



Business Process Services

White Paper

Improving Efficiency in Business Process Services through User Interface Re-engineering

About the Authors

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Business Process Service (BPS) providers are increasingly re-inventing themselves to adapt to the new market dynamics resulting from emerging technologies. In their new role as strategic partners to their customers, BPS providers are aligning their solutions to the business objectives of their client organizations. Such alignment can take the form of adopting new technologies or re-engineering existing aspects of their IT landscapes.

Human-computer interaction (HCI) impacts not just how we do what we do, but also influences whether or not we like doing it. Currently, prevailing user interfaces and process flows in the BPS industry are prone to errors and inefficiencies, leading to poor customer experience. As a result, the BPS industry is focusing on leveraging user experience (UX) principles to improve HCI within its processes.

This paper proposes a systematic and planned redesign of the user interface (UI) of the applications that BPS agents work on to reduce non-value-adding motor and retinal movements, and facilitate easy identification of the relevant information. This potentially translates to increased productivity and effectiveness of agents, and thus, greater end-customer satisfaction. We also examine the manner in which organizations can determine the feasibility of adopting such a program to ensure that the results are aligned with organizational goals for UI redesign.

Contents

Introduction	5
The need to move from Usability Engineering to User Experience	5
Why the BPS industry cannot ignore UX	5
UX and its impact on business processes	6
Assessing the feasibility of UX based UI in business processes	7
Conclusion	8

Introduction

As the business landscape evolves in tandem with new technologies, enterprises must adapt their business models and operational strategies to changing market conditions. Organizations need to build high levels of agility in order to stay ahead of the innovation curve and tap into opportunities that can potentially shift the business equilibrium.

Recent years have witnessed a radical transformation in the role of Business Process Services (BPS) providers. From being reactive service providers, they are now increasingly being perceived as proactive strategic partners for their clients. The industry's ability to leverage technology in a seamless and synchronized way to cater to individual customer needs effectively has catalyzed this evolution. Developments in HCI in terms of Usability Engineering, or its next avatar, User Experience (UX), have significantly influenced the BPS industry.

The need to move from Usability Engineering to User Experience

As per the ISO 9241-210:2009 standard, UX can be defined as a person's perceptions and responses that result from the use or anticipated use of a product, system, or service.¹ User experience includes emotions, beliefs, preferences, perceptions, physical and psychological responses, behavior, and accomplishments of all users, that occur before, during, and after use. Three factors influence user experience— the system, the user, and the context of use.

Emerging digital technologies such as social, mobile, cloud, and Big Data have moved HCI practically into all areas of human activity. This necessitates the shift from usability engineering to a much richer scope of user experience, where a user's feelings, motivations, and values are given as much attention as efficiency, effectiveness, and basic subjective satisfaction.

Why the BPS industry cannot ignore UX

With accelerated growth of the BPS industry coinciding with increased customer demands for improved efficacy, UX has gained importance for BPS providers like never before. Be it customer interaction services, data entry operations, or knowledge intensive processing, the application of suitably designed UI around UX principles has proved to be a game changer.

[1] International Organization for Standardization, *Ergonomics of human system interaction - Part 210: Human-centered design for interactive systems (formerly known as 13407)*, ISO FDIS 9241-210:2009, 2009

Activity	Customer Interaction Agent	Data Processing Agent	Knowledge and Analytics Worker
Browsing	80%	10%	10%
Data Entry	10%	80%	50%
Structured Thinking	10%	10%	40%

Table 1: Typical activities undertaken by BPS associates while searching for the requisite information

Table 1 shows typical activities an agent performs while gathering information for customer interaction, data processing, or analysis. In a typical BPS process, agents need to access several applications and/or screens to get the information required to complete a task or customer call. Frequent toggling between screens to capture the required data increases the probability of errors as well as the average turnaround time (TAT). This in turn impacts efficiency and accuracy, and results in poor customer experience.

These operational challenges, which are applicable to customer interaction services, data entry operations, and even knowledge-based service processing, can be effectively addressed through UX based UI redesign. To do this we must analyze the way BPS agents interact with the IT systems and use the observations to optimize the retinal and motor movements involved. For applications with a large user base, redesigning UI can substantially increase task accomplishment or reduce call duration. To evaluate gains from employing UX in a business process, we can employ metrics such as average task completion rate, average number of errors per task, and average system usability score.

UX and its impact on business processes

As each activity in a business process involves various aspects such as browsing, data entry, and structured thinking, the role and impact of UX also varies accordingly. By leveraging UX, BPS providers can experience improved results such as:

- Customer interaction operations
 - Reduction in average (call) handling time (AHT) – With reduced retinal and motor movements resulting from composite information, an agent can respond to customers' queries faster, which helps reduce AHT.
- Data processing or knowledge intensive processing
 - Higher accuracy and reduced operational risk – Easy access to pertinent information helps agents achieve a higher degree of accuracy. In addition, guided movement within an application reduces the risk of reaching unrelated sub-processes, and feeding unrelated information in the system.
 - Enhanced productivity – With relevant information made readily available to agents, the time required to process can be effectively reduced, thereby increasing productivity.

To better understand the relevance and importance of UX in the BPS industry, let us look at two typical business scenarios.

Scenario 1: For providers of customer interaction services, one of the key parameters to gauge customer satisfaction is the AHT. Typically, the lower the AHT, the higher the customer satisfaction index. With a less intuitive and user-friendly interface, BPS agents struggle to find the right contextual information while speaking to customers, resulting in higher AHT.

The UI screens can be redesigned to collate the requisite information on a single screen, reduce non-value-adding motor and retinal movements, and facilitate the ease of finding the right information. This potentially translates to reduced AHT, and therefore, higher customer satisfaction.

Scenario 2: In multi-step data entry transactions, there is an increased probability of committing errors if the user has to navigate different sub-sections of the UI. This can be effectively addressed by developing a UI based on guided navigation to ensure smooth execution of each process.

Assessing the feasibility of UX based UI in business processes

In order to assess the feasibility and viability of UX based UI re-design for BPS operations, a scientific and structured usability assessment should be performed.

A high level view of a usability assessment exercise is depicted in Figure 1. It consists of:

1. User Centered Analysis (UXA)
2. User Centered Design (UXD)

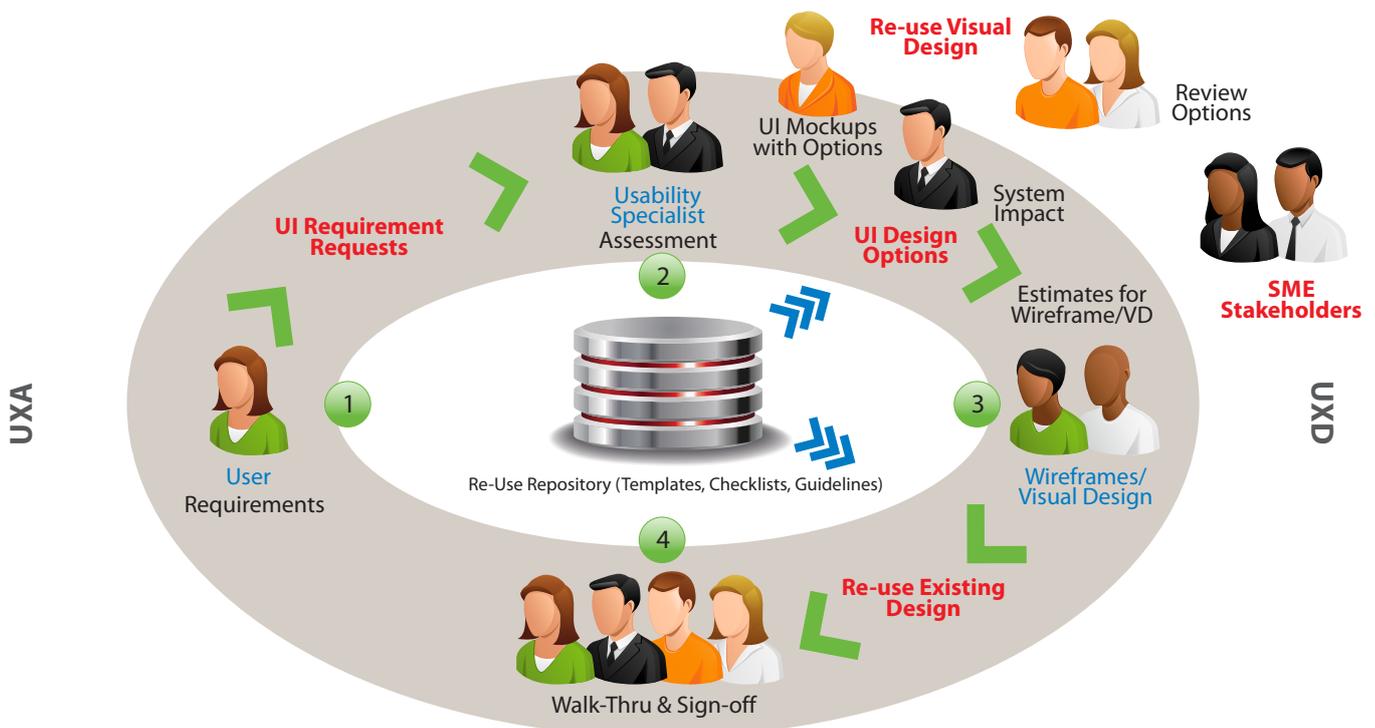


Figure 2: Usability assessment of a UX based redesign of the UI of a system

The UXA of the user interfaces in a system helps an assessor understand the underlying business goals along with the marketing and branding goals of the UI redesign. It also helps identify target users, create personas and profiles, implement various data gathering methods, create scenarios and task flows, and develop the 'information architecture' of the system. The information architecture developed during the UXA phase is a key input for developing the 'visual design', which is developed in the UXD phase.

Information architecture helps structure all the information into groups and levels. This enables prioritizing content by its impact on the processes, presents the content in an easy to understand manner, and facilitates locating an item through intuitive groups or labels.

In order to derive optimal results from a UX assessment, it is important to analyze a process from the perspective of the users— taking their goals, emotions, and activities into consideration.

Conclusion

In a challenging economic climate, organizations are looking at their BPS providers to provide cost effective ways of increasing the satisfaction of their end-customers. Since the BPS industry manages much of the interaction with end-customers, it is imperative to adopt ways to reduce AHT and increase efficacy of transactions— the key factors that influence customer satisfaction. To do this, UX principles can be used to redesign UI in a wide range of BPS processes including customer interaction operations, data processing operations, and knowledge processing operations.

An effective UI helps reduce human error and improves process efficiency for the BPS industry, thereby impacting the AHT for each transaction and leading to greater end-customer satisfaction.

BPS organizations should consider well drawn UI redesign plans that are feasible, viable, and based on sound UX principles to improve the user experience of their agents and end users. This will enable them to support their clients in delivering greater customer satisfaction.

About TCS Business Process Services (BPS)

Enterprises seek to drive business growth and agility through innovation in an increasingly regulated, competitive, and global market. TCS helps clients achieve these goals by managing and executing their business operations effectively and efficiently.

TCS' Business Process Services (BPS) include core industry-specific processes, analytics and insights, and enterprise services such as finance and accounting, HR, and supply chain management. TCS creates value through its FORE™ simplification and transformation methodology, backed by its deep domain expertise, extensive technology experience, and TRAPEZE™ governance enablers and solutions. TCS complements its experience and expertise with innovative delivery models such as using robotic automation and providing Business Processes as a Service (BPaaS).

TCS' BPS unit has been positioned in the leaders' quadrant for various service lines by many leading analyst firms. With over four decades of global experience and a delivery footprint spanning six continents, TCS is one of the largest BPS providers today.

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