Designing Experience in Service Processes Using Multi-Disciplinary Concepts

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Abstract

The paper attempts to create a structured framework for designing Service Processes for enhanced User Experience (as a User experiences a service process. E.g. check-in process in a hotel, complaint process through mobile in e-commerce, etc.). Using multi-disciplinary concepts of User Experience (UX) Design, Evolutionary Psychology (EP), Behavioral Economics (BE) and Business Process Engineering (BPE).
User Experience happens (the User experiences a process) within social, cultural, psychological, demographic and evolutionary contexts.
While interacting with a process, the User not only has Functional Goals (Hard Goals) to achieve, the User also has Psychological and Sociological aspects (Soft Goals) to satisfy. While designing a process, the psychological and sociological aspects of humans are often neglected. And emphasis is usually given solely to accomplish the functional goal.
The structured framework treats the User not in mechanical term of attaining a functional goal, but as is a living, thinking, emotional being, evolved through millennia.
The framework uses concepts of: 1.Evolutionary psychology; 2.User Experience (UX) Design; 3.Behavioral Economics; 4. Business Process Engineering (BPE).
The framework puts User at the center of design initiative. And offers a clear methodology to the organization to design the process for desired experience by the User.
Having built in the different concepts stated above, the practice adopted for modelling the Process is the extended Event-Driven Process Chain (e-EPC). e-EPC is robust and time-tested and have been used for Process Modelling for many SAP implementations across the globe.
This framework can be used for designing Service Processes across industries - IT, non-IT, brick-and-mortar. Where ever there is direct or indirect human interface or perception is involved.
The Framework, thus, offers a step-by-step method to design Processes for delivering a Service, which provides high degree of Experience on all counts from the User's point of view. Assuring not only functional excellence, but also satisfying and often delighting the User psychologically and sociologically.
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Introduction

The framework under consideration is for designing Processes, and not for Products. More importantly, Service Processes (processes which are meant to serve any purpose of a User). For providing best User Experience.

The framework puts User at the centre of the design initiative.

The Process is defined, not just from the organization's perspective, but also from the User's perspective.

Subsequently, the design parameters of the Service Process are categorised and sub-categorized from the User's perspective.

Process

Process as defined by a few gurus:

A collection of activities that takes one or more kinds of inputs and creates an output that is of value to the customer. - Michael Hammer and James Champy.

In definitional term, a process is simply a structured, measured set of activities designed to produce a specific output for a particular customer or market. It implies a strong emphasis on how work is done within an organization, in contrast to a product's emphasis on what. – Thomas H. Davenport.

Deriving from the definitions above, a Process has the following characteristics:

a. Set of activities
b. Triggered off by events (beginning)
c. Has at least one objective
d. Culminates in a situation (end)

E.g. Process of buying an airline ticket over the internet. Process of asking to return an item purchased through a mobile app.

Taking the buying airline of ticket as the example, and viewing it from the point of the User:

Purpose of the User: To buy an airline ticket to travel. For the org, to sell the ticket. Purpose is discussed in more detail, later.

Beginning: From design point of view, say, for an online travel agent (OTA), the beginning is when a User is on the home page through mobile app or on laptop. Some may argue that the beginning is to be on the top 3 list of a search result for buying airline ticket.

End: End can be multiple scenarios. A ticket bought. Or booked but not fully paid. Or a whole travel package bought. Accommodation bought but not the ticket. Or nothing is bought. Etc.

"Process" to be designed can be end-to-end, or any definable part thereof. The fundamental tenants of a process under consideration are:

1. It can be an end-to-end process, or a sub-process / part of a larger process / part of a network of processes
2. Has a definable beginning
3. An end (which can be the beginning / trigger point of another process or sub-process)
4. Has at least one human element - a User experiencing it
5. The process can be delivered with or without human intervention.

Step 1 - Defining Purpose of the Process:

In most cases, the Purpose of most processes are defined from the Organizational (Org) perspective, and not from that of the User. E.g. Cash disbursement process in retail banking.

In this framework, the realistic decision-making process, as outlined by Behavioural Economics, is accepted. That, the User can have a perspective of the purpose of a process different from that of the designer. And both the perspectives need to be considered.

Therefore, the key questions asked, chronologically are:

1. What does the User find the Process doing?
2. What does the Org find the Process doing?

Note: The most basic, jargon-free, lay-person's language is used, deliberately, to question and describe the purpose. This is a recommended strategy in process modelling so that the Designer and the User are on the same page.

The Process designer acknowledges the difference in perspectives. Often these perspectives are very different.

Let's take the example of hotel check-in process (note, the semantics is from pov of the hotel).

What does the Org (hotel) find the Process doing?

Answer: Doing a series of mandatory checks – identifying the guest, authenticating booking details, payment procedure, allocating room, etc.

What does the User (guest) find the process doing?

Answer: It is the hotel's often time-consuming formality, sometimes making me stand in a non-moving queue, to hand over the key to the room I have already booked, and in many cases already paid for.

Most in the hospitality industry may chuckle at the User's (guest's) perspective, as naive.

Interesting note:

But. Here is what an Org, who took the User's (guest's) perspective seriously, and put the User (guest) at the centre of designing the check-in process, did.

When guests travel in the Disney's bus from the airport to Disneyland's hotel, the check-in process is completed during the bus journey. When the guests alight from the bus at the hotel, they are handed over the keys (at the point of alighting, not at any counter inside the hotel building), their luggage taken care of. The guests (which often include young children) are now free to run straight to Disney Park. (We shall revisit this example again, later).

Step 2 - Determining and defining Process Factors and Goals – of the User:

While designing a process, the psychological and sociological aspects of humans are often neglected. And emphasis is given solely to accomplish the functional goal.

This paper attempts to integrate all the 3 aspects of human nature while designing a process.

Therefore, apart from User Experience (UX) – the primary discipline followed for designing - incorporating aspects of Evolutionary Psychology (EP) and Behavioural Economics (BE) add value to designing experience. Further, the delivery requires necessary backend Business Process Engineering (BPE).

The Structured Framework, thus, not only puts the 'User' at the centre of the design process, but offers a Methodology to follow to Design for desired Experience, using concepts and design artefacts from EP, BE, UX, and adopting BPE as the methodology to model the process.

The User is influenced by 2 Factors while going through a Process. Hygiene and Motivational factors.

a. Hygiene factors: This is characterized by:
    a. Fulfilment of which does not impress the User
    b. Non-fulfilment of which would have negative impact on the User.

E.g. A website navigation. If the navigation works properly, it is considered normal, and does not impress the User. However, if the navigation doesn't work properly, it impacts the User negatively, not just about the Process, but also about the Company / Organization.

b. Motivational factors: This is characterized by:
    a. Fulfilment of which delights the User
    b. Non-fulfilment of which does not necessarily upsets the User.

E.g. A welcome drink offered to the guests (User) at the check-in counter of a hotel. Unless it is a routine offering, the guest does not get upset if this is not offered. However, offering the drink makes the guest (User) happy, even though, may be, momentarily.

The User has another set of Goals to achieve vis-à-vis a process. Functional, Psychological and Sociological.

Step 3 - Structure of User Goals:

While designing a Process, the Functional, Psychological and Sociological Goals of a User are thus structured and documented.

a. Functional:
    a. Primary goals to achieve through a process. E.g. register a complaint in an e-commerce app through its mobile app.
    Key designing questions:
    What is the task/s the User wants to complete?

    What event or situation states that the task has been satisfactorily completed?

b. Psychological:

The User can have multiple psychological needs and factors, other that the functional need, regarding the process. Some are:

a. Fears: E.g. missing the deadline for refund.
   Key designing questions:
   What are the primary concerns of the User?
   What event or situation states that the concerns have been successfully mitigated?
b. Biases:
c. Sense of achievement:
d. Other, relevant to the process

c. Sociological:

The User can have multiple sociological needs and factors, other than the functional need, regarding the process. Some are:

a. Social cautions
b. Social aspirations
c. Others, relevant to the process

Below is the Factor-Goal matrix of a Process (Table -1). It is from the pov of the User. Filling it up, with as much deliberation and detail as possible, will make it clear to the designers about the design elements which need to be in place, and the pitfalls to avoid.

The matrix can also be used as a guide to develop test cases, and field test the process.

Factors → Goals ↓		**Hygiene**	**Motivation**
Functional		1 2	1 2
Psychological	Fear	1 2	1 2 3
	Biases	1 2 3	1 2
	Other relevant to the process		
Sociological	Cautions	1 2	1 2
	Aspirations	1 2	1 2 3
	Other relevant to the process		

Table 1. Factor - Goal Matrix

Step 4 – Process Trade-off and Alignment:

Trade-off:

Even while placing the User at the centre of design methodology, the org cannot afford to go overboard and always have an eye on (a) technical feasibility, and (c) economic viability.

This balancing act is depicted in Fig. 1.

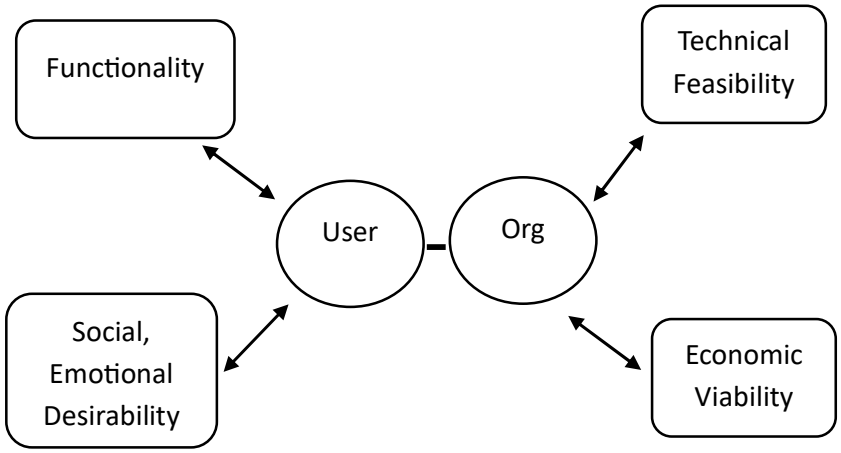

Fig. 1 Design Value Proposition

Alignment:

It will not be wise to assume the design trade-off as a zero-sum game. It is possible, and this should be the endeavour of the designer, to try to align the User's goals with that of the Org.

Let us revisit the example of Disney in Step - 1.

By redesigning the check-in process, the hotel (Org) delighted the guests (Users). What did the Org gain?

Remember, a good number of guests in Disney are children being accompanied by their parents. The children are eager to hit the fun park ASAP.

Because of the redesign of check-in, the Users get into the park earlier than under ordinary process, and consequently spend more time inside the park. More park-time results in more money spent in the park.

Step 5 - Touch Points:

Touchpoints are the points where the User is exposed to the process and is interacting in some way. These are the Experiential Components (EC) of the User, interacting with a Process.

For the Process under consideration for designing, identify and document all the Touchpoints of the User while on the Process to be designed.

Each Touchpoint is a potential to deliver disappointment or delight to the User.

It is important to put on the User's hat while documenting Touchpoints. Can also get some prospective Users to run through. The format of documenting Touchpoints is given as in Table 2.

Location	Stage	Touchpoints						
		Website	Mobile App	Phone System	Airport display	Counter queue	Chek-in Counter	Departure Gate
At Home	Check Flight options	●	●					
	Buy Ticket	●	●					
	Check-in	●	●					
Way to Airport	Check Flight Status		●	●				
	Receive Flight Status		●					
At Airport	Check-in luggage				●	●	●	
	Waiting for Departure							●

Table 2. Touchpoints Documentation Format (e.g. booking and catching a flight)

For every Touchpoint, it would be the endeavour of the designer to:

1. Align the Org's purpose with that of User's
2. Always think win-win (even though not always feasible)
3. Never miss an opportunity to delight the User on as many of the User's goals as possible.
4. Be aware of the Hygiene factors of the user and avoid all possible situations of disappointment.

Step 6 – Design and Model the Process:

Now, one is ready to design the process. Keeping the Purposes, Goals and Factors in mind, as well as the Touchpoints, one can use standard UX (User Experience) methods to create the Process. The Iterative Method of designing is recommended, as in Fig. - 2.

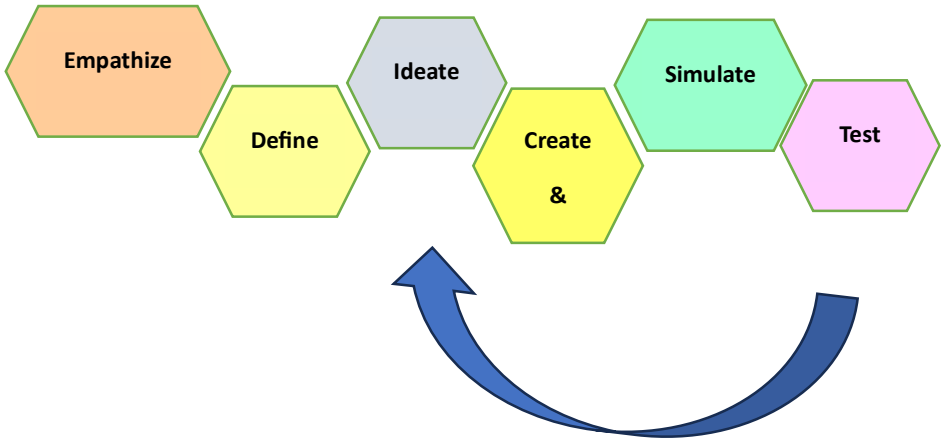

Fig. 2 Iterative Design Method

a. Empathize: Step - 1 to Step - 4 provides the structure to empathize. The Steps do not stifle creativity and offers great flexibility for out-of-the-box thinking, and yet provides a step-by-step method to follow.
b. Define: Again, Step - 1 to Step - 3 bring clarity to define the Process.
c. Ideate: The Factor-Goal Matrix (Table - 1) in Step - 3 helps to prod and channelize out-of-the-box thinking in ideation. This is where the Structured Framework creates scope of process innovation. The Framework actually nudges to innovate for User Delight.
d. Create and Model: The Process is created and documented in a structured Process Model. For the sake of maturity and scalability, here, I have chosen e-EPC (extended Event-driven Process Chain) as the methodology to model the process. Example in Fig. 2.
e. Simulate: Simulate the process in controlled environment for testing.
f. Test: Test the process. Record outputs, comments, suggestions. Go back to Ideate if required to improve the design.

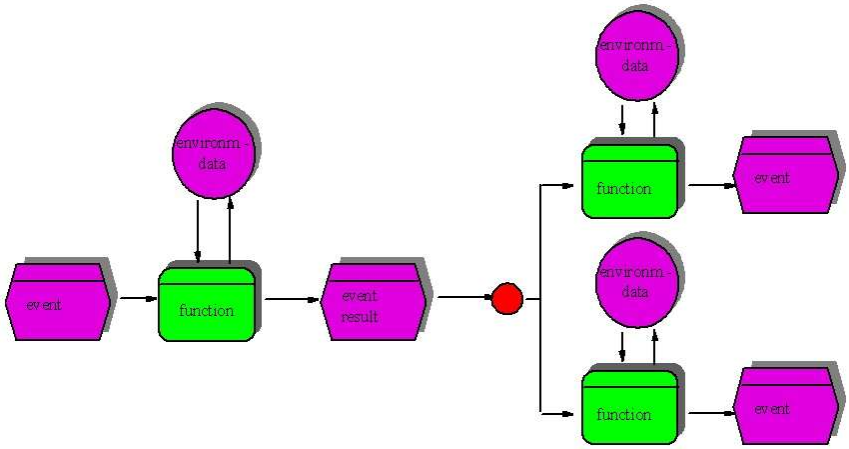

Fig. 3 e-EPC (extended Event-driven Process Chain)

Implement-ability: the Structured Framework facilitates implementation of the designed process for User delight with the help of a clear roadmap. The Framework works equally effectively for:

(a) Developing new service – Greenfield process design
(b) Re-designing existing service processes

Scalability: the Framework is Scalable. It also works effectively across business verticals.

Conclusion: The Structured Framework for designing greenfield Process or re-engineering existing Process provides a step-by-step method, keeping User delight at the centre of the design initiative without compromising on the viability of the organization.

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