e-Tourism: Impact of New Technologies

Some Insights

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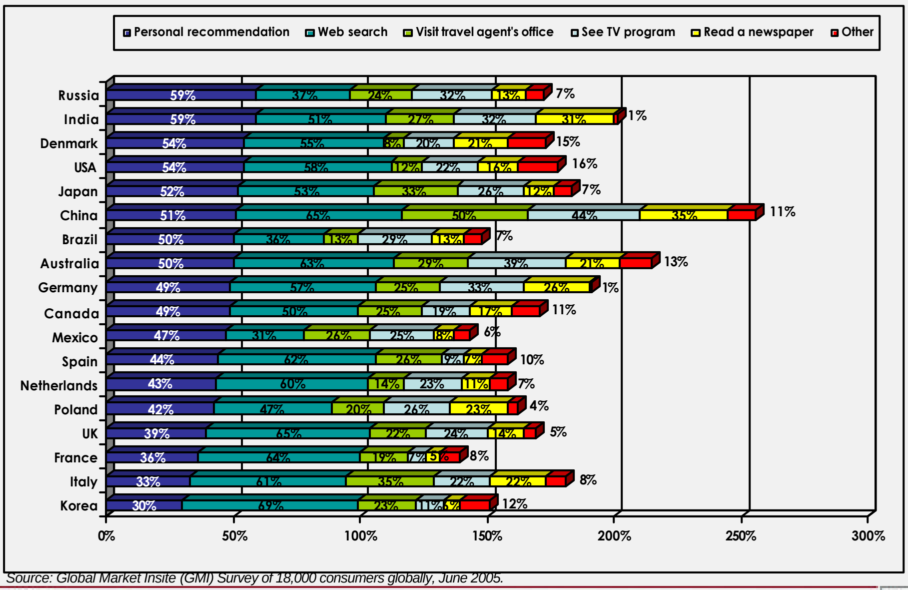
Content

- e-Tourism – some facts
- Situation and trends
- Challenges

e-Tourism – Some Facts

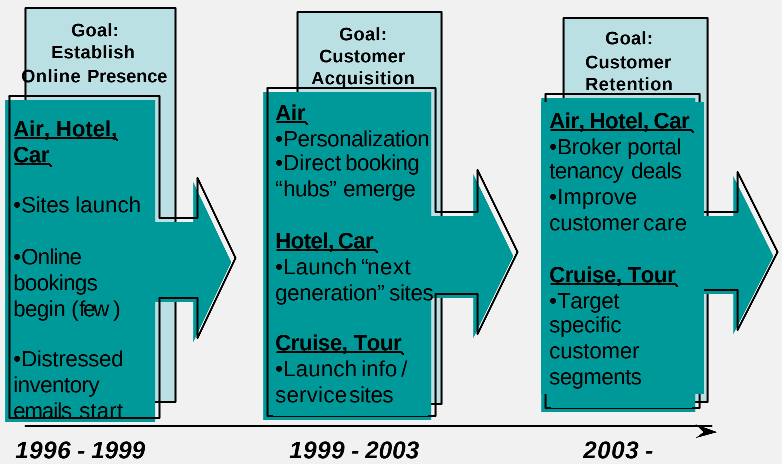
- In Europe approx. 18 % of travel/tourism sale online, estimate 33% in 2009 (Marcussen)
- In 2005 US Internet sales were approx. 30% of total travel / tourism market (Phocuswright)
- Europe: 80 % of hotels have Website (DG Enterprise, 05)
- Austria: above 90% have website,63 % of hotels support online sales, and 73 % online requests (ÖHV, 05)
- Travel and tourism among most important application domains in b2c e-commerce
- IT already important in the past (CRS/GDS in the 60s)
- Travel & Tourism industry sees IT as a strategic issue
- International and national (research & innovation) programs, conferences, journals, ..
- Travel & Tourism – in this context – (can) serve as an enabler for SMEs and other sectors

Travel Information Sources / 2005



Source: Global Market Insite (GMI) Survey of 18,000 consumers globally, June 2005.

Market Development: in Few Years 3 Generations



General e-commerce Situation

- General B2C rather evolutionary development
- Differences with respect to sectors (**Travel & Tourism**)
- Smaller companies show a lag – problems: costs and Know How
- Digital Divide
- Lower entry barriers ease entrance of new players, use(d) this for strategic positioning (Expedia, Travelocity, ..)
- Traditional players with „competitive response", financial and market position in combination with existing distribution channels – multichannel (TUI, ThomasCook, …)
- Specific position of destinations as aggregator, constrained by certain rules and organisational modes – representative of all tourism (and related sectors) suppliers

Situation – 2

- Mobile applications – missing business model (focused on telcos) and unknown „acceptance" patterns
- Decreasing prices – only partly (Walden et al., 2002)
- Disintermediation and re-intermediation
- Immediate imitation of business models and technology
- e-commerce favors, in tendency, users – buyers
  individualization / personal prices, personal recommendation, travel blogs – **Web 2.0**
  from *customer focused* to *customer driven* (sites & products)
- (New) market forms – auctions and comparison/forecast shopping

And …

- "Informatization" of entire value chain
- From e-commerce to e-business – Internet based integration of processes – e-commerce transforms industry
- Set of "new" (relationship) models
- Not only *process reengineering*, but also *network engineering*
- Services become commodities – deconstruction of value chain
- In parallel trend towards concentration

- **Web: Evolution of order and disorder**

Challenges

- Users
  - Enabling access everywhere anytime
  - Behavior analysis (including "prediction") and support of tourist decision process
- Supply side
  - Business model (market position, relations) and planning (e.g., products, prices and marketing [SEO or adverts])
  - Support of dynamic networks in a heterogeneous environment – "intelligent" cooperations, including users and user driven content / services
  - Destinations as cooperative networks
- Markets
  - Market design and analysis – dynamic structures and pricing
  - (Automatic) market research – using the Web as image / mirror of real world

Conclusions

- E-commerce – e-business transforms tourism industry
- IT a strategic issue, and T&T industry is a rich field for applications and research
- Tourism industry may act as enabler / catalyst for other areas
- Integration of research and application as well as industrial innovation – with "permanent" innovation
- Increasing complexity (structures, processes and technology)
- Multidisciplinarity major issue

Digital Divide

Market situation in Europe

March 2005 – European Top Travel websites	Unique visitors (000)
Total Travel Category visitors	87,581
1. Expedia Travel	19,682
2. Viamichelin.com	11,291
3. TUI Group	10,067
4.Lastminute.com sites	9,052
5. SNCF	8,454
6. Trip Network Inc.	7,817
7. Deutsche Bahn	7,587
8. Easyjet.com	6,183
9. Opodo	5,766
10. Ryanair	5,586
11. Hotels.com sites	5,528
12. Ebookers sites	4,963
13. Travelocity	4,152
14. Thomas Cook AG	3,922
15. Yahoo! Travel	3,467

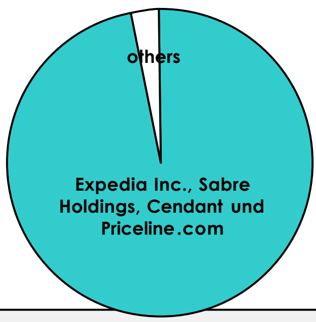
- Seven of 15 top sites in Europe are US owned

Source: comScore Media Metrix, March 2005 (quoted by eMarketer in August 2005).

Online travel agency market

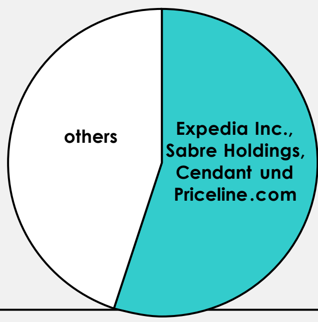
U.S. Online Agency Market Share 2005

Expedia Inc., Sabre Holdings, Cendant and Priceline.com 97% of US online travel agency market



European Online Agency Market Share 2005

In Europe, top 4 more than half



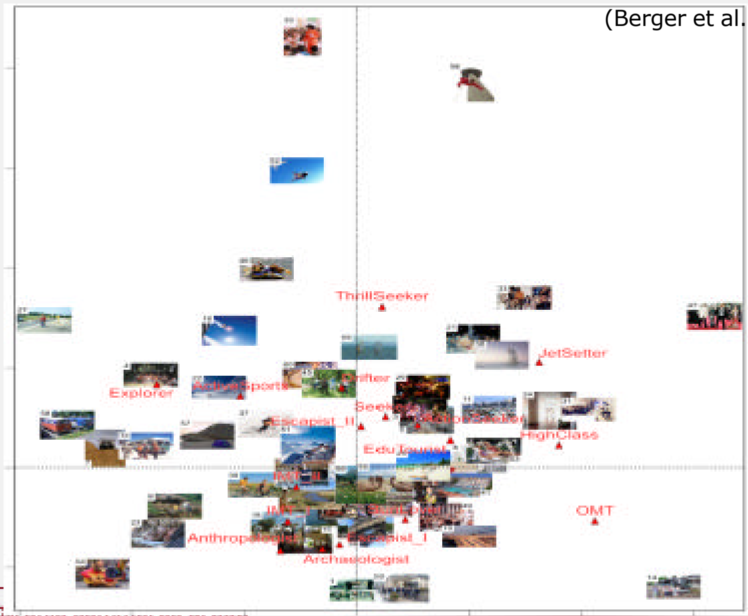
Since 2004:
- Travelocity acquired Lastminutes.com
- Cendant bought ebookers

User Analysis, „Forecast“ and Support

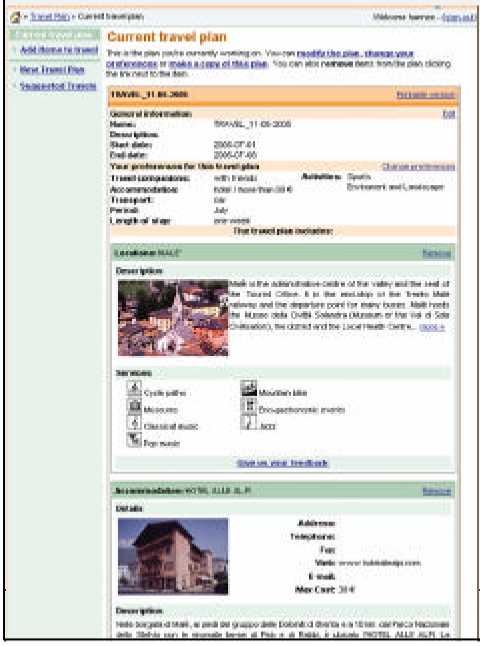
- Analyze behavior of users and build causal models explaining the behavior (Steinbauer, 2006)
- Models based on several fields of research:
  - theories of consumer behavior
  - models of decision making in tourism and
  - theories of e-shopping acceptance
- Identification of travel personalities
- Relate such personalities with activities / destinations (Gretzel & Fesenmaier, 2006 – authors can identify 10 basic types)

Relationship Personalities (Activities) / Pictures

(Berger et al., 2007)



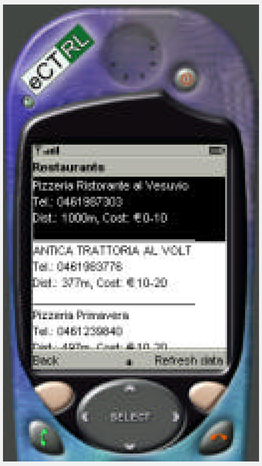
“Last” step – support individual user



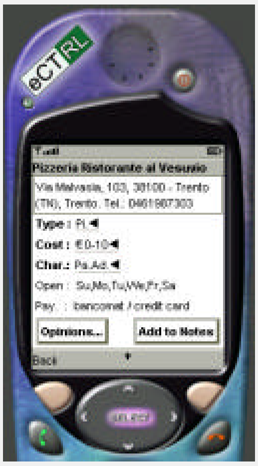
(Ricci & Werthner, 2004)

- **Trip@dvice**
- The system helps the individual user to select products and to **bundle** personalized travel plans
- The user is supported by the system, by means of:
  - Recommendations
  - Conversational aspects – query refinement (relaxation & tightening)
  - Bundling
- Based on AI technology - CBR

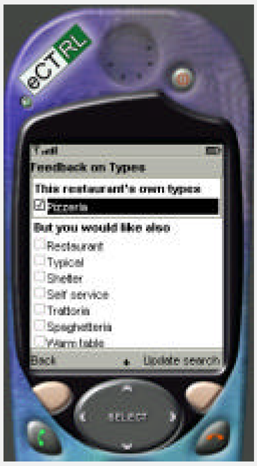
Link with mobile application



The initial list of best candidates



Details of restaurant
User can give feedback on features



Additional user feedback

VisitEurope and Principles

- Developed by EC3 managed consortia, funded by EU, now operated by ETC (European Travel Commission, 34 countries)
- Maintain autonomy of national/regional sites while enabling joint marketing
- **As much content as needed, as little as necessary**
- **Intelligent linking and customization of services as well as external services / sites**
- Additional user driven / intelligent services, linking them with national / regional / businesses content
- Different integration means
  - „aggregated" content
  - customized services
  - linked services

System Features

- User Interface
  - 6 “classical” languages + now (Chinese, Japanese, Russian)
- Services
  - For the visitor
    - Intelligent (semantic) search
    - Recommendation service
    - Route planner and flight connections – comparison
    - Other portal services such as UNESCO heritage database, European cuisine, weather service
  - For ETC and NTOs
    - Content management system
    - Reporting tool and Intranet communication service
    - Administration tools (users, links,..)
- Semantic web (HARMONISE ontology and mapping) and wrapper technology for content integration / extraction
- Mostly open source