



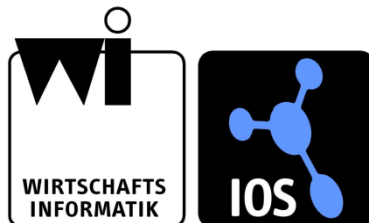
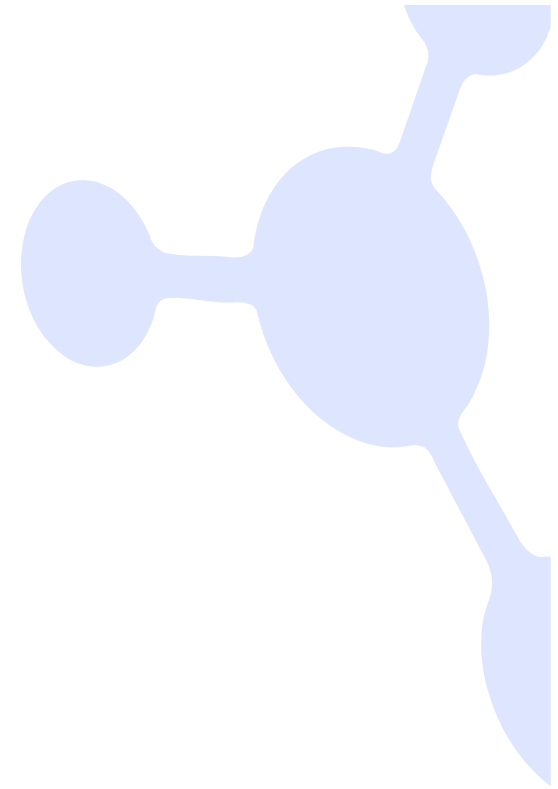
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WILHELMS-UNIVERSITÄT
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Universität Münster
Institut für Wirtschaftsinformatik

Lehrstuhl für Wirtschaftsinformatik
und Interorganisationssysteme
Prof. Dr. Stefan Klein

www.wi-ios.de
mail@wi-ios.de

Service Innovation



Wikis

- IT and the security of (air-)travel

- IT and data protection

“The OECD Guideline on the Protection of Privacy and Transborder Flows of Personal Data offers assistance in the effort of governments to protect privacy and personal data”

What happened in Detroit?



Vereitelter Anschlag

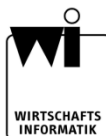
Flugzeugbomber war Sicherheitsbehörden bekannt

Nach dem vereitelten Anschlag auf einen Airbus bei der Landung in Detroit herrscht in den USA Alarmstimmung. Die US-Regierung forderte alle Fluglinien auf, ihre Sicherheitsvorkehrungen zu erhöhen. Der Attentäter Faruk Abdulmutallab war der Behörden schon zuvor bekannt. [mehr...](#)



Detroit

Flugzeuganschlag in USA vereitelt



WIRTSCHAFTS
INFORMATIK



IOS

Universität Münster

US-Präsident Obama übernimmt die Verantwortung für das Versagen der Geheimdienste beim vereitelten Anschlag von Detroit.

US-Präsident Barack Obama hat die persönliche Verantwortung für das Versagen der amerikanischen Geheimdienste bei dem nur mit Glück vereitelten Bombenanschlag vom ersten Weihnachtstag übernommen.

In einer zwölfminütigen Erklärung im Weißen Haus sagte Obama am Donnerstag, dass der Attentatsversuch des Nigerianers Umar Faruk Abdulmutallab auf einen Airbus im Anflug auf Detroit eindeutig hätte verhindert werden können. Genügend Warnhinweise habe es gegeben. Sie seien nicht angemessen beachtet worden.

Die ersten Untersuchungen hätten aber ergeben, dass dies nicht Schuld eines einzelnen Beamten oder eines der 16 US-Geheimdienste gewesen sei. Vielmehr habe der Fehler im System gelegen. "Wenn das System versagt, bin ich verantwortlich", sagte Obama, "als Präsident habe ich die heilige Pflicht, unsere Nation und unser Volk zu schützen."

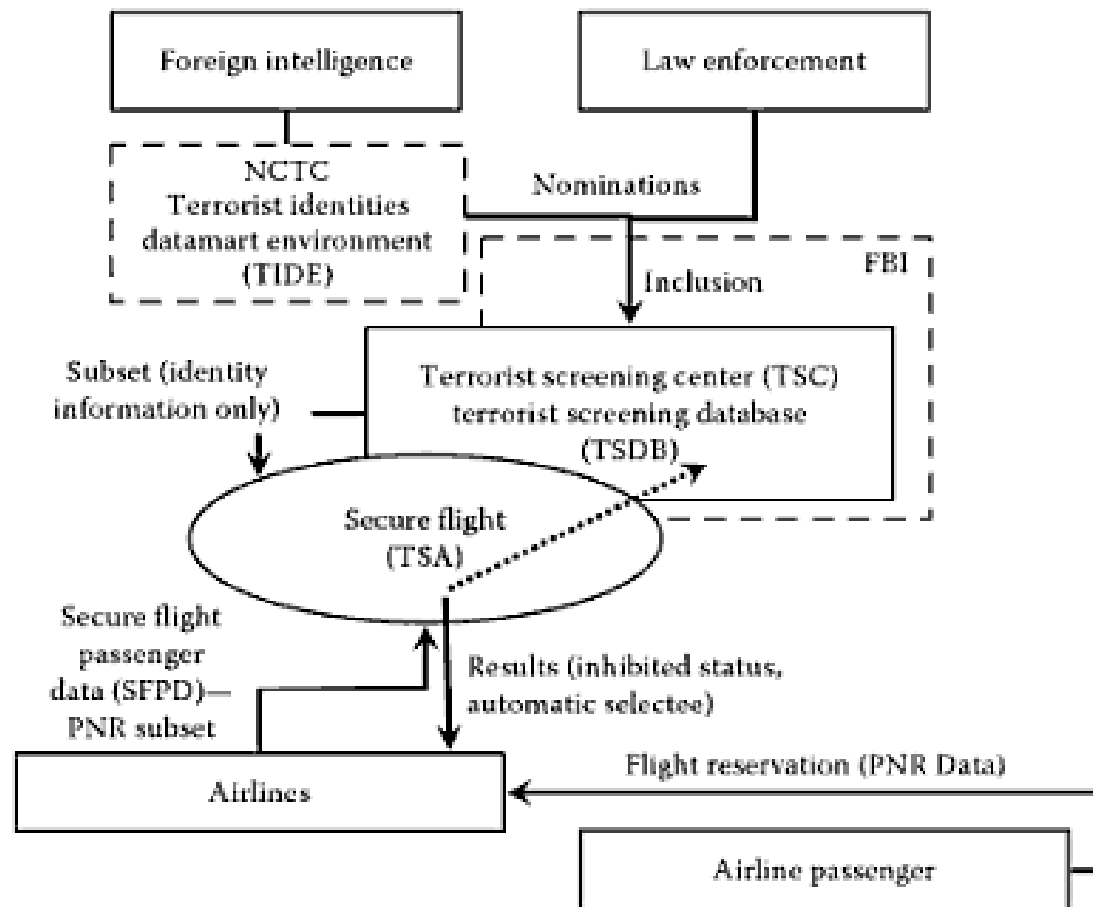


Barack Obama gab an diesem späten Donnerstagabend (MESZ) eine Erklärung ab - und übernahm die Verantwortung für das Versagen der Geheimdienste.
Foto: AFP

A schematic of the Secure Flight passenger prescreening system ...

Exploiting Intelligence and Counterterrorism Information

... for checking passenger data against terrorist watch list data derived from the TSDB.



Wikis (cntd.)

- IT innovation in tourism: tourism as driver of IT innovation, open issues, major areas of innovation (5)
- IT innovation in hotels (6)
- Tourism 2.0 (7)

Learning goals

- Understand service innovation from different stakeholder perspectives.
- Make sense of the specific innovation examples as part of bigger trends.
- Assess potential implications of innovations in tourism.

Agenda

1. Innovation and e-Business

2. Innovation in tourism

3. Methods

Innovation is defined as ...

- “the **renewal and enlargement** of the range of
 - products and
 - services and the
 - associated markets;

- the establishment of **new methods** of
 - production,
 - supply and
 - distribution;
- the introduction of **changes**
 - in management,
 - work organization, and
 - the working conditions and skills of the workforce”

eBusiness

(COM(1995) 688)

Characteristics of eBusiness related to innovation

- Innovative ways of using technology for business - **innovative (network) business models**
 - Process and network innovation (roles & linkages)
 - Advanced service properties, including multi-channel strategies
- Network effects
- Information revolution
- **Controlled experiments** and short innovation cycles
- Increasingly **competitive environment**
 - High level of visibility facilitates competition of imitation
 - Value webs facilitate efficient allocation of resources and the pooling of competencies

The new rules of the new economy

... innovation focused

- “First, wealth in this new regime flows directly from **innovation, not optimization**; that is, wealth is not gained by perfecting the known, but by imperfectly seizing the unknown.
- Second, the ideal environment for cultivating the unknown is to nurture the supreme **agility and nimbleness of networks**.
- Third, the domestication of the unknown inevitably means abandoning the highly successful known - **undoing the perfected**.
- And last, in the thickening web of the Network Economy, **the cycle of "find, nurture, destroy" happens faster** and more intensely than ever before.”

(Source: Kelly 1997)

The Six Core Elements of the Innovation System

1. **Leadership & Management** - provides inspiration, makes key choices, and organizes the development process.
2. **Strategic Alignment** - links innovation strategy with corporate goals, strategy, and objectives.
3. **Innovation Process** - defines who does what, when it should occur, and how to do it.
4. **Organization & People** - channel resources, define norms, provide infrastructure, drive innovation.
5. **Metrics** - provide the guidance and control system for innovation.
6. **Corporate Culture** - determines how the above elements behave and interact with each other.

Source: http://www.1000ventures.com/business_guide/innovation_system.html

Top barriers to innovation success

- Predominance of a risk-averse culture
- Lack of metrics relating to return on innovation investment
- Lack of innovation strategy / new product strategy. (Managing a product list instead of a cohesive strategy)
- Insufficient human resources
- Poor communication between levels of management and across functions, which interfered with setting clear expectations.

Source: http://www.1000ventures.com/business_guide/innovation_system.html

Apple vs. Google

„When companies start to imitate one another, it's usually either an extreme case of flattery — or war. In the case of Google and Apple, it's both. ...

"Apple goes pretty fast, but having someone chasing you always makes you go faster. This is going to be good for consumers."

Source: Business Week, Cover Story January 14, 2010, **Apple vs. Google: How the battle between Silicon Valley's superstars will shape the future of mobile computing**

	GOOGLE	APPLE
Date Founded	1998	1976
CEOs	Eric Schmidt	Steve Jobs
CEO salary	\$1 a year	\$1 a year
Headquarters	The Googleplex, Mountain View	Infinite Loop campus, Cupertino
Market cap	\$186 billion	\$190 billion
Revenue*	\$22.6 billion	\$36.5 billion
Motto	Don't be evil	Think different
Key to success	Algorithms	Elegance
Work ethic	20% of employees' time for pet projects	120% of employees' time for Steve's projects
The employees who matter	Engineers	Designers
How decisions get made	Data, data, data	Because Steve says so
Founders' aircraft	Boeing 767	Gulfstream V
Car of choice	Toyota Prius	Mercedes SL55
Big challenge	Can they make money on anything but search?	Does anyone but Jobs have a vision?

Democratising Innovation

“Innovation is rapidly becoming democratized. Users, aided by improvements in computer and communications technology, increasingly can develop their own new products and services.

User innovation, the data show, is strongly concentrated among "lead users." These lead users - both individuals and firms - often freely share their innovations with others, creating user-innovation communities and a rich intellectual commons.

... User innovation provides a valuable feedstock for manufacturer innovation. It also produces an increase in social welfare relative to a manufacturer-only innovation system.”

Eric van Hippel, EURAM 2005, Key note

The idea of Living Labs

- Many stakeholders
- Multiple technologies
- Participatory approach / collaboration matters
- Multi-sited
- Unbounded potential
 - involved partners conduct applied R&D in live environment
 - academic coordinators bridge University & Industry
 - demonstrators across EU member states (& beyond) in four industry segments (beer, paper, food and pharmaceutical)
 - As a *team* all partners explore application of novel processes and technologies to better enable electronic administration
 - The technology providers and partners deploy prototypes & concepts
 - Working towards standardized approaches and general application

Technology impact vision: Ambient Intelligence

“We can make huge numbers of inexpensive computing devices which can exchange data very fast;

If we could integrate fixed and mobile communication / services in a seamless way;

And if we could link these devices to the basis infrastructure and embed them in our surrounding;

And if we could incorporate value added services we make the devices to understand the people they serve,

we would have an Ambient Intelligence Landscape”

(see www.cordis.lu, DG INFSOC of the European Commission).

New modes of interaction

“Today we interact with the computer in a concentrated and work-related mode, tomorrow we may (hopefully) interact in a relaxed and probably even joyful way. People should have fun, technology should move to the background. And finally, why should not your washing machine directly “speak” with your dirty clothes in order to define the correct water temperature and detergent?”

Werthner/ Klein 2005

Garnter predictions/ strategic planning assumptions

1. By 2012, 20% of businesses will own no IT assets.
2. By 2012, India-centric IT services companies will represent 20% of the leading cloud aggregators
3. in the market (through cloud service offerings).
4. By 2012, Facebook will become the hub for social network integration and Web socialization.
5. By 2014, most IT business cases will include carbon remediation costs.
6. In 2012, 60% of a new PC's total life greenhouse gas emissions will have occurred before the user first turns the machine on.

Source: http://www.gartner.com/technology/research/reports/predicts_2010.jsp

Garnter predictions/ strategic planning assumptions

7. Internet marketing will be regulated by 2015, controlling more than \$250 billion in Internet marketing spending worldwide.
8. By 2014, over 3 billion of the world's adult population will be able to transact electronically via mobile or Internet technology.
9. By 2015, context will be as influential to mobile consumer services and relationships as search engines are to the Web.
10. By 2013, mobile phones will overtake PCs as the most common Web access device worldwide.

Source: http://www.gartner.com/technology/research/reports/predicts_2010.jsp

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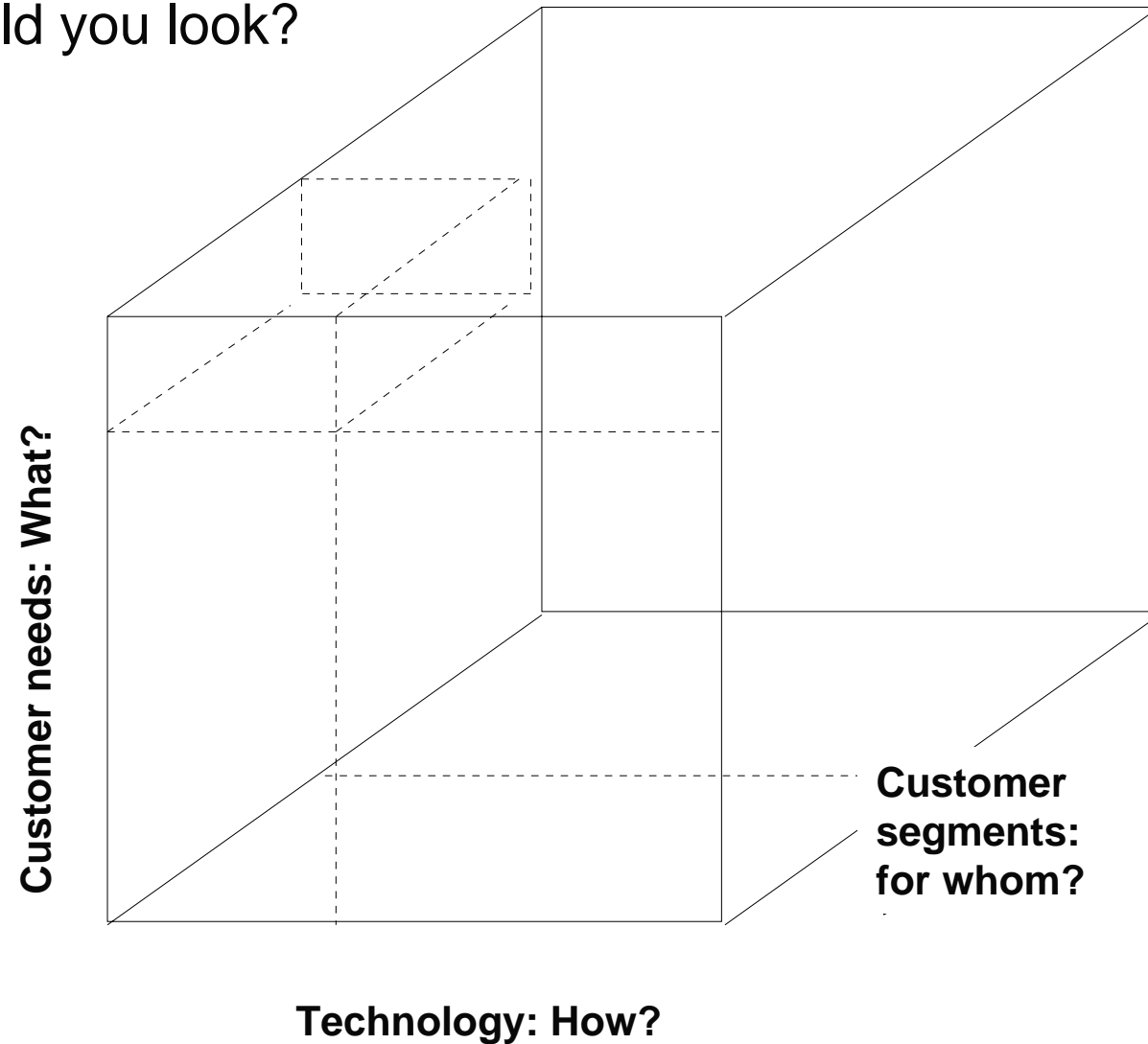
2. Innovation in tourism

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What could be promising areas of innovation in tourism?

- What could be promising areas of innovation in tourism?
- Where would you look?

Remember:



Challenges for recommender systems

The next generations of those systems have to address organizational and strategic issues as much as technical ones:

- Improved user involvement.
- Extended and transparent profile management.
- Standard templates for travelers' profiles.
- Integration of real-time communication in order to give access to human agents, be it an intermediary or representatives of either service providers or the destination.
- Establishing the notion that advanced recommendations are not for free and should ideally be paid separately from the trip. Currently the risk is that computer-mediated travel support is widely regarded as a low cost option with a poor service level in the back-office (hot line etc.).
- The configuration of trips is computationally quite complex and at the same time intellectually challenging for the prospective traveler. Hence the challenge is to identify and present satisfying solutions quickly and early on, before the search space is extended.

Example: Best Beach Formula

- Beach recommendation system by Dimitrios Buhalis

See:

http://news.bbc.co.uk/1/hi/wales/south_west/4684581.stm



A = Beach quality

W = Weather

E = Entertainment

C = Culture

V = Activities

F = Friendliness

S = Shopping

T = Travel time

TC = Cost as % of annual income

Extended destination management

- ICT will provide extended opportunities to create larger, **virtual pools of offerings** for groups, large events or simply for last minute bookings, in as much the individual and highly fragmented service providers agree to cooperate.
- While online destination management has proven its potential to communicate destination brands and destination offerings as a combination of travel, accommodation, restaurants, sports and entertainment facilities, **extended models of coordination and cooperation of service providers** are still rare.
- These cooperation models will become even more important, when customers (or groups of customers) will play a more active part, asking for flexible – on the fly – bundling of products.

Requirements for the future: service providers

- **Communication** has to be facilitated across **different channels, customer touch points and phases** of the trip, either for (urgent messages) or for providing additional information or support.
- Innovative **profile management** architectures are needed which allow sharing of information across service providers while at the same time providing transparency to the customers about
 - what information is stored and
 - for which purpose combined
 - with active opt-in and opt-out (“Do you want me to remember this?”, customer profile management) functions.

Requirements for the future: service providers

- ICT system should provide support for heterogeneous functions, processes and access information sources, maintaining the autonomy of participating organizations while enabling their integration into “**smart**” **networks**.
- On a technological level such a scenario requires new architectures, based on **semantic web**, **semantic web services** and **peer-to-peer networks**

Communities

- **Activity communities** may act as tour operators on behalf of their members, offering specialized products, designed specifically to meet their requirements, and with the best value-for-money, by cutting out a commercial intermediary, but still having bulk purchasing power. Such operations will generally operate over a number of destinations.
- A **destination community** will have a specific commitment to the enhancement and sustainability of that destination, but also it will offer its members specific benefits – including exclusive opportunities to enjoy special facilities – i.e. a connoisseur's experience.

Examples of travel related innovations

“Here are a few other travel related innovations I really like:

- A company called Vocation Vacations lets people try out other jobs.
- The "whatever, whenever" desk at W Hotels.
- The pillow menu at Hilton Hotels (airlines should steal this idea immediately).
- The double beds on Virgin Atlantic Airways.
- The women-only floor at the Hamilton Crowne Plaza in Washington.
- Cabin lights in first class on Emirates airline that resemble the night sky.
- Borrowing a goldfish bowl for your room at the Monaro Hotel in Chicago.
- Retro-tourism: using the slowest means possible to get from A to B.
- The Laboratory of Experimental Tourism (it really exists).
- Space tourism: coming soon to a galaxy near you.”

Richard Watson: The future of travel

[<http://www.fastcompany.com/resources/innovation/watson/030606.html>]

A few examples

- Total customer care: assistance service e.g. American Express Platinum
- Highly automated service provision:
 - DB Carsharing (<http://www.dbcarsharing-buchung.de/>)
 - Hotel without receptionist
- Tourism in Second Life

American Express

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I was beside myself. The minute I got off the plane, I realised I'd left behind my laptop, complete with my entire degree's worth of lecture notes and essays. Whatever influence American Express has with airlines, it produced spectacular results: the would-be stowaway laptop was delivered in person to my hotel room by an airline supervisor, less than two hours later.



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Ein Auto schnell und unkompliziert in 5 Schritten buchen:

- **Buchung:** Bei Abschluss Ihrer Buchung identifizieren Sie sich über Ihre Kundennummer und das Passwort. Sie buchen Ihr gewünschtes Fahrzeug bequem und kostenfrei über www.dbcarsharing.de oder über die 24-Stunden-Servicezentrale 0180 1 282828 (Ortstarif). Egal, ob lange im Voraus oder spontan, ob für wenige Stunden oder mehrere Tage.
- **Öffnen/Kundenkarte:** Ihre persönliche Kundenkarte ist Ihr Zugang zum Öffnen der Fahrzeuge in ganz Deutschland, und Sie können somit Ihr gebuchtes Fahrzeug für den gewünschten Zeitraum nutzen. Eine Fahrtverlängerung ist jederzeit über die Servicezentrale möglich. Für Buchungen in der Schweiz benötigen Sie eine weitere Kundenkarte, die Sie über die Servicezentrale erhalten.
- **Autoschlüssel:** Den Autoschlüssel finden Sie im Handschuhfach oder im Schlüssel-Tresor, der sich ebenfalls mit der Kundenkarte öffnet.
- **Rückgabe:** Fahrzeugrückgabe erfolgt an der Station, an der Sie das Fahrzeug ausgeliehen haben. Autoschlüssel wieder in den Halter des Handschuhfachs und das Auto wieder mit der Kundenkarte verriegeln.
- **Zahlen:** Ca. 2 Wochen nach Ihrer Fahrt erhalten Sie Ihre Rechnung wahlweise per Email oder Post.

Tourism moves into a virtual reality

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Dublin in SL is known for its warmth and sense of community. Drop by The Blarney Stone for a pint and chat with the regulars. Catch a live show, or go shopping at one of our many stores and boutiques.

Dublin in SL was designed to be photorealistic, to give a sense of a real place. Dublin in SL has been praised by real Dubliners for its realism and accuracy: "It's just like being there!"

UPCOMING EVENTS

eventful.com/venues/dublin-W0-001-000187421-6

MORE

INTERACTIVE STREET MAP

CLICK TO BEGIN EXPLORING DUBLIN

Fáilte! Welcome to Dublin in SL, Gathering Place for the World!

Summarizing propositions

Proposition 1: **Real-time communication** will facilitate a transformation of travel and tourism into a communication rich environment.

Proposition 2: **New forms of collaboration** between service providers will emerge in order to create superior customer care. This may take the form of smart business networks, as they can already be partly observed today, with adaptive nodes (e.g., participating organizations). And most probably those networks will operate without central governance, no central node.

Proposition 3: **Customer empowerment**, active communities and the extension of prosumer roles, which combine service production and consumption elements, are a prerequisite for extended service customization. Service providers need to develop modes of interaction which can be familiarized quickly.

Proposition 4: Two **opposing trends**: Unbundling of services and increasing shift of tasks to customers vs. seamless integration of services and customer care across numerous service providers. Customers will be able to select the level of required customer care and support.

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Gartner

Gartner's top predictions for 2010 showcase the trends and events that will change the nature of business today and beyond. Selected from across our research areas as the most compelling and critical predictions, the trends and topics they address this year speak to the changing balance of power and focus in IT. ...

The **selection process** included evaluating several criteria that define a top prediction. The issues examined included relevance, impact and audience appeal. More than 70 of the **strongest predictions** across all research areas were submitted for consideration this year.

Our top predictions are intended to compel readers to action and position them to take advantage of coming changes, not to be damaged by them. Clarity and conciseness are also essential characteristics of our top predictions: the average reader of the Wall Street Journal should be able to follow each prediction and its effect on areas of interest.

Delphi

The classical **Delphi design**:

- application of formalized questionnaires,
- panel of experts,
- responses of each single expert are kept anonymous,
- determination of the statistical group response, and
- two or more rounds (Linstone & Turoff, 2002).

Häder (2002) identifies four different **objectives** of Delphi studies

- (1) aggregating data,
- (2) making as exact predictions as possible about uncertain events,
- (3) determining and qualifying experts' opinions on diffuse issues, and
- (4) building consensus.

Scenario technique

The scenario technique attempts to develop several contrasting or even contradicting rich pictures of possible futures. Schwartz (1991) has suggested an eight step model for scenario development:

Step One: Identify focal issue or decision,

Step Two: Key forces in the local environment, influencing success or failure,

Step Three: Driving forces in the macro environment,

Step Four: Rank by importance and uncertainty, controlling the likelihood of events,

Step Five: Selecting scenario logics,

Step Six: Fleshing out the scenarios,

Step Seven: Implications for the decision,

Step Eight: Selection of leading indicators and signposts.

The art of scenario writing is to identify plausible, yet surprising descriptions of possible futures.

Example

Diffusion of EC	Fast	Slow
Market structure changes		
Increased direct sales activities of the airlines	Travel agents lose an important part of their revenues and have to focus on specialized, lucrative niches	Travel agents can retaliate airlines' direct sales activities, increasing the airlines losses in the new channel
Successful positioning of innovative travel agents on the Web	Travel agents' web sites have been established as successful complementary sales and service channel	Web activities are regarded as a strategic necessity but do not yield any profits.
Dominant new entrants (in collaboration with CRS/GDS)	Microsoft Expedia etc. dominate the electronic marketplace with superior service offerings and technology	Microsoft Expedia etc. dominate the electronic marketplace but lose money