Engineering the Knowledge Destinations in the Era of e-Tourism: A Conceptual Introduction

Prof. Matthias Fuchs
Guest Lecture
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ETOUR est. 1997 at Mid Sweden University, Campus Östersund

Staff
13 faculty researchers
8 PhD students
3 Professors

Tourism education
Bachelors degree
Masters degree
PhD degree (since 2010)

Prof. Matthias Fuchs

E-Tourism Research

- Business Intelligence in Tourism
- Electronic Marketing in Tourism
- Engineering and Impact Evaluation of E-Business Applications in Tourism
Agenda 

Engineering the Knowledge Destinations in the Era of e-Tourism

- The Knowledge Destination
  - The Knowledge Paradigm
  - The Knowledge Destination Framework
- Stylized Facts on e-Tourism after 15 years of Web-Story
  - e-Tourism Market
  - Web 2.0 Revolution
  - M-Tourism
- E-Tourism research – An Interdisciplinary View
  - E-Business Models
  - ICT Adoption & Acceptance
  - Social Media Marketing
  - Mobile Tourist Guides
  - Success Factors of Tourism Online Auctions - The Case of eBay
- Conclusion
  - Major e-Tourism Trends
  - Future Challenges for eTourism Research
The Knowledge Paradigm

- Service societies = \( f \) \{trends: societal, demoscopic, internationalization, new information and communication technologies\} (Fitzsimmons & Fitzsimmons 2006) ⇔ Travel & Tourism (Dwyer et al. 2007)
  - ICTS erode traditional firm boundaries and knowledge bases ⇔ behavioural and structural changes (market place → market space)

- Knowledge-based view of the firm (Grant 1996)
  - Organization’s value limited by available knowledge
  - Economic development of industries related to availability of knowledge to reconfigure resources to remain competitive (Barney 1991: 101)
The Knowledge Paradigm

- Only if knowledge resources are...
  - valuable to customers
  - scarce
  - difficult to imitate/substitute

  ... ideal base to gain long-term competitive advantages → core competencies

- Dynamic reconfiguration capability (Teece et al. 1997: 516)
  - Firm’s ability to integrate, build and reconfigure internal and external competencies to address changing environments
  - Need for renewal and validation through learning (knowledge absorption)
The Knowledge Paradigm

- **Capabilities for organizational learning** (Burmann 2002)

  - *Replication capability*
    - Effectively and efficiently multiplying established processes and operations ✤
      - **firm-internal** knowledge transfer and codification processes

  - *Reconfiguration capability*
    - Modifying resource configurations through acquisition and development of **new core-competencies** ✤ determined by
      - Absorbability of *external knowledge* *(ability to learn)* and potential to deduce generalizable cause-effect relationships from knowledge applicable to a **wider range of strategic options** (Back et al. 2007)
      - Firm’s *proximity to the customer* ✤ relevance of **customer-based knowledge** (Tajeddini 2010)
The Knowledge Destination

- **Tourism destination**
  - Strategic unit in T&T
  - Value network of *competencies* coordinating complex social stakeholder constellations and resource configurations to deliver co-created *tourist experience* (Coles et al. 2006)

- **Competitiveness of tourism destinations**
  - Attractiveness and *self-transformation potential* (Ritchie & Ritchie 2002; Ritchie & Crouch 2003)
  - Satisfied *information needs* and *learning requirements* of stakeholders (Fesenmaier et al. 2004; Shaw & Williams 2009) ↔ Generation and access of information relevant for resource re-configuration (Back et al. 2007)
The Knowledge Destination

- **Learning Tourism Destination** (Schianetz et al 2007)
  - Effective learning cycles through networked *ICT-based infrastructures* and *services* collecting data for processing, applying and disseminating knowledge
  - **ICTS’ role** in satisfying communication, info & knowledge needs (↓info asymmetries) (Pyo et al. 2002; Buhalis 2006)

- **Area where knowledge is created and where knowledge is applied**
  - Feedback loops between *knowledge interfaces* through which new *external information* is collected and *areas where knowledge is applied*
    - **Inclusion of client** in learning system (ibid 2007:1487)
    - Organisational learning in tourism destinations enhanced by **Business Intelligence** (Pyo 2005; Fuchs & Höpken 2009)
The Knowledge Destination

- Large variety and quantity of **customer-based data** in destinations
  - **Data bases** [Transaction Data, CRM Data, Survey Data]
  - **Webservers** [Navigation Data, Search Data, UGC]
    - However, huge amount remains **unused**

- **Solution**: Knowledge creation, application and org. learning through
  **Business Intelligence** (Pyo 2002; Höpken et al 2011)

- **Data Mining** = One of 10 technologies changing the world (MIT Tech Review 2001)
  - Explosive growth of data flows and collection
  - Decreasing data storage costs ⇔ growth of computing power/storage capacity
  - OS SW for AI applications (**WEKA**™, **RapidMiner**™)
  - Ad-hoc analyses by marketing managers
The Knowledge Destination

Business Intelligence...

- **Data Warehousing**: Data identification & ETL: focus *customer/product characteristics* (e.g. quality, price, distribution channel) vs transaction-oriented DB system

- **Data mining**: process of discovering meaningful *new* correlations, patterns and trends by sifting through large amounts of data stored in repositories, using *pattern recognition* techniques as well as *statistical* and *mathematical techniques* (Larose 2003)
  - Weak data assumptions ⇔ Huge in amount

- **Online Analytical Processing** (OLAP)
  - Supported analyses by *data base query* (MySQL)

The Knowledge Destination

Huge amounts of customer-based data in destinations **unused**

- Transaction data
- CRM data
- Survey data
- Tracking data

- Navigation data
- Search data [keywords]
- UGC [ratings, blogs, e-reviews]

World Wide Web

Business Intelligence

- Marketing effectiveness
- Quality of visitor experience
- Economic performance

- Monitor fulfilment of strategic goals
  e.g. Are Vision 2020: satisfied guests, stays, contacts, brand awareness...

- Decision making support to increase degree of goal fulfilment
  e.g. media mix, reach, conversion, market basket, capacity forecast, cancellation...

Destination Management Information System
The Knowledge Destination Framework

The Knowledge destination framework architecture

Stylized Facts on e-Tourism

- Information Technology and Tourism ⇔ 2 world’s fastest growing industries
  - Travel & holidays = most expensive regularly purchased item
  - Travel & Tourism (T&T)
    - 5th world’s biggest economic sector (WTTC 2012)
      - $ 2 trillion in 2011 and 98 million employed people
      - Double GDP if compared to automotive industries
      - Expected growth 2020: 4.2%
  - Information intensive ⇔ T&T largest sector in e-Commerce
    - 25.7% (€ 65.2 Bn) of EU online sales generated by T&T - in 2001: € 5 Bn (Marcussen 2009)
    - T&T ⇔ ICT shortcomings: collaborative offer generation, market research, knowledge creation, product innovation and strategic decision-making (E-Business Watch 2006)
15 Years of Web-Story

- The Internet - Globally accessible and transparent info infrastructure
  - Most nodes few links, but small and significant number show very many (hubs, authorities)
    - 25 billion distinct web sites
    - 7 trillion web pages
    - 307 trillion links
- In 2010 480 Exa-bytes \(10^{18}\) of information
  - 25% originally created ⇔ 75% replicated
  - 95% unstructured, distributed, little control \(\Rightarrow\) query
- Internet Users
  - 2000 400m \(\rightarrow\) 2006 1Bn \(\rightarrow\) 2008 1.5 Bn \(\rightarrow\) 2012 2.3 Bn (i.e. \(1/3\) of global citizens)
- Changes in society ⇔ Service industry transformation
  - Virtual network externality: value based on information and user integration in global service network co-creating complex interactions (Vargo & Lusch 2002)

Stylized Facts on e-Tourism

- Internet Tourism
  - 96% search online (i.e. 10 sites before booking), 62% book online (Phocuswright 2009)
  - **Concentration**: Top 1% of tourism websites join 53% of users
  - 3 players dominate 93% of online travel US market (65% EU)

*Travel Portals*: Expedia, Hotels.com, Tripadvisor
*GDS*: Galileo, Gullivers, Avis, Orbitz.com, Octopustravel.com
*CRS*: Travelocity.com, Lastminute.com

Stylized Facts on e-Tourism

ICT Diffusion in Tourism

The component indicators for size-bands are based on aggregated data from the 10 sectors studied in 2006 (in 10 EU countries).

The Scoreboard consists of 16 component indicators, grouped in four categories. The underlying survey data have been weighted by employment, thus emphasizing the activity of larger firms. The size of the bubbles is indicative for the relative size of a sector (by employment). Data for hospitals are not 100% comparable, as for some business indicators proxies had to be used.
The electronic tourism market

Telegraph.co.uk

Join the magic circle
Charles Stamer-Smith tours the tropical Cape Verde islands. Audio slideshow: pictures and music from Cape Verde

Savvy traveller
Only time for the briefest trip to the Continent? Nick Trend offers plane and train schedules that will ensure you make the most of it.

On the case
Gill Charlton answers readers' questions on the non-human flaw in health insurance screening, cash payment for flights and hand baggage rules.

Migration
The electronic tourism market
The electronic tourism market

Form-based dialogues for preference elicitation

Personalized Recommendation

The electronic tourism market

Tiscover Auktionen bei eBay in Österreich

http://www.tiscover.at/ebay
Web 2.0 Revolution in Tourism

- The Social Tourism Web

**ENGAGING VIA UGC: EXAMPLES**

**UGC CONTENT, NTO EXAMPLE**

The ThinkTank research highlights VisitBritain’s use of “user-generated” style blog posts from UK bloggers. Their blog posts add an authenticity and engaging honesty to VisitBritain's marketing efforts.

Web 2.0 Revolution in Tourism

ENGAGING VIA PROMOTIONAL CAMPAIGNS: EXAMPLES

NORWAY ‘SCREAMS’ CAMPAIGN

http://vimeo.com/61038689

SOCIAL: EXAMPLES

NTO SOCIAL MEDIA: FACEBOOK EXAMPLES

- The Visit Norway Facebook page, pictured, has a high level of visitor engagement (currently 47,041 “talking about this”), they use daily competitions, featuring high-quality photography, to provoke conversation and pique interest.

In summary, a good example because:

- High level of visitor engagement

- Uses daily competitions to provoke engagement

Source: The European NTO digital benchmark
The Geospatial Web

Social Media App: TripAdvisor

- With social media it’s the pages and apps that anticipate and leverage our emotional needs that often do well.
- With an estimated 10,000,000+ monthly active users, TripAdvisor’s social travel guide app is ranked as the third most popular of all Facebook apps.
- It’s no accident that TripAdvisor promotes it as letting the user “show off all your adventures” and “then compare your travels to all your friends”. TripAdvisor are aware that users’ self-esteem, friends and family are important.

Geo-referenced feedback
M-Tourism

Geo-referenced queries

QR Code-based Info Retrieval
M-Tourism

Augmented Reality

Ambient Intelligence
E-Tourism Research: An Interdisciplinary View

E-Tourism research ⇔ Conceptualization, Development & Implementation, Acceptance & Adoption, Use and Impact of ICTS in Tourism

E-Tourism Research: An Interdisciplinary View

- Scientific Community Association
- Textbooks
- Major Conference
- Journals
IFITT Digital Knowledge Bank
Life-long Learning with IFITT

IFITT President:
Prof. Dimitrios Duhakis, Bournemouth University

IFITT Education Director:
Prof. Matthias Fuchs
European Tourism Research Institute, Mid-Sweden University

IFITT Education Panel:
Prof. Rodolfo Baggio, Bocconi University
Prof. Wolfram Hopken, University of Applied Sciences Ravensburg
Prof. Ulrike Grezel, University of Wollongong
Ma. Kai Kronenberg, Mid-Sweden University

Resources Tab on www.ifitt.org

IFITT e-Tourism Curriculum
- Open Learning Resources
- Up-to-Date Case Studies
- Lecturing Material

Content Areas:
- ICT and Tourism Introduction
- ICT Usage in Tourism and Case Studies
- Trends and Technical Applications

IFITT e-Tourism Wiki
- Theme-specific Wikipedia
- Contributions by Scholars in the field of e-Tourism
- More than 40 e-Tourism Topics

IFITT Digital Library
- ENTER Proceedings
- Journal of Information Technology & Tourism
- Parameterized Search Mechanism
E-Tourism Research: An Interdisciplinary View

Fuchs & Höpken, 2010, p. 146
E-Tourism Research: An Interdisciplinary View

- Tourism benefits from ICT due to **confidence characteristics** of tourism product
  - Complex service experience **co-created** by SMES & tourist best presented by new media
    - **Supply**: Coord., differentiation & promotion (visualization), distr., reduce risks in co-production
    - **Demand**: Planning & individualization, config., interaction, risk avoidance in co-production
  - **Information intensiveness in tourism**
    - Huge data amounts and info-processing efforts

- **Frictionless market scenario through Internet** (Akerlof 1970)
  - **Ubiquitous** access to **equilibria mechanisms** (*brand, web2.0, screening*)

- **Consumer Culture Theory and SD-Logic**
  - ICTS put empowered user in middle of **co-creation** process to achieve **performance**
    - **Interest driven** web-behaviour (i.e. need-recognition ➔ going online)
    - Business engineering ➔ well-being engineering (i.e. utilitarian/ratio AND hedonic/entertainment)
  - Website neutralizes trade-off between no. of achievable persons and info richness
    - e.g. accuracy, timeliness, customization level, etc.

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E-Tourism Research: An Interdisciplinary View

- **Strategic goals** in T&T associated with ICTS
  - 1996 - 2000 *Establish online presence*
  - 2001 - 2005 *Acquire new customers* (e.g. personalized information)
  - 2006 - 2009 *Retention of customers* (e.g. eCRM)
  - 2010 - ? *Customer integration* (i.e. customer focussed → customer driven)

- **Strategic ICT Use in T&T**
  - *Value proposition & e-Marketing* (info, dialogue, engagement ⇔ complexity / effort reduction, trust ⇔ branding/e-CRM)
  - *Flexible co-creation* (adaptation & customization, dynamic sourcing & pricing YM)
  - *Management & re-engineering* (cost structure & sources of revenue, resources and assets, Business Intelligence)
  - *Market Value Chain* (linkages to online portals & e-commerce operators, n/r/l, PPP)
  - *ICT investments* (R&D, training, TAM)
E-Tourism Research: An Interdisciplinary View

Performance
- Efficiency
- Costs
- Sales
- Innovation rate
- Managerial performance
- Service Quality (CS)

Customer behaviour
- Empowerment
- Lowered loyalty
- Adopt tasks as prerequisite for customization
- Customer care across numerous service providers

Market structure
- Concentration
- Specialisation
- Dis-/re-intermediation
- New distribution channels
- Value adding services
- New eBusiness models

Skill demand
- education system
- training system
- Learning methods

ICT provoked change in tourism

E-Tourism Research: An Interdisciplinary View

(Werthner/Klein 1999)

Value chains *integrated* in longer e-value system → coordination need

**Dis-Intermediation**

\[ \text{TrC} > \text{PrC} \]

*but also...*

**Re-Intermediation**

\[ \text{TrC} = \text{PrC} \text{ and Value Added} \]

E-Tourism Research: An Interdisciplinary View

E-Business Models in Tourism

- **E-Tailing** ↔ single hotel website or commission-based portal supports customer query and enables booking, e.g. [www.tiscover.com](http://www.tiscover.com), [www.skistar.com](http://www.skistar.com)

- **Infomediary** ↔ buyers & sellers gain info and do business, e.g. [www.expedia.com](http://www.expedia.com), [www.travelocity.com](http://www.travelocity.com)
E-Tourism Research: An Interdisciplinary View

E-Business Models in Tourism

- **Adverstising** ↔ search engines generate traffic and permit customization, e.g. [www.austria.info](http://www.austria.info)

- **Brokerage** ↔ market makers OTA: suppliers
  - Marketplace exchange (e.g. [www.orbitz.com](http://www.orbitz.com))
  - Demand collection (e.g. [www.priceline.com](http://www.priceline.com))
E-Tourism Research: An Interdisciplinary View

E-Business Models in Tourism

- **Auctions** e.g. [www.ebay.com](http://www.ebay.com)
  - With smart business network for inter-firm collaboration

![Diagram of E-Business Models in Tourism](image)

- Consumers
  - e.g. DMS, online platform

- Suppliers
  - Fixed network structure

- New markets, new players
  - e.g. online auction
  - e.g. SBN

[Image of ebay website](http://www.ebay.com/sch/hotelgutscheinreisen/m.html)
E-Tourism Research: An Interdisciplinary View

Business Intelligence by mining log file data

E-Tourism Research: An Interdisciplinary View

ICT Acceptance & Adoption

I. Technology Organization Environment Framework (TOE)

II. Innovation Diffusion Theory (IDT)

III. Technology Acceptance Model (TAM)

Usability-Lab *i-consult (Vienna AUT)*


N = 206 (G) (A) (CH)

Booking task → Evaluation of 57 indicators

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cp.: Lederer et al. (2000), The Technology Acceptance Model and the w.w.
### Strategic core question...

"which website dimensions perceived by potential users have strongest impact to acceptance of that specific website system?"

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<table>
<thead>
<tr>
<th><a href="http://www.soelden.com">www.soelden.com</a></th>
<th>Factor 9</th>
<th>Factor 10</th>
<th>Factor 11</th>
<th>Factor 12</th>
<th>Factor 13</th>
<th>Factor 14</th>
<th>Factor 15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cross-selling</td>
<td>Legal Conditions</td>
<td>Branding</td>
<td>Information Relevance</td>
<td>Information Amount</td>
<td>Information Depth</td>
<td>Val. Added Services</td>
</tr>
<tr>
<td><strong>Eigenvalue</strong></td>
<td>1.66</td>
<td>1.58</td>
<td>1.40</td>
<td>1.30</td>
<td>1.22</td>
<td>1.15</td>
<td>1.03</td>
</tr>
<tr>
<td><strong>Cronbach α</strong></td>
<td>0.74</td>
<td>0.78</td>
<td>0.77</td>
<td>0.84</td>
<td>0.75</td>
<td>0.73</td>
<td>0.74</td>
</tr>
</tbody>
</table>

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| Offers of further destination services | 0.762 |
| Links concerning Flight/Train information | 0.733 |
| Information regarding destination region, culture | 0.722 |
| General business conditions | 0.749 |
| Cancellation information, terms of payment | 0.730 |
| Office hours | 0.715 |
| Consistency & continuity: Design | 0.723 |
| Consistency & continuity: Corporate Design | 0.713 |
| Corporate Design | 0.613 |
| Important information | 0.839 |
| Desired information | 0.829 |
| Information accuracy | 0.810 |
| Information amount | 0.849 |
| Plentiful information | 0.435 |
| Info-depth | 0.641 |
| Downloads | 0.531 |
| Info-style | 0.461 |
| Mail contact | 0.782 |
| Travel insurance | 0.537 |

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*Factor Analysis Results from: www.soelden.com*
E-Tourism Research: An Interdisciplinary View

Regression Analysis for www.soelden.com

**IT experience**
Low IT experienced accept websites at same level as high IT experienced users and by same factors!

**Gender**
*Ease of Use (w payment/security, m performance)*

**Age**
*Ease of Use (> 30 performance)*
*Usefulness (> 30 cross selling)*

E-Tourism Research: An Interdisciplinary View

E-Business Readiness

E-Business Intensity

E-Business Impact

Organizational Context
- ICT Infrastructure
- ICT Skills
- Perceived Costs
- Perceived Success
- Financial Commitment

Environmental Context
- Perceived Competitive Pressure
- Perceived Pressure from Customers

Firm related Context
- Firm Size
- Firm Type

Decision Maker’s Context
- Age
- Education
- Experience
- Risk Propensity

E-Business Intensity - Readiness-Impact Framework
(Fuchs et al. 2009)

ICT Use
- Adoption
- Routine

ICT Value
- Impact on Sales
- Impact on Efficiency
- Impact on Business Relationships
- Impact on Customer Satisfaction

Table: e-Business Application

<table>
<thead>
<tr>
<th>e-Business Application</th>
<th>Adoption Share</th>
<th>Usage Intensity (Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution via Online Platforms (OPLA)</td>
<td>96%</td>
<td>1.85</td>
</tr>
<tr>
<td>Online Procurement (PROC)</td>
<td>88%</td>
<td>3.21</td>
</tr>
<tr>
<td>E-Mail-Marketing (EMM)</td>
<td>87%</td>
<td>2.73</td>
</tr>
<tr>
<td>Property Management System (PMS)</td>
<td>78%</td>
<td>2.37</td>
</tr>
<tr>
<td>Costing &amp; Accounting System (CAS)</td>
<td>78%</td>
<td>3.14</td>
</tr>
<tr>
<td>Websites with booking functionality (WBOOK)</td>
<td>68%</td>
<td>2.99</td>
</tr>
<tr>
<td>eCustomer Relationship Management (CRM)</td>
<td>67%</td>
<td>3.08</td>
</tr>
<tr>
<td>Intranet (INTR)</td>
<td>50%</td>
<td>4.00</td>
</tr>
<tr>
<td>Yield Management System (YMS)</td>
<td>42%</td>
<td>4.71</td>
</tr>
<tr>
<td>Enterprise Resource Planning System (ERP)</td>
<td>41%</td>
<td>4.86</td>
</tr>
<tr>
<td>Personal Information System (PIS)</td>
<td>40%</td>
<td>4.76</td>
</tr>
</tbody>
</table>

Graph: E-Business Readiness-Impact Framework

Online survey (Jan-March 2008)
managers of 3,600 hotels
723 completed questionnaires (20%)
equally distributed over whole of Austria

Are Austria’s hotel managers unable to generate or to recognize efficiency gains from ICT?

### Web 2.0 Revolution in Tourism

- **1995s: Web 1.0 (S-GC – 2D)**
  - UGC Creators: 44% → 51%
  - Blog Readers: 58% → 69% (eMarketer 2009)

- **2005s: Web 2.0 (U-GC – 3D)**
  - 25 Mio. unique users
  - 96% positive reviews

#### Key Features
- **Rating and Reviews**
- **What others are saying**
- **Sharing discoveries with peers**
- **Recommendation**
- **Photo & Video**
- **Up-Selling**
- **GPS Tracking, Mashup Navigation**
- **UG Add (Tags)**

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*Image credit: Mittuniversitetet*
Web 2.0
- No separation between user and editor
  - Authoring tools (dynamic website, UCG)
    - Social network: open, interactive, rich-experience, global → hyperlinked collective intelligence = permanent collaborative contributions
  - Dislocation of desktop applications into Internet (→ user configures and controls, open source = perpetual Beta)

Research areas
- Applications (e.g. blogs, feedback-reviews, mobile tags, podcasts, body finder...)
- Conditions & implications (e.g. communities, integration, empowerment, sharing, innov., co-creation...)

# E-Tourism Research: An Interdisciplinary View

## Types of Social Media  
Source: Morevisibility.com

- **Social Networking Sites**: Facebook, Myspace, LinkedIn
- **Picture Sites**: Flickr, Picasa, Instagram
- **Video Sites**: Youtube, Vimeo
- **Aggregators/social bookmarking**: Digg, Tumblr, Del.icio.us, Pinterest
- **Forums/Message Boards**: Tripadvisor, Virtual Tourist
- **Blogs/Microblogs**: Bloggers, Twitter
- **Virtual Worlds/Games**: SecondLife

### Community Site | Visits (04/08) | Links | Shared Goal | Specific features/web 2.0 technologies
---|---|---|---|---
www.lonelyplanet.com | 1,158,800 | 630 | Travel info | Forum, blogs for professional authors, mobile services (POI & Reviews)
www.travelpod.com | 657,000 | 991 | Travel experiences | Blogs (i.e. travelogues) associated to geographical maps (linked in mashups), mobile blogging & podcasting
www.virtualtourist.com | 1,154,400 | 3,277 | Unbiased fellow-based travel guides | Descriptions & rateable reviews of travel locations, several forums, ‘post a question’, reservation and booking functionalities (travel deals)
www.travelistic.com | 90,000 | 170 | Travel info & video | Flash player-based, user and professional video content is linked to geographical info & map, can be rated, commented and tagged (à la YouIube)
www.wikitravel.org | 723,400 | 2,036 | Free travel guide | Open create & edit functions, Blogs, RSS-feeds, tag clouds
www.travel.yahoo.com/trip | n.a. | n.a. | Create & illustrate custom trip plan | Schedule (timeline), journal (reviews, descriptions, podcast) & maps (integrates)
www.couchsurfing.com | 900,400 | 539 | Network for private accommodation | Messenger, contact list, blogs & reports, profiles
www.tripadvisor.com | 4,413,200 | 7,070 | Unbiased fellow reviews & helping in forums (> 10 Mio. reviews generate 17 Mio. trips / week) | Popularity index, traveller articles (wiki-based), game travelIQ (find locations on map), right now (community events in real time), forum, podcast
www.travelblog.org | 575,800 | 1,101 | Travel info & experiences | Geographically associated blogs, forum and photos (tips, facts, history), map and routes
E-Tourism Research: An Interdisciplinary View

- **E-WOM** - From interpersonal communication to broadcasting
  - Beyond immediate social circle
  - Creative and engaging
  - Visible for marketers
- **New Consumers** - Full of opinions
  - Online throughout day
  - Maintain wide personal networks
  - Demand to be heard

Source: Vovici.com

New Influencers

Source: Sean Moffett, BuzzCanuck
E-Tourism Research: An Interdisciplinary View

Web 1.0

Marketer

Consumers

2.0 Social Network

Marketer

Consumers

Consumers

Social Media Marketing

<table>
<thead>
<tr>
<th>What type of Web 2.0 &amp; Social Media marketing initiatives are you planning for 2010?</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertise on social media sites (e.g. TripAdvisor, Facebook, etc.)</td>
<td>8.1%</td>
<td>15.1%</td>
<td>39.7%</td>
</tr>
<tr>
<td>A photo sharing functionality on the hotel website</td>
<td>12.7%</td>
<td>4.7%</td>
<td>32.8%</td>
</tr>
<tr>
<td>Sweepstakes and contests on the hotel website</td>
<td>9%</td>
<td>3.5%</td>
<td>36.2%</td>
</tr>
<tr>
<td>Survey and comment card on the hotel website</td>
<td>18.4%</td>
<td>14%</td>
<td>31%</td>
</tr>
<tr>
<td>Subscribe to a reputation monitoring service</td>
<td>8.4%</td>
<td>2.3%</td>
<td>19%</td>
</tr>
<tr>
<td>Create profiles for my hotel(s) on the social networks (Facebook, Twitter, Flickr, etc.)</td>
<td>13.3%</td>
<td>14%</td>
<td>50%</td>
</tr>
<tr>
<td>Create and post videos on YouTube</td>
<td>N/A</td>
<td>N/A</td>
<td>46.6%</td>
</tr>
<tr>
<td>Actively participate in blogs that concern my hotel</td>
<td>12.7%</td>
<td>5.8%</td>
<td>24.1%</td>
</tr>
<tr>
<td>I am not planning on Web 2.0 and Social Media initiatives for 2010</td>
<td>N/A</td>
<td>15.1%</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

http://www.hospitalitybusiness.com/blog/are-hoteliers-ready-for-hyper-interactive-travel-consumers/
E-Tourism Research: An Interdisciplinary View

Key benefits of SMM

- Customer Loyalty
- Brand Awareness
- Ideation & Innovation
- Low Feedback costs
- Ongoing Dialogue

<table>
<thead>
<tr>
<th>Traditional CRM</th>
<th>CRM 2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company to customer communication</td>
<td>Company to customer</td>
</tr>
<tr>
<td></td>
<td>Costumer to company</td>
</tr>
<tr>
<td></td>
<td>Customer to customer sharing of company communication</td>
</tr>
<tr>
<td>Delayed response</td>
<td>Real-time</td>
</tr>
<tr>
<td>Messages for one-off promotions</td>
<td>Continuous communication</td>
</tr>
<tr>
<td>Intimate relationship</td>
<td>Visible to others</td>
</tr>
<tr>
<td>Focus on behavioural loyalty =&gt; driving sales</td>
<td>Both behavioural and attitudinal loyalty =&gt; managing reputation</td>
</tr>
<tr>
<td>Personalization</td>
<td>Relevance</td>
</tr>
</tbody>
</table>
E-Tourism Research: An Interdisciplinary View

7 Wonders of Social Media Marketing (source: Vovici.com)

- **Relationships**
  - Customers’ prospects /preferred communication means ↔ P2P not Brand2People

- **Respect**
  - Reciprocal learning from customer opinions/input ↔ Dialogue not Sell

- **Personalisation**
  - Data-based customization of communication and service ↔ Privacy

- **Partizipation**
  - Encouraged by feedback on what others say ↔ Support networking

- **Conversation**
  - No control rather topics ↔ text mining (Sentiment Detection)

- **Community**
  - Place to talk ↔ opinion leaders’ content provision

- **Co-Creation**
  - Idea generation (commenting) about promo/product improvements
Marketers’ concerns

- SM only encompasses the young
- Negative Buzz
  - Most feedback is positive
  - Most dissatisfied customers mollified
  - Negative feedback isn’t bad
  - Admit fallibility ⇔ promise to improve

http://royal.pingdom.com/2010/02/16/study-ages-of-social-network-users/
E-Tourism Research: An Interdisciplinary View

DMO challenges

- **Content Collection ↔ Info Provision**
  - Multi channel UGC
  - Mobile & LBS

- **Promotion**
  - SM-based facilitator & moderator of consumer processes
  - eCRM → eCMR (viral)

- **Research & Quality Assurance**
  - CS ↔ e-Reviews
  - Sentiment Detection

- **Transactions**
  - One-stop shopping, Dynamic packaging → open SBN

Where do I do what → what do I do where?

(Roger Carter 2009)
Mobile services in tourism

eTourism → mTourism

- **Characteristics of mobile services** (Pocket Computer → Tablet/PDA → Smart Phone)
  - **Ubiquity** (any time and anywhere)
  - **Localisation** (location-based)
Mobile services in tourism

- Destination access, reached and located at any place and time
  - Interaction = location-sensitive, time-critical, identity-enacted
  - 79%/310 M EU citizens use mobile broad-band for smart phones (65% priv.)
- Failed tourism projects

- User centricity
  - Comprehensive support during stay
    - M-Search/Browsing
    - Transaction
  - LBS (GPS)
    - Push/Pull
  - Web 2.0
    - Mobile-Social Media
  - Web-based
  - www.innsbruck-mobile.at
  - www.dolomitiSuperski.mobi

Mobile services in tourism

- Dynamic adaptation & personalization
  - Application logic (web-/midlet-based), display and content representation automatically adapts to preference, use context (user, location, time, environment) and device

Mobile services in tourism

- **Recommendation**
  - Preference-based *(multiple collaborative filtering)*


Mobile services in tourism

- **Push Functionality**
  - E-C-A Rule-Engine (triggers SMS/Email)
  - Location-based push-notification (GPS)

Mobile services in tourism

Cockpit

Editors for decentralized content & SMS configuration

Context-Sensitive Push I
Context-Sensitive Push II
Feedback

In unserem persönlich geführten Wirtshaus bieten wir eine große Auswahl an kulinarischen Ausgeh-Möglichkeiten. Die ideale Lage zwischen Innenstadt und Alpbachkern bietet sowohl für Geschäftsleute als auch für Privatpersonen eine ideale Basis. Herzlich willkommen bei uns!
Mobile services in tourism

- **EURO 2008**
  - Daily Programme
  - Match schedule
  - Event Zones (fan route, VIP areas)
  - Stadion
  - SMS Service (match report, traffic)

- **Traffic information**
  - Timetable train
  - Bus-stations Live
  - Parking places
  - Traffic notifications (congestion, preferred routes)

Mobile services in tourism

Pilotized in Nov. 2006 www.innsbruck-mobile.at
Since, ca. 25,000 users

Mobile services in tourism

www.dolomitiSuperski.mobi

Livecam
Check out the latest pictures of this fascinating winter sports region. Click onto the desired ski area to view live pics of the slopes on your cell phone. This keeps you at all times updated about the Dolomiti Superski region.

Continue ... 

Weather
At a glance: weather and weather forecast as well as mountain and valley temperatures.

Continue ... 

PC Version

Smart Phone
Mobile services in tourism

**Livecam**

**Weather**

- Mountain temperature: -7.0°C
- Valley temperature: 12.0°C
- Mountain winds: 0.0 km/h
- Livecam: Show

**Forecast**

- 07.12.2008: ☑
- 08.12.2008: ☑
- 09.12.2008: ☑

**Lifts and Slopes**

<table>
<thead>
<tr>
<th>Kronplatz</th>
<th>Lifts and Slopes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length of slopes:</td>
<td>90 of 105 km</td>
</tr>
<tr>
<td>Open ski lifts:</td>
<td>25 of 31</td>
</tr>
<tr>
<td>Snow type:</td>
<td>Morning solidly packed/Afternoon wet packed</td>
</tr>
<tr>
<td>Total snowfall - mountain:</td>
<td>140 cm</td>
</tr>
<tr>
<td>Total snowfall - valley:</td>
<td>50 cm</td>
</tr>
<tr>
<td>Last snowfall:</td>
<td>05.12.2008 (20 cm)</td>
</tr>
</tbody>
</table>

**Skimap**

**SMS Services**

SMS info neve/piste aperte
Good Morning Post

482812 scrivendo "GMP" + LOCALITA

**Dolomiti Dating**
Mobile services in tourism

Ski Performance
Skipass 1-31 days
First numbers on your skipass

Gastronomy
Apres-ski Bar
Gigeralm
Reischach, Selba
+390474548419

Open:
Tel. Info.: +390474548419
Location: Reischach, Selbfhahre 2
Description: Rustic tavern with disco music

Skiing Huts
Kronplatz Skiing Huts
Search:

Events
Events today
• FIS European Cup
  [13-14.12.2007] 09:00 AM
  San Vigil di Marebbe

Events tomorrow
• FIS European Cup
  [13-14.12.2007] 09:00 AM
  San Vigil di Marebbe

Events remaining
• FIS European Cup
  [13-14.12.2007] 09:00 AM
  San Vigil di Marebbe

Wallpapers
• Cortina d'Ampezzo – The Lagazuoi
  Ralf Gasser

• Skier
  Udo Remhart

• Alta Badia: View on San Pellegrino
  Tourism Association Alta Badia

Information
• Information offices
• Skipass offices
• Ski rental
• Ski schools

Tourist office Kronplatz
Tourist office: Holiday Region Kronplatz
Address: Via Michael Pacher, 11A
Info:
Tel.: 0039 0474 555447
Fax: 0039 0474 530018
e-mail: info@kronplatz.com
Mobile services in tourism

- **Usage Statistics**
  - 23,453 Unique Visits (2008)
  - 36,750 Unique Visitors (2009)

- **Satisfaction Survey (N = 207)**
  - Tyrol (14-30/04/08)
    - Nokia E61
  - 20\text{min} Test
  - 10\text{min} Evaluation

Mobile services in tourism

Extended UTAUT for Mobile Information Systems
(Fuchs et al. 2012, p. 292)

# Mobile services in tourism

<table>
<thead>
<tr>
<th>Scale items</th>
<th>Mean</th>
<th>Cronbach Alpha</th>
<th>Std. Loadings</th>
<th>CR</th>
<th>SMC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived Performance Expectancy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being a visitor I would find DS useful.</td>
<td>2.26</td>
<td>.95</td>
<td>14.54</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>DS would support my vacation.</td>
<td>2.48</td>
<td>.96</td>
<td>15.51</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>DS would increase the quality of stay.</td>
<td>2.65</td>
<td>.93</td>
<td>16.23</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Effort Expectancy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find DS easy to use.</td>
<td>1.96</td>
<td>.92</td>
<td>18.13</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>DS is clear and understandable.</td>
<td>1.70</td>
<td>.96</td>
<td>23.19</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>It is easy to use DS.</td>
<td>1.71</td>
<td>.80</td>
<td>16.22</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Hedonic Quality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS is flashy and fun to use.</td>
<td>2.68</td>
<td>.91</td>
<td>22.06</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>DS is exciting to use.</td>
<td>3.01</td>
<td>.91</td>
<td>19.04</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>DS is cool.</td>
<td>3.20</td>
<td>.74</td>
<td>13.44</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Information Quality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Info given by DS is accurate.</td>
<td>2.27</td>
<td>.94</td>
<td>10.22</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td>Info given by DS is concise.</td>
<td>2.33</td>
<td>.94</td>
<td>12.15</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Info given by DS is useful.</td>
<td>2.01</td>
<td>.96</td>
<td>14.44</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>Info given by DS is complete.</td>
<td>2.78</td>
<td>.70</td>
<td>12.80</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td><strong>Social Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My friends think I should use DS.</td>
<td>3.80</td>
<td>.86</td>
<td>12.51</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Using DS can raise my prestige.</td>
<td>4.83</td>
<td>.87</td>
<td>13.22</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Using DS is a status symbol.</td>
<td>4.84</td>
<td>.76</td>
<td>13.84</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Trust</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think DS has adequate security features.</td>
<td>3.00</td>
<td>.94</td>
<td>12.80</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Trust in DS.</td>
<td>3.70</td>
<td>.76</td>
<td>13.44</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>DS is trustworthy.</td>
<td>2.67</td>
<td>.96</td>
<td>13.84</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td><strong>Behavioural Intention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would use the service.</td>
<td>3.73</td>
<td>.93</td>
<td>13.22</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>I plan to use the service.</td>
<td>3.65</td>
<td>.98</td>
<td>13.70</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>I intend to use the service.</td>
<td>3.78</td>
<td>.97</td>
<td>13.84</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Monetary Transparency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I know what it will cost to visit DS</td>
<td>3.77</td>
<td>.95</td>
<td>14.54</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>I can estimate costs incurred by use of DS</td>
<td>3.73</td>
<td>.92</td>
<td>13.70</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>I find costs transparent.</td>
<td>3.80</td>
<td>.97</td>
<td>13.84</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Price Fairness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price for usage of DS is adequate.</td>
<td>3.69</td>
<td>.95</td>
<td>13.84</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Use of DS is good value for the money.</td>
<td>3.72</td>
<td>.98</td>
<td>13.84</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Price for the usage of DS is fair.</td>
<td>3.77</td>
<td>.98</td>
<td>13.84</td>
<td>78</td>
<td></td>
</tr>
</tbody>
</table>

**Method:**
- MLE

**Model Fit:**
- Normed-$\chi^2$ = 1.436
- AGFI = .896
- RMSEA = .046
- CFI = .97
- SRMR = .05

**Cost Model:**
- 1€/1 MB: (Roto et al. 2006)
Mobile services in tourism

Nomologic Validation of Mobile UTAUT

Method:
Maximum Likelihood Estimation

Model fit:
Normed χ² = 1.803
CFI = .95
RMSEA = .059

Mobile services in tourism

- **Usage barriers**
  - Cost issues (EU Roaming: € 1.25 - € 17.79 / MB)
    - $BI_1$ 1€ / 1 MB 3.70
    - $BI_2$ Free of charge 2.11
      - Bilateral contract with network operator / service provider
      - Bluethooth / WiFi broadcasting station
  - Moderators (Goldsmith, 2001)
    - $BI Q_1$ Innovators 2.93
    - $BI Q_{2-3}$ Majority 3.70
    - $BI Q_4$ Laggards 4.39

- **Success factors**
  - Hedonic quality
  - Goal directed → Appeal focussed
  - Social Influence

- **Mobile services in tourism**
  - eCRM (time & place independent interaction)
  - Cross-Selling (Use patterns)
  - Branding
    - Brand community (Web 2.0)
    - Innovativeness & promotion

**Dolomiti Superski Goes Mobile**

By Patrick Thome on December 3, 2007

A new cellphone service allows skiers to access snow cams and singles in resorts including Selva.

Images of the slopes and the snow-covered Dolomites can now be accessed on your mobile phone thanks to a new service from Italy’s largest ski area, Dolomiti Superski, which incorporates around 50 ski resorts on one lift ticket including Selva in Val Gardena.

Simply connect your mobile phone to this website www.DolomitiSuperski.mobi and you will be able to look at the webcam images of the resort, and see for yourself the actual slope conditions; additionally you can access useful numbers to book accommodation, ski lessons or lunch in one of the huts.

Furthermore, if you are on holiday on your own or if you simply want to add some fun to your holiday you will be able to meet other like-minded skiers or snowboarders thanks to the Dolomiti Superski Dating through your mobile phone arranging to meet for some dinner or fun together. If you are keen to find out the daily stats on how much you skied, how many kilometers you did, how many lifts you used and whether you climbed you can also now download your ski performance on your mobile phone.

**US Press Releases**

DolomitiSuperski.mobi

"Mobile Services" also offers novelties galore. Besides free SMS and MMS newsletter service, the users of internet enabled cell phones will be able to access live webcams, weather and resorts info. You’ll also be able reserve a ski school session or a seat in a local rifugio. Further on, the possibility of ski dating will provide single single skiers with a fast track-route to romance. These services will be accessible at www.dolomitisuperski.mobi in two months’ time.
Online Auctions in tourism

Disadvantages of static pricing in rapidly changing economic environments

- Elimination of excess capacity (i.e. secondary capacity)
- Price discrimination (i.e. rare products)

- Auctions - *The* dynamic pricing instrument

- Online auctions
  - Reduce transaction costs (e.g. multimedia)
  - Increase pool of bidders (longer duration, sniping = last minute bidding/duelling, automatic proxy bidding, retailing = BIN)
  - Auction Data → Mining (Business Intelligence)

- Scarce tourism research
  - Market size & structure, success and revenue forecast
  - Determinants affecting final price
  - Software for optimally listing accommodation packages
Online Auctions in tourism

### Market size

- **Travel**
  - **25,000 listings (i.e. 5m unique visits per month)**
    - **Short-term lodging** (i.e. 7,500 listings, 300 visits) 45%
    - Travel Packages 7%
    - Coupons/Vouchers (e.g. restaurants, rent-a-car) 5%
    - Vacation houses & holiday flats 12%
    - Camping 2%
    - Tickets (e.g. rail, airplane, etc.) 6%
    - Cruising & bus travelling 2%
    - Accessoires for travelling 21%

Every 4 minutes one hotel voucher is sold (Cultuzz 2005)

Online Auctions in tourism

**Market structure**

- *Short-term lodging*

![Market Structure Diagram]

- 3 Star: 10%
- 2 Star: 4%
- 5 Star: 6%
- 4 Star: 80%
- 1 pax: 16%
- 2 pax: 81%
- 3 pax: 2%
- 4 pax: 1%
- 2 nights: 29.8%

29.8% 4 star – 2 pax – 2 nights

---

Online Auctions in tourism

Success and revenue forecast

- Short-term lodging

<table>
<thead>
<tr>
<th>Accommodation Packages</th>
<th>Sample Share</th>
<th>Success Rate</th>
<th>Avg. Success Rate at eBay</th>
<th>Average Final-Price</th>
<th>% Share below Market Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 star, 2 person, 1 night</td>
<td>8%</td>
<td>94%</td>
<td>46%</td>
<td>80.50 €</td>
<td>47%</td>
</tr>
<tr>
<td>4 star, 2 person, 2 nights</td>
<td>29%</td>
<td>90%</td>
<td>46%</td>
<td>154.10 €</td>
<td>29%</td>
</tr>
</tbody>
</table>

For 20% of sold items auction end-price lies above avg. market price

Combination of English (i.e. open bids; final price = last bid) and Vickrey type (i.e. sealed bids, final price = 2\textsuperscript{nd} highest bid)

Online Auctions in tourism

Auction features
Start price, final price, #bids, listing features...

Product features
Type of accomm., #Pax, overnights, services...

Seller features
Username, origin, reputation...

Bid history
Bid #, -sequence, time, bidders origin...

Auction data since 2009-2010
short-term lodging category AUT
⇒ 23.814 Auctions
⇒ 69.859 Bid histories

Online Auctions in tourism

Determinants affecting final price at eBay®

- used to optimize set of auction features for selling accommodation packages
  - seven day auction duration
  - starting price 79 €
  - gallery picture, featured, sec. cat (i.e. 10.6 €)

Model Fit:

- Normed-$\chi^2 = 2.874$
- AGFI = .998
- NFI = .997
- TLI = .998
- RFI = .996
- RMSEA = .012
- SRMR = .003

Online Auctions in tourism

Benefits for hoteliers

- Optimized auction design (profit gain)
- Common account generates sales to get Power Seller status (reputation)
- Automation of transaction processes (safes time and effort)
- Convenient front end interface (3-clicks away from sale generation ↔ web form)

Software Agent for Selling Accommodation Packages on eBay

Online Auctions in tourism

http://www.tiscover.at/ebay

Market Relaunch: eBay Connect
Berlin Juni 2007

15.03.2007 | Etourism Competence Center Austria, Tirol, Innsbruck
Gelungene Symbiose zwischen Wirtschaft und Wissenschaft
Online Auktionen im Tourismus - Ein Gemeinschaftsprojekt von eBay,
TISCOVER und dem eTourism Competence Center Austria
Conclusion: Major E-Tourism Trends

- **ICT enhanced tourism experience**
  - Memorable for all travel stages ⇔ high-touch technology empowers customer (i.e. co-creation, one-to-one engagement, personalisation)

- **Online reputation & E-Branding**
  - Brand management in Web 2.0 is co-created through on-going interactions among brand users establishing a common understanding of brand concept

- **Social Transformation**
  - *Generation X* (baby boomers >1950): 21% world population ⇔ ‘digital travellers’
  - *Digital natives* (20th century kids): co-create and interoperate in all tourism market *spaces*

- **Content & Context**
  - Rich content authenticate experience ⇔ narrate story, new features: cloud computing, image recognition
  - **Social Media - Location Based - Mobile (SoLoMo) Marketing**
Conclusions: Major E-Tourism Trends

- **“Service of Now” ⇔ Real Time**
  - Enabled by M-SM, sharing of experiences, opinions, sentiments about brands during consumption stage
  - Proactive engagement with customer (e.g. instant adaptation & personalization, immediate recovery of service failures, delight)

- **Augmented Reality (AR) and Gaming**
  - Real-world elements augmented by computer-generated sensory input (context-based sound/visual) → tourists’ current reality perception is enhanced
  - Mobile gaming immerses tourists on-site through exciting storytelling, role-playing and social interaction with other players

Buhalis, D. (2013) Content, context, co-creation and other eTourism predictions for the next 20 years
March 7, 2013 By Special Nodes 5 Comments 181 Tweet6 +1117 Share17 Share613Share
Future challenges for eTourism Research

- **ICT biggest force affecting Travel and Tourism**
  - Empowered tourist = *Tour Operator*
  - *Ultimate travel portal*: Unlimited online medium offering broadest spectrum of information generated within business network and *user community*

- **Interdisciplinary eTourism Research: Methods** to create *knowledge* to understand interrelation between...
  - **Technology**
    - The Web (web-structure mining = topology), *intelligent e-business* (DMIS) and *end user* applications
  - **Content**
    - Reinforcing self-propagation
      - *Web-content mining*, *Automated Sentiment Detection*
  - **Users**
    - Attitudes and behavior as co-producer
      - *Web-usage mining*, trust, privacy, TAM, e-Branding, cooperation & adoption behavior

Service Oriented Architecture (Werthner 2008)
Thank you! 😊
Literature


Literature


Literature


