; good designs will reduce the amount of training required.

2. How to Get Started: Understanding the contact center user

Armed with knowledge of what makes designing for contact centers different, one must be able to employ specific tactics to produce desirable results.

- **Observe** – The importance of on-site, side-by-side observation cannot be overemphasized. Without knowledge of the use environment, you are unlikely to be taken seriously, let alone succeed. With all the tasks and expectations that service agents are faced with on a daily basis, it is impossible to predetermine these constraints without observing them. You have to understand the agents' environment well before you can collect appropriate data. Seeing the papers they have tacked on their walls, the handbooks in use, and the various calculators employed – on a first-hand basis – is essential to good design.

- **Determine value drivers** – Contact centers have both business and user value drivers. The first step to good design is determining what these priorities are. For example, does the organization value increase sales over handling time? What issues motivate agents? Which activities are considered important and what is their frequency? Answers to these questions can be determined through observation and interviews. Ask local managers for the metrics on which the agents are evaluated and coached. Learn how realistic these are. What are the barriers to achieving the goals?

- **Apply unique approaches** – When do agents use paper? What cheat sheets do they have tacked up on their cubicle walls? Do they trust the applications? Techniques such as eye-tracking\(^2\) can be employed in combination with more traditional methods of analysis to achieve a greater depth of data. Use technology to collect a corpus of interactions for later viewing and analysis.

- **Employ decision support initiatives** – Identifying and evaluating the processes that agents have to go through to accomplish given tasks is critical. Business processes are often layered on top of a system’s basic functionality. It is critical to gather data on processes because the information you gain will allow you to employ decision-supporting methods.

- **Understand the methods, procedures, policies, and practices** – Most contact centers have extensive documentation prescribing what the agents are supposed to say and do in most cases. These documents are invaluable. It is also very revealing to discover how much – or how little – agents adhere to these practices.

3. What role does training play in enhancing the user experience?

Companies like Ritz-Carlton invest, on average, a minimum of 310 hours of training per year on each new contact center employee\(^3\). The principles of user-centered design dictate that good designs will reduce the need for training. Within the contact center domain, this principle

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\(^2\) Eye tracking is a technology that provides a non-intrusive, remote and highly accurate way of gathering data on users’ eye movements. Eye tracking can provide additional quantitative data to evaluate and compare usability across different screens. Results can help determine the appropriateness of layout, efficiency, and information clarity.

\(^3\) [http://www.speechtechmag.com/whitepapers/Ascent2.pdf](http://www.speechtechmag.com/whitepapers/Ascent2.pdf)
can be used as the crux of an argument for the benefits of investing in the user experience. As described at the beginning of this paper, training costs can be one of the most expensive elements of a contact center operation. The average cost to recruit and train just one representative is $8,000-$12,000\(^4\). Although training remains vital to producing knowledgeable agents, usability specialists must advocate the need for their expertise in helping to eliminate redundant training.

### 4. Design considerations for contact centers

It is just as critical to fill our design arsenal not only with tactics, but also with basic usability principles that will enhance the contact center user’s experience. Some specific considerations include:

- **Do no harm** – It’s important not to make agents’ jobs harder, or to add additional burdens that would prevent them from meeting their performance objectives.

- **Design for the expert, but support the novice** – Because of high turnover rates with agents, both the expert and the novice must be considered.

- **Apply high bandwidth** – Simple isn’t always better. Experts do not want to be spoon-fed information. If well-constructed, contact center agents can handle highly complex displays to the benefit of the caller, themselves, and the business.

- **Assume training** – Because designs are often so “web-centric,” we forget that in the case of call centers, agents will be trained, if not drilled, in the use of the applications.

- **Minimize interruptions to process flows** – Screen and data flows should be as parsimonious as possible, using effective visual coding to draw the eye to the proper steps. Also pop-ups that provide no variable data should be avoided.

- **Agents are not designers** – This principle is especially important to follow within the contact center domain.

- **Avoid the “tyranny of the expert”** – If contact center systems are designed based on input from expert agents only, they will not have an appropriate perspective for more novice agents. Management often defers to a single user to make design decisions.

- **Management is not the user (but they must approve)** – Although management determines the business priorities and performance metrics, they are not the end users and should not have the final say in the end design.

- **Develop high-fidelity prototypes and test with agents, and test with agents and test with agents...** – In order to effectively assess a proposed design, agents should be given the most realistic view of the system in as realistic situation as possible. This is the most secure method of obtaining quality results.

- **Use adequate sampling sizes for assessment** – Because of the complexity of the domain, appropriate sampling must be employed to ensure effective results.

- **Leave little to the creativity of programmers** – As discussed above, even small changes can affect performance metrics within a large scope of contact center activities; it is important not to leave even the smallest design decision to programmers.

\(^4\) [http://answers.google.com/answers/threadview?id=71118](http://answers.google.com/answers/threadview?id=71118)
• Graphics matter, but not as much as efficiency – Response time is usually a major performance factor, so any graphics that increase time and provide little value must be avoided.

5. How does designing within this domain result in culture change?

Based on experience, any time a new application is introduced within the contact center environment, the result is a change in culture for the business. There are often ripple effects of design decisions throughout the contact center organization.

Usability practitioners must support progressive design initiatives. Management should be aware that new designs often result in concomitant business process changes and the dynamics of both arenas need to be controlled. It is also important to communicate plans for new designs, while maintaining a certain degree of cautiousness in how these communications are organized.

Conclusion

Enhancing the user experience within this environment could be seen as a more challenging goal to accomplish than it is elsewhere. However, efforts made within contact centers are also more likely to demonstrate the value of usability to the average business client because the opportunity to create a tangible impact is so profound.

Be sure to implement all of the user-centered tools, methods, and tactics outlined in the paper within a model that fits an organization’s business objectives. By diagnosing a client’s business challenges first, and then prescribing an approach that addresses these issues, usability efforts within contact centers are more likely to succeed.