I would like to take your children and articles away ....
Smart and Real Time Tourism
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Where it all began ....1980s!

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

Where it all began ....1987!

RICIRMS: Destination Inventory Management

Destinations need to manage inventory and provide information

RICIRMS: Dynamic Packaging

Package Destination products
RICIRMS: Benefits of Destination Management Systems


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

Equitable returns for the resources utilized and sustainable development

A FRAMEWORK FOR TOURISM TRENDS ANALYSIS

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Technology Changes the world

Ready for the Internet
https://www.youtube.com/watch?v=AzWKx5WW1k

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

Technology driven tourism by smart Travellers looking for VALUE

An Increasing Number of Connected And Sophisticated Devices Will Become Available

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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

  - Online & offline, mobile services, LBS

- **4 On-Site Experience:** Co-create unique experiences

- **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

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The Consumer Decision Journey has changed

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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 maximizing value for all stakeholders.

This reengineering enables shaping products, actions, processes and services in real-time, by engaging different stakeholders simultaneously to optimize 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 infrastructure for the value creation for all.

World City - to - City Connections

SMART VS …Not Smart…

Tourism

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What is Quality?

Innovations in the last 33 years 1985-2018?
SMART NESS

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| Table 1: Tourism operation deregulated service |
|---|---|
| **Dimension** | **Value Creation** |
| **Aquifer** | Tourism production, transformation, and distribution, and access to information |
| **Transportation** | Planning, navigation and location information, services, services features and services accessibility |
| **Accommodation** | Valuation of the destination, evaluation of the destination, and evaluation of the destination’s service levels |
| **Gastronomy** | Personalisation of the destination, personalisation of the destination’s services, and personalisation of the destination’s information |
| **Attractions** | Personalisation of the destination, personalisation of the destination’s services, and personalisation of the destination’s information |
| **Activities** | Personalisation of the destination, personalisation of the destination’s services, and personalisation of the destination’s information |
| **Amelioration** | Valuation of the destination, evaluation of the destination, and evaluation of the destination’s service levels |


SMART NESS

Smartness and agility towards value co-creation and competitiveness 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


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From eTourism to Smart Tourism

- Mono organisation 1-2-1
- Linear actions
- Many to Many / Non Linear
- Networked and interoperable
- Real time - Co-created
- Personalised & contextualised services
- Ad-hock networks

- Bid Data
- Evolusion of travel

Data and Technology
the backbone

Internet of Things
- Inter-networking & communication
- Sensing information intelligently
- Dynamic & heterogeneous

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
- Dynamic & heterogeneous
- Open Data
- Freely used, re-used and re-distributed
- Accessible in convenient forms
- Inter-operable with other datasets

Key players in Smartness

<table>
<thead>
<tr>
<th>TOURISM</th>
<th>TECHNOLOGY</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borders</td>
<td>Telecommunications</td>
<td>Local Governments/Council</td>
</tr>
<tr>
<td>Accommodation</td>
<td>Gatekeepers such as Facebook, Google and Amazon</td>
<td>Police</td>
</tr>
<tr>
<td>Restaurants</td>
<td>Mobile app developers</td>
<td>Destination Management</td>
</tr>
<tr>
<td>Entertainment</td>
<td>Digital platform developers</td>
<td>Organisation</td>
</tr>
<tr>
<td>Sports</td>
<td>Business Improvement</td>
<td>District</td>
</tr>
<tr>
<td>Retail</td>
<td>CCTV providers</td>
<td>Utility service providers</td>
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<tr>
<td>Transport</td>
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<td>(for example energy, water)</td>
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<td></td>
<td></td>
<td>Transport providers</td>
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<td></td>
<td>Banking &amp; finance institutions</td>
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<tr>
<td></td>
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<td>Universities &amp; Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Organisations</td>
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</tbody>
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“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”

Opportunities in and benefits of social media content mining.

Smart Tourism Destination
- Interconnect multiple stakeholders
- Dynamic ICT platform
- Real-time information exchange
- Enhanced decision-making


“The future of tourism development” (UNWTO Secretary General Taleb Rifai 2017)
Smart Tourism Ecosystem

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
Towards network competitiveness and max value for ecosystem

Figure 4. Institutional innovation network of Aveiro


http://ejtr.vumk.eu/index.php/volume18/540-v18rp33


http://doi.org/10.1016/j.jdmm.2012.08.001

Smart personalised experiences


https://doi.org/10.1002/jtr.1958

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Smart Hospitality Ecosystem

In-destination Tour Products and the Disrupted Tourism Industry

Towards network competitiveness and max value for ecosystem

Opportunities in and benefits of social media content mining.

DMO online platforms: Image and intention to visit

Use Gamification to engage in customer experience

In-destination Tour Products and the Disrupted Tourism Industry

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The accessible / disabled traveler ecosystem


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


Smart Tourism Framework

The accessible / disabled traveler ecosystem

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

Smart Tourism Framework

The Current Status

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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Internal & External Contextual Factors

- Season
- Political Situation
- Location
- Light
- Traffic
- Air Pressure
- Delays
- Emotional Status
- Topics of Interest
- Disability
- Personal Events
- Approaches

Real-time personalized experiences

BU

Smart personal experiences


SoCoMo Social media Context based MOBis

Travel Industry

Social Media

Connected Mobile Devices

SoCoMo enabled CoCreation

Tasks

Goals

Preferences

Disabilities

Topics of Interest

Location

Weather

Social Environment

Season/Time

Political Situation

Traffic

Emergencies

Delays

Air Pressure

Light

Delays


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The Service of Now
Leveraging Social Media and Context Technology to Enhance Consumer Experience in Real-Time

CONSUMER EXPECTATION & DIGITAL TOUCH POINTS
WANTS / EXPECTATIONS

What’s near me?
Any recommendations?
It doesn’t work. Help!
Terrible Service!

DIGITAL TOUCH POINTS

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.

Definitions of 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.


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Real-time Marketing Definition

“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.
- Provides a more personalized experience where “informed, networked, empowered consumers increasingly co-create value” with brands (Prahalad & Ramaswamy 2004).
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 suit 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

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.

Multiple Case Study

1) KLM

1) 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’.

2) In July 2015, KLM became one of the world’s first brands to provide 24/7 service in social media.
3) KLM also pioneered the use of 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 has proven success, with more than 1.4 million customers received their flight updates and documents through Messenger.

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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’ reached consumers at the right moment, which has resulted in additional 600% share of voice, 375% raise in conversion rate and 60% increase in direct bookings (MMA 2014, Gupta 2015, Koch 2016, Reyser 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).

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

Value Exchange between Consumers and Brands


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Value for Stakeholders

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Value</th>
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<tbody>
<tr>
<td>Brands / Marketers</td>
<td>- positive advocacy / WOM / Networks</td>
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<tr>
<td></td>
<td>- product and service improvement</td>
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<td>- customer and online experience</td>
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<td>- organic engagement</td>
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<td>- real-time complaint management / service recovery</td>
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<td></td>
<td>- proximity / location based offerings</td>
</tr>
<tr>
<td></td>
<td>- real-time customer service</td>
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<td>- yield management or dynamic pricing based on real-time data</td>
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<tr>
<td>Consumers</td>
<td>- instant gratification</td>
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<td></td>
<td>- customer satisfaction &amp; loyalty</td>
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<td></td>
<td>- personalized experience</td>
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<tr>
<td></td>
<td>- dynamic &amp; interactive communications</td>
</tr>
<tr>
<td></td>
<td>- surprise &amp; delight</td>
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<tr>
<td>Potential Customers</td>
<td>- truthfulness / reassurance / recommendation</td>
</tr>
<tr>
<td></td>
<td>- improved brand perception</td>
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</tbody>
</table>

Answer when they need you

Delivering the Wow Factor in Real-time

Conceptualisation of Real-time cocreation and nowness service ecosystem

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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Shared cars

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Shared cars

Car becomes the guide and concierge?

Safety and Security
Safety and Security

Crisis management

Autonomous Vehicles

Autonomous car Interconnectivity
Ambient Intelligence (AmI) Tourism

- Internet of Things
- Internet of Everything
- Virtual reality
- Augmented reality
- Internet connected cars
- Mobile devices, smartphones and tablets
- Applications or Apps (along with ARMs)
- Cryptocurrency and Blockchain

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

Explore the city and locate all the Points of Interest

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SMART TOURISM

is NOT about technology

It is about agility in value cocreation
Stay in touch with Dimitrios

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