

"A man is
great by
deeds, not by
birth"

-Chanakya

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Pre-Testing Servicescape Designs for Marketing Advantage

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Pre-Testing Servicescape Designs for Marketing Advantage

Abstract

Service delivery environments are often referred to as *servicescapes*. Well-designed servicescapes can be advantageous in differentiating one service entity from another, and lead to desired business outcomes. However, design of servicescapes is still dominantly a domain of designers and comprehensive tools that can incorporate user's or consumer's viewpoints are still much needed. From our empirical research rooted in concepts of Environmental Psychology, we developed a *Servicescape Evaluation Pack - a Guide* and a *Toolkit* – that can help simplify and organize pre-testing of servicescape designs for their visual aesthetic appeal for consumers.

KEYWORDS: servicescapes, servicescape design pre-testing, visual aesthetics, services marketing.

Pre-Testing Servicescape Designs for Marketing Advantage

Twenty years after opening its boutique shop on London's Regent Street, French natural beauty, skincare and fragrance brand L'Occitane en Provence has moved to a new, 6450 sqft flagship store... also located on Regent Street... [the interior designers] FutureBrand Uxus was briefed to create a new, immersive experience that offered customers a luxurious and sensorial exploration of L'Occitane's full range of natural beauty products, all inspired by the south of France art de vivre and Provençal beauty secrets. Its vision for the space was an enchanting retail experience with education and trial at the core, sharing L'Occitane's 'beauty of life' philosophy.

- 'L'Occitane, UK.' *Arc magazine* | *LIGHTING IN ARCHITECTURE*, 23 Apr 2018.²

When Apple launched its first retail stores 15 years ago, the company pioneered a sleek, minimalist design that traditional retailers would copy in coming years. Traditional, clunky customer-service desks were replaced with Apple's Genius Bar. But this year, after iPhone sales dropped for the first time since 2003, Apple is unveiling a brand-new retail-store strategy... Its new stores are meant to look more like a town square and less like a retail store, a community-inspired, experiential place you (supposedly) won't want to leave (even after dropping a considerable chunk of change on a bunch of new Apple hardware)...

- Maya Kosoff, "Apple Unveils First Major Store Redesign in 15 Years,"
Vanity Fair, 20 May 2016.³

Google has opened its first physical retail space in New York's Chelsea, designed by architecture studio Reddymade to include cork furniture and recycled materials... Elements of the exhibition, A Space For Being, including the core principles of neuroaesthetics – a branch of science that examines how visual aesthetics can impact our bodies and minds – informed the design of the store... "Reddymade's design puts the visitor at ease, welcoming those seeking help alongside those pursuing their curiosity,"...

- Dan Howarth, "Google opens first physical retail space in NYC by Reddymade", *dezeen*, 18 June 2021⁴

One doesn't need to be in services business to recognize how important the visual beauty (visual aesthetics) of 'service delivery environments' (often referred to as 'servicescapes' (Bitner,1992)), is for success; and Corporates have been investing heavily in

² <https://www.arc-magazine.com/loccitane-uk/>. Last accessed 15 April 2021.

³ <https://www.vanityfair.com/news/2016/05/apple-unveils-first-major-store-redesign-in-15-years>. Last accessed 15 April 2021.

⁴ <https://www.dezeen.com/2021/06/18/google-store-first-physical-retail-space-reddymade-new-york-chelsea/>, Last accessed 13 Nov 2021.

developing state of the art interiors for a long time. It's an irrefutable fact that visually stunning interiors can differentiate the offerings of one service entity from another and generate positive business outcomes. For instance, Disney's radical global redesign of its store interiors investing \$480 Mn. is reportedly paying off well, with revenue in UK increasing from \$200 Mn. in 2012 to \$ 760 Mn. in 2014 (Renfrow, 2014). In re-designing its US stores, Starbucks asked designers to involve with local communities to create the look and feel that reflected local sentiments so that it could compete "with the charms of a local shop;"(Valleskey, 2014) and projects this store environment as one of its key brand value propositions.⁵

Not to be left behind are companies such as Google, Samsung and Facebook, now focusing on crafting cutting edge work environments as a strategic tool to facilitate employee creativity and business growth (Waber, Magnolfi & Lindsay, 2014). *Business Standard* reports that Google's new office concept is anchored in the needs and cultural backgrounds of its employees - every Google office designed uniquely, based on the theme of "fun" at work (Kapur, 2014). And, for Alice Cutright of TAG Architects group, the concept for her award winning design of 'University of South Alabama Children's & Women's Hospital' was not to bring aquatic representations or Disney characters in the interiors, but to create a space that would give room for "a kid's imagination."⁶

Finally, just as in practice, academic literature also reveals that a consumer's brand choice is influenced by the visual aesthetics of products and the environment in which they are bought (Vieira, 2010). Studies such as that of Professors Dana Goldman and John Romley from Schaeffer Center for Health Policy and Economics at the University of Southern California show that physical environment is a more crucial factor in driving traffic to hospitals than clinical quality (Yuhgo, 2015).

⁵ "Store Design: Sustainable design and build methodologies are part of our DNA," May 25, 2016, <http://www.starbucks.in/coffeehouse/store-design>. Last accessed 12 April 2021

⁶ "Interior Design at USA Children's & Women's Hospital Wins State Award," December 8, 2014, <http://www.usahealthsystem.com/body.cfm?id=4428&action=detail&ref=137>. Last accessed 31 August 2018.

All the above evidence clearly illustrates that the feelings and preferences of users - be they consumers or employees - should be the primary focus in designing interiors for service businesses. However, we may ask: How many designers are really able to bring the users' viewpoint effectively into a space design? To what extent do users feel the desired impact of the service environment design(s) leading to a more satisfying experience? How do managers as decision makers who spend huge sums of money in commissioning such makeovers judge how effective the designs are for their businesses? More often than not, the answers to critical business questions such as these are assumed rather than assessed.

Based on our research on servicescapes, we present crisp measures to empirically link the aesthetic dimensions of service delivery environments with the affective responses they generate in the user-consumer, which would enable decision makers to more accurately assess the effectiveness of their servicescape design for their businesses.

Challenges in Measuring Consumer Responses to Servicescape Designs

Traditionally, dominant brand communication tools in goods marketing, such as advertising, have used highly evolved methods - commonly known as 'copytests' or 'advertising pre-tests.' They are applied to ensure that each creative element in the campaign is thoroughly tested for its impact on consumers before the advertisements are finally released, given both the huge cost incurred for media release and the far-reaching implications for the brand. Although a creative exercise, an advertisement has to evoke consumer responses aligned to the brand's strategic objectives, which can't just be left to the imagination and actions of artists alone.

Similar is the case with servicescapes. Because appealing designs do lead to competitive advantage for the firm, investments in servicescape designs are markedly increasing. Further, the stakes involved in servicescapes are even higher because they significantly shape brand imagery and consumer engagement as services are mostly intangible and experiential. Hence

it makes immense sense to confirm the effectiveness of designs before they are executed. However, servicescapes have largely been the domain of designers, with very little marketing science applied to pre-testing their impact on consumers.

Despite drawings, 3D models, interactive walk-throughs and mock-ups being de-facto in the space design industry, the question remains: Why is it not a common practice to test alternative servicescape designs for their suitability to evoke appropriate consumer responses? The paucity of marketing research literature in this regard suggests that measuring aesthetic responses to servicescape designs has indeed been an under-evolved science. Particularly, three key challenges confront marketing professionals in this area: a) lack of holistic measures, b) inability to reliably generate actionable insights anchored in consumer evaluations to improve the servicescape or to generate new designs, and c) inadequate understanding of the differences in the impact of aesthetic dimensions on consumer responses based on the type of service.

Need for Holistic Measures of Visual Aesthetics. The visual aspects of servicescapes are perceived holistically by consumers, rather than as individual elements like colour, furniture arrangements or lighting in isolation (Tveit, Ode, & Fry, 2006; Verhoeven, Van Rompay, & Pruyn, 2009). However, while there have been several studies that measure and evaluate the impact of individual elements (Grayson & McNeill, 2009; Mari & Poggesi, 2013; Tantanatewin & Vorapat, 2016) both scholars and practitioners alike have made little effort to identify holistic aesthetic measures for servicescapes, particularly from a consumer perspective (Kumar, Purani & Sahadev, 2013).

Generating Actionable Insights Anchored in Consumer Evaluations. Faced with lack of holistic measures, marketers tend to rely on outcome variables such as preference/satisfaction responses that a particular design evokes. Thus, one can know if a specific design is successful in generating the desired response or not in the mind of a consumer. For instance, marketers testing a servicescape design with a sample of consumers may find that the design generates

responses different from the desired one(s). However, when they have to take the design back to the designer for revision, there is indeed little reliably actionable input to guide decisions regarding what type of changes would increase effectiveness. Unless there are methodical ways to identify sound reasons for the observed variations, which the current outcome(s)-based assessments are unable to reliably provide, modification attempts could lead to confused or inadequate re-designs, again misaligned with the desired consumer preferences.

Differences in Aesthetic Response for Different Types of Service. Even if marketers succeed in measuring servicescape aesthetic dimensions specifically and reliably, the impact of each dimension on consumers' affective responses and preference is likely to be different for different types of service (Jiang & Lu Wang, 2006). That is, consumers could seek correspondence of the servicescape with the service type. For example, while dim lighting is an asset to an upscale restaurant, a well-lit hospital may be preferred by a consumer. Hence, unless marketers are able to systematically identify and reliably categorize the type of service, any effort at measuring servicescape aesthetic appeal, however rigorously done, may prove to be of little final value.

Our research addresses all three of these challenges by borrowing holistic measures from environmental psychology, empirically establishing relationships between measures of servicescape aesthetic dimensions and the emotional responses they generate in the consumer, and by testing the moderating role of service context – Hedonic or Utilitarian - on these relationships. Combining these three elements, we present a *Design Pre-Test Guide for Professionals* when they want to reconfigure their servicescapes to enhance their consumers' experiences, or want to design them altogether new.

Visual Aesthetic Dimensions of Servicescapes

While multi-sensory experiences are an integral part of many servicescapes, the visual aesthetic experience is of supreme importance, as images that form experiences mainly flow from visual to the other senses (Pralhad & Sawhney, 2011). Hence, servicescapes' visual aesthetics form important drivers of consumer responses. We draw from the domain of environmental psychology to introduce five dimensions of visual servicescape aesthetics that can define their configuration, content and format: *legibility*, *coherence*, *complexity*, *mystery* and *novelty*. These dimensions have been widely tested in natural landscape contexts, and since people may evaluate servicescapes in a similar fashion (Scott, 1993), they can be applied to built environments as well.

Legibility refers to presence of unique elements, features or signage in the servicescape that help 'way finding' for the consumers. These could include, for example, the presence of landmarks which help customers to orient themselves, or the presence of clearly defined aisles or passages. *Coherence* is the sense of visual order, how various elements present in the servicescape 'hang together' harmoniously with the surroundings without any deep contrast. This can be achieved by having a setting that has more symmetrical arrangements or by having various elements which are more unified in appearance. *Mystery* refers to those characteristics present in the servicescape, which partially hide the view of feature(s) that might lie ahead, thereby inducing a tendency in the consumers to further explore. It is this partial hiding that creates curiosity in the user to explore. Lighting levels and spaciousness also add to mystery, as lower levels of lighting and very spacious interiors add to the perception of mystery. *Complexity* refers to visual richness due to the presence of assorted elements having different size, shape, colour, surface texture, pattern, composition and type in the servicescape. Lastly, *novelty* refers to the visual newness or freshness in the servicescape; thus an atypical

servicescape would be considered as more novel. Table 1 lists these five dimensions and their specific indicators.

How Servicescape Aesthetics Dimensions Impact Consumer Preferences

Our empirical research using Kaplan's information theory (Kaplan, 1987) and Mehrabian and Russell's 'Stimulus-Organism-Response' model (Mehrabian & Russell, 1974) from environmental psychology showed that the five dimensions examined are related to consumers' emotional responses and concomitant preferences (see Table 2). Our research also established that the service context - utilitarian or hedonic - moderate this relationship. Specifically, in utilitarian services, consumer preferences are driven largely by legibility and coherence; whereas in hedonic services, consumers appreciate mystery, coherence, complexity and novelty (see Table 3).

In utilitarian service contexts such as banks or hospitals, higher levels of coherence and legibility have higher influence on consumer preference. Translating this understanding to practice, we suggest that consumers in utilitarian contexts look for harmonious design of various elements present in the setting. They are likely to prefer well organised interiors with more symmetrical arrangements that facilitate ease of sense-making. The preference would also be towards colour schemes that are less contrasting; and importantly, presence of visual cues like signage, queue managers, or objects that assist customers to easily access the services add to enhanced legibility of the service context. Visible and well-defined aisle spaces are also something that consumers need in this type of service. Further, for utilitarian services like banks, customers prefer a high degree of visibility so that they can see service desks, teller counters, customer lounge, etc. Because customers prefer this kind of an overall view of various activity zones, enclosures which hinder servicescape visibility may be avoided in utilitarian contexts.

On the other side, in hedonic service contexts such as upscale restaurants or spas, consumer preferences are driven more by complexity, mystery and novelty rather than by legibility, although coherence remains important. It is significant to note that while high levels of coherence and mystery result in more positive consumer preferences, only moderate levels (i.e. not high or low levels) of novelty and complexity are effective in hedonic servicescapes. It may appear counterintuitive that moderate complexity and yet high coherence are preferred by the consumers. The rationale is that too many elements without any coherence can cause a state of clutter that would be disliked by consumers (Kaplan, 1987). Similarly, moderate levels of novelty imply that consumers prefer servicescapes which are somewhat (but not extremely) atypical in nature. It should be noted that what we refer to as novelty is different from surprise. Surprise occurs when a user encounters a stimulus that is totally unexpected or mismatched to what one recently experienced or expected in a similar setting (Nasar & Cubukcu, 2010). Novelty, on the other hand, refers to the visual newness or freshness of the servicescape features, which can be created through adopting new design styles, by breaking conventional interior lay-outing or by re-engineering the service design. Also, in the case of hedonic service contexts, consumers prefer higher levels of visual mystery, which can be incorporated in the design using lighting systems that provide a mix of light and dark (shadow) spots. Light spots can be placed in such a way as to provide an overall understanding of the servicescape, whereas the shadow portions can evoke curiosity and the urge to explore. Similarly, introducing translucent baffle walls or partition screens, which constitute a partial visual hindrance to consumers as they enter the servicescape, may generate similar responses.

Pre-testing Servicescape Design: A Step-by-Step Guide for Professionals

Having presented holistic measures of visual aesthetic dimensions for servicescapes and established the influencing role of the service type on consumer evaluations, we now present

the key application of our research, which forms the core of this article – *The Servicescape Design Pre-Test Guide for Professionals*. This *Guide* provides all necessary guidance to professionals (e.g., Space/Interior Designers, Architects, Service Marketers, Retailers and Market Researchers) to measure the visual aesthetic qualities of servicescape designs, when they want to reconfigure their current servicescape(s) to enhance their consumers' experiences, or want to design a servicescape altogether new. Servicescape being an important marketing mix element in services marketing, inputs to channelize resources based on consumer evaluations can significantly improve marketing return on investments. We present the *Guide* below as a four-step process involving: (1) Service context categorization, (2) Stimulus design and exposure, (3) Measurement of aesthetic dimensions, and (4) Interpretation of scores (see Figure 1).

Step-1: Service Context Categorization. The first step involves identifying the predominant 'type' of the service context - whether it is hedonic or utilitarian; because, consumers relate in one way to services that primarily satisfy their utilitarian needs and in a different way to services that gratify their hedonic needs. Services providing experiences such as excitement, playfulness and entertainment are considered as hedonic, while those providing functional utilities to solve practical problems are utilitarian (Jiang & Wang, 2006). To identify the predominant type of the service context, professionals can use the assessment tool that we have developed based on the HED-UT Scale (Voss, Spangenberg & Grohmann, 2003) in Appendix 1 (complete with scoring method and interpretation of scores). Once this evaluation is done, the next stage is to design suitable stimuli (i.e. servicescape images) for testing.

Step-2: Stimulus (i.e. Servicescape) Design & Exposure. Having identified the service type in Step-1, the designer may now develop appropriate design schemes for the servicescape. Usually the design process starts with development of the concept (i.e. basic design layout) and the design brief (which describes the concept and the type of elements and finishes the designer

intends to deploy), both of which will be used for initial discussion with the client. Once the client gives approval for the concept and the brief, these can be converted to presentation form and used for pre-testing. Generally, the presentations are made by the designer in the form of free-hand perspective drawings, detailed sketches with colour rendering and computer simulated 3D visuals (using 3D modelling software like Google SketchUp, Autodesk Revit, AutoCAD Architecture, ArchiCAD, animation miniature 3D models, etc.). For existing servicescapes, interior photographs can be used as inputs for pre-testing. Once this is ready in some visual form that is easy for a layman to understand, the designer can proceed to Step-3.

Step-3: Measuring Servicescape Aesthetic Dimensions. This stage involves getting the servicescape visuals (developed in Step-2) evaluated by a carefully chosen sample of target consumers, using the *Tool* provided in Appendix 2A for Utilitarian and 2B for Hedonic service contexts. The respondents rate all four items in each of the Statement Sets on a 7 points scale (Appendix 2A has 2 Statement Sets, and 2B has 4). The sum of responses for each statement within a set provides the composite index for that dimension for each respondent, and ranges between 4 and 28. Following this, the average value for the entire sample can be computed on that dimension. With these sample means for all the relevant aesthetic dimensions of the servicescape, the designer now proceeds to Step-4 to interpret the scores.

Step-4: Interpreting the Scores. Table 4 lists different ranges for the average value of the composite index derived for each dimension (from Step-3) for the sample, for both Utilitarian and Hedonic services (Parts A and B respectively). The value of the concerned aesthetic dimension is interpreted as 'low' if the mean index falls between 4 and 12, as 'medium' between 13 and 20, and as 'high' between 21 and 28. Finally, the last column in Table 4, under 'Actions Required,' provides guidelines to professionals for using the mean scores and their inferences to guide their servicescape design(s). Table 5 lists various design modifications that

correspond to the 'Actions Required' for each of the aesthetic dimension in Utilitarian and Hedonic service contexts.

Towards Designing Influential Servicescapes

Recognizing the enhanced significance of and importance given by services firms to visual aesthetics of their service delivery (consumption) environments, in this article, we presented holistic measures derived from environmental psychology to evaluate the same. Our research showed that the type of service – hedonic or utilitarian – do influence the way consumers evaluate the visual appeal of servicescapes. Grounded in these findings, we developed and presented *The Servicescape Design Pre-Test Guide*, to simplify and systematize the process of measuring visual design aesthetics of servicescapes for professionals, through the consumers' perspective. Our research shows that with the help of the measures provided in this *Guide*, professionals will be able to make valid and reliable assessments regarding effectiveness of design elements. While we recognize that there can't be one hard and fast rule for designing every servicescape, our *Guide* (along with the Tools given in Appendices) can certainly provide dependable directions to service marketers, market researchers, design professionals and concerned others, in systematically deciding on the design alternative(s) most suitable for their servicescape, skilfully incorporating consumer's perspectives.

APPENDIX 1

TOOL FOR EVALUATING THE PREDOMINANT SERVICE CONTEXT DIMENSION*

Assume that you are going to visit the service in question (provided to you). Please provide your evaluation about the type of service, by appropriately responding to the statements given below.

STATEMENTS		RESPONSE (Please '√' The Appropriate Number Between Each Pair of Statements)							STATEMENTS
		Extremely	Very	Fairly	Neither / Nor	Fairly	Very	Extremely	
1	I consider this service as a necessary one	①	②	③	④	⑤	⑥	⑦	I consider this service as a not necessary one
2	I consider this service as an effective one	①	②	③	④	⑤	⑥	⑦	I consider this service as a not effective one
3	I consider this service as a functional one	①	②	③	④	⑤	⑥	⑦	I consider this service as a not functional one
4	I consider this service as a practical one	①	②	③	④	⑤	⑥	⑦	I consider this service as a not practical one
5	I consider this service as a helpful one	①	②	③	④	⑤	⑥	⑦	I consider this service as a not helpful one
6	I consider this service as a dull one	①	②	③	④	⑤	⑥	⑦	I consider this service as an exciting one
7	I consider this service as not for fun one	①	②	③	④	⑤	⑥	⑦	I consider this service as for fun one
8	I consider this service as a not delightful one	①	②	③	④	⑤	⑥	⑦	I consider this service as a delightful one
9	I consider this service as a not thrilling one	①	②	③	④	⑤	⑥	⑦	I consider this service as thrilling one
10	I consider this service as a boring one	①	②	③	④	⑤	⑥	⑦	I consider this service as an interesting one
		UTILITARIAN			↔	HEDONIC			

SCORING & INTERPRETATION: **Step-1:** Find the mean value (**m**) of the scores given to the 10 pairs of statements above, by each respondent in the study/survey. **Step-2:** Find the mean value (**M**) of the mean scores (**m**) of all the respondents in the study/survey. **Step-3:** If **M**<3, then the service has a predominant **UTILITARIAN** dimension, whereas if **M**>5, then the service has a predominant **HEDONIC** dimension. When **M** is 3=<M=<5, the indication is, something is amiss in the study; and the manager may look into aspects such as the representative nature of the sample used and the manner in which the service was presented to them for responding. Even re-testing could be necessary. Users may also consider contextually anchored judgement towards utilitarian for 3=<M<3.5, and hedonic for 4.5<M=<5.

* Developed based on the scale suggested by Voss, Spangenberg & Grohmann (2003), with permission.

APPENDIX 2A
TOOL FOR EVALUATING VISUAL AESTHETICS OF UTILITIRIAN SERVICES

STATEMENT SETS	Assume that you are going to visit the setting (provided to you). Please evaluate the “scene” on the following set of statements (Please ‘√’the appropriate number against each statement).	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
SET A: COHERENCE	1. The various elements ‘hang together’ very well.	①	②	③	④	⑤	⑥	⑦
	2. The arrangement looks symmetrical.	①	②	③	④	⑤	⑥	⑦
	3. The arrangement looks harmonious.	①	②	③	④	⑤	⑥	⑦
	4. There is no deep contrast visible in the scene.	①	②	③	④	⑤	⑥	⑦
	EVALUATION: COHERENCE TOTAL = 1+2+3+4							
SET B: LEGIBILITY	1. The layout of the scene in very clear.	①	②	③	④	⑤	⑥	⑦
	2. The scene has signage present.	①	②	③	④	⑤	⑥	⑦
	3. There are unique objects (“landmarks”) visible in the scene.	①	②	③	④	⑤	⑥	⑦
	4. There are visible walkways and aisle in the scene.	①	②	③	④	⑤	⑥	⑦
	EVALUATION: LEGIBILITY TOTAL = 1+2+3+4							
<p>Note: The composite index for each aesthetic Dimension for each respondent is obtained by summing up the scores for each statement (in the corresponding Statement Set) as shown (Evaluation: 1+2+3+4). Subsequently, the sample mean is computed for each Dimension for drawing design inferences (as given in Table 4).</p>								

**APPENDIX 2B
TOOL FOR EVALUATING VISUAL AESTHETICS OF HEDONIC SERVICES**

STATEMENT SETS	Assume that you are going to visit the setting (provided to you). Please evaluate the "scene" on the following set of statements (Please '√' the appropriate number against each statement).	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
SET A: COHERENCE	1. The various elements 'hang together' very well.	①	②	③	④	⑤	⑥	⑦
	2. The arrangement looks symmetrical.	①	②	③	④	⑤	⑥	⑦
	3. The arrangement looks harmonious.	①	②	③	④	⑤	⑥	⑦
	4. There is no deep contrast visible in the scene.	①	②	③	④	⑤	⑥	⑦
	EVALUATION: COHERENCE TOTAL = 1+2+3+4							
SET B: MYSTERY	1. There are some shadowed places seen in the scene.	①	②	③	④	⑤	⑥	⑦
	2. There are a few partial screenings of complete view of the scene.	①	②	③	④	⑤	⑥	⑦
	3. The setting seems to have more features which are not visible in the scene.	①	②	③	④	⑤	⑥	⑦
	4. The scene appears very spacious with good ceiling heights and wider rooms	①	②	③	④	⑤	⑥	⑦
	EVALUATION: MYSTERY TOTAL = 1+2+3+4							
SET C: COMPLEXITY	1. There is a lot to be looked at in the scene.	①	②	③	④	⑤	⑥	⑦
	2. There are a variety of elements present.	①	②	③	④	⑤	⑥	⑦
	3. There are a variety of colours or textures present.	①	②	③	④	⑤	⑥	⑦
	4. There are a number of elements present.	①	②	③	④	⑤	⑥	⑦
	EVALUATION: COMPLEXITY TOTAL = 1+2+3+4							
SET D: NOVELTY	1. This setting is quite un-familiar.	①	②	③	④	⑤	⑥	⑦
	2. This setting is quite un-usual.	①	②	③	④	⑤	⑥	⑦
	3. This setting is atypical.	①	②	③	④	⑤	⑥	⑦
	4. This setting is new.	①	②	③	④	⑤	⑥	⑦
	EVALUATION: NOVELTY TOTAL = 1+2+3+4							
<p>Note: The composite index for each aesthetic Dimension for each respondent is obtained by summing up the scores for each statement (in the corresponding Statement Set) as shown (Evaluation: 1+2+3+4). Subsequently, the sample mean is computed for each Dimension for drawing design inferences (as given in Table 4).</p>								

Figure 1: Process for Pre-testing Servicescape Designs

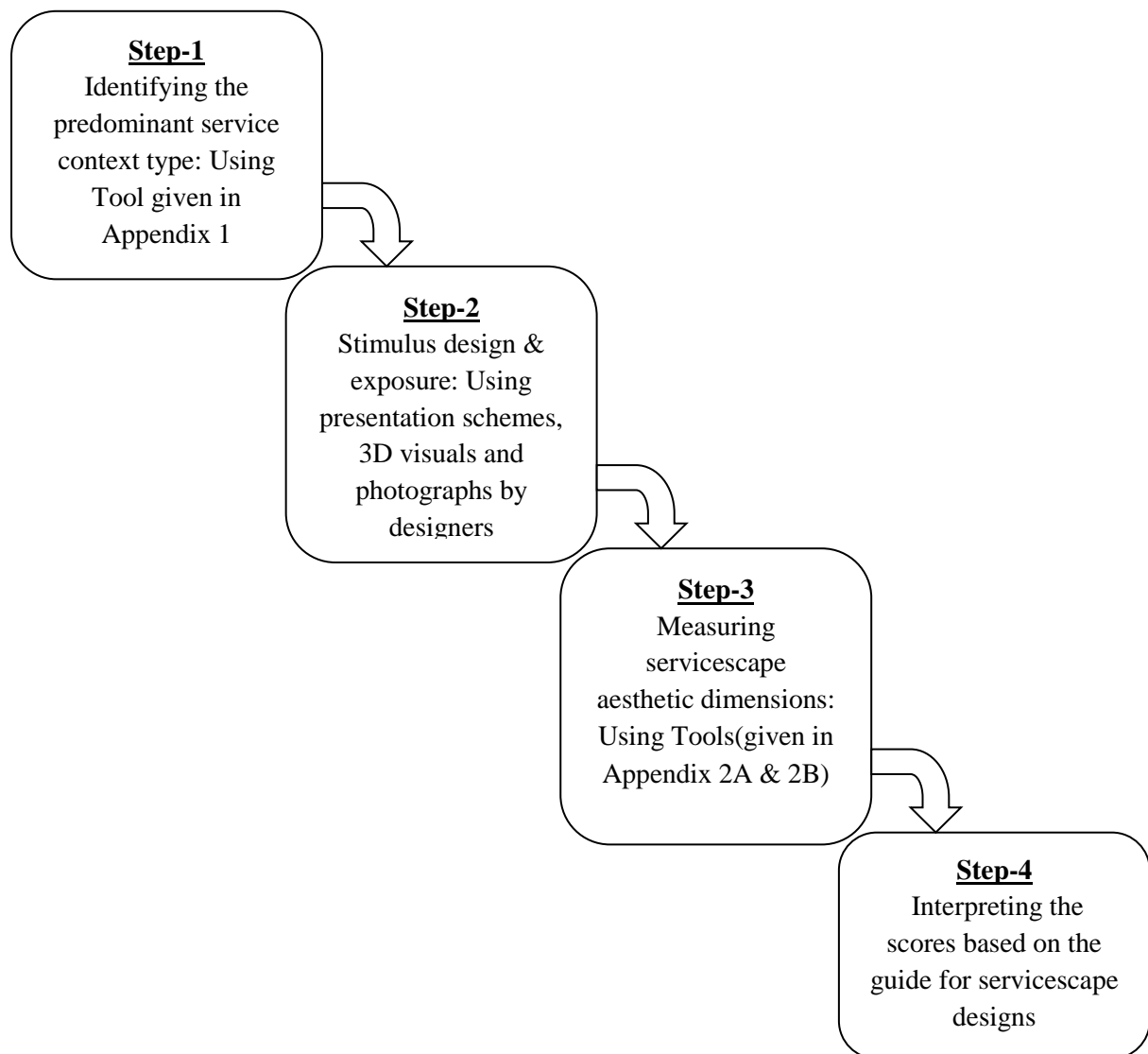


Table 1: Servicescape Aesthetics Dimensions

Dimensions	Indicators
<i>Legibility</i> : Level of distinctiveness that enables viewers to understand or categorize the contents of a scene	<ul style="list-style-type: none">• Clarity of layouts; presence of signage• Presence of landmarks• Presence of walkways (aisles)
<i>Mystery</i> : How much more information the scene promises if one could walk deeper into it	<ul style="list-style-type: none">• Lighting levels• Spaciousness (depth of view)• Visual permeability (screening)
<i>Coherence</i> : How the elements in the scene are complementing each other or 'hanging together'	<ul style="list-style-type: none">• Symmetrical and proportionate arrangement of elements• Uniform (less contrasting) colour scheme
<i>Complexity</i> : How visually rich and intricate the scene appears	<ul style="list-style-type: none">• Visual richness• Variety of elements present• Variety of textures / colours
<i>Novelty</i> : The new, unexpected or unfamiliar aspects present in the scene	<ul style="list-style-type: none">• Visual newness or uniqueness• Atypical aspects• Originality

Table 2: Our Research on Servicescapes

Our research on visual servicescape aesthetics followed a multi-stage process. We developed our theoretical framework using Kaplan's information theory (Kaplan, 1987) and Mehrabian and Russell 'Stimulus-Organism-Response' model (Mehrabian & Russell, 1974) from environmental psychology. It asks two fundamental questions regarding visual aesthetics: (1) How do visual aesthetic dimensions of servicescapes influence consumer responses? (2) How do such influences vary with service contexts – utilitarian and hedonic? It suggests that the variables visual *legibility*, *coherence*, *mystery*, *complexity* and *novelty* - individually as well as collectively shape consumers' emotional responses and preferences.

First, using a pre-test we identified 4 services - two utilitarian (hospital and bank) and two hedonic (up-scale restaurant and spa). A pool of photographs of these four service environments, identified through a two-stage expert assessment process, served as the stimuli for the study. We used a laboratory-like experimental setting, and the data was collected from working executives from 5 Indian cities. Using data from 1400 responses, we estimated PLS-SEM models to assess the impact of key visual aesthetic variables (using Warp PLS software) - specifically, whether they have an impact on the respondents' emotional responses and preferences and, if so, whether the consequences are either positive or negative. We also established how the influences of these variables change with service contexts by estimating multi-group models.

Table 3: Service Type and Importance of Visual Aesthetic Dimensions

	Utilitarian Services	Hedonic Services
Legibility	✓	✗
Coherence	✓	✓
Mystery	✗	✓
Complexity	✗	✓
Novelty	✗	✓
✓ Important	✗ Not Important	

TABLE 4: GUIDE FOR SERVICESCAPE DESIGN

Part A: Utilitarian Services			
Dimen- sions	Composite Index Range (Mean Value for the Sample)	Inference	Actions Required
LEGI- BILITY	4-12	Low	Needs considerable improvement in the design on legibility aspects such as signage, walk-ways, etc.
	13-20	Medium	Needs minor improvement in the design on legibility aspects such as signage, walk-ways, etc.
	21-28	High	Acceptable
COHERENCE	4-12	Low	Needs considerable improvement in the design on coherence aspects such as symmetry, harmony of arrangements, etc.
	13-20	Medium	Needs minor improvement in the design on coherence aspects such as symmetry, harmony of arrangements, etc.
	21-28	High	Acceptable
Part B: Hedonic Services			
COHERENCE	4-12	Low	Needs considerable improvement in the design on coherence aspects such as symmetry, harmony of arrangements, etc.
	13-20	Medium	Needs minor improvement in the design on coherence aspects such as symmetry, harmony of arrangements, etc.
	21-28	High	Acceptable
MYSTERY	4-12	Low	Needs considerable improvement in the design on mystery aspects such as partial screening, head room, lighting and shadows, etc.
	13-20	Medium	Needs minor improvement in the design on mystery aspects such as partial screening, head room, lighting and shadows, etc.
	21-28	High	Acceptable
COM- PLEXITY	4-12	Low	Needs minor improvement in the design on complexity aspects such as colour and texture, number of elements present, etc.
	13-20	Medium	Acceptable
	21-28	High	Over aesthetic, needs toning down.
NOV- ELTY	4-12	Low	Needs minor improvement in the design on novelty aspects; new a-typical designs, etc.
	13-20	Medium	Acceptable
	21-28	High	Over aesthetic, needs toning down.

Table 5: Design modifications for Utilitarian and Hedonic service contexts

Dimensions	Possible Design Modifications
Legibility	For enhancing <i>Legibility</i> , adequately/proportionately increase the: <ul style="list-style-type: none"> - Presence of signage / visible walk ways - Presence of landmarks – unique features, theme walls etc. - Clarity of overall layout
Coherence	For enhancing <i>Coherence</i> : <ul style="list-style-type: none"> - Select symmetrical arrangement of elements - Prefer uniform (less contrasting) colour scheme - Choose harmonious design (with similar shaped elements) - Adopt proportionate arrangement of elements
Mystery	For enhancing <i>Mystery</i> : <ul style="list-style-type: none"> - Provide screens/baffle walls/medium height partition walls that partially screens the various elements - Arrange shadows and light points suitably - Suitably organize spaciousness of layout (width-breadth-height of room)
Complexity	Appropriately and adequately increase or decrease the following, respectively for enhancing or reducing <i>Complexity</i> : <ul style="list-style-type: none"> - Number of various elements present - Number of colours/ textures present - Variety of elements present - Number and type of lighting elements
Novelty	Appropriately and adequately increase or decrease the following, respectively for enhancing or reducing <i>Novelty</i> : <ul style="list-style-type: none"> - Atypical arrangement of elements - New shapes, type of elements - Un-conventional colour schemes - New design themes

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