Design Science in Tourism: Smart(er) Tourism Design

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Presentation outline

1. the experience economy
2. progress
3. smart tourism design
The tourism experience
Change in value of economic offerings

1. Commodities
2. Goods
3. Services
4. Experiences
The progression of value

- **Undifferentiated Commodities**
- **Make Goods**
- **Extract Commodities**
- **Deliver Services**
- **Staged Experiences**

**Needs of Customers**
- Relevant to Premium
- Irrelevant to Market

**Competitive Position**
- Differentiated
- Undifferentiated

**Pricing**

Pine & Gilmore, 1999
Foundational reading

The Classics

The Popular

The Emerging
The beginning of Tourism Design

Clare Gunn –
Texas A&M University

1942 - Concepts for Designing Tourist Regions

1968 - Vacationscape: A new concept for the design of a tourist recreation region

1972 - Vacationscape: Designing tourist areas

The foundations
Strong theory - Defining experience

What is experience?
“The aggregate and cumulative customer perception created during the process of learning about, acquiring and using a product or service” (Carbone & Haeckel 1994)
“..engage individual customers in a way that creates a memorable event” (Pine & Gilmore, 1999)

Components of experience…
Implies acquisition of knowledge and sensations
Creates emotional connections
Supported by social settings and technology

Key developments over past 50 years
Strong theory – Decision making

- Dual Processing Theory
- Emotion
- Frames
- Cues
- Situation

Key developments over past 50 years
Strong theory - Events and structure

Key developments over past 50 years
Strong theory – Touch points

Mapping tourism experiences

Key developments over past 50 years
Strong theory - A bus trip through Philadelphia

Measuring human response to design in real time

Key developments over past 50 years
Strong theory – the role of technology

Shaping travel behavior

Key developments over past 50 years
Strong theory - Key design factors

- Themes
- Stories
- Atmospherics
- Affordances
- Co-creation
- Technology

Key developments over past 50 years
Age of Big Data

“It’s a revolution,” says Gary King, director of Harvard’s Institute for Quantitative Social Science. “We’re really just getting under way. But the march of quantification, made possible by enormous new sources of data, will sweep through academia, business and government. There is no area that is going to be untouched.”
Tools - measuring technology

Emergence of technology, data and tools

Blogs, tweets, likes, etc.
Networks – facebook, 4square
Search, logfiles, purchases, surveys
Scanner data – RFID tags – QR codes
Mobile devices – systems
Cameras
Internet of things
Data mining tools
Emerging analytics – sentiment analysis

Key developments over past 50 years
Tools - defining big data

Three aspects of Big Data
• Big numbers
• Lots of different data
• It happens often

New metrics - New tools
• Storage and management
• Analytics
• Nature of science ???

Key developments over past 50 years
Sensors in Tourism

Key developments over past 50 years
Tools - The quantifiable world

Sensorizing, integrating and AI (IBM’s Watson)

Key developments over past 50 years
Tools – Three eras of analytics - Davenport, 2014

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Key developments over past 50 years
Systems thinking

- Ecological systems
- Organism
- Systems
- Dynamic
- Adaptive

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Key developments over past 50 years
Logic of design in tourism

Design is...

- Design – noun
- Design – verb
- Design thinking – a way of understanding and/or seeing
- Design science – a systematic framework guiding tourism research and development

Key developments over past 50 years
Types of design

1. Spatial design
2. Digital design
3. Service design
4. Experience design
Design Thinking Process

Key developments over past 50 years
Managing the system

Technology and the customer..

- Traveler controls much of the marketplace through social media
- Recommender systems continue to grow
- eCRM is the dominant paradigm for customer management and communication

Key developments over past 50 years
Summary – Five important developments

1. Strong Theory
2. Systems Thinking
3. New Tools
4. Design Thinking
5. eCRM

Key developments over past 50 years
Designing tourism places/spaces/experiences

Seven Components

Design Science in Tourism
Seven Key Features

1. Better understanding of the world
2. Systems thinking
3. Becoming much more flexible – dynamic
4. Creating a deep commitment to measurement and strategy within the organization
5. New technology, new metrics & new tools
6. New paradigms for communicating with and managing travelers
7. Design orientation
Seven Central Tenets

1. Experience focused
2. Science based
3. Uses new tools – metrics
4. Systems oriented
5. Scalable from small to large settings
6. Adopts principles of design thinking
7. Action – constructive oriented
Applications in tourism

Range of applications of Design Science in Tourism

Smart(er) Tourism Design
Seven key challenges in Smart(er) Tourism Design

1. Responding to the changing world
2. Building engagement and redefining the spectator
3. Supporting innovation and organizational change
4. Supporting communities, culture and change
5. Building dynamic systems to support travelers
6. Supporting health and everyday living
7. Supporting authentic and meaning making experiences
Age of algorithms

Organisations in the age of algorithms
Towards a new Operating System for Organisations
State of the Net, Milan, October 2015

Smart(er) Tourism Design
Age of algorithms

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Opinion

We Built a (Legal) Facial Recognition Machine for $60

Using a public camera, we looked for prominent people walking through a New York City park. What we found shows the technology's promise — and perils.

1h ago

Smart(er) Tourism Design
Age of empowerment – Smart(er) Living

Smart(er) Tourism Design
Design Science in Tourism – Smart(er) Tourism Design