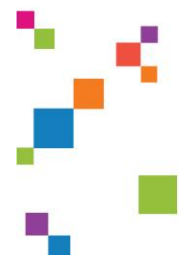# Foresight Research Report:
Museums and Experience Design

Document Overview

The following research report is designed to provide an overview of key strategic issues relevant to the future of California communities and museums. We hope that this report will be of interest to California museum professionals working to improve service to their community and to plan for the future.

In the Spring/Summer of 2012 a team of museum professionals participating in the California Association of Museum's *Leaders of the Future: Museum Professionals Developing Strategic Foresight* training project conducted their own secondary (*desktop*) research on current conditions, trends, and plans for a *baseline forecast* that postulates the most expected future. The authors of this report include:

- Linda Cano, Executive Director, Fresno Art Museum
- Jana Holsenback, Manager of Institutional Giving, Museum of Photographic Arts
- Marilee Jennings, Executive Director, Children's Discovery Museum of San Jose
- Catherine King, Vice President, Exhibitions & Programs, International Museum of Women (Team Leader)
- Deborah Silguero, Curator of Collections and Exhibitions, National Steinbeck Center

This report is the first phase in the development of a baseline forecast and is intended to define the idea of "Experience Design," explore emerging trends and possible futures, and create a framework upon which a baseline forecast could be presented. Major sections include:

- **Domain Definition:** Describes the main elements of this subject matter
- **Current Assessment:** Describes a current snapshot of the domain highlighting key stakeholders, timelines, and issues within society and museums
- **Trends/Projections:** Describes observable trends (changes over time) along with their direction and momentum
- **Plans:** Outlines stated and potential plans by leading stakeholders and outliers
- **Baseline Forecast:** Combines elements to reveal the most likely future(s) for this domain across different time horizons: 2015, 2020 and 2030

The working group and the CAM Foresight Committee will undertake the second half of this research to highlight alternative forecasting elements. This second phase of research on alternative futures will include:

- **Ideas**: Descriptions of potential *breakthrough or breakdown* visions of the domain by leading evangelists and thought leaders
- **Events:** A spectrum of events (scheduled/planned; plausible; wildcards) that could alter the future of the domain
- **Emerging Issues:** An outline of emerging issue choices that must be made by individuals, institutions or public policy makers
- **Alternative Futures (Scenario Platforms):** Combined elements that create short alternative scenario platforms for the domain

Note:
Document includes embedded bracketed [hyperlinks] for: *Further Reading, Sources and Citations*

The *Museum and Experience Design* domain refers to the study of people and place-based experiences.

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Strategic Objectives: Museums and Experience Design

✓ Ensuring California museums remain relevant as institutions that deliver unique user experiences

✓ Providing context and resource materials for awareness, education, and professional training opportunities on how museums can become more innovative in intentionally designed experiences

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Introduction: Museums and Experience Design

Current Conditions
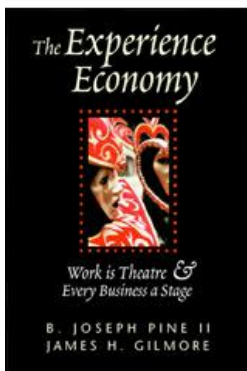
Every business is a stage. Every customer that walks through the door presents an opportunity to perform for them; to wow them with sights and sounds, to amaze them with visual displays and tend to them with the most personalized interaction.

Why would someone buy a cup of coffee and be willing to pay over 300% the price of a coffee at a convenient store, or 800% more than a coffee brewed at home? This is what occurs every day to the tune of roughly $500 million dollars a year in net earnings at Starbucks. The experience that Starbucks customers receive from a particular store is what brings them back. From the plush oversized chairs and the exceptional customer service to the collective euphoria of relaxing with friends, Starbucks has created an atmosphere that provides a memorable experience to their customers.
– Except from book Experience Economy (Pine & Gilmore)

Experience design is a broadly applied term that refers to a transdisciplinary field that combines service design, usability studies, interaction design, information architecture, engineering and a wide range of other sub-disciplines. It applies to both digital media and traditional, established, and other diverse disciplines such as theater, graphic design, storytelling, exhibit design, theme-park design, online design, game design, interior design, and architecture. Experience design may often be referred to as or related to: User Experience, UX, or Customer Experience Design.

Companies and institutions, such as museums, apply the principles of experience design to enhance their relationships with customers by providing more compelling extensions of traditional products and services. A well-known example would be the food retailer Whole Foods which uses experience design elements such as in-store dining, health consultants, and aesthetic design elements to out-innovate traditional supermarkets. Museum examples include the Dallas Museum of Art disbanding of its traditional membership program and recreating it as the more inclusive DMA Friends and Partners. Other models are The City Museum in St. Louis, MO for its overall experience design and the United

[States Memorial Holocaust Museum](#) where visitors can use question cards as they move through the narrative of the main exhibition. The Minnesota History Center is including experience design in a number of exhibitions, including The Greatest Generation where visitors listen to oral history clips from the men who served while experiencing the feeling of a combat flight in a C-47 plane.

The intent of experience design is to develop a holistic approach to brands, organizations, and physical and virtual environments to elevate customer expectations for more contextualized and personalized experiences. It refers to the application of user-centered design practices to generate cohesive, predictive, and desirable designs based on holistic consideration of users' experience.

More intentionally designed experiences can be developed for any medium, including spatial/environmental installations, print products, hard products, services, broadcast images and sounds, live performances and events, digital and online media, etc.

Lessons for Museums

Museums have a strong reputation for creating dynamic exhibitions and rich learning environments for visitors. As the digital age reshapes patterns of human expression and connection, museums must continue to innovate. Experience design is relevant to the future of museums as a potential emerging field, which could help an expansion of perceptions from 'exhibit design' to broader 'experience design'

Experience design should be seen as relevant to all museum audiences. Museums will need to respond to the desires and expectations of Generation X and Millennial audiences for participatory engagement, the ability to shape experiences, and social interaction.

Experience design has the potential to transform relationships between museums and patrons, as well as patrons among other patrons. Museums applying experience design principles look at the journey of a user:
- across multiple touchpoints (pre-event; during; post-event);
- between people and brands, organizations, and/or environments; and
- within the ideas, emotions, and memories that these moments create.

Experience design is transactive and transformative: every experience designer is an *experiencer*; and every *experiencer*, via his or her reactions, a designer of experience in turn.

Dimensions of Experience Design
Experience design seeks to develop and shape the user experience along any or all of the following 6 dimensions:

✓ **Time/Duration**
   (Initiation, Immersion, Conclusion, and Continuation)

✓ **Intensity**
   (Reflex, Habit, Engagement)

✓ **Breadth/Consistency**
   (Products, Services, Brands, Channels/Environment, Price)

✓ **Interactivity**
   (Passive, Active, Interactive)

✓ **Cognitive Triggers**
   (All Human Senses, Concepts, and Symbols)

✓ **Significance**
   (Meaning, Status, Emotion, Value, and Function)

Key Historical Events & Milestones

How did we arrive at the 'experience design' conversation? What are a few historical events or milestones that have helped to define the current 'era' for this domain?

The following list of key events and milestones in museums has helped to shape the conversation (Marjorie Schwarzer, *Riches, Rivals & Radicals: 100 Years of Museums in America*).

1773   Charleston Library Society formed the first American museum collection
1869   American Museum of Natural History established in New York
1870   Metropolitan Museum of Art and Museum of Fine Arts, Boston established
1906   American Association of Museums established
1907   The term 'docent' first introduced by the Museum of Fine Arts, Boston
1938   Rhode Island School of Design's Museum of Art makes music available in galleries through headphones
1952   Handheld audio guide - Phillips Guide - StedilHolland
1957   Acoustiguide introduces reel-to-reel tape museum recorder tours
1961   Ray and Charles Eames create "Mathematica"—perhaps America's first participatory science exhibition for the California Museum of Science and Industry (now California Science Center)
1969   Exploratorium founded in San Francisco by Frank Oppenheimer
1970s   "Object Theater" introduced at Ontario Science Center
1973   The Reuben H. Fleet Science Center in San Diego was the first science museum to combine interactive science exhibits with a planetarium and an IMAX Dome (OMNIMAX) theater
1976   "Treasures of Tutankhamen" called America's first blockbuster exhibition
1977   Fine Arts Museums of San Francisco designs the first exhibitions for airport terminals
1980s   Personal computers, video games, Walkman become widely available
1980s   Stand-alone computer interactives in museums
1988   Book release: *The Experience Economy* (Pine & Gilmore)
1989   The Getty opened an Interactive Gallery
1992   *Excellence and Equity* seminal report calling on museums to emphasize their role as educational institutions
2004   Term "Web 2.0" coined by Tim O'Reilly
2008   Tate Modern Wiki on Mobile Museum Resources ([link](#))
2009   [Alexander Dorner](#) investigates the museum as a force field ("Kraftfeld")

Imagining the Future of Experience Design Metrics

There is no definitive guide to experience design. This report is design to introduce a broad set of principles as a set of potential strategies for museums to explore based on their own unique needs and capabilities.

A good foundation for thinking about the future influence of experience design for museums is rethinking new types of metrics that can measure outputs (e.g. number of visitors) and outcomes (e.g. did patrons improve learning on topic).

Experience Design Metrics

Consider the following categories of metrics that might become central to future experience design efforts:

- ✓ **Behavioral Metrics**

  Imagine museum exhibit halls layered with sensors that are able to measure:
  - o **Emotional Responses & Body Language**

    What if exhibits could "see and sense" the viewers? Could we measure smiles or other reactions that reflect levels of interest and learning? Imagine using a Microsoft *Kinect* device to determine body posture or engagement with exhibits (e.g. Kimetric retail kiosk display)
  - o **Crowd Flows: Pauses & Movements**

    What if we could measure the rate of flow of people moving throughout the museums and understanding where they might stop and learn vs. pass-through?

- ✓ **Social Metrics**
  - o **Sharing** - Does the museum provide sharable materials? How might we detect how customers share their feelings and experiences within their own social networks and beyond?
  - o **Creative Additions** - How do we prompt museum-goers to create new variations or *mashups* of media/content?

- ✓ **Learning Metrics**
  - o As learning institutions how might we create feedback mechanisms that capture learning experiences tied to museum visits?

- ✓ **Loyalty Metrics**
  - o How might museum experience help to cultivate stronger relationships with our communities? Can we create metrics that measure loyalty and personal affiliations? Can we extend those relationships with premium memberships and special services?


Trends/Projections

What are observable trends within the domain that reflect the positive (or negative) direction and momentum of new expectations for experience design:

- Increase in number of smart phones (mobile devices) that serve as active and passive information and sensing tools
- Increase in social media participation
- Increase in communication and assessment tools (e.g. sentiment analysis)
- Shifting expectations (*higher*) for museum experiences based on demographic transitions (e.g. aging Baby Boomers demanding more from experiences)
- Increase in number of professionals supporting the field of experience design/design interaction, et al.
- Increase in funding programs (e.g. arts and place-making)
- Increase in number of conferences and events related to the experience design profession (e.g. Maker Faire; SXSW, Eyeo)
- Increase in the number of startups focused on behavior change (e.g. gaming mechanic companies)
- Decreasing museum membership (potential loss of core base)

Qualitative/Anecdotal Trends

- Increased competition and commodization of products and service forces companies to innovate as experience-focused brands (e.g. Apple, Ikea). Belief that customers are showing more demand for simplicity, *elegant design*, social good, et al.
- Increase in public references/searches of 'experience design' (Source: Google Trends)
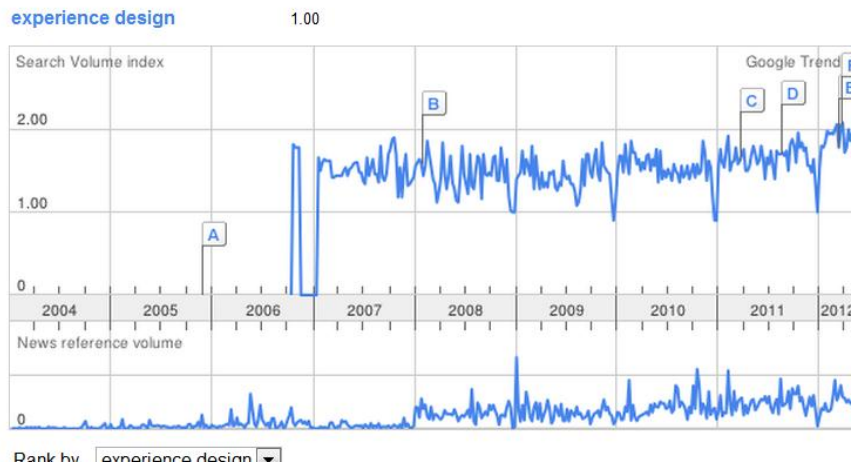
Resources (Websites, Articles, Conferences, Stakeholders)

Web Resources
- Experientia
- Design Research Network
- Interaction Design
- UX Magazine
- Boxes and Arrows
- Popsop
- UX Blog (Data Viz focus)
- Smashing Design
- Hydrant SF
- Interaction Design (Introduction)
- All Good Design

People
- John Falk – *Identity and the Museum Visitor Experience* (2009)
- Elaine Gurian
- Stephanie Weaver – *Creating Great Visitor Experiences* (2007)
- Lisa Zimmerman - 7Story
- Seb Chan
- Drew Davidson - Entertainment Technology Center, Carnegie Mellon University
- Jane McGonigal
- Shari Tishman - Harvard Graduate School of Education / Project Zero
- Kathleen McLean, Museum Exhibition Designer

- Catherine Styles
- Gabe Zichermann
- Nina Simon – Museum 2.0
- Kyle McDonald
- Lea Ann Hutter
- Joshua Nobel
- Golan Levin
- Andre Braz - Experience Design

Associations
- NAME (National Association for Museum Exhibition)
- MCN - Museum Computer Network
- AAM'S Media and Technology Committee -
- Wiki Museum Mobile
- MIT Media Lab
- Interaction Design Association
- User Experience Network (disbanded 2010) archive exists
- Project for Public Spaces: Experience Design

Books
- List of Experience Design Books

Articles/White Papers
- What The Heck Is Experience Design?, Donna Braden, Ellen Rosenthal, Daniel Spock, The Exhibitionist, Fall 2005, pp. 14-20
- Museum Experience Design by Catherine Styles
- http://sensingarchitecture.com/1713/top-10-tips-to-great-museum-exhibit-design/
- Learning by Design within a Museum Environment by Lucila Carvalho & Andy Dong
- User Experience Design Patterns
- Human-centered design for government
- London Business School Report on Experiential Service Innovation and Design
- Form Content Context Time Experience by Richard Grefe, AIGA Jan. 31, 2000

Companies
- Ideo
- Expdesign
- PGAV
- Kahlerslater
- Hydrantsf
- Museumplanner
  Nickbelldesign

Resources - Conferences
- Society for Environmental Graphic Design - The global community of people working at the intersection of communication design and the built environment.

Examples of Experience Design

Examples of experience design can be found across all sectors. Some noted examples include:

Major Brands - Food Industry
- Whole Foods vs. supermarket
- Starbucks vs. coffee at gas station
- Disneyland theme parks, toys and media brands
- Ikea

Designing Collaborative Arts and Media Experiences
- Maker Faire
- Yarn Bombing
- Burning Man
- Flux Foundation
- TED/TEDx
- Open Field
- Create Denver

Healthcare
- Facilities for Veterans
- Hospitals

Government
- Agencies, i.e. General Services Administration, Social Security Administration, etc.
- Schools
- Civic Buildings
- Historical Sites

Entertainment/Technology
- Zynga
- Electronic Arts
- PixyKids (social media platform for kids designed to transform online interaction)