**Smart Tourism
Real Time Marketing
and Nowness**

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TUI Travel PLC | Management trainee

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TOURISM REVIEW

Clarivate
Analytics
Social Sciences
Citation Index
(SSCI)®

Editor in Chief
Professor Dimitrios Buhalis
(since 2017)

The Editors encourage articles that explore knowledge and theor
future perspective that adds value to all tourism stakeholders glo

TOURISM REVIEW PUBLISHES THREE TYPES OF

- Research Papers (both empirical and conceptual)
- State of the Art papers (synthesis of literature)
- Cutting edge papers (short contemporary topic/ PhD rese

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Where it all began

30 years

of eTourism innovation

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Where it all began ….1980s!

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Kodak 200

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Tourism Information – Analogue
Where it all began ….1980s!

Bournemouth

Western Europe

Where it all began….1987!

Where it all began …. RICIRMS

Bournemouth

Buhalis, D., 1993, Regional Integrated Computer Information Reservation Management Systems (RICIRMS) as a strategic tool for the small and medium tourism enterprises, Tourism Management, Vol. 14(5), pp.366 378, https://doi.org/10.1016/0261-5177(93)90005-6

RICIRMS as a strategic tool for small and medium tourism enterprises

Complexity of worldwide CRS arrangements

Global Distribution Systems (GDSs) emerge in 1980s

Figure 1. Complexity of existing CRS.
Source: M. Scocozza. 'Deregulation – a recipe for prosperity', IATA Review, January 1989.
Note: Links between CRSs are in varying stages of development.

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RICIRMS: Destination Inventory Management

Bournemouth

Buhalis, D., 1993, Regional Integrated Computer Information Reservation Management Systems (RICIRMS) as a strategic tool for the small and medium tourism enterprises, Tourism Management, Vol. 14(5), pp.366 378, https://doi.org/10.1016/0261-5177(93)90005-6

Destinations need to manage inventory and provide information

Figure 2. Contents of the RICIRMS 'AEGEO'.
Source: Adapted from Buhalis, op cit, Ref 5, p 116.

RICIRMS: Dynamic Packaging

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Buhalis, D., 1993, Regional Integrated Computer Information Reservation Management Systems (RICIRMS) as a strategic tool for the small and medium tourism enterprises, Tourism Management, Vol. 14(5), pp.366 378, https://doi.org/10.1016/0261-5177(93)90005-6

Package Destination products

Figure 3. Creation of tourist package using the AEGEO RICIRMS.

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RICIRMS: Benefits of Destination Management Systems

Buhalis, D., 1993, Regional Integrated Computer Information Reservation Management Systems (RICIRMS) as a strategic tool for the small and medium tourism enterprises, Tourism Management, Vol. 14(5), pp.366 378. https://doi.org/10.1016/0261-5177(93)90005-6

RICIRMS as a strategic tool for small and medium tourism enterprises

Table 2. Summary of the arguments for and against the development of an RICIRMS.

Demand side	Supply side
For:	
● More and shorter holidays	● Need for regional tourism cooperation
● Need for specialised tourism/independence	● Need to improve total tourist service
● New products, like city breaks, weekends	● Need for diagonal integration
● Need for instant supply of information	● Use of yield management technique
● Need for flexibility/last-minute arrangements	● Extend market coverage for SMTEs
● Convenience in paying arrangements	● Connection with global CRSs for better coverage of the market
● Sophistication in decision making	● Improve marketing activities
● Access from home via personal computer or Videotex	● Decrease tour operators' monopoly power
● Time saving for experienced user	● Increase the economic contribution to the destination
● Looking for best available deal	● Increase rates/fares of the tourism products
● Value for money	● Stimulate alternative/off-season tourism
● Increase of total satisfaction	● Facilitate transportation deregulation
● High tech–high touch	● Control rapid growth of the industry
	● Incentive for SMTE registration at the NTO
	● Create competitive advantage for long-term SMTE survival
Against:	
● Generally limited understanding of technology	● Against the status quo
● Against the current consumption patterns	● Perceived as threat against tour operators and travel agents
● May increase prices	● Potential bias
● Consumer increases own involvement with travel arrangements	● Potential dependency on system
● Consumer relies on the reliability of the CRS and individual tourism suppliers	● Perceived not necessary for SMTEs
	● SMTE cannot afford investments
	● SMTE personnel/owner have limited understanding of ITT
	● Fear of SMTE to release business information
	● Mistrust of reservation and development agencies

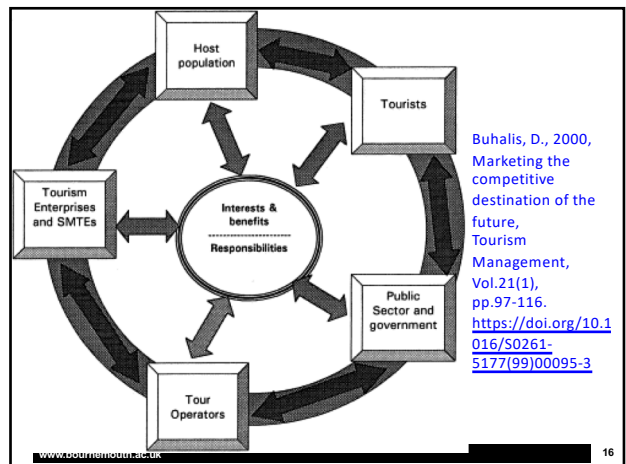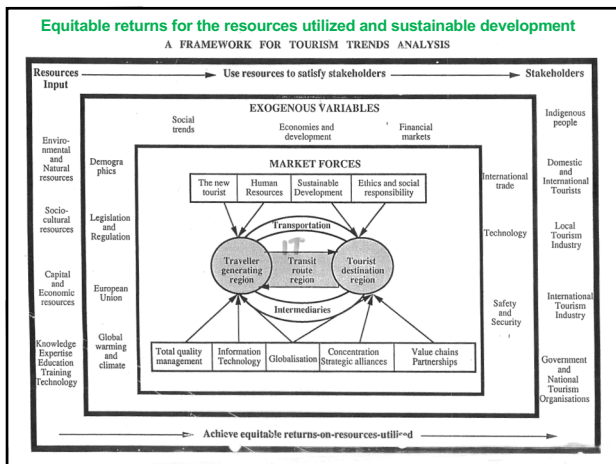## Destinations
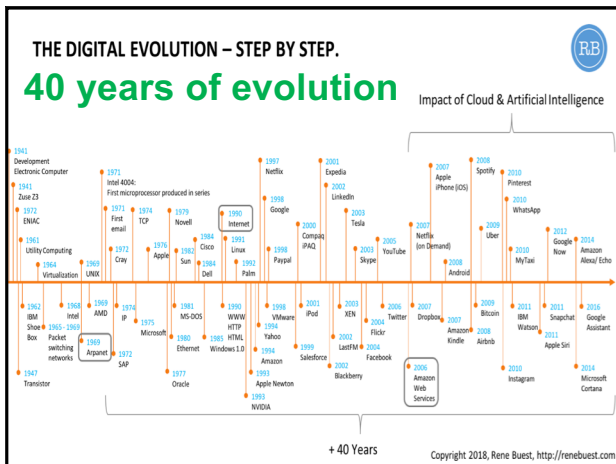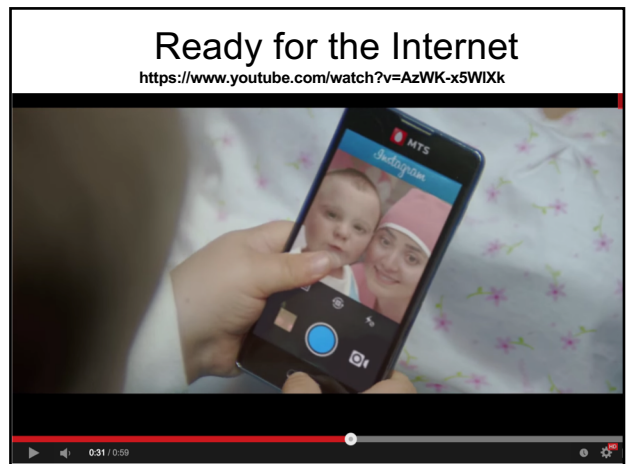
1. Competitive advantage
2. Destination differentiation
3. Enhanced reputation & maintaining destination image
4. Nurturing new business models –Innovation & investment
5. Resource optimisation especially urban assets
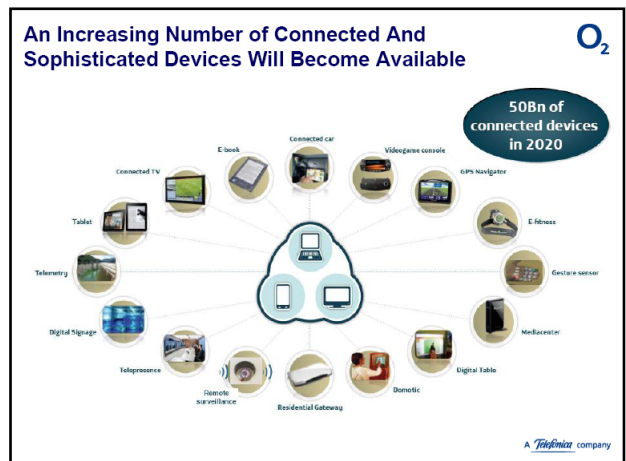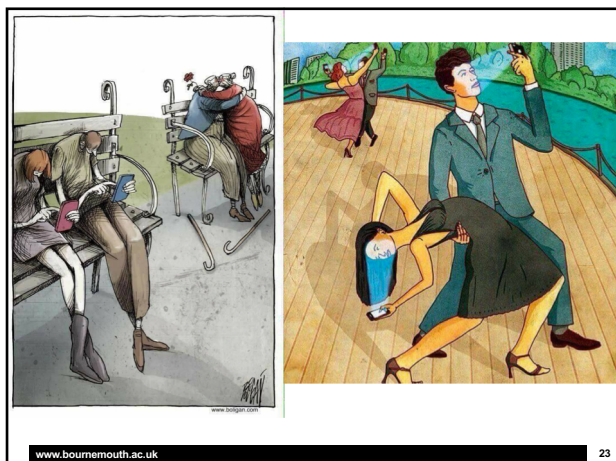6. Reimagining DMOs

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Source: Kieran White

Equitable returns for the resources utilized and sustainable development
A FRAMEWORK FOR TOURISM TRENDS ANALYSIS

Buhalis, D., 2000, Marketing the competitive destination of the future, Tourism Management, Vol.21(1), pp.97-116. https://doi.org/10.1016/S0261-5177(99)00095-3

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Technology Changes the world

Ready for the Internet
https://www.youtube.com/watch?v=AzWK-x5WlXk

THE DIGITAL EVOLUTION – STEP BY STEP.
40 years of evolution

Copyright 2018, Rene Buest, http://renebuest.com

Technology driven tourism by smart Travellers looking for VALUE
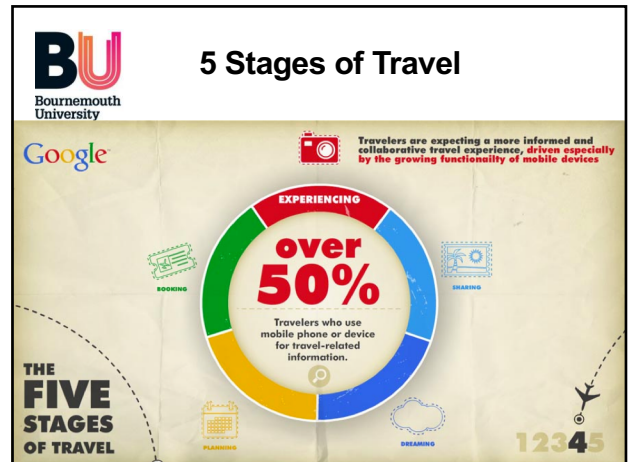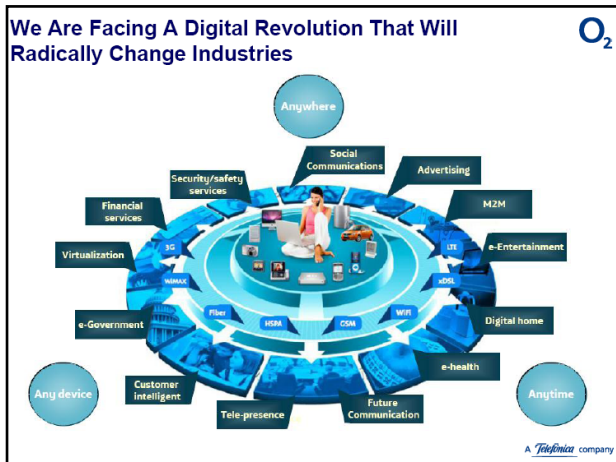
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- Personalisation of services
- Contextualisation and engaging
- Co-creation of experiences
- Instant gratification
- Shares experiences
- Engage with new technologies
- Control of own experience
- Personalisation across all stages of travel
  - Pre-travel: Make informed decisions
  - During: Convenience, real-time engagement, feedback
  - Post-travel: sharing travel experience & reviews

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An Increasing Number of Connected And Sophisticated Devices Will Become Available

O₂

50Bn of connected devices in 2020

A Telefónica company

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We Are Facing A Digital Revolution That Will Radically Change Industries

O2

5 Stages of Travel

Google

Travelers are expecting a more informed and collaborative travel experience, driven especially by the growing functionality of mobile devices

EXPERIENCING

over 50%

Travelers who use mobile phone or device for travel-related information.

THE FIVE STAGES OF TRAVEL

12345

Multiple stages of tourist experience

What is the role of technology in the different stages?

- **1 Dreaming:** Engage and inspire
Social Media - Travel blogs, travel review sites
- **2 Planning:** Search and compare
Websites and Social Media, provide information
- **3 Booking:** Decide and book
Booking platforms, engage consumers
- **4 On-Site Experience:** Co-create unique experiences
Online & offline, mobile services, LBS
- **5 Sharing:** Share, review and engage
Social Media – engage consumers Facebook, Twitter, Foursquare, TripAdvisor
- Technology is omnipresent and accompanies the individual in all stages, i.e. pre-travel, during and post-travel stages

CLICK TO FIND OUT MORE

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Fotis, J., Buhalis, D., Rossides, N., 2011, Social media impact on holiday travel: The case of the Russian and the FSU markets, International Journal of Online Marketing, 1(4), 1-19. https://doi.org/10.4018/ijom.2011100101

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YOU AIN'T SEEN NOTHIN' YET!

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The Consumer Decision Journey has changed

Old Consumer Journey Model — AWARENESS, INTEREST, CONSIDERATION, PURCHASE, LOYALTY

Actual Consumer Journey Model — Active Evaluation (Information gathering, shopping), Loyalty Loop, INITIAL CONSIDERATION SET, MOMENT OF PURCHASE, Post Purchase Experience (Ongoing exposure)

McKinsey Quarterly "The Consumer Decision Journey" 2009

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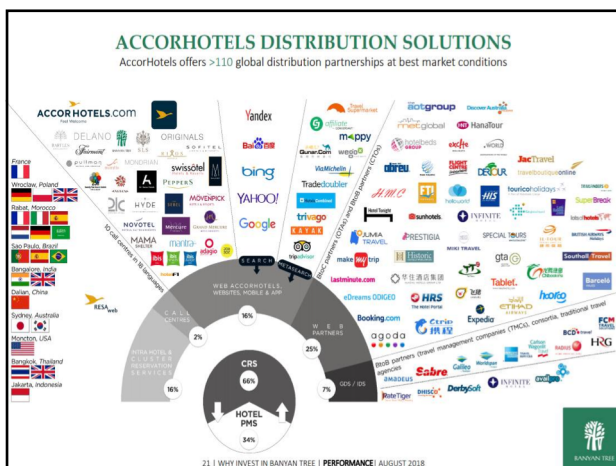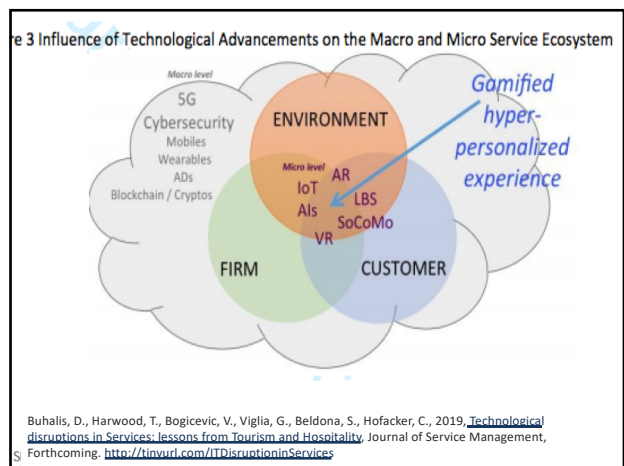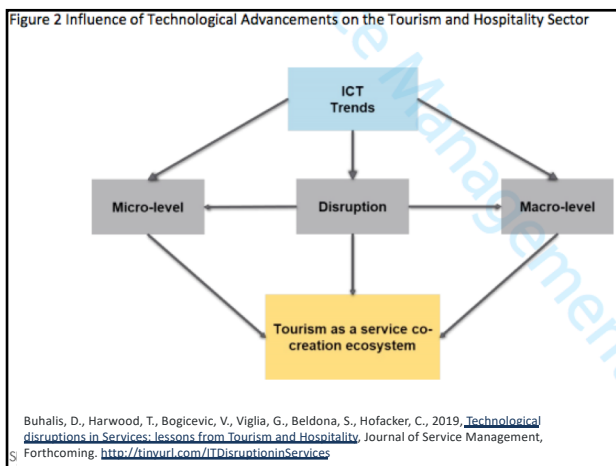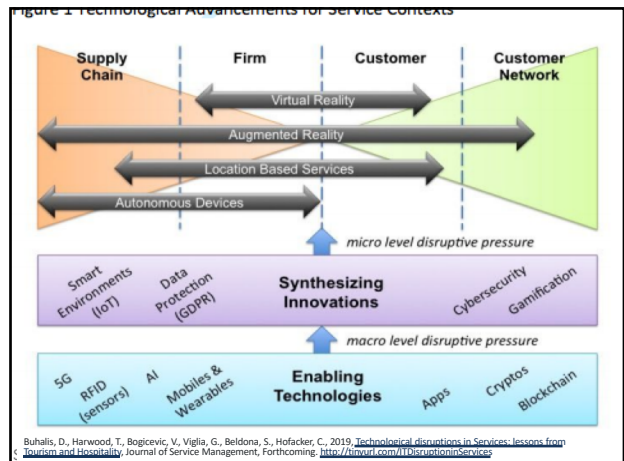https://scholar.google.co.uk/citations?user=KW2ZrvUAAAAJ&hl

SMART NESS

Smartness takes advantage of interconnectivity and interoperability of integrated technologies to reengineer processes and data in order to produce innovative services, products and procedures towards maximising value for all stakeholders.
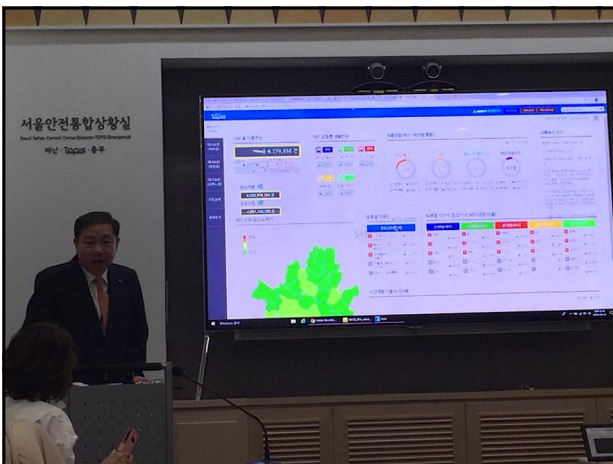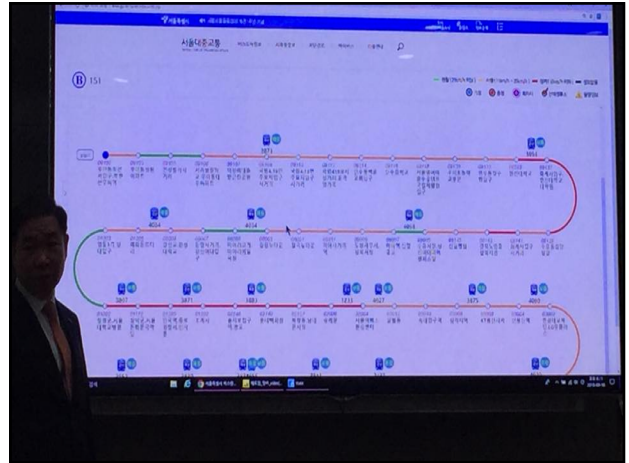
This reengineering enables shaping products, actions, processes and services in real-time, by engaging different stakeholders simultaneously to optimise the collective performance and competitiveness and generate agile solutions and value for all involved in the value system.

Smartness is the glue of interoperable, interconnected and mutually beneficial systems and stakeholders and provides the infostructure for the value creation for all.
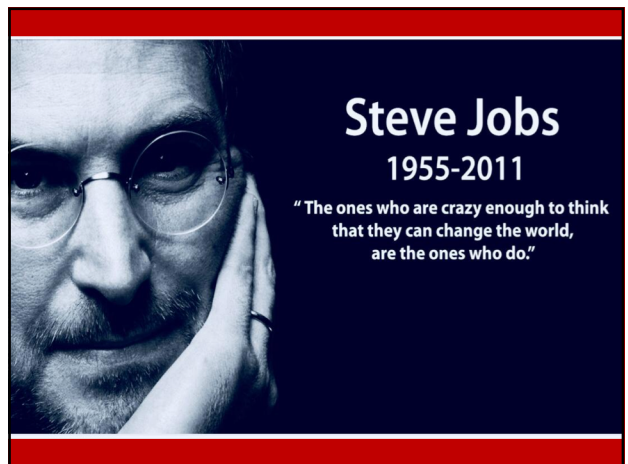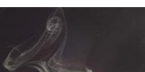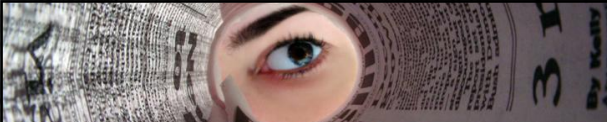
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Figure 1 Technological Advancements for Service Contexts

Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., Hofacker, C., 2019, Technological disruptions in Services: lessons from Tourism and Hospitality, Journal of Service Management, Forthcoming. http://tinyurl.com/ITDisruptioninServices

Figure 2 Influence of Technological Advancements on the Tourism and Hospitality Sector

Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., Hofacker, C., 2019, Technological disruptions in Services: lessons from Tourism and Hospitality, Journal of Service Management, Forthcoming. http://tinyurl.com/ITDisruptioninServices

Figure 3 Influence of Technological Advancements on the Macro and Micro Service Ecosystem

Buhalis, D., Harwood, T., Bogicevic, V., Viglia, G., Beldona, S., Hofacker, C., 2019, Technological disruptions in Services: lessons from Tourism and Hospitality, Journal of Service Management, Forthcoming. http://tinyurl.com/ITDisruptioninServices

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SMART
VS
…Not Smart…

Tourism

Burj el Arab, Dubai

Burj el Arab

Tele porting

Dreaming

Dreaming

REALITY AT MCO :(

SMART ???

SMART
Tourism

Steve Jobs
1955-2011
" The ones who are crazy enough to think
that they can change the world,
are the ones who do."

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SMART NESS

Smartness takes advantage of interconnectivity and interoperability of integrated technologies to reengineer processes and data in order to produce innovative services, products and procedures towards maximising value for all stakeholders.

This reengineering enables shaping products, actions, processes and services in real-time, by engaging different stakeholders simultaneously to optimise the collective performance and competitiveness and generate agile solutions and value for all involved in the value system.

Smartness is the glue of interoperable, interconnected and mutually beneficial systems and stakeholders and provides the infostructure for the value creation for all.

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smartness and agility
towards value co-creation and competitivess
building at the destination level as a network

- Networks: Interoperability and interconnectivity
- Internet of Things and Internet of Everything
- Sensors and Beacons
- Big Data and Data Analytics
- Social Media, Web 2.0 and User Generated Content
- Technological enablers for the hospitality industry
- Service Dominant Logic -Value co-creation of experience
- The concepts of co-creation and coopetition

Table 2 Tourists expectation on personalised services

Dimensions	Phases		
	Before	During	After
Transportation	1. Planning: navigation and information (duration, types of transportation, schedule and fare) 2. Recommender system: trail package and offerings 3. Time savings: booking, check-in	1. Real-time schedule 2. Personalised greetings 3. Personalised meals 4. Suggest alternative 5. Universal card	1. Feedback loop 2. Promotional update 3. Luggage finder
Accommodation	1. Planning: navigation and information (location, reviews, room type, price and surrounding events) 2. Time savings: booking and check-in 3. Personalised welcome message	1. Personalised welcome message 2. Awareness on customer preference 3. Personalised customer service 4. Room control over customer services	1. Feedback 2. Promotional offers 3. Maintaining engagement 4. Post customer service
Gastronomical	Information (special dietary, variety of meals, navigation, food ingredients and restaurant information)	1. Integration service 2. Real-time information: customer awareness and social context	1. Promotion 2. Prolong engagement
Attraction	1. Recommender system 2. Information provider	1. Co-creation through digital maps 2. Real-time information 3. Information on surrounding events	1. Sharing platform 2. Prolong experience 3. News update 4. Recommender system
Ancillaries		1. Navigation 2. General information 3. Instantly exchanging information	

Buhalis, D., Amaranggana, A., 2015, Smart Tourism Destinations Enhancing Tourism Experience through Personalisation of Services, in Tussyadiah, I., and Inversini, A., (eds), ENTER 2015 Proceedings, Lugano, Springer-Verlag, Wien, ISBN:9783319143422, pp.377-390

http://goo.gl/C6pHvw

SMART NESS

≠
Automation and Information Technology
Digitatization
Evolution
Social media
Reservations
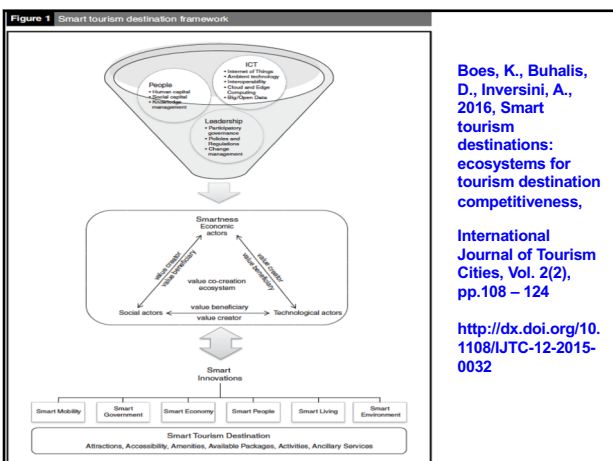
GLUE of
Interoperable and interconnected networks
mutually beneficial systems
Real time, dynamic and adaptive
Customised, individualised, contextualised
Collective competitiveness and coordination
value creation for all stakeholders

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Figure 1 Smart tourism destination framework

Boes, K., Buhalis, D., Inversini, A., 2016, Smart tourism destinations: ecosystems for tourism destination competitiveness,

International Journal of Tourism Cities, Vol. 2(2), pp.108 – 124

http://dx.doi.org/10.1108/IJTC-12-2015-0032

Technologies to Watch for the Next-Generation Enterprise in 2016 & 2017

From http://zdnet.com/blog/hinchcliffe on ZDNet by Dion Hinchcliffe

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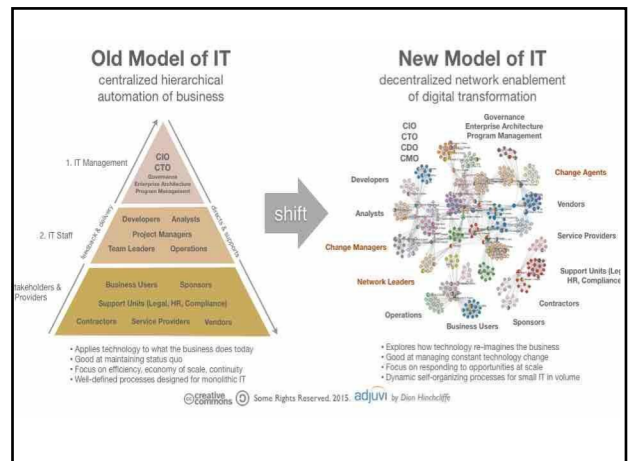https://scholar.google.co.uk/citations?user=KW2ZrvUAAAAJ&hl

From eTourism to Smart Tourism

- **Mono organisation 1-2-1**
- **Linear actions**

- Many to Many / Non Linear
- Networked and interoperable
- Real time - Cocreated
- Personalised & contextualised services
- Ad-hock networks

- **Bid Data**
- **Evolusion of travel**

Old Model of IT — centralized hierarchical automation of business

New Model of IT — decentralized network enablement of digital transformation

Data and Technology: the backbone

Internet of Things

Inter-networking & communication

Sensing information intelligently

Dynamic & heterogenous

Open Data

Freely used, re-used and re-distributed

Accessible in convenient forms

Inter-operable with other datasets

Big Data

Useful in predictive & user-behaviour analytics

High volume & variety Real-time

Relies on Machine Learning & cloud computing Internet of Things

NON Smart Traveller

- **Confused**
- **Unfamiliar environment**
- **Barriers such as language or mobility needs**

Smart Traveller

- Personalised & contextualised services
- Engage & explore
- Authentic & immersive experience
- All stages of travel

- **User Generated Content**
- **Influence brand reputation**
- **Impacts destination**
- **World of Mouth**

① INPUT — ICT-EMBEDDED ENVIRONMENT — Source of structured and unstructured data from multiple sources

② PROCESS — DATA STORAGE, TREATMENT & ANALYTICS — Data is split, sorted, reorganised, reduced and converted to meaningful information

DATA STORAGE — Storage servers — Cloud Computing

DATA TREATMENT — Artificial Intelligence Machine to Machine Learning

SMART ANALYTICS

Descriptive — Summarises past datasets to find trends, common & traditional form of analytics — What is happening?

Diagnostic — Analyses datasets to find the principal cause of a problem, however provides limited insights — Why is it happening?

Predictive — Slightly more complex, it tries to forecast future trends based on past datasets — What is likely to happen?

Prescriptive — Highly complex and advanced analytics which combines multiple datasets to predict future and suggests possible actions — What can be done about it?

③ OUTPUT — VALUE CREATION — Stakeholders use insights to form decisions that can bring value to the Smart Destination.

CREATION OF VALUE — Example: Recommender System, smartphone application, intelligent traffic management, dynamic revenue management

④ FEEDBACK — Value generated from this cycle results in changes, which are fed back into the INPUT for the next cycle, making it an iterative, adaptive and continuously evolving process

Key players in Smartness

TOURISM	TECHNOLOGY	OTHER
Borders	Telecommunications	Local Governments/Council
Accommodation	Gatekeepers such as Facebook,	Police
Restaurants	Google and Amazon	Destination Management
Entertainment	Mobile app developers	Organisation
Sports	Digital platform developers	Business Improvement
Retail	CCTV providers	District
Transport		Utility service providers (for example energy, water)
		Transport providers
	LOCAL RESIDENTS & TOURISTS	Banking & finance institutions
		Universities & Research Organisations

Thinking smart for life - SENSORS

Your wearable technology map

Social Media Monitoring

•Social Media Statistics:
http://www.socialbakers.com

CONVERSATION PRISM 5.0

M LIVE in Real Time – Marriott Hotels
https://goo.gl/It8zUt
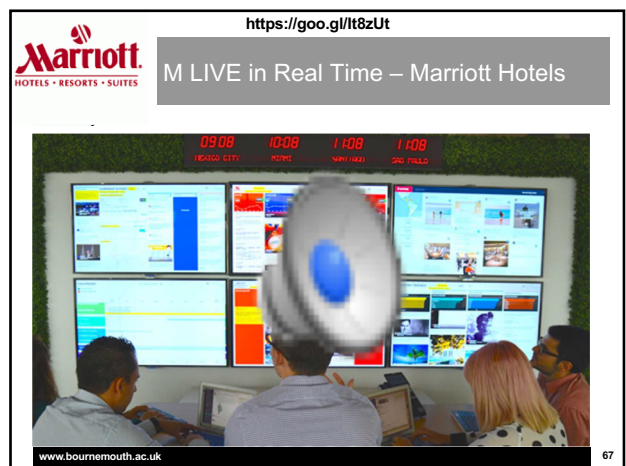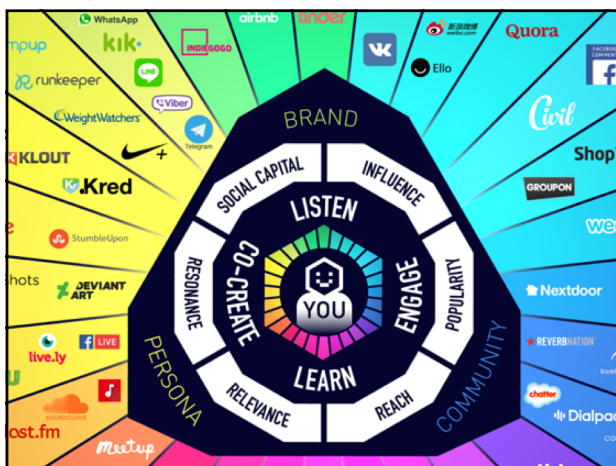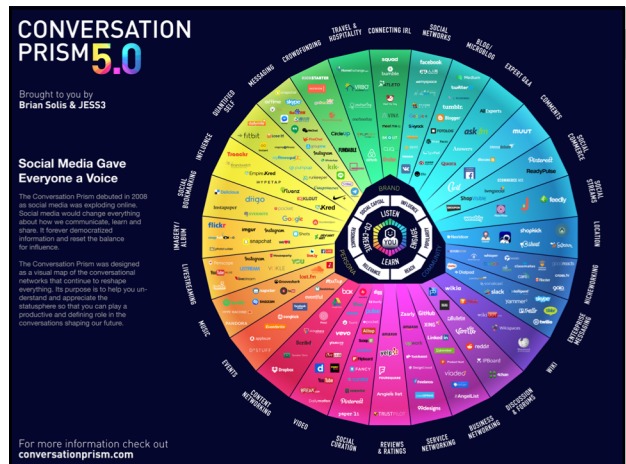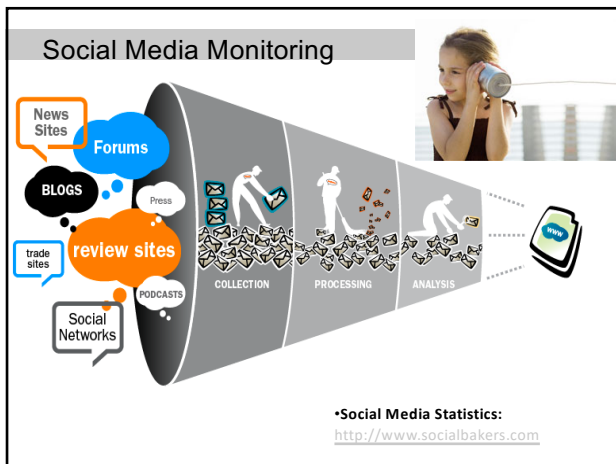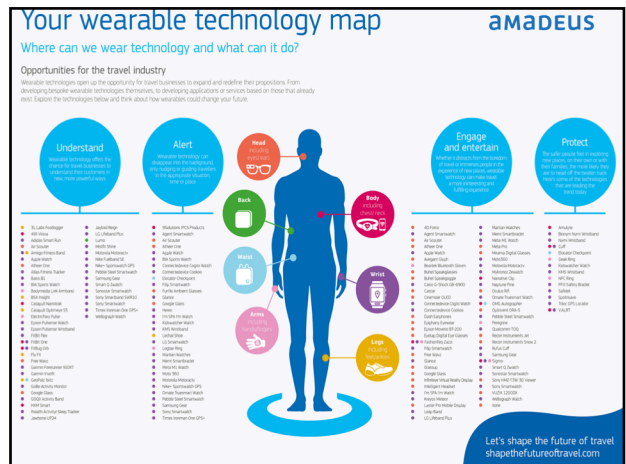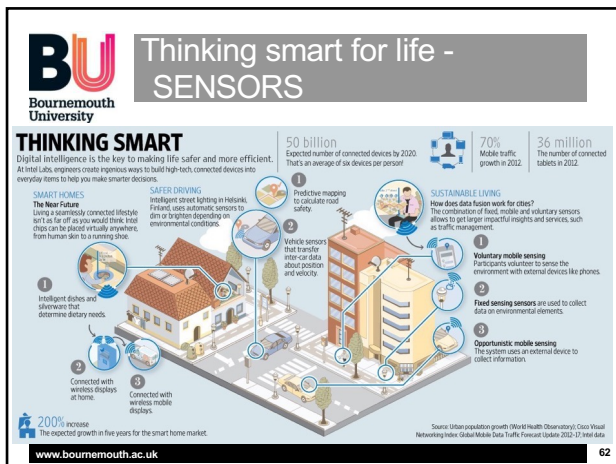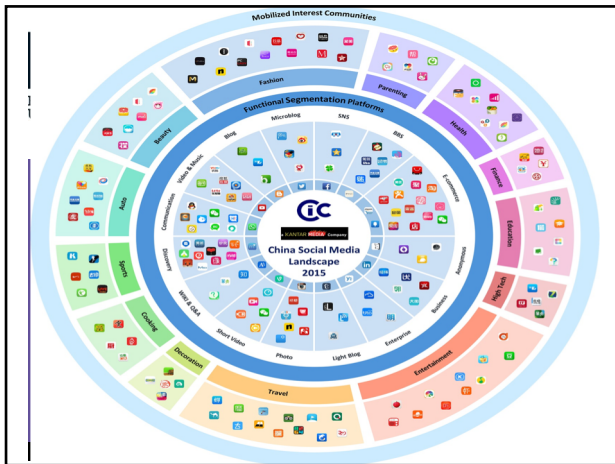
Tourism Needs Planning And Management

Sustainability of Tourism and Transport

- Congestion in motorways
- Access congestion in small historic towns and WHS
- Parking congestion in small historic towns and WHS
- Congestion at airports

Planning Tourism and Transport together:

- *Seasonality*
- *Incentives*
- *Railway Travel*
- *Awareness*
- *Ecolabels*
- *Indicators*

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Tourist & Mobility Congestion

Destination Planning and Management

Destinations

Overtourism and the Struggle for Sustainable Tourism Development

Wouter Geerts, Euromonitor - Mar 09, 2017 12:30 am

- "Capping tourists is a drastic measure, and surely not something destinations would like to do. It is often seen as a last resort, and the fact that more and more tourist destinations see no other way to remain sustainable and competitive is telling of the apparent failure of other initiatives"
- "While surveys show that individuals feel increasingly responsible about their impact on the environment, this does not necessarily translate into action, a phenomenon that has in the past been referred to as the 30:3 syndrome. While 30% of respondents to a survey claimed to be ethical consumers, only 3% actually bought ethical products"

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TOURIST: YOUR LUXURY TRIP MY DAILY MISERY

WHAT MAKES A SMART CITY SMART?

IoT · Smart Retail · Smart Health · Smart Mobility · Smart Home · Smart Energy · Open Data · Education

CONCEPTUAL MODEL OF BARCELONA

Smart Tourism Destination

- Interconnect multiple stakeholders
- Dynamic ICT platform
- Real-time information exchange
- Enhanced decision-making
  (Buhalis & Amarrangana 2015)

Buhalis, D., Amaranggana, A., 2015, Smart Tourism Destinations Enhancing Tourism Experience through Personalisation of Services, in Tussyadiah, I., and Inversini, A., (eds), ENTER 2015 Proceedings, Lugano, Springer-Verlag, Wien, ISBN:9783319143422, pp.377-390

"The future of tourism development"
(UNWTO Secretary General Taleb Rifai 2017)

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Smart Tourism Ecosystem

CO-CREATED Memorable Experiences

Driven by AGILITY

Enabled by TECHNOLOGY, BIG DATA & CONNECTIVITY

Dynamic, Strategic & Tactical MARKETING

Interoperability of systems in real-time

Technology is the means to an end, not the solution
Enabled by **Big Data, IoT and Open Data**

Enhancing positive experiences, removing negative factors through co-creation

Deriving value through marketing

All elements are pushed through with **an agile mindset**

Destination > Individual businesses

Smart Bournemouth

- UK's **fastest growing digital economy**
- **Testbed for 5G** mapping trials
- Strong links with University as **a knowledge partner**
- Testing the **Open Bournemouth IoT network**
- Active **engagement**
- **Agility** towards benefits
- Encourage **innovation** through partners such as Barclays Eagle Lab

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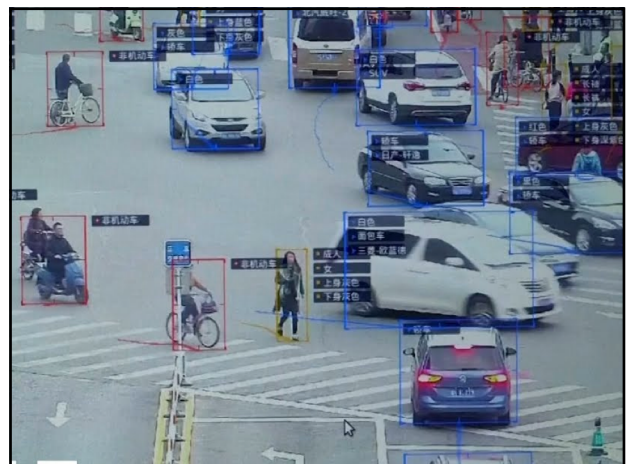
Thinking smart for life -BEACONS
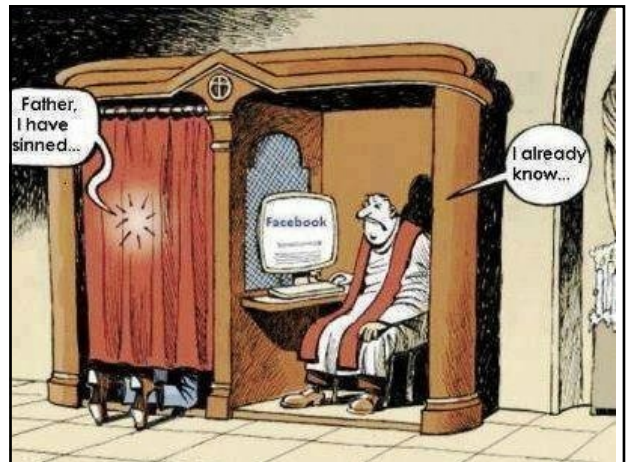
Brandão, F., Costa, C., and Buhalis, D., 2018, Tourism innovation networks: a regional approach, European Journal of Tourism Research, Vol.18, pp. 33-56- http://ejtr.vumk.eu/index.php/volume18/540-v18rp33

Neuhofer, B., Buhalis, D., Ladkin, A., 2012, Conceptualising technology enhanced destination experiences, Journal of Destination Marketing & Management Vol. 1 pp.36–46 https://doi.org/10.1016/j.jdmm.2012.08.001
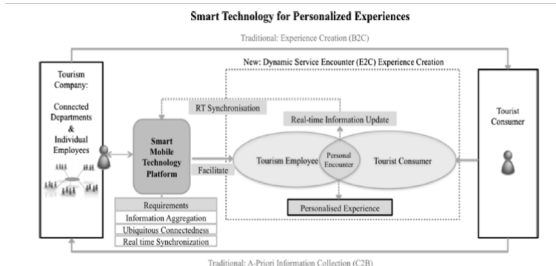
Neuhofer, B., Buhalis, D., Ladkin, A., 2015, Smart technologies for personalised experiences. A case from the Hospitality Industry, Electronic Markets, Volume 25(3), pp. 243-254 https://link.springer.com/article/10.1007/s12525-015-0182-1

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Neuhofer, B., Buhalis, D., Ladkin, A., 2014, A typology of technology enhanced experiences, International Journal of Tourism Research, 16: 340–350 https://doi.org/10.1002/jtr.1958

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https://scholar.google.co.uk/citations?user=KW2ZrvUAAAAJ&hl

Opportunities in and benefits of social media content mining.

Thomaz, Biz, Bettonic, Mendes-Filho, Buhalis, 2017, Content mining framework in social media: A FIFA world cup 2014 case analysis, Information & Management Volume 54 (6), Pages 786-801 https://doi.org/10.1016/j.im.2016.11.005

DMO online platforms: Image and intention to visit

Williams, N., Inversini; A., Buhalis, D., Ferdinand, N., 2017 Destination eWOM drivers and characteristics, Annals of Tourism Research Vol.64 pp.87- http://doi.org/10.1016/j.annals.2017.02.007

Smart Hospitality Ecosystem

Buhalis, D., Leung, R.,2018, Smart Hospitality – Interconnectivity and Interoperability towards an Ecosystem, International Journal of Hospitality Management, Vol.71, p.41- 50 https://doi.org/10.1016/j.ijhm.2017.11.011
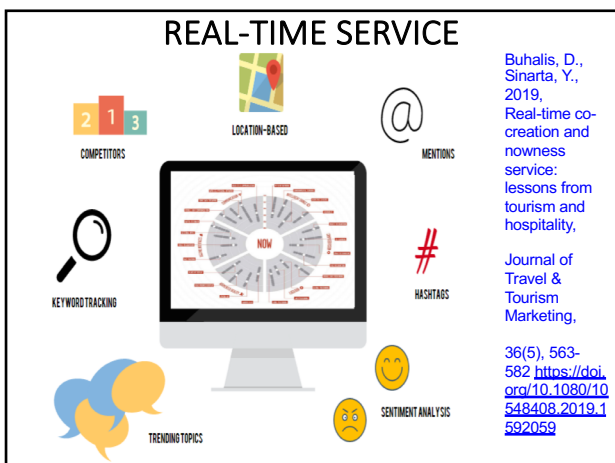
Use Gamification to engage in customer experience

Xu, F., Buhalis, D., Weber, J., 2017, Serious Games and the Gamification of Tourism, Tourism Management Vol.60, pp.244-256 http://www.sciencedirect.com/science/article/pii/S0261517716302369

In-destination Tour Products and the Disrupted Tourism Industry

Hsu, A., King, B., Wang, D., and Buhalis, D., 2016, In-destination Tour Products and the Disrupted Tourism Industry: Progress and Prospects", Information Technology & Tourism, Vol.16(4), pp.413-433 http://doi.org/10.1007/s40558-016-0067-y

Towards network competitiveness and max value for ecosystem

Figure I. The conceptual model for this study.

Zhang, H., Gordon, S., Buhalis, D., Ding, X., 2018, Experience Value Cocreation on Destination Online Platforms, Journal of Travel Research, In print https://doi.org/10.1177/0047287517733557

The accessible / disabled traveler ecosystem

Figure 1 Universal approaches

Sources: Buhalis and Darcy *et al.* (2011). Adapted from Buhalis *et al.* (2005), Clawson and Knetsch (1966), Leiper (2003), Packer *et al.* (2007), Small and Darcy (2010)

Michopoulou, E., Darcy, S., Ambrose, I., Buhalis, D., 2016, Accessible tourism futures: the world we dream to live in and the opportunities we hope to have, Journal of Tourism Futures, Vol.1(3), pp. 179 – 188, http://www.emeraldinsight.com/doi/full/10.1108/JTF-08-2015-0043w

Customer-to-customer co-creation practices in tourism: Customer-Dominant logic

I. Rihova et al. / Tourism Management 67 (2018) 362–375

		Autotelic	Instrumental
	Private	Communicating – Affective, Social Sharing – Affective, Social Confiding – Affective	Insulating – Affective, Social Territoriality – Affective, Social Non-conforming – Affective, Social, Functional Collaborating – Affective, Social, Functional
	Public	Conforming – Social, Network Acknowledging – Network Conversing – Network Relating – Affective, Network Initiating – Affective, Network Fun-making - Affective, Network Rekindling - Network	Advising – Functional, Network Helping – Affective, Functional, Network Trading – Functional, Network

Fig. 1. C2C co-creation value outcomes.

Rihova, I., Buhalis, D., Gouthro, M., Moital, M., 2018, Customer-to-customer co-creation practices in tourism: Lessons from Customer-Dominant logic, Tourism Management Vol.67, p. 362-375- https://doi.org/10.1016/j.tourman.2018.02.010

Smart Tourism Framework

The Current Status

Companies use only 12% of the data they gather! (Gov.UK 2017)

The Benefits

Consumer
Co-created, personalised experience
Engaged in all stages of travel
Derive value in an unfamiliar place conveniently

Supplier
Analyse meta trends for better predictability
Control operational costs
Influence customer behaviour in real time

Destination
Enhance and manage brand reputation
Reduce community – tourist conflict
Foster cross-sector innovation & growth

Nowness Service

Real Time Tourism

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https://scholar.google.co.uk/citations?user=KW2ZrvUAAAAJ&hl

Data Integration

Smart personalised experiences

Smart Technology for Personalized Experiences

fig. 3 Process model personalized experience creation

Neuhofer, B., Buhalis, D., Ladkin, A., 2015, Smart technologies for personalized experiences: a case study in the hospitality domain, Electronic Markets, Vol 25(1) https://doi.org/10.1007/s12525-015-0182-1

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Internal & Expernal Contextual Factors

Season   Political Situation   Location
Light   Emergencies
Likes
Traffic
Goals
Air Pressure   Preferences   Strikes
Delays   Tasks   Weather
Emotional Status   Topics of interest
Disability   Personal events
Approaches

Dimitrios Buhalis and Marie Foerste 2015, SoCoMo Marketing for Travel and Tourism: empowering co-creation of value,

Journal of Destination Marketing & Management, 4(3), October 2015, pp.151–161

http://dx.doi.org/10.1016/j.jdmm.2015.04.001

SoCoMo enabled Cocreation

Travellers   Social Media   Travel Industry

Connected Mobile Devices

SoCoMo
SOcial media
COntext based
MObile

Context

Internal Context		External Context	
Tasks and purpose	Goals and Likes	Location	Traffic
Company	Preferences	Weather	Emergencies
Familiarity with area	Disabilities	Social Environment	Delays
Topics of Interest	Allergies	Season/Time	Air Pressure
Emotional status		Political Situation	Light

REAL-TIME SERVICE

COMPETITORS   LOCATION-BASED   MENTIONS
KEYWORD TRACKING   NOW   HASHTAGS
TRENDING TOPICS   SENTIMENT ANALYSIS

Buhalis, D., Sinarta, Y., 2019, Real-time co-creation and nowness service: lessons from tourism and hospitality,

Journal of Travel & Tourism Marketing,

36(5), 563-582 https://doi.org/10.1080/10548408.2019.1592059

Bringing it home… UK footfall, hour by hour.

http://slideplayer.com/slide/10976205/

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https://scholar.google.co.uk/citations?user=KW2ZrvUAAAAJ&hl

low penetration   high penetration

http://slideplayer.com/slide/10976205/

The Service of Now

Leveraging Social Media and Context Technology to Enhance Consumer Experience in

Real-Time

Buhalis, D., and Sinarta, Y., 2019, Real-time co-creation and nowness service: lessons from tourism and hospitality, Journal of Travel and Tourism Marketing, 36(5), pp.563-582 https://doi.org/10.1080/10548408.2019.1592059
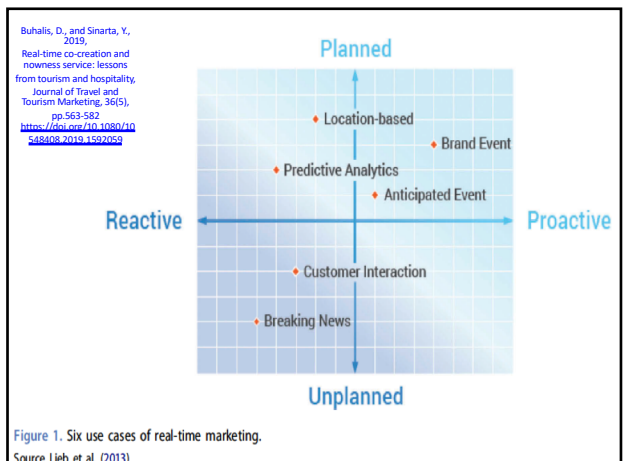
Table 7. Real-time service enablers.

Essential	
External enablers	**Social media, technology and online presence:** Interconnected social channels (e.g. Facebook, Twitter, Instagram, Google+, Snapchat, etc.), interactive and responsive websites, and/or brand's mobile apps. **Listening, monitoring and analysing tools:** Developing monitoring and search tools in social media through Twitter's Advanced Search, Facebook for Developers, and other third-party tools such as, Hootsuite, Google Alerts, Sprout Social, Mention, Keyhole, Netbase, etc. **Data-driven strategy and data relevancy:** A strategy for data mining in Real-time where all relevant data for the context of brands and consumers are examined dynamically. A combination of internal context including consumer's individual preferences, abilities, likes and external contextual context such as location or weather can be used to optimise suggestions.
Brand's internal enablers	**Real-time creative content curation and decision-making:** Real-time content curation can include an Intuitive, quick capture of trends Support both virtual/digital and physical/natural interactions These interactions can be either private or public according to the value co-creation **Employees' empowerment:** Well-trained, predictive-scenario management (Ability to solve problems instantly and empowering decision-making for individuals Detailed product and service knowledge Human empathy and personable and approachable manner **Operational flexibility** Highly adaptive to emerging trends (e.g. flexible tactics based on real-time data) Highly responsive to constant changes in consumer behaviour

---

CONSUMER EXPECTATION & DIGITAL TOUCH POINTS

WANTS / EXPECTATIONS

What's near me?   Any reccommendations?   It doesn't work. Help!   Terrible Service!

DIGITAL TOUCH POINTS
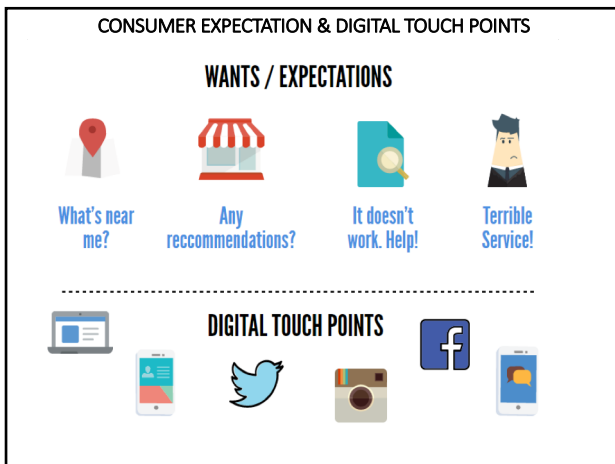
Definitions of Real Time Marketing

Table 1. Definitions of real-time marketing.

Author/Institution	Definition
SmartFocus (Ca.2017)	"the ability to engage with your customers or fans instantly based on real-time information – like their actions and behaviour, changes to your own data or external news or events. It is instant, (mostly) automated, and targeted."
Econsultancy (2015)	"real-time marketing involves taking in real-time input from a customer and delivering a highly personalised, relevant and timely message back to them."
TranslateMedia (2015)	"Real-time marketing is a timely, agile style of promotion focused around current events and immediate feedback from customers."
Deutsch (2014)	"simply getting the message to the right person at the right instant. It is a way to interact with followers by focusing on something ongoing."
Lieb (2014)	"The strategy and practice of responding with immediacy to external events and triggers. It's arguably the most relevant form of marketing, achieved by listening to and/or anticipating consumer interests and needs."
Firebelly (2014)	"…what happens when a company uses real-time data to pivot their content, conversation, community and conversion approaches across social (owned, earned and paid) and other marketing channels to take advantage of time sensitive opportunities. It could be an effort towards being relevant or it could have a number of different objectives."
Smart Insights (2014)	"marketing that links into current events that are relevant to an audience in order to engage them with a brand."
Garner (2013, p. 3)	"a way of thinking and philosophy that requires businesses to meet the demands of an always-on digital world, and includes production, communication, organisation and infrastructure." "…is about time, existence in time, and using search and social technologies to interact and strike with lighting speed and laser-like efficiency."
Scott (2012)	"Real-time means news breaks over minutes, not days. It's when companies develop (or refine) products or services instantly, based on feedback from customers or events in the marketplace. And it's when businesses see an opportunity and are the first to act on it."
Rust and Oliver (2000, p. 55)	"Individually customised service product that tracks changing customer needs continuously and update itself to meet customer's personal needs through interaction with the customer and environment."
Oliver et al. (1998, p. 31–32)	"The marketing approach in which personally customised goods or services and continuously update themselves to continuously track changing customer needs, without intervention by corporate personnel, often without conscious or overt input from the customer."
McKenna (1995)	"replacing broadcast mentality that has long dominated marketing with a willingness to give consumers access to the company and to view their actions and feedback as integral to developing or improving products." "focusing on real-time customer satisfaction, providing support, help, guidance and information necessary to win customer's loyalty."

Buhalis, D., and Sinarta, Y., 2019,
Real-time co-creation and nowness service: lessons from tourism and hospitality,
Journal of Travel and Tourism Marketing, 36(5), pp.563-582
https://doi.org/10.1080/10548408.2019.1592059

Noweness and Real Time Marketing

real-time marketing can be defined as marketing that provides personalised, individualised and contextualised products and services, based on real-time dynamic engagement with customers and co-creation of experiences, to optimise value for all stakeholders involved. Real-time marketing is propelling " nowness" or present moment service and experience.

Buhalis, D., and Sinarta, Y., 2019,
Real-time co-creation and nowness service: lessons from tourism and hospitality,
Journal of Travel and Tourism Marketing, 36(5), pp.563-582
https://doi.org/10.1080/10548408.2019.1592059

Buhalis, D., and Sinarta, Y., 2019, Real-time co-creation and nowness service: lessons from tourism and hospitality, Journal of Travel and Tourism Marketing, 36(5), pp.563-582 https://doi.org/10.1080/10548408.2019.1592059

Planned

Reactive   Proactive

Unplanned

- Location-based
- Brand Event
- Predictive Analytics
- Anticipated Event
- Customer Interaction
- Breaking News

Figure 1. Six use cases of real-time marketing.
Source Lieb et al. (2013)

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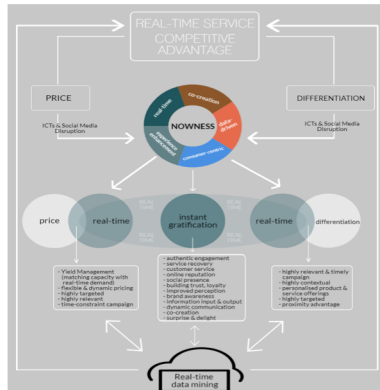Tel: +44 1202 961517   Email: dbuhalis@bournemouth.ac.uk
http://www.bournemouth.ac.uk/etourismlab   Twitter @buhalis
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https://scholar.google.co.uk/citations?user=KW2ZrvUAAAAJ&hl

Conceptual Framework of Real-time Service Competitive Advantage

Buhalis, D., and Sinarta, Y., 2019, Real-time co-creation and nowness service: lessons from tourism and hospitality, Journal of Travel and Tourism Marketing, 36(5), pp.563-582 https://doi.org/10.1080/10548408.2019.1592059

Characteristics of Real Time Cocreation

Table 5. Interconnected characteristics of real-time co-creation and nowness service.

Real-time	Immediate and relevant
	Instant engagement
	Dynamic environments and delivery types
	Virtual or physical environments
	Public or private engagement
	Online or offline interactions
Co-creation	Value co-creation, active engagement with consumers
	Brands empower consumers to engage dynamically
	Resources to co-create own experience through collaboration
	Brands as a facilitator of service re-engineering
	Instant gratification
Data-driven	Tailored products and services
	Uniquely based on consumer's needs
	External context aware
	Personalisation and contextualisation
	Differentiation of service offerings in real-time
	Dynamic pricing and revenue management in real-time
Consumer-centric	Identification of different consumer's persona based on particular context
	Customer Intelligence based on
	historical data (- purchase history or previous relevant interactions
	current data – consumer's social profile or real-time updates
	predictive data -patent recognition and forecasting of choice
Experience enhancement	Focus on real-time experience enhancement
	Creating utilitarian or functional gratification for consumers
	Deliver hedonic gratification
	Exceed expectation and co-create memorable experience

Buhalis, D., and Sinarta, Y., 2019, Real-time co-creation and nowness service: lessons from tourism and hospitality, Journal of Travel and Tourism Marketing, 36(5), pp.563-582 https://doi.org/10.1080/10548408.2019.1592059

Table 4. Real-time co-creation triggers for nowness service.

Real-time triggers	Implications
User-Generated Content	Consumers regularly share user generated content about brands, often as things happen. Conversation on line with peers then often emerge about particular experiences. Marriott Hotels implemented alerts to identify influences in social media and explore the conversation about their brand in real time. Depending on the conversation they often engage proactively with consumers, especially with ones that have many followers, have engaging and favourable content.
Location/geolocation & geo-fencing	Smart devices allow brands to provide geographically relevant content, posted at specific locations at the time that customers visit. Geo-fencing is critical to understand contextual factors in real-time and trigger real-time response. It can also be used for push notifications of special geo and time-based offers and promotions.
Sentiment	Consumers share positive or negative opinions, emotions and feelings in social media. Analysing message sentiment based on the tone or particular words used can help brands develop their engagement. Praise is often acknowledged and encouraged towards creating advocates. Criticism and complaints are addressed instantly, often off-line or in private conversations, to improve experience and regain confidence in real-time. This can prevent the escalation of complains and service recovery. Protecting the brand integrity and reputation online is of paramount importance as this is a major asset for tourism and hospitality organisations.
Keywords	Leveraging keywords by tracking brand names, locations or key attributes can also assist brands to engage with consumers and to capture opportunities to cocreate value. Events or related news are good engagement opportunities when people discuss a theme, location, activity or a topic.
Mentions Tags	When consumers mention or tag brands, they want to engage with brands intentionally. This is to share experiences or feelings, ask assistance or information, complain, or simply engage the brands. Acknowledging, responding and supporting are critical to support customers, maintain engagement and improve experience.
Hashtags	Hashtags track particular topics for specific conversations. Hashtag tracking is used to track particular event, topic or campaign. Examples include #Mariott #Bournemouth #thailand #royalwedding #pokemon #tennis #brexit #christmas #olympics. It allows tourism companies to theme activities and target special interest tourism or relate to an event.
Breaking news or events, Political or regular social events	Break news incidents may change the context dramatically and therefore they must be served through real-time interaction. Real-time monitoring of news assist brands to update stakeholders by providing reliable information. This may include severe weather, natural disasters, earthquakes, storms, strikes, political unrests, violence outbreaks, accidents, terrorism attacks and other crises and unpredicted eventualities. Real-time knowledge about a particular crisis or negative situation may be critical for customer safety and also for the decision whether to travel to a destination or not. Brands have a duty of care to their customers and also need to protect employees and assets. Engaging with real time, accurate and reliable information is critical in a crisis situation. It can also avoid embarrassment when brands have pre-programmed content that may be inappropriate given the current situation. For example promoting holidays at a destination when there is a natural disaster and there is a need for humanitarian aid is inappropriate and embarrassing. Viral stories can also be effective to support brands to achieve authentic engagement and advocacy. For example, utilising positive events, such as the royal wedding for promotion and themed campaigns can gain exposure and bookings for the company. Real-time decision-making is required in seizing the opportunity to do so.
Occasions	Consumer occasions include special memorable moments that consumers share in the public domain that are related to a tourism organisation. When brands proactively acknowledge consumers' important occasions (e.g. birthday or special celebrations), they can offer a surprise and delight real-time experience that leads to positive advocacies and conversations.

Source: Adapted from Sinarta and Buhalis (2018)

Real-time Marketing Definition

Criteria	Mass customization	Relationship marketing	Real-time marketing
Focus	Transaction	Relationship	Customer space; time
Core product	Customized	Not customized	Adapted in real time
Service product*	Not customized	Customized	Adapted in real time
Product flexibility	No	No	Yes
Technology employed	Flexible manufacturing	Information technology (e.g., computerized databases, desktop technology, etc.)	Information technology, new material sensors, flexible manufacturing

* Service product refers to those services which are part of the product offering, and which need to be fulfilled over the period of the relationship (e.g., warranty). This is also referred to as product augmentations.
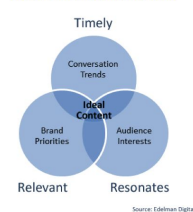
Oliver et al., 1998

"the strategy and practice of responding with immediacy to external events and triggers. It's arguably the most relevant form of marketing, achieved by listening to and/or anticipating consumer interests and needs" (Lieb, 2014).

Real-time Co-Creation

- The rising expectations of consumers who increasingly participate in the experience co-creation process rather than the consumption of service

- Process of value creation has evolved from product-centric to a consumer-centric

- Provide a more personalised experience where "informed, networked, empowered consumers increasingly co-create value" with brands (Prahalad & Ramaswamy 2004)

Real-Time Content Mix

Timely

Conversation Trends

Ideal Content

Brand Priorities

Audience Interests

Relevant

Resonates

Source: Edelman Digital

MARKETER-CENTRIC MARKETING
Allocating resources based on what has worked historically, or what is controllable, measurable, and/or cheaper

CONSUMER-CENTRIC MARKETING
Providing the right information to the consumer at the right time and place to develop relationships and drive a purchase

MARKETER CENTRIC

CONSUMER CENTRIC

Milward Brown Digital, 2015

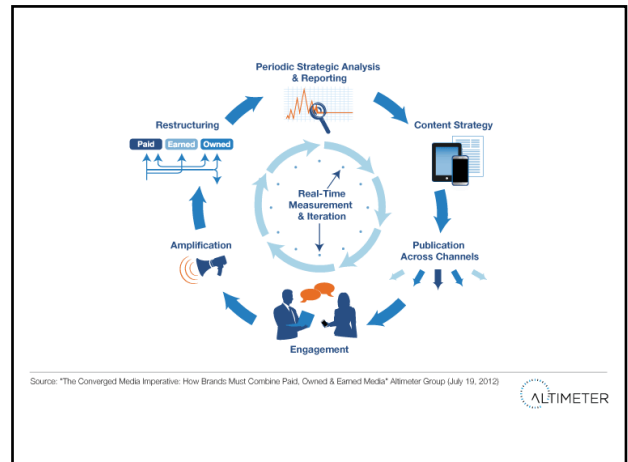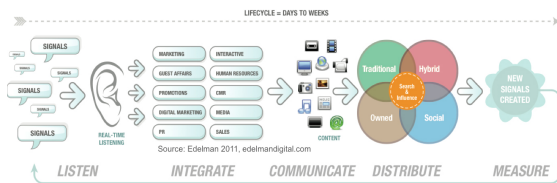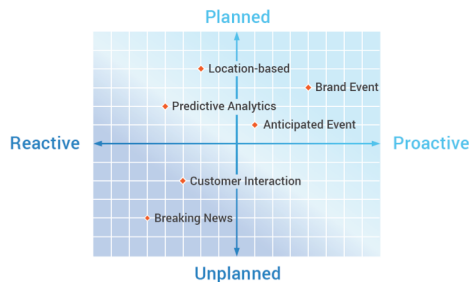## Real-time Competitive Advantage

- Develop brand's competitiveness by better understanding consumer expectation and engage with them in real-time
- Utilising real-time data monitoring to ensure brand relevancy from producing and co-creating content or service that are meaningful to consumers when they are most interested, via medium or platforms which suits their behaviour best
- Brands ability to co-create distinctive value with consumers based on real-time needs
- Rising demand of highly personalised and contextualised products or services

Source: Edelman 2011, edelmandigital.com

LISTEN   INTEGRATE   COMMUNICATE   DISTRIBUTE   MEASURE

Source: "The Converged Media Imperative: How Brands Must Combine Paid, Owned & Earned Media" Altimeter Group (July 19, 2012)

ALTIMETER

Real-time Service Best-practice

- In-depth case study of Marriott M Live
- Multiple case study of KLM Dutch Airlines, Visit Philadelphia, Red Roof Inn and Pretzel Crisps

Marriott M Live Case Study

Why Marriott?

1) Marriott is one of the leading innovators of real-time service implementation

2) Has a dedicated real-time command centre (M Live) in four countries (and counting) to actively interact with its global consumers 24/7 in various languages

3) Utilising real-time data with a main focus of 'Return of Engagement' and experience enhancement (co-creation) – which highly relevant with the scope and objectives of this study

4) Has won Gold and Silver Creative Data Lions at the Cannes International Festival of Creativity 2017 in the categories of Social Data and Use of Real-time Data, respectively.

Using geo-fencing technology, M Live has shifted the common content distribution strategy, which was 'creating a general content and share it to the wide audiences', to '**listening and benefitting a single moment that is pertinent and shareable between targeted consumers**'.

Multiple Case Study

1) KLM

In July 2011, KLM became one of the wold's first brands to provide 24/7 service in social media.

KLM also pioneered in using Facebook Messenger as their service channel in 2016. This platform options have expanded to Twitter and WeChat in June 2017, with an addition of Emoji Service to cater even more social-savvy target market. The service via Messenger which was piloted last year was proven success, with more than 1.4 million customers received their flight updates and documents through Messenger.

_____

Multiple Case Study

2) Visit Philadelphia

Visit Philadelphia (Visit Philly) establishes personal connections with fans by sharing related content and tailoring recommendations unique to each visitor's interest and to connect visitors and locals through real-time interactions both virtually and physically (co-creation).

They also identify meaningful user-generated content through #visitphilly hashtag, geotags and keywords analysis, which has been effectively utilised to perform 'surprise and delight' for visitors.

Multiple Case Study

3) Red Roof Inn

Red Roof Inn used a moments-based approach to leverage a highly relevant and real-time offers after realising that there are high numbers of flight cancellations each day, especially during winter season.

They developed a flight-tracking technology to monitor flight delays in real-time and send targeted paid search campaigns for their hotel chains near airports. The live cancellation data are filtered through a conditional algorithm which could automatically boost the bids to win ad space on Google search system.
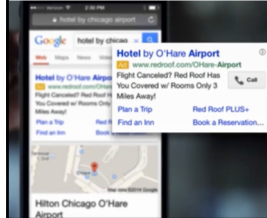
The real-time personalised ads which say 'Flight cancelled? Red Roof Has You Covered' seized consumers at the right moment, which has resulted in additional 650% share of voice, 375% raise in conversion rate and 60% increase in direct bookings (MMA 2014, Gupta 2015, Koch 2016, Keyser 2017).

Multiple Case Study

3) Pretzel Crisps

Pretzel Crisps monitored Twitter conversations to discover consumers who are 'in need of a snack', by employing keyword search terms and social profile analysis.

The strategy, which referred as 'social sampling', engage with consumers via dialogue and just-in-time product sampling delivery. This campaign has resulted in more than 4.2 million earned media impressions since its launch in 2010 and 87% increase in sales compared with the prior year

(Pretzel Crisps 2017).

Multiple Case Study
Cross-case analysis

All four brands (KLM, Visit Philly, Red Roof Inn and Pretzel Crisps) identify consumer needs proactively and co-create value dynamically. They establish online engagement with their consumers and are in a position to respond in near real-time.

The main commonalities between the four cases are the aim to enhance consumer experience by actively engaging, as well as by personalising and contextualising service offerings. Brands are actively reaching out to targeted or relevantly influential consumers, often in an unexpected manner, to enhance their experience.

Data Driven
Real-time
Value Co-creation

- Time is a critical element of the contextual information, both internal and external, for all stakeholders
- Instant gratification value of social media benefit consumers with timely reaction from brands which support co-creation
- Actively engaging as well as personalising and contextualising to enhance consumer experience
- Integrating critical knowledge of consumer's real time need, geo-data, contextual factor and mobile search behaviour to capture real-time needs
- Flexibility and adaptive behavior towards consumer demand and online empathy are crucial to maintain engagement

Buhalis, D., and Sinarta, Y., 2019,
Real-time co-creation and nowness service: lessons from tourism and hospitality,
Journal of Travel and Tourism Marketing, 36(5), pp.563-582
https://doi.org/10.1080/10548408.2019.1592059

Value Exchange between Consumers and Brands
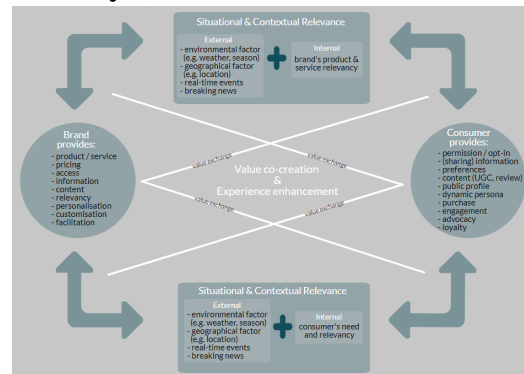
Buhalis, D., and Sinarta, Y., 2019,
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Value for Stakeholders

Stakeholders	Value
Brands / Marketers	- positive advocacy / e-WOM / Referrals - product and service improvement - increase sales / sales growth - organic engagement - authentic User-Generated Content - real-time complaint management / service recovery - proximity / location-based offerings - real-time customer service - yield management or dynamic pricing based on real-time data
Consumers	- instant gratification - consumer satisfaction & loyalty - enhanced experience - real-time information & recommendation - dynamic & interactive communications - brand awareness - surprise & delight
Potential consumers	- trustful information source / recommendation - improved brand perception

Conceptualisation of Real-time cocreation and nowness service ecosystem

Buhalis, D., and Sinarta, Y., 2019, Real-time co-creation and nowness service: lessons from tourism and hospitality, Journal of Travel and Tourism Marketing, 36(5), pp.563-582 https://doi.org/10.1080/10548408.2019.1592059
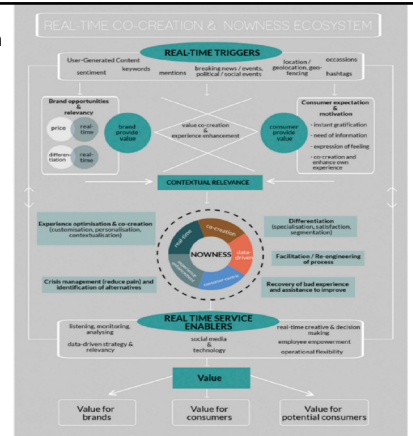
Figure 3. Conceptualisation of real-time co-creation and nowness service ecosystem.

Answer when they need you
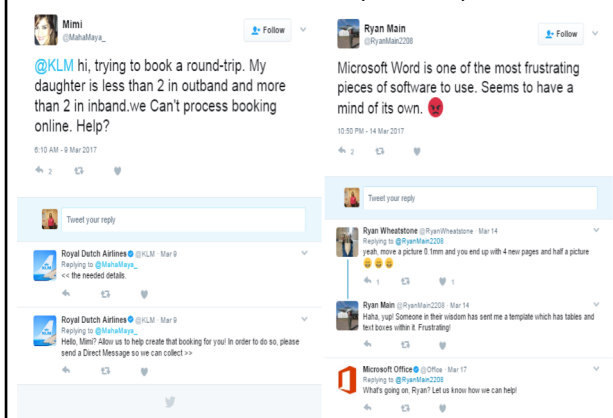
complaints
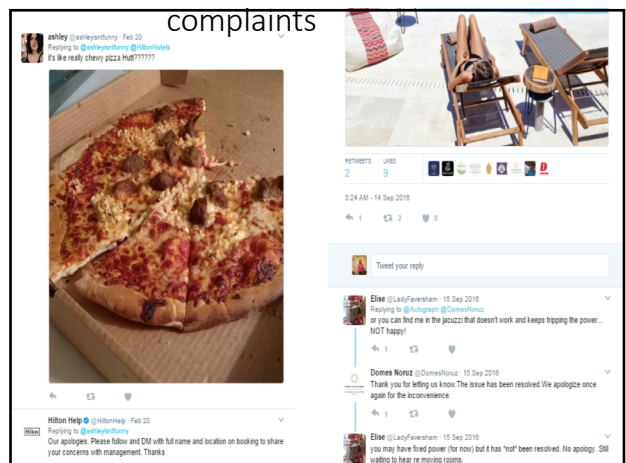
Delivering the Wow Factor in Real-time

SMART SOLUTIONS

**Sharing Economy
Autonomous Vehicles and Drones
Artificial Intelligence
Big Data Management
Real Time Management
Autonomous Vehicles**

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Dock-less bicycle-sharing system

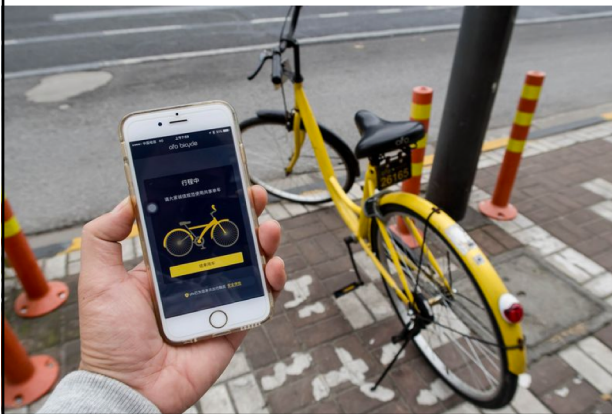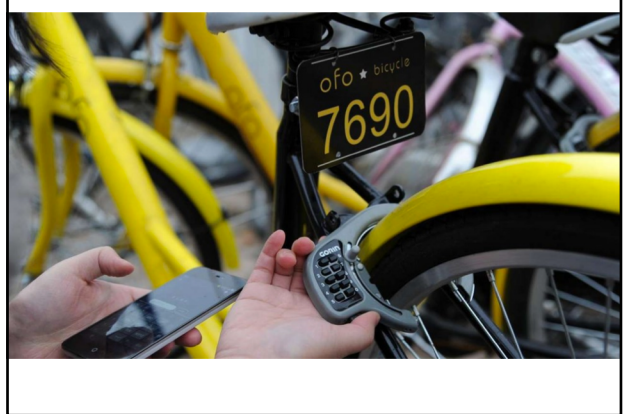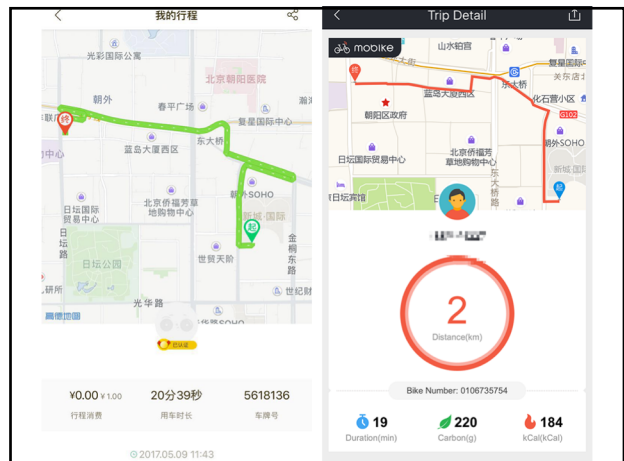**Dock-less bicycle-sharing system**

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Dock-less bicycle-sharing system

Dock-less bicycle-sharing system

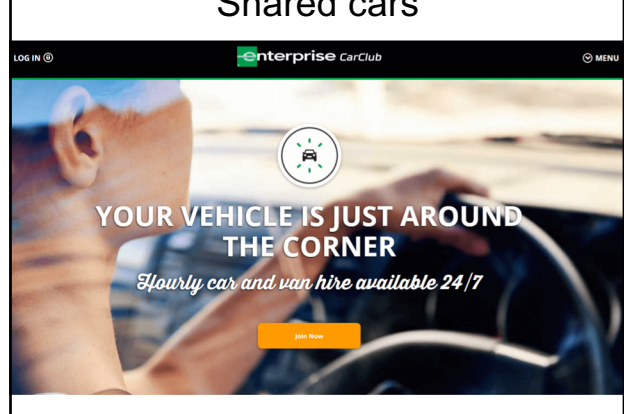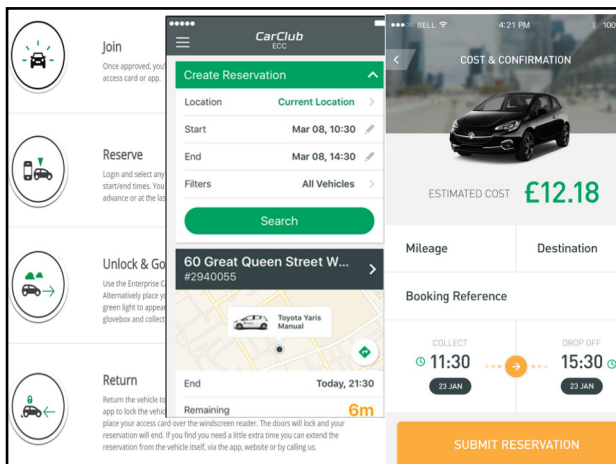**Dock-less bicycle-sharing system**
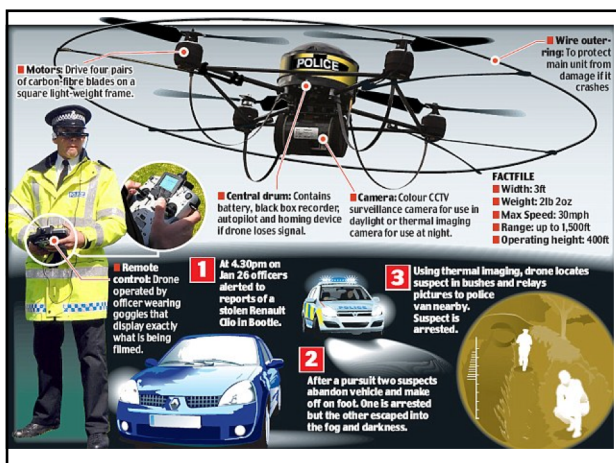

Dock-less bicycle-sharing system

Shared cars

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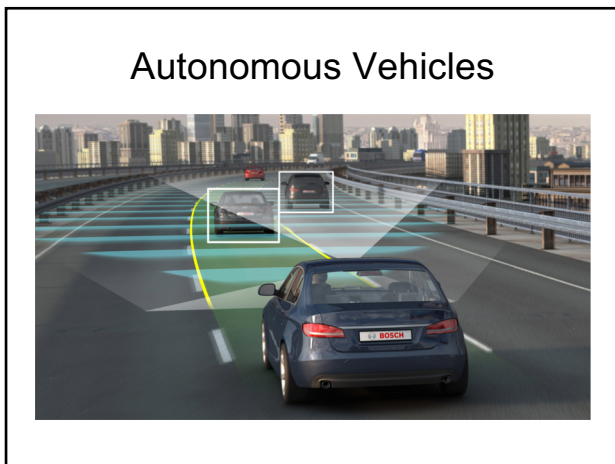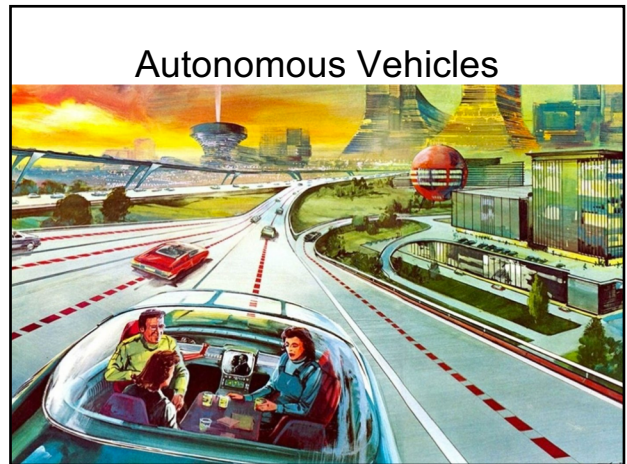**https://scholar.google.co.uk/citations?user=KW2ZrvUAAAAJ&hl**

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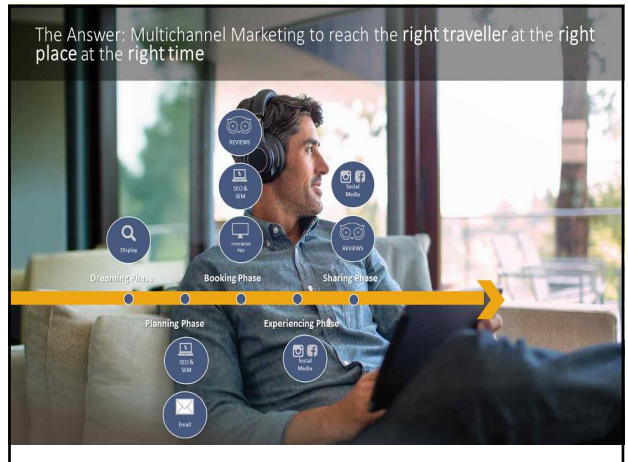
Shared cars

Shared cars

Car becomes the guide and concierge ?

Safety and Security

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Safety and Security

Crisis management

Autonomous Vehicles

Autonomous car Interconnectivity

Autonomous Vehicles

Autonomous Vehicles

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THE FUTURE?

Ambient Intelligence (AmI) Tourism

- Analytical capabilities supported by Artificial Intelligence (AI) and Machine Learning (ML)
- Internet of Things
- Internet of Everything
- Fifth generation mobile network (5G)
- Radio Frequency Identification (RFID)
- Mobile devices, smartphones and wearables
- Applications or Apps (along with APIs)
- Cryptocurrency and Blockchain
- Sensor and beacon networks
- Pervasive computing
- Gamification

Mobile Augmented Reality:
Apps That Will Change the Way We See the World

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Explore the city and locate all the Points of Interest

Teatro Municipal

The Theatre Municipal (Municipal Theatre) of Rio de Janeiro is located in Cinelândia (Praça Marechal Floriano) in the city center of Rio de Janeiro, Brazil. Built in the beginning of the twentieth century, it is one of the most beautiful and important theatres in the country.

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SMART TOURISM

is NOT about technology

It is about agility in value cocreation

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