



# Global Trends and Best Cases of Digital Transformation of Tourism

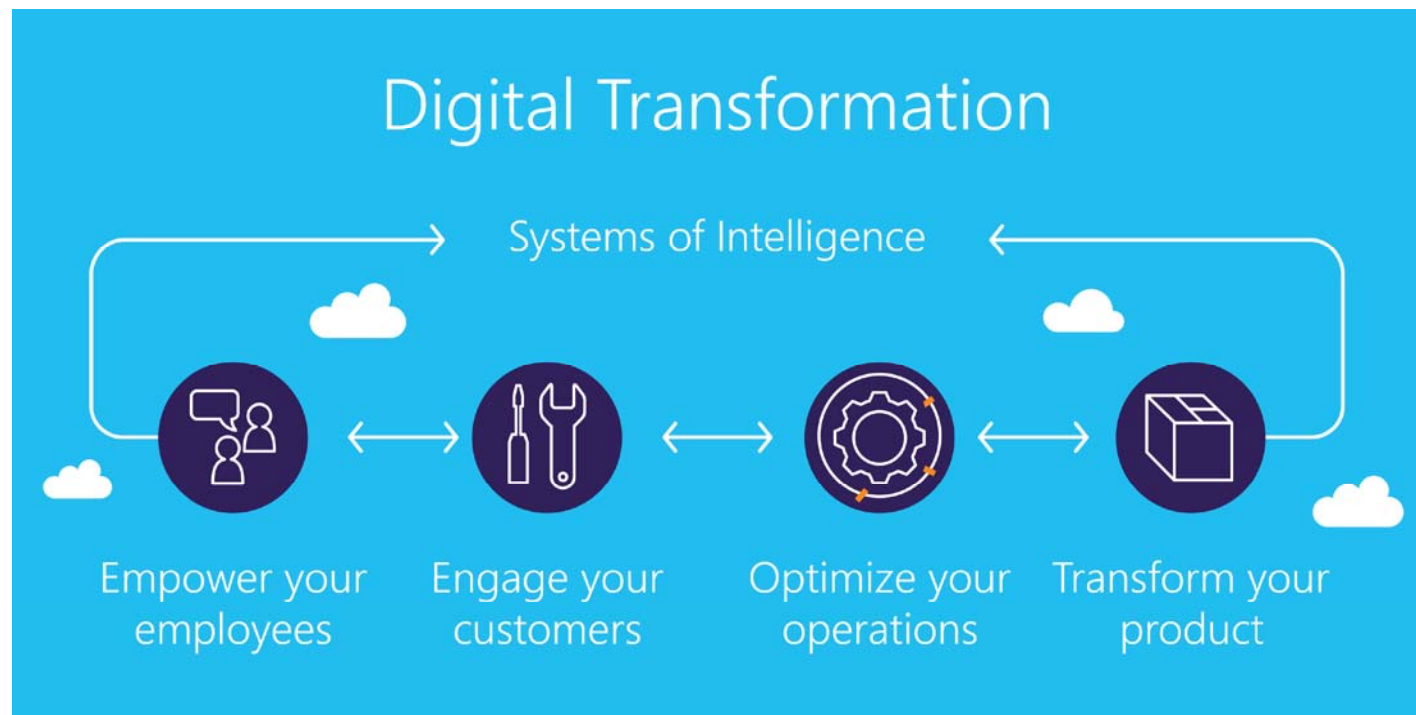
**Dr. ROLAND SCHEGG**

**Sri Lanka-Korea  
Tourism Cooperation Seminar  
“Sustainable Tourism & Digital Transformation”**

Tuesday, December 11, 2018  
Hilton Colombo, Sri Lanka

# Digital transformation

- Digital transformation (DX) is the **reworking of the products, processes and strategies** within an organization by **leveraging current technologies**. (WhatIs.com)
- Digital transformation is the **changes** associated with the application of digital technology in all aspects of human society (Wikipedia)



# Let's take the most important things right now.....

- **Digital transformation is not a question of technology**, but of what you can (still) do better with it.
- In the future, we must see not only the trees, i.e. the technologies, but also the forest that these trees are capable of forming.
  - develop and exploit **infrastructures, skills and abilities**
  - strengthen **innovations in processes** and **business models**
  - Develop the **ability to think in an even more coherent, customer-oriented and therefore company-wide way** and to use the benefits of digitisation in this context.

# Agenda

- **Digital Transformation & Tourism**
- eTourism: travel search and booking trends
- Online Travel and the Global Players
- Sustainable Tourism and ICT
- Case studies
- Implications

# 4 Drivers for Digital Transformation

## 1) Connectivity as Internet is available everywhere

- fibre, 4G -> soon 5G, in public transport (train, airplane), ...

## 2) Miniaturisation and mobile applications -> connectivity of stationary and mobile

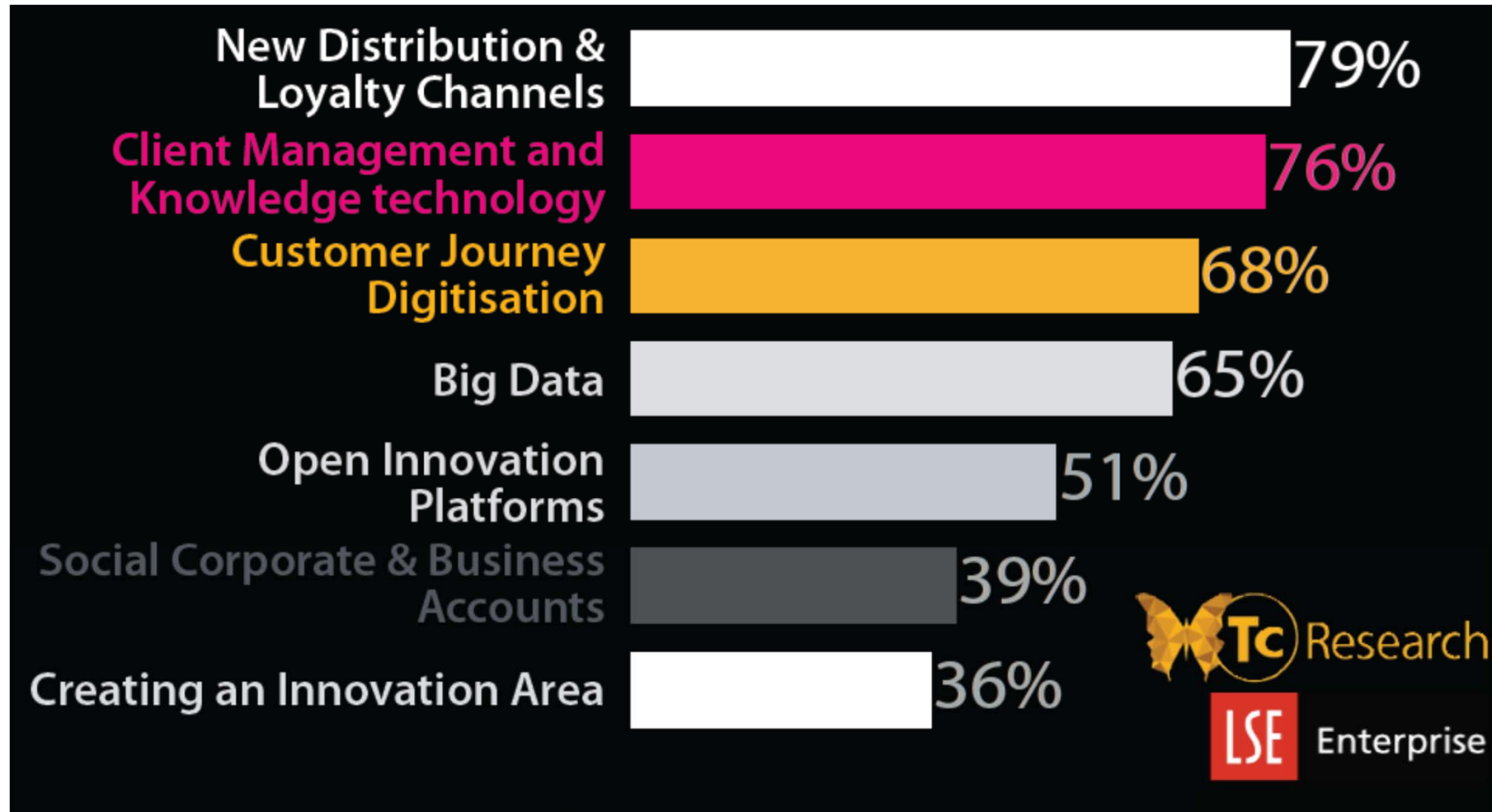
- Internet of Things (IoT), Smart City/Destination

## 3) Massive Price Reduction of Sensors

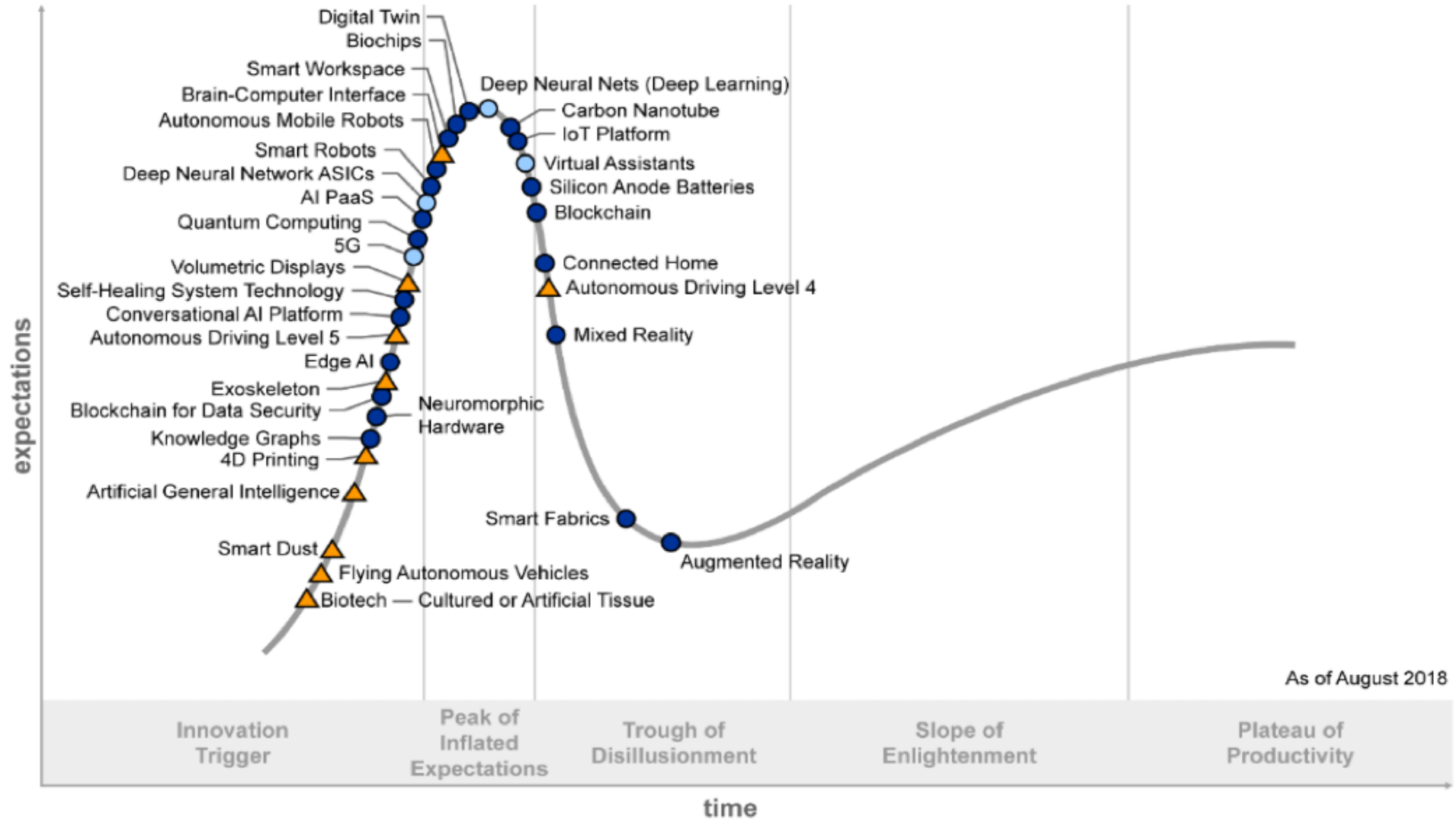
## 4) Massive Increase of Performance of IT devices and Artificial Intelligence (AI)

- Real-time translation, Chatbots, Marketing Automation, etc

# Digital Transformation is related to ...



# Gartner's Hype Cycle 2018



As of August 2018

Plateau will be reached:

- less than 2 years
- 2 to 5 years
- 5 to 10 years
- ▲ more than 10 years
- ⊗ obsolete before plateau

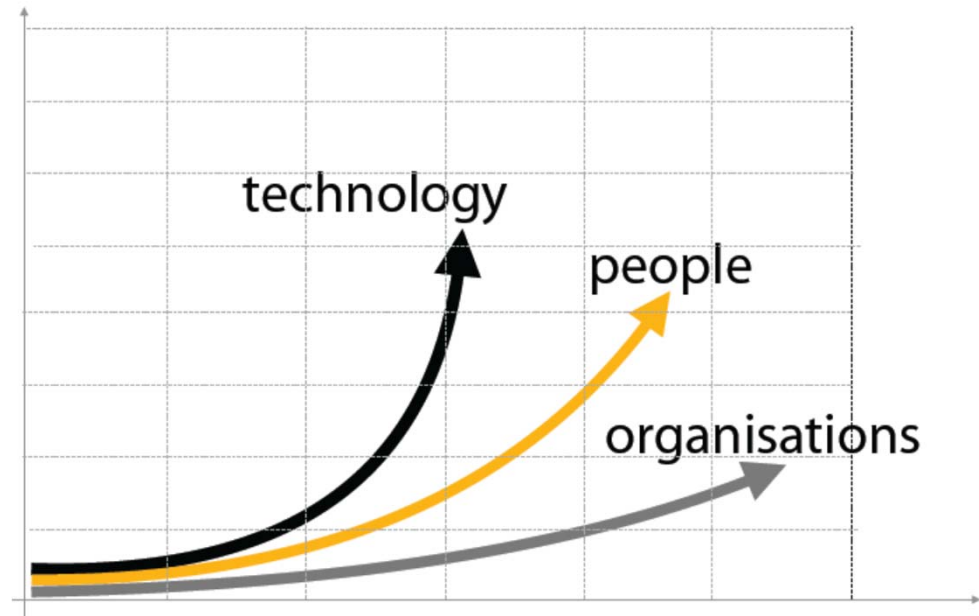
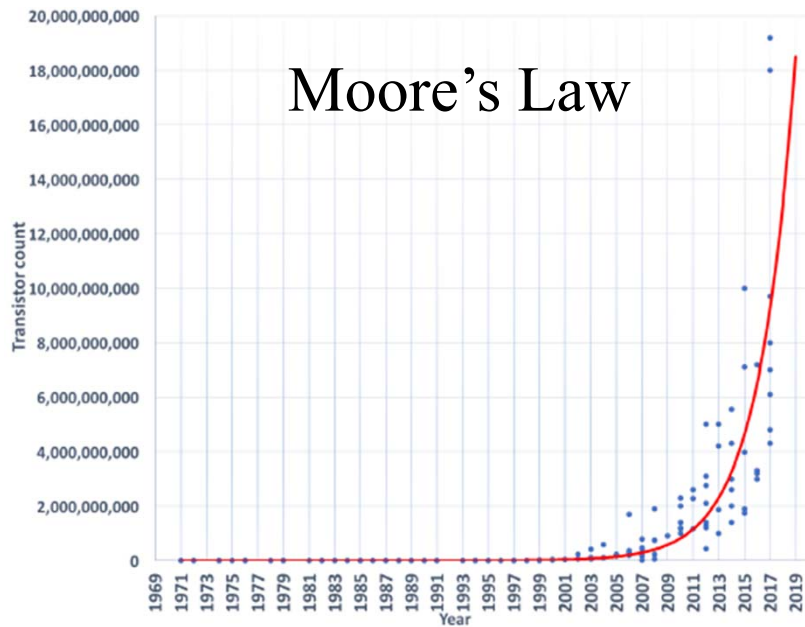


# Changing economy: The future of jobs in a digitalized economy



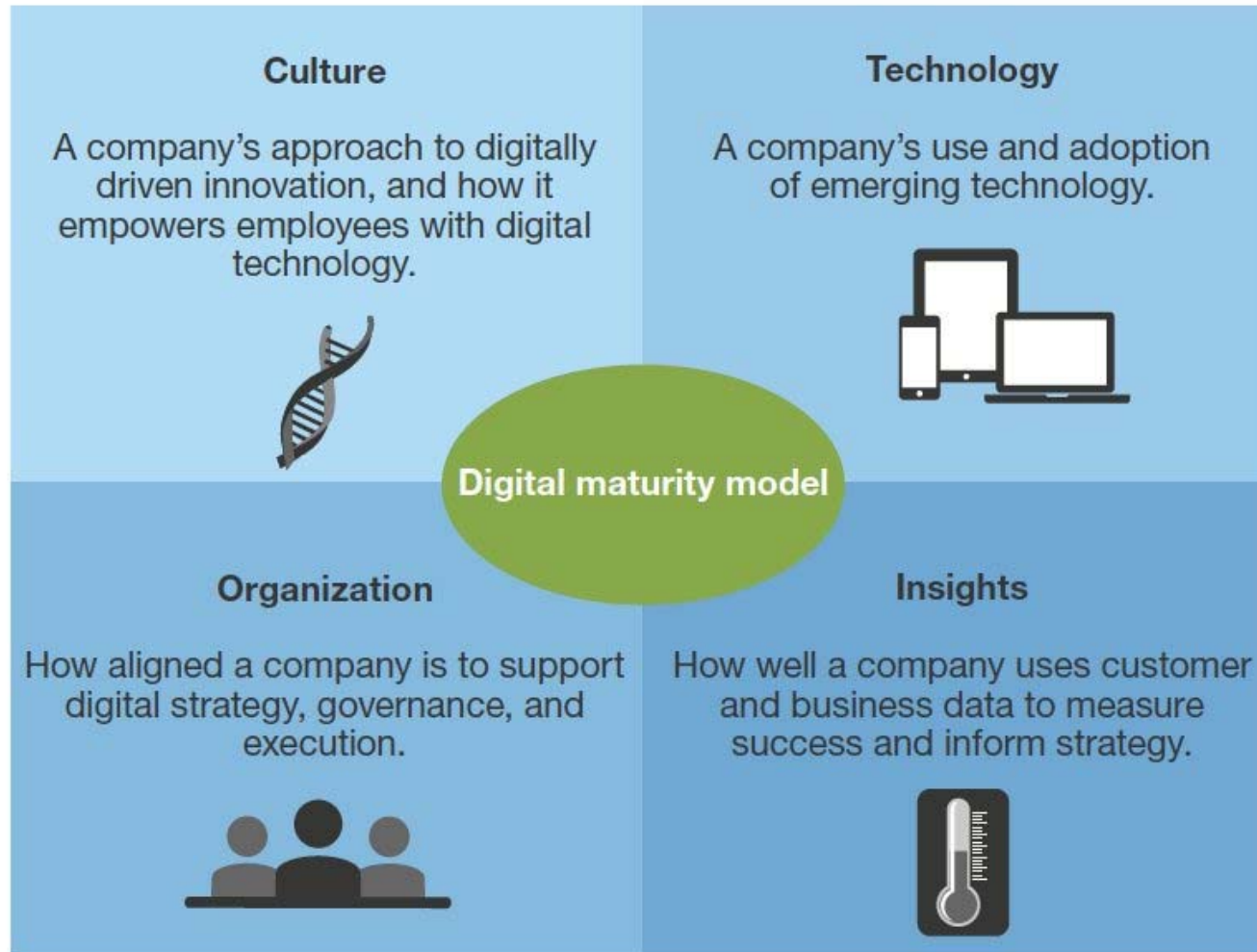


# Exponential growth – but organisations / people are failing to keep up with frantic pace of technological revolution



**Moore's Law** is the observation made by Intel co-founder Gordon **Moore** that the **number of transistors on a chip doubles every year** while the **costs are halved**.

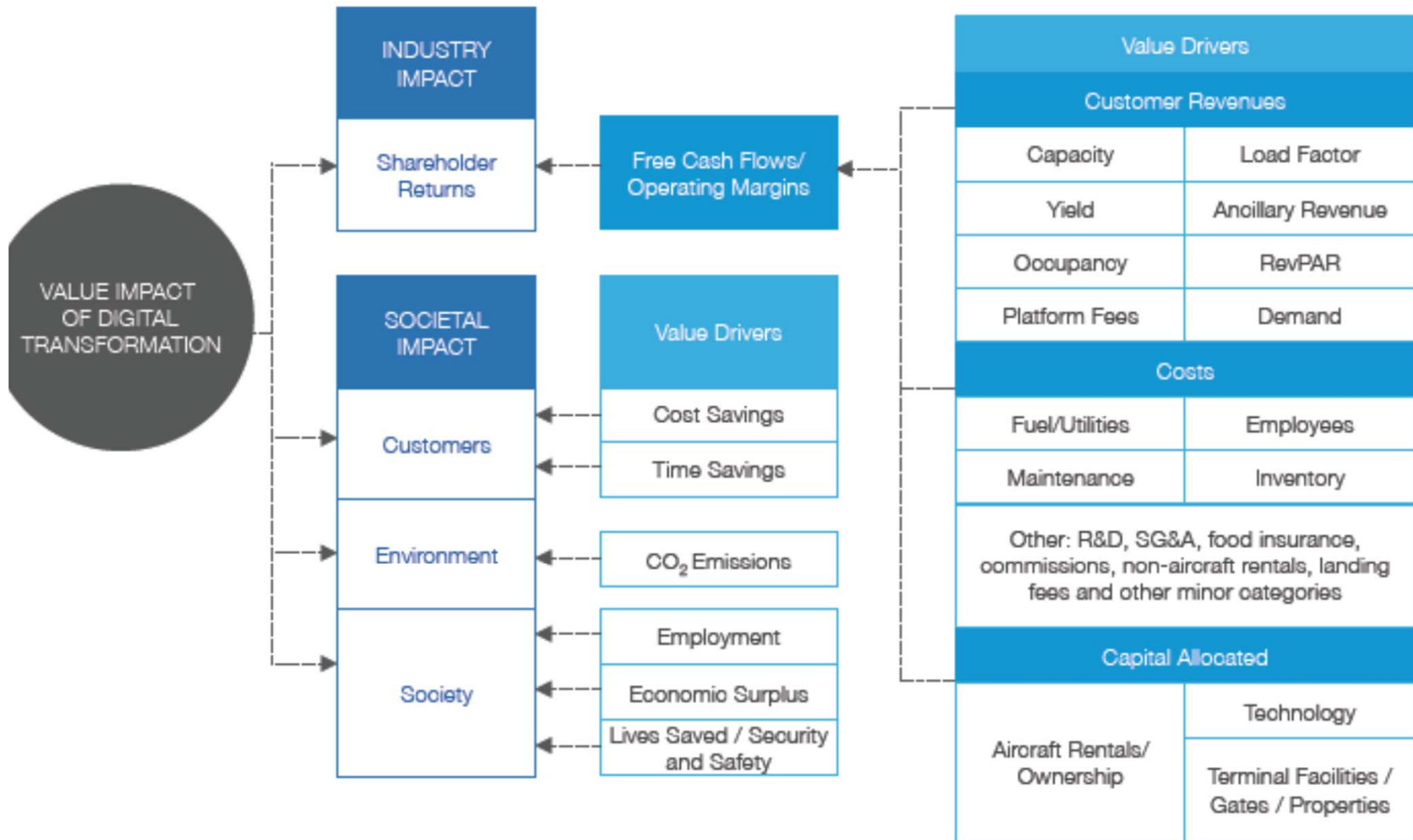
# Four Dimensions Determine Digital Maturity



Digital Transformation at the Heart of Competitiveness

- Strategic Thinking
- Organisational Culture Shift
- Human Capital
- Creativity & Entrepreneurship

# Value Impact of Digital Transformation on Travel & Tourism



World Economic Forum / Accenture analysis

[https://www.accenture.com/t20170116T084449\\_w\\_/us-en/\\_acnmedia/Accenture/Conversion-Assets/WEF/PDF/Accenture-DTI-Aviation-Travel-and-Tourism-Industry-White-Paper.pdf](https://www.accenture.com/t20170116T084449_w_/us-en/_acnmedia/Accenture/Conversion-Assets/WEF/PDF/Accenture-DTI-Aviation-Travel-and-Tourism-Industry-White-Paper.pdf)

# Central Themes of Digital Transformation in Travel (I): Customer experience, data and personalisation



## Living travel experience

Travellers will experience seamless journeys tailored to their habits and preferences. Companies along the travel journey will optimize customer experience by collecting and exchanging data, and continuously generating insights. In time, travel will become frictionless, blending seamlessly with other everyday activities.

# Digital Touch Points during Customer Journey





# Central Themes of Digital Transformation in Travel (II): New digital ecosystem with global players as gatekeepers

Google

Booking.com



**Enabling the travel ecosystem**  
Ecosystem roles are blurring as stakeholders throughout the customer journey vie to own the customer relationship. Digital platforms that enable ecosystem alliances will continue to emerge, as asset- and information-sharing become increasingly important from a B2B perspective.



# Central Themes of Digital Transformation in Travel (III): Technological innovations change the system and the processes

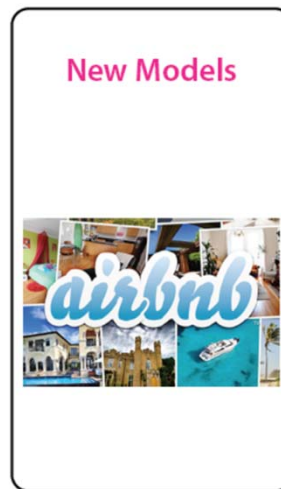
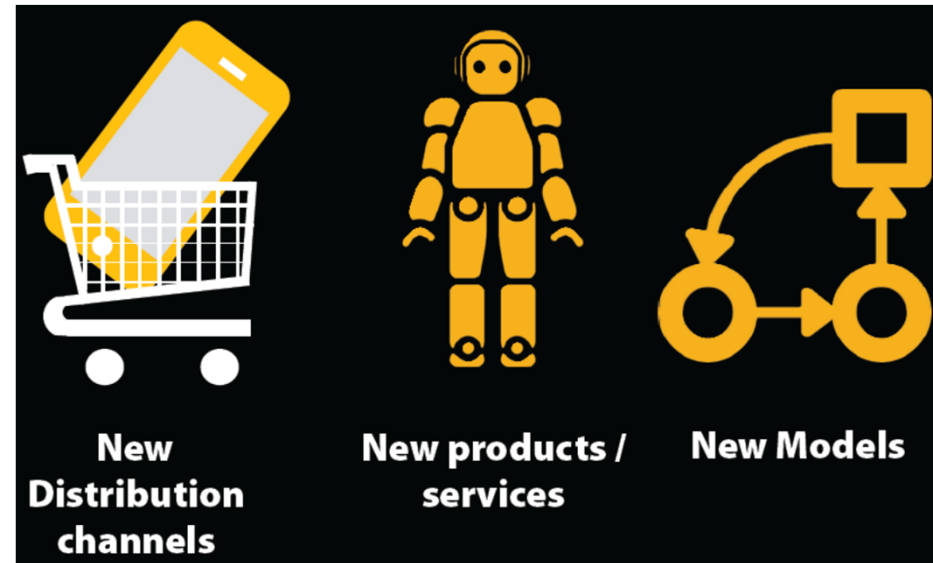


## Digital enterprise

Digital technologies that revolutionize manufacturing, optimize the real-time use of assets and eventually augment the industry workforce will transform operations. Innovations such as 3D printing, AI, IoT, VR and digital platforms will enable flexible working and changes to core operational processes.



# New Digital Channels, Services and Business Models



# Central Themes of Digital Transformation in Travel (IV): Identity management, safety and security



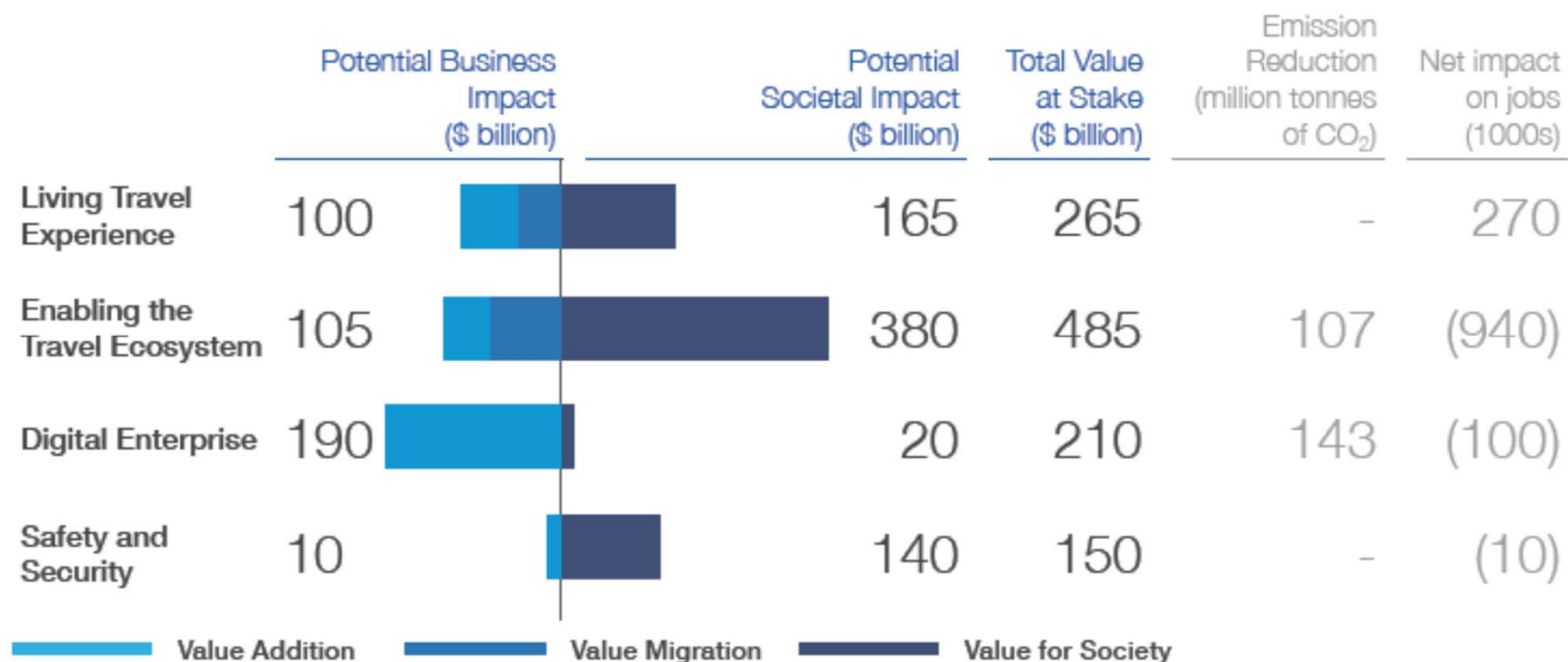
## Safety and security

As identity management becomes increasingly digital, a collaborative effort towards boosting cybersecurity and protecting the privacy of traveller data will be crucial to maintaining customer trust and public safety. Digital technologies (e.g. biometrics such as facial recognition, IoT, crowd analytics and video monitoring via AI) will be used to create a ubiquitously secure environment.



biometrics

# Value at Stake for Digital Themes in Aviation, Travel and Tourism



Source: World Economic Forum/Accenture analysis  
[https://www.accenture.com/t20170116T084449\\_w\\_us-en/\\_acnmedia/Accenture/Conversion-Assets/WEF/PDF/Accenture-DTI-Aviation-Travel-and-Tourism-Industry-White-Paper.pdf](https://www.accenture.com/t20170116T084449_w_us-en/_acnmedia/Accenture/Conversion-Assets/WEF/PDF/Accenture-DTI-Aviation-Travel-and-Tourism-Industry-White-Paper.pdf)

# Impact of digital transformation on tourism

- **Change in production processes**
  - Service 4.0 with IT-controlled processes, networked objects and objects (Internet of Things, Smart Destination), robotics/machines/automated processes to replace personal service interaction
- **Breaking down the traditional value chains**
  - Outsourcing of services (platform economy), peer-to-peer economy, better qualities and lower prices, marginal cost economy
- **Disruption as a characteristic of new value chains**
  - New processes, dilution of property, ownership and benefits (Airbnb, Uber), redefinition of transaction rules (Blockchain)
- **Emancipation/ empowerment of customer**
  - Individual access to partial services, continuous availability of information and booking options on a global basis (anywhere, anyhow, anytime)
- **Importance of network effects**
  - falling marginal costs on the supplier side, increasing marginal utility on the demand side; "The Winner takes it all")

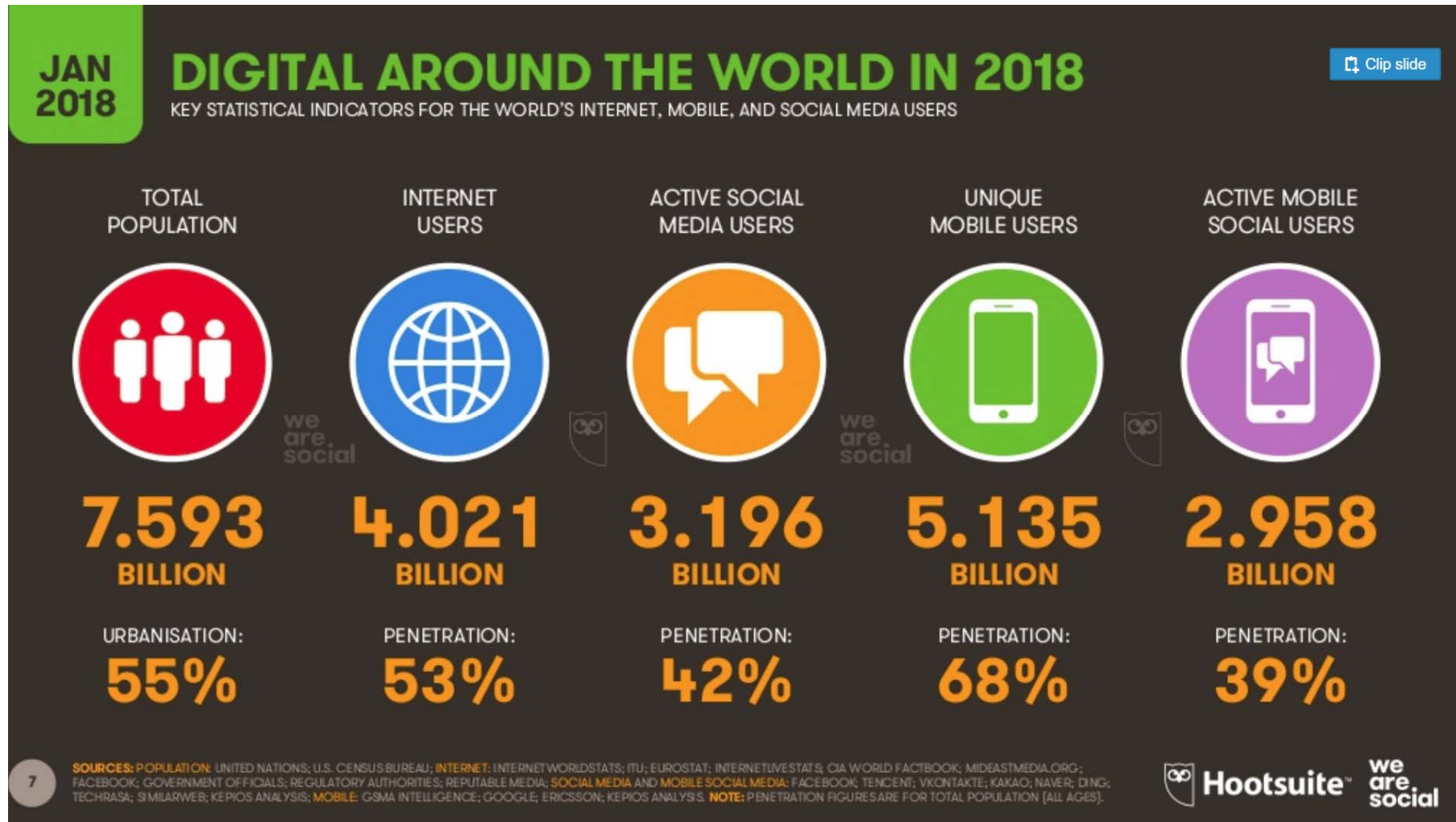
Quelle: Laesser, Schegg, Fux, Liebrich, Stämflì, Bandi & Lehmann (2018).  
*Digitalisierung im Schweizer Tourismus: Chancen, Herausforderungen, Implikationen*

# Agenda

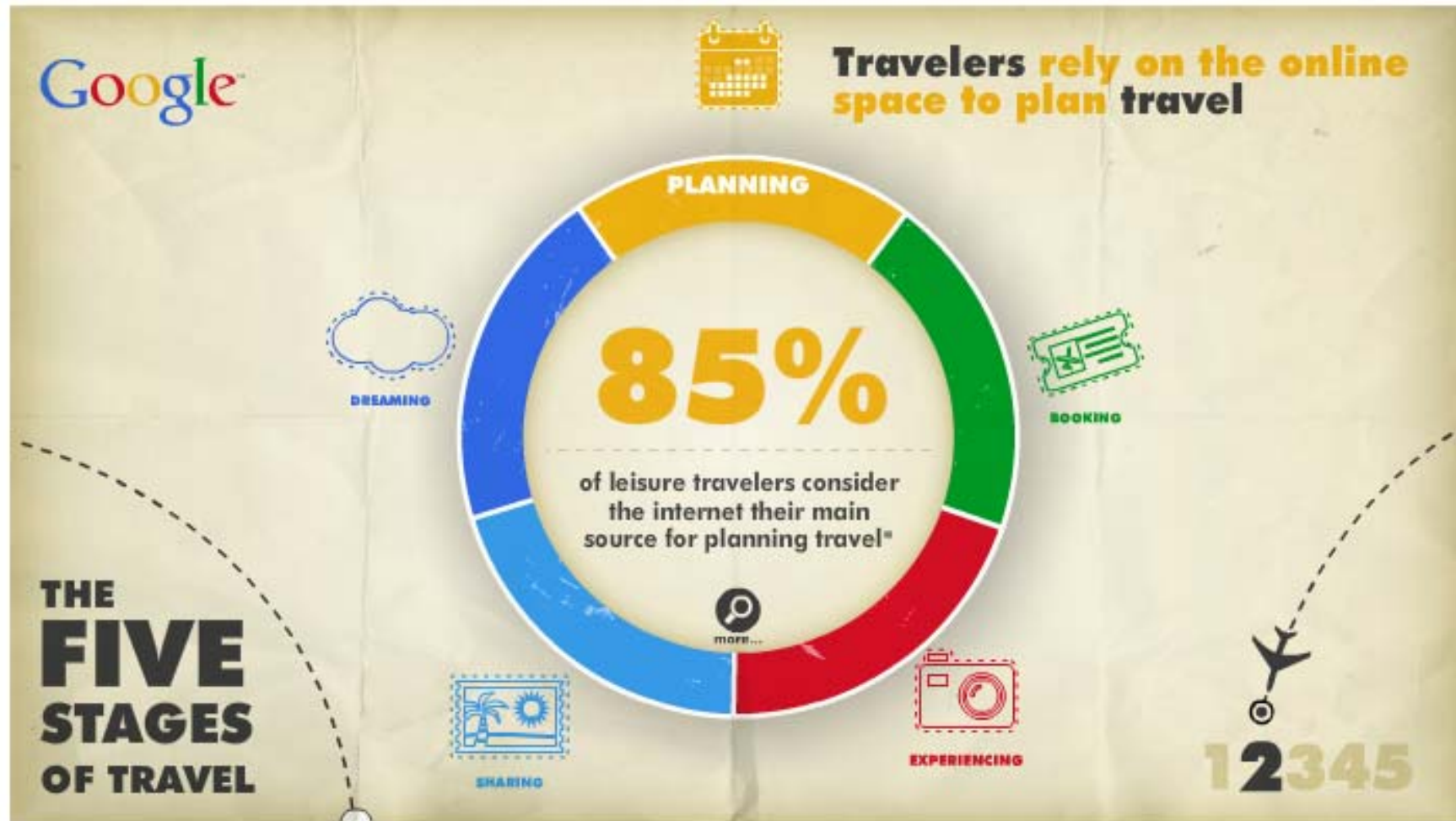
- Digital Transformation & Tourism
- **eTourism: Travel Search and Booking Trends**
- Online Travel and the Global Players
- Sustainable Tourism and ICT
- How to improve sustainability with ICT
- Implications



# Use of digital media: global, mobile and social



# Five Stages of Travel: digital dominates each step



# Digital technology omnipresent in travel planning



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# Distribution - strategic analysis: power of suppliers -> young, dynamic, global platform companies



Creation: 2001 (Microsoft)  
Valuation : 20.3 Mia \$



Creation : 2000  
Valuation : 6.4 Mia \$

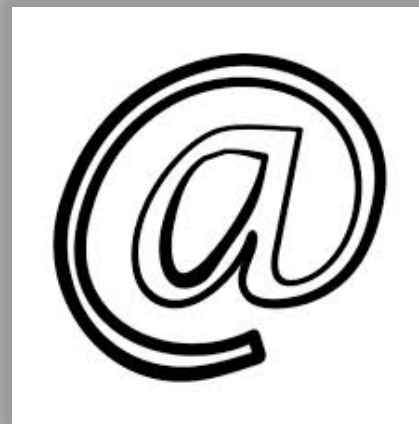


Creation : 1997 (booking 2000)  
Valuation : 88.7 Mia \$



Creation : 2005  
Valuation : 2.9 Mia \$

*4.11.2015: Expedia buys  
HomeAway for 4 Mia \$*



Creation : 2009  
Valuation: >60 Mia \$



Creation : 2008  
Valuation: 31 Mia \$

## Comparison

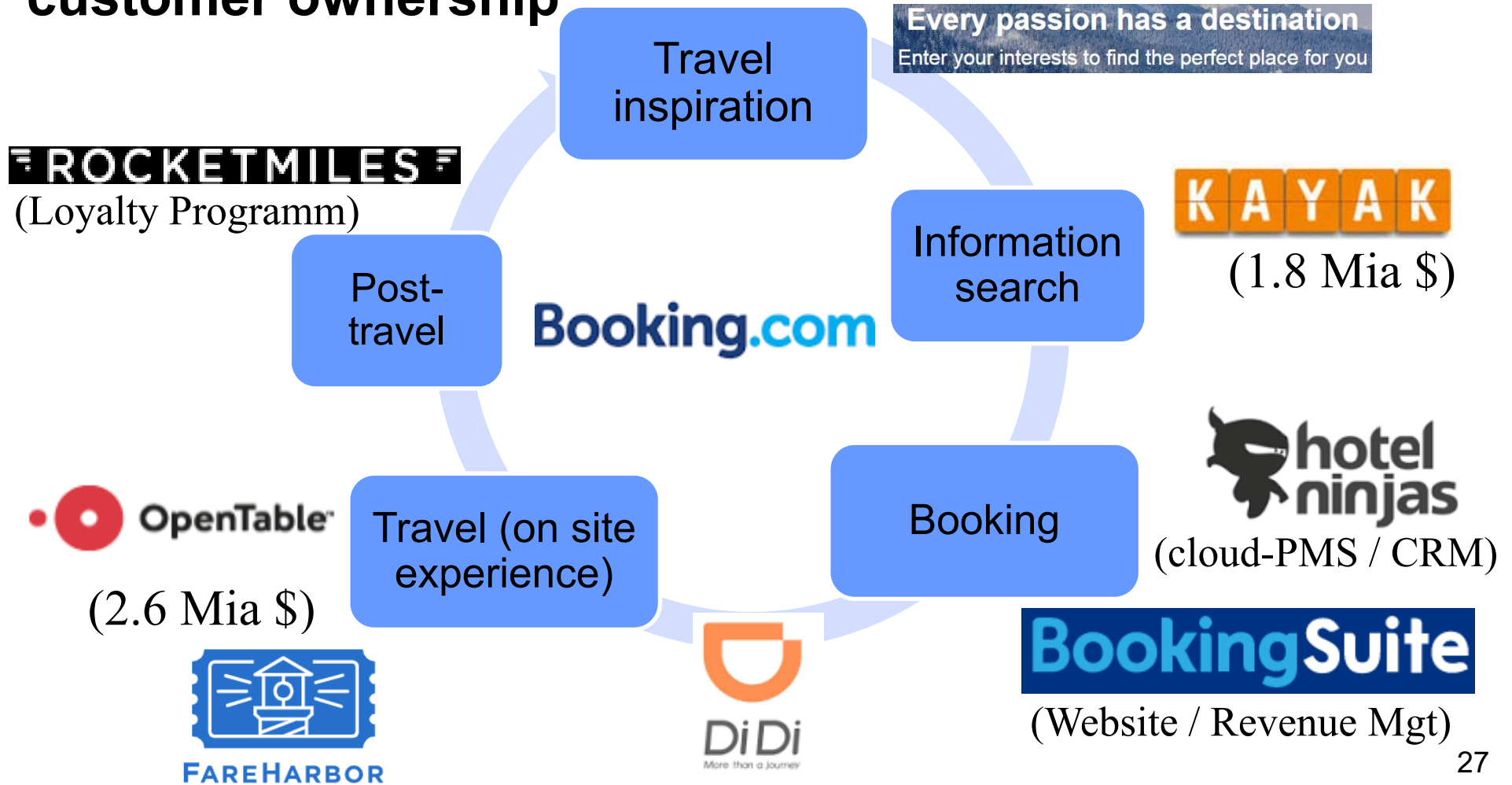


Creation : 1957  
Valuation : 7.15 Mia \$  
Revenue: 1.1 Mia \$

Source: [trefis.com](http://trefis.com) / [techcrunch.com](http://techcrunch.com) /  
[Reuters](http://Reuters) / [Piper Jaffray](http://Piper Jaffray) & [wikipedia.org](http://wikipedia.org)



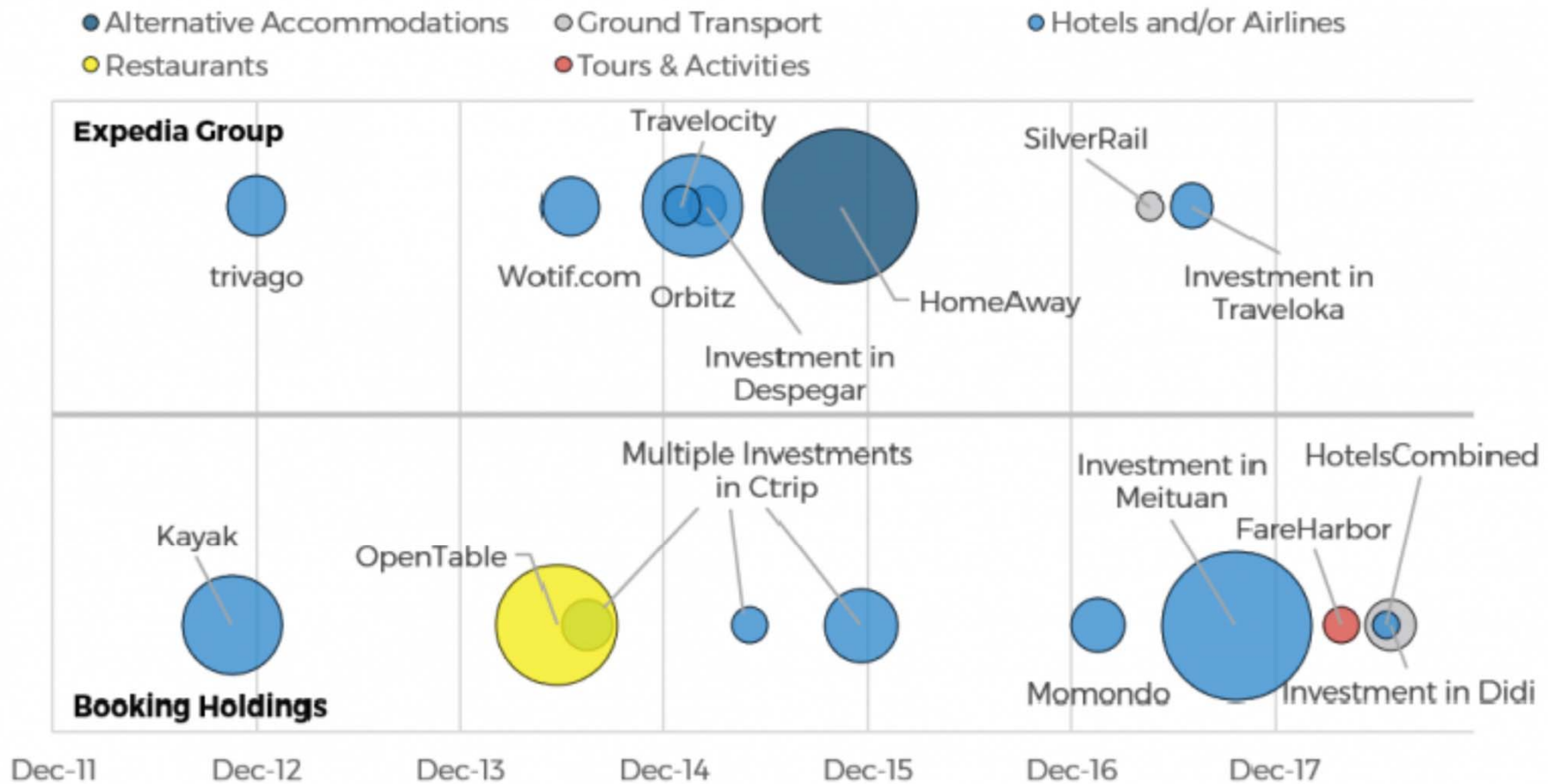
# Distribution - strategic analysis: power of suppliers -> vertical integration with the aim of customer ownership



*DiDi – ride sharing / FareHarbor - Booking software and services for tours and activities*

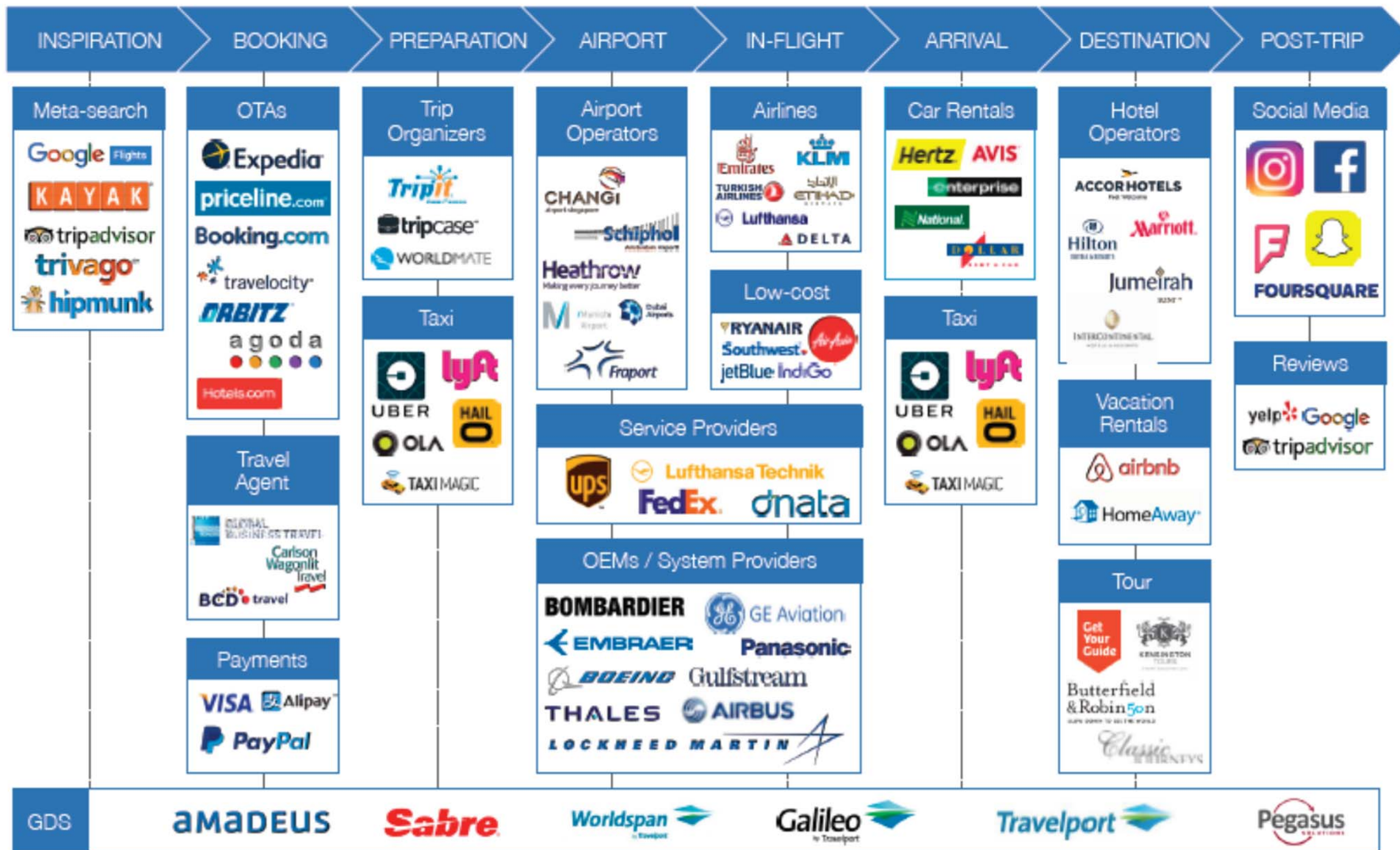
# Timeline of major acquisitions and investments at Expedia and Booking Holdings

Timeline of Acquisitions and Investments >\$100M



Source: Skift Research, Capital IQ.

# Online Travel: Playground of Big Players



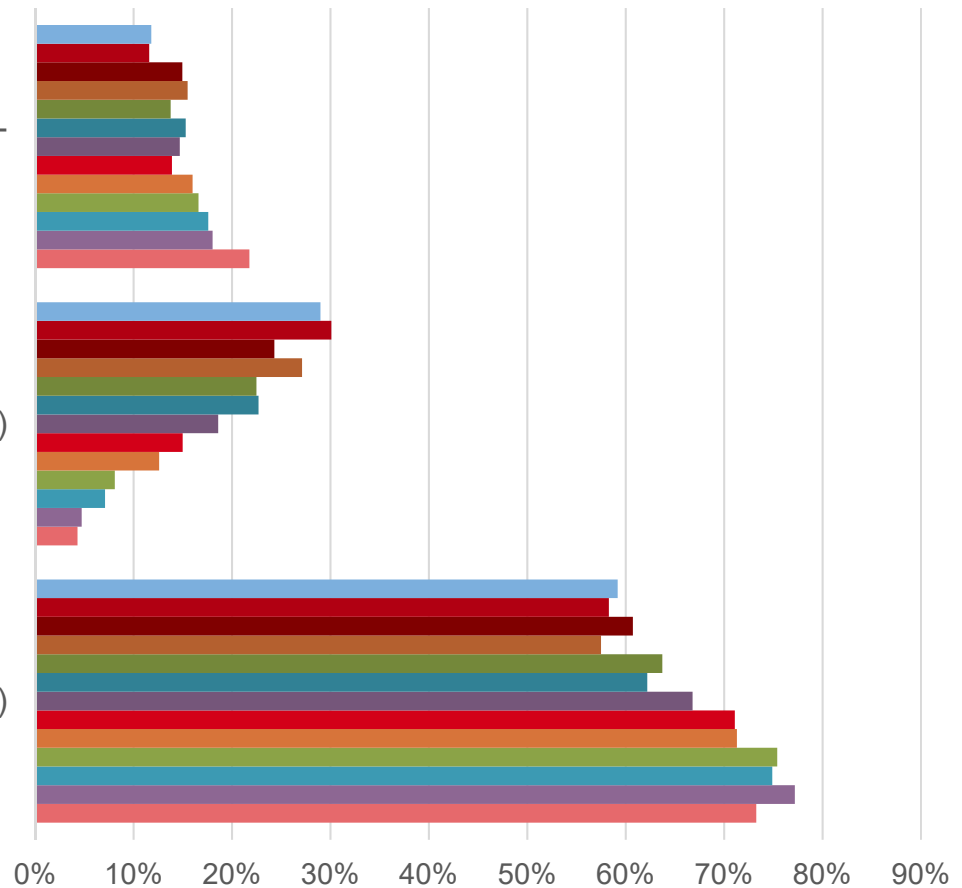
[https://www.accenture.com/t20170116T084449\\_w\\_us-en/\\_acnmedia/Accenture/Conversion-Assets/WEF/PDF/Accenture-DTI-Aviation-Travel-and-Tourism-Industry-White-Paper.pdf](https://www.accenture.com/t20170116T084449_w_us-en/_acnmedia/Accenture/Conversion-Assets/WEF/PDF/Accenture-DTI-Aviation-Travel-and-Tourism-Industry-White-Paper.pdf)

# Case study Switzerland: Distribution Trends in the Hotel Sector 2002-2017

Tourism partners (tour operators, wholesaler, DMO national-local, event & conference organizers, hotel chain, others)

Online booking intermediaries (OTA, GDS, social media)

Direct Bookings (hotel-guest)



■ \*2017 (n=252) ■ \*2016 (n=243) ■ \*2015 (n=226) ■ 2014 (n=250) ■ \*2013 (n=279) ■ 2012 (n=200) ■ 2011 (n=196)  
■ 2010 (n=211) ■ 2009 (n=198) ■ 2008 (n=184) ■ 2006 (n=100) ■ 2005 (n=94) ■ 2002 (n=202)

Source: Schegg 2018

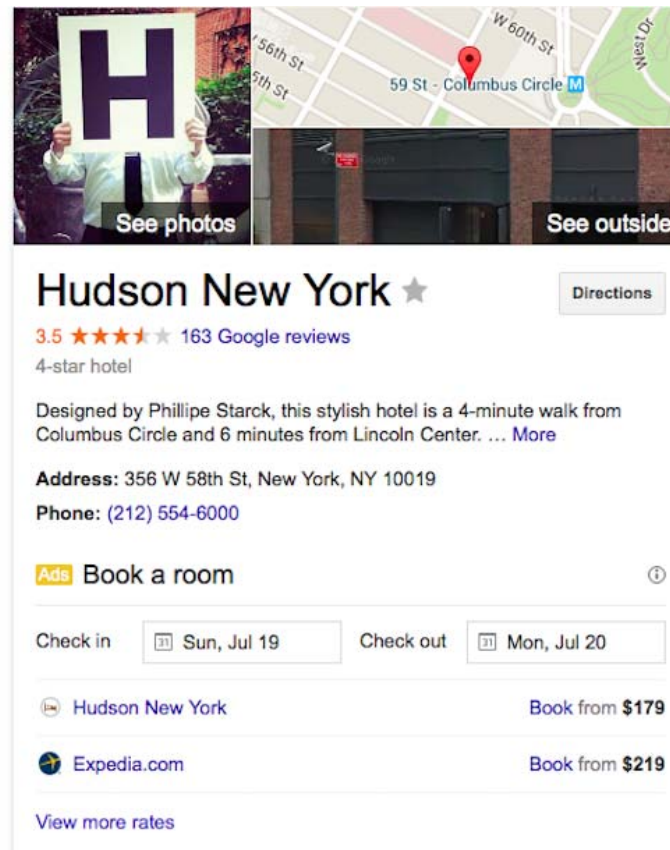
# New Entrants in Travel Distribution: Google

DIGITAL > BOOKING SITES

## And Then the Earth Shook: Google Enters Travel Booking

Dennis Schaal, Skift - Jul 13, 2015 7:00 am

 @denschaal




**Hudson New York** ★  
3.5 ★★★★★ 163 Google reviews  
4-star hotel


Designed by Phillippe Starck, this stylish hotel is a 4-minute walk from Columbus Circle and 6 minutes from Lincoln Center. ... [More](#)

**Address:** 356 W 58th St, New York, NY 10019  
**Phone:** (212) 554-6000

**Ads** Book a room

Check in  Check out

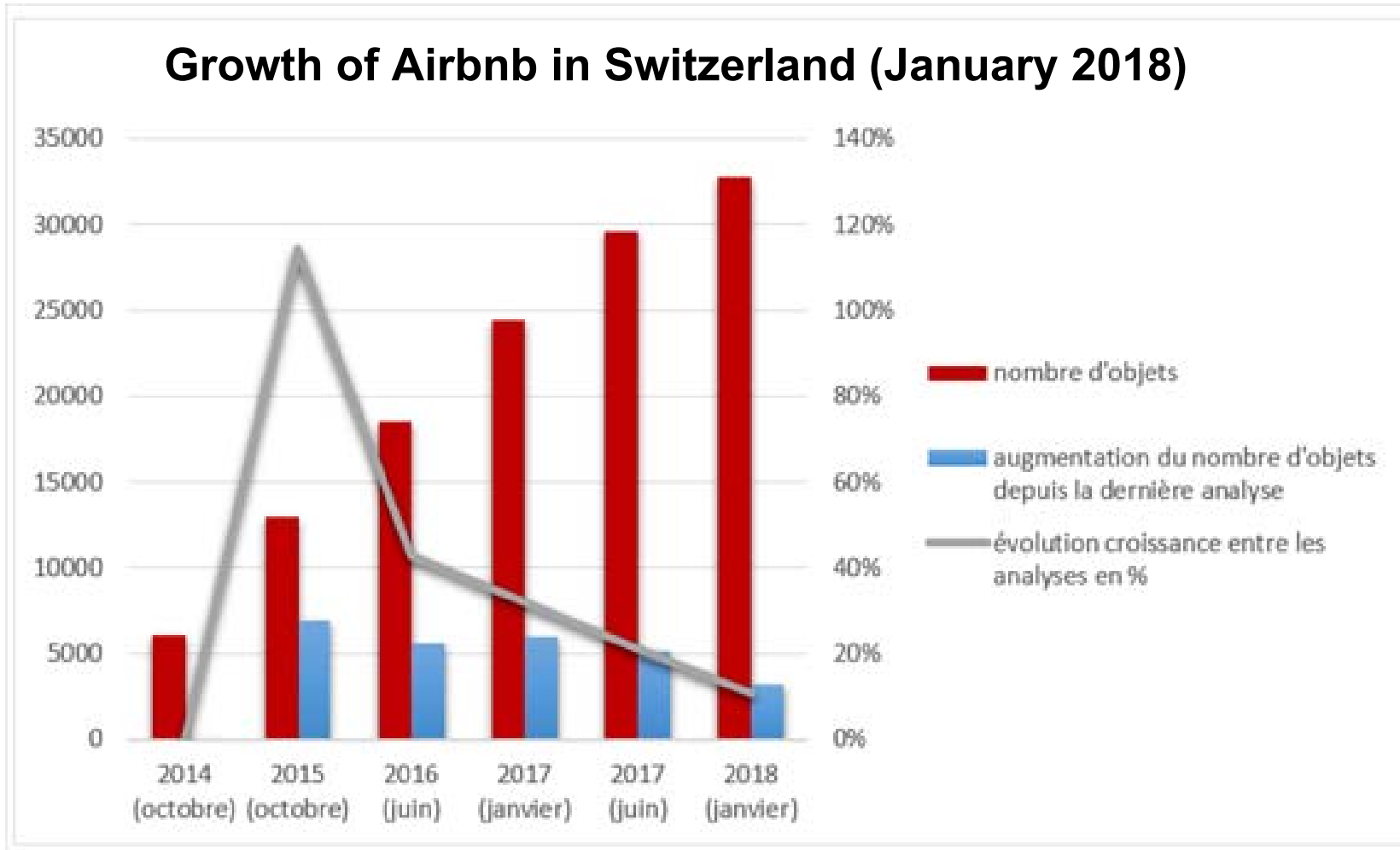
 Hudson New York [Book from \\$179](#)

 Expedia.com [Book from \\$219](#)

[View more rates](#)



# New Entrants in Travel Distribution: Airbnb

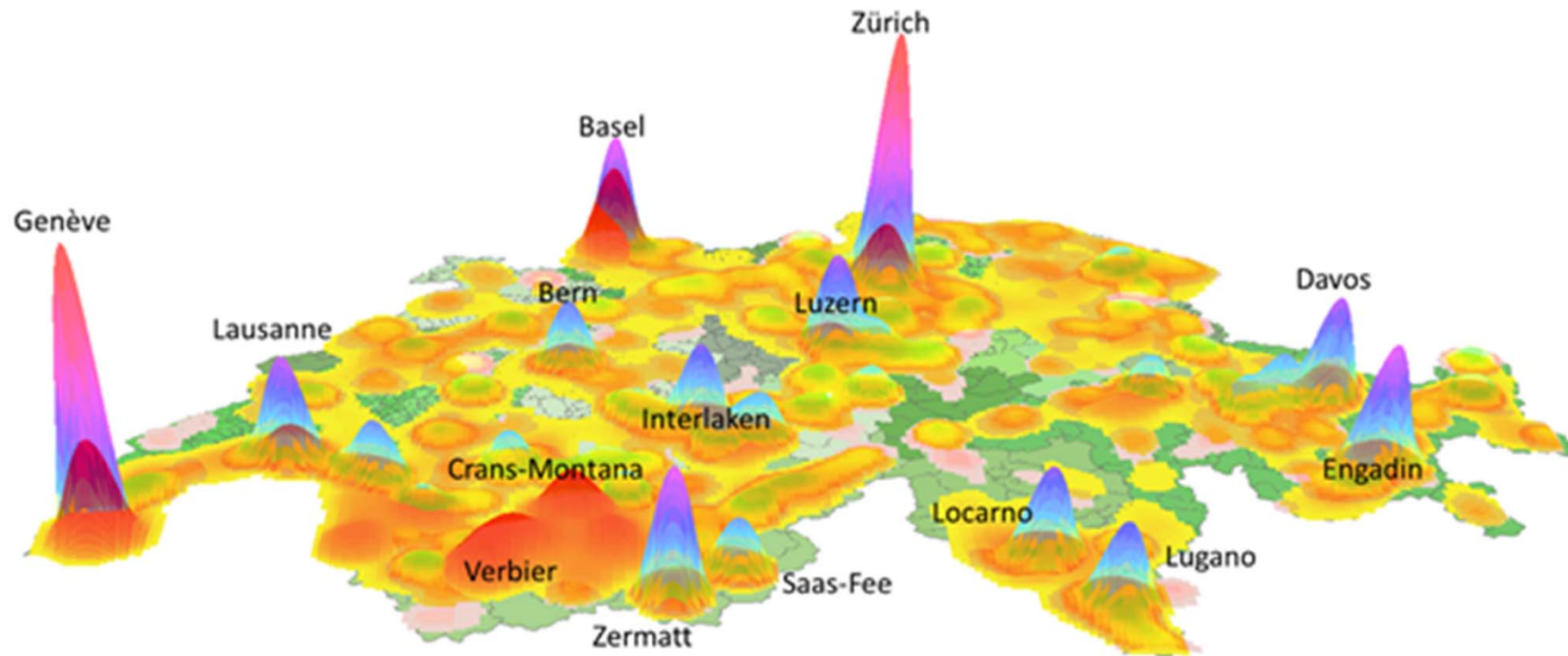


<https://www.touobs.ch/fr/articles-et-actualites/articles/id-6683-airbnb-co-l-engouement-des-acteurs-globaux-de-la-location-entre-particuliers-pour-le-marche-suisse/>

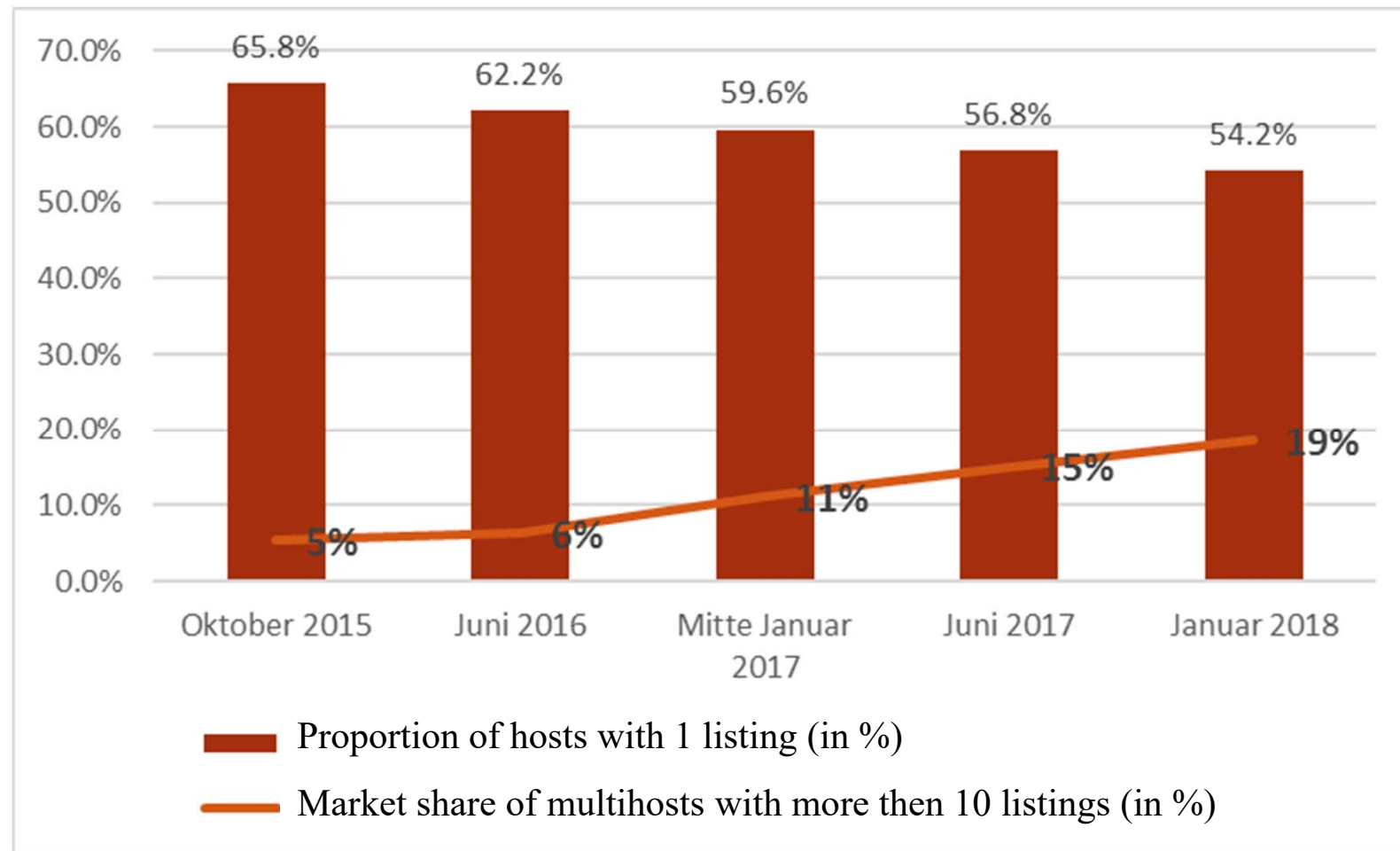


# New Entrants in Travel Distribution: Airbnb

3D Mapping of Airbnb bed supply (yellow/red) vs hotel bed supply (violet/blue) (January 2017)



# Airbnb Switzerland: single hosts vs multi-hosts (January 2018)



<https://www.tourobs.ch/fr/articles-et-actualites/articles/id-6683-airbnb-co-l-engouement-des-acteurs-globaux-de-la-location-entre-particuliers-pour-le-marche-suisse/>

# Big Players invest in In-Destination Activities

**Tours and activities providers bring experiences to Google search and maps | PhocusWire**



**Airbnb says nothing "off-limits" with Experiences | PhocusWire**

**TUI Group Buys Musement as Tours and Activities Sector Stays Hot for Deals –**

**Booking.com expands Experiences service, now in 60 cities worldwide | PhocusWire**

**Video: GetYourGuide Is Playing the Long Game With Activity Booking –**

**Tours and Experiences: The Next Great Untapped Market in Online Travel –**

**Expedia gets super-serious about activities, plots five-fold booking jump | PhocusWire**

# Sustainable Tourism in a World of OTA, GAFA and BAT

“If you cannot beat them join them”

- **Dominance of big players seems to be a fact (also through mergers and acquisitions)**
- **High pace of innovation favors big players**

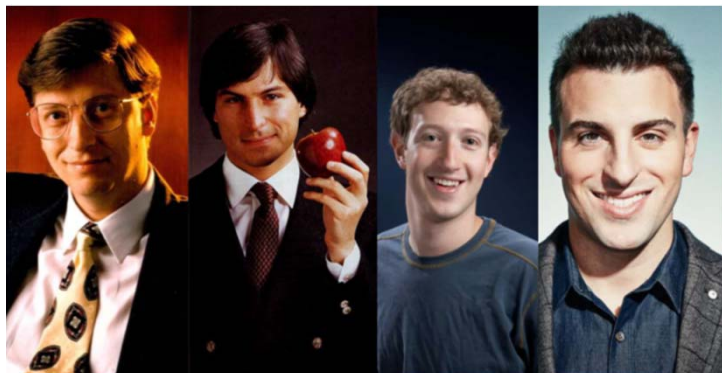
*The growing power of digital platforms is reshaping the travel ecosystem, making new business models viable and intensifying the battle for customer mindshare.*



“

**Do not reinvent the wheel. Partner with experts who have a competitive edge – a team effort across industry is necessary.**

”



*OTA: Online Travel Agency, GAFA: Google, Amazon, facebook, Apple, BAT: Baidu, Alibaba, Tencent (WeChat)*

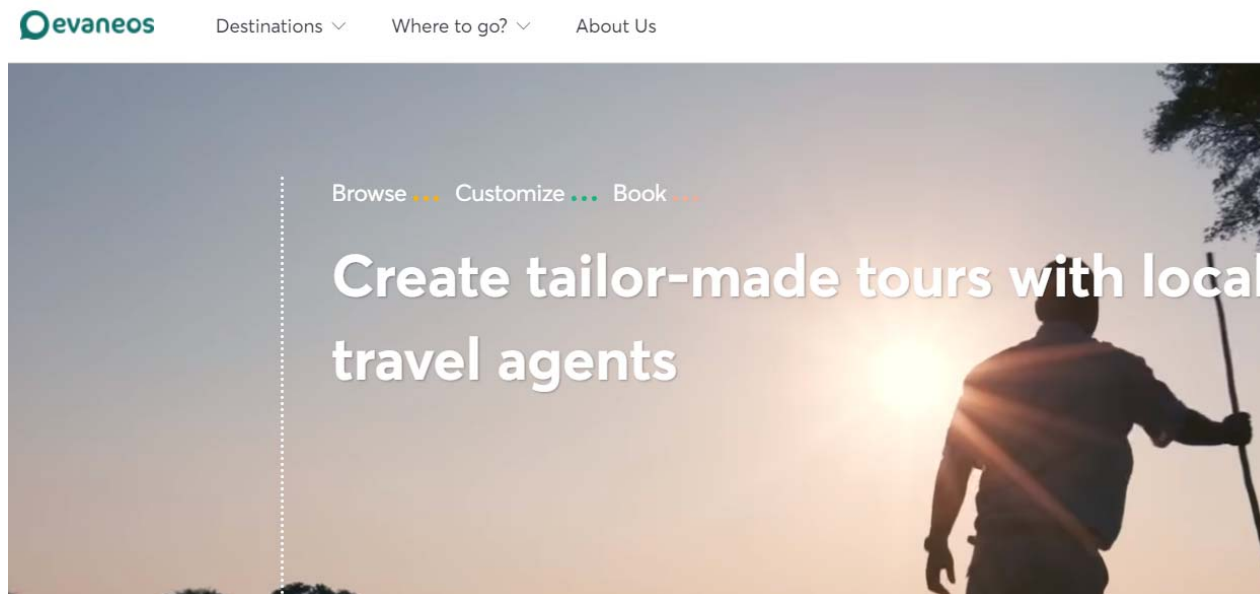
*[https://www.accenture.com/t20170116T084449\\_w\\_/us-en/\\_acnmedia/Accenture/Conversion-Assets/WEF/PDF/Accenture-DTI-Aviation-Travel-and-Tourism-Industry-White-Paper.pdf](https://www.accenture.com/t20170116T084449_w_/us-en/_acnmedia/Accenture/Conversion-Assets/WEF/PDF/Accenture-DTI-Aviation-Travel-and-Tourism-Industry-White-Paper.pdf)*





# Evaneos connects travelers with off-the-beaten-track activities

- Evaneos, a **booking platform for customized multi-day tours**, has raised an \$80 million round of investment with the goal of becoming a global digital travel brand.
- Evaneos connects consumers with more than **1,200 professional local agents** to create multi-day tours, such as a safari in **Kenya** or an 11-day tour of sights in **Uzbekistan**.



*Alternative  
to GAFAs /  
OTAs*

# Agenda

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- **Sustainable Tourism and ICT**
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# Video: ICT for a Sustainable World



*(until 3:46)*

# Areas of Catalytic Importance for Boosting Sustainability in the Tourism Sector

- Frame of reference
- **Interconnectedness of actors**
- Effective prioritization of new ideas
- Shared Value structure
- **Expert knowledge**
- **Assistance from key stakeholders**
- Focus on key subject
- **Communication**
- ‘Replicability and Stickiness’ of core message
- Room, to maneuver
- **Participatory approach**
- Continuous advancements
- Lead actors’ characteristics

Human factors, exchange and communication, collaboration seem crucial elements -> ICT can enhance and facilitate these areas (open innovation approach, collaborative tools, ease of communication etc.)

# Video: ICT and Sustainable Tourism



<https://www.youtube.com/watch?v=Hvv3lwngRP4>



# The promise of digital technologies for sustainable tourism

- The **technologies allow for greater efficiency in the use of resources** and, consequently, a reduction in costs.
- **Connectivity** and sensing at destinations enables better **measurement of all parameters related to sustainable tourism**, even in real time.
- The possibilities of storing and exploiting **information** are greater with **big data techniques**.
- The **dissemination** of information and the participation of local society is easier with the use of new technologies.

# The Promise of Digital technologies: reality check

- Digital technologies and platforms can help developing economies to **leapfrog conventional destination management challenges** and boost their competitiveness.
  - They also can provide new opportunities for **women and rural entrepreneurs** to improve their market access and financial inclusion.
- 
- However, many developing (*and even the developed - Schegg*) destinations have **limited knowledge on how to take advantage of digital platforms** and mitigate risks.
  - Either constrained by the **lack of understanding or knowhow and resources**, these economies are not able to leverage digital tools to grow their tourism.

# The Promise of Digital technologies: reality check

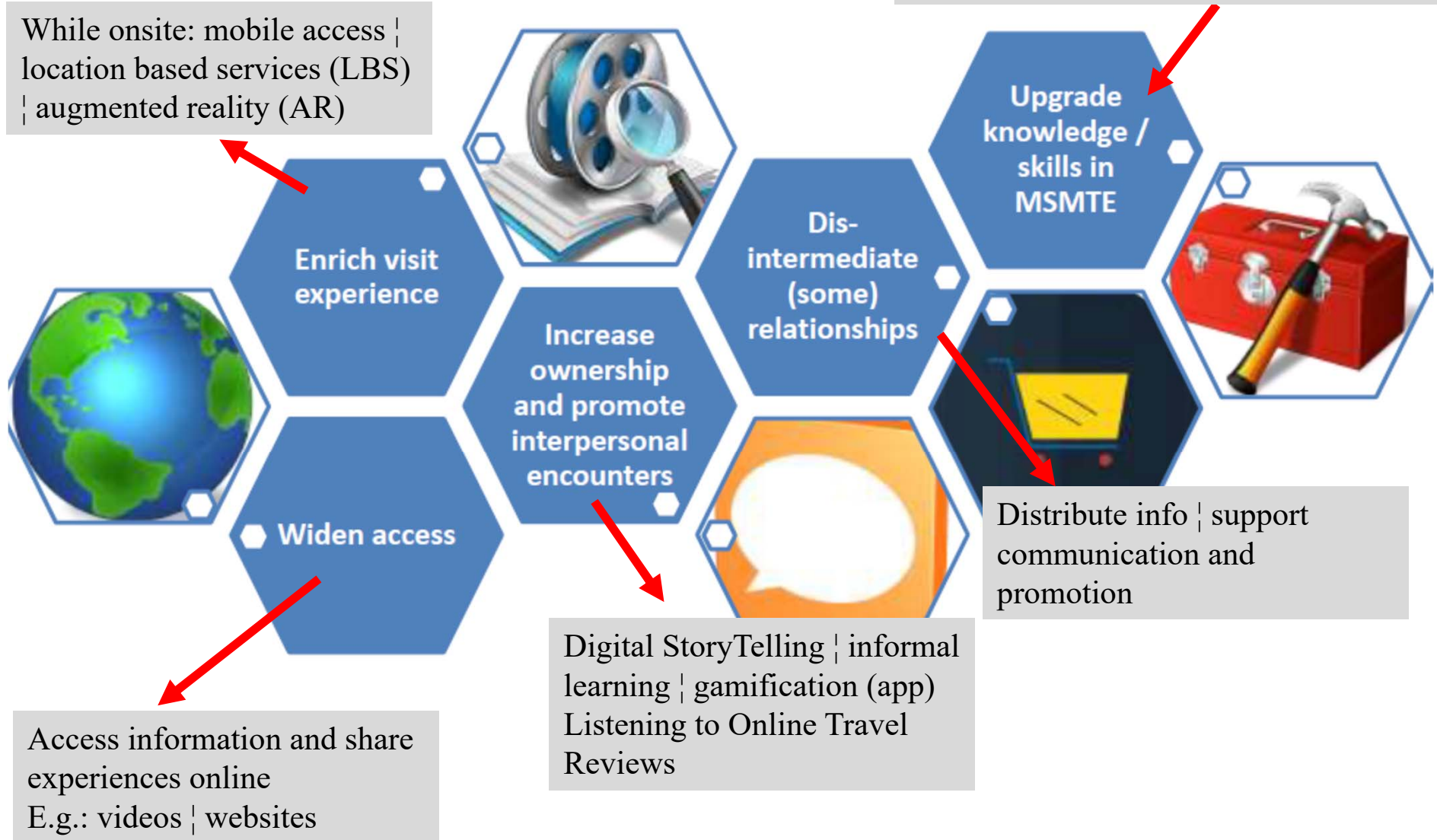
- ICT provides a host of tourism stakeholders with the basis for **direct market access**, global **distribution** and **networking**.
  - Nevertheless, fewer than 3% of tour guides have an online presence.
  - Since **digital connectivity** is essential for empowering SMEs to market their products and services in a global economy, there is an urgent **need to further improve ICT-related infrastructure**, particularly in developing countries and rural areas.

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# Five areas of intervention of ICT in context of sustainable tourism

eLearning | Open Educational Resources (OER) | MOOCs | ...  
 E.g.: [elearning.ticino.ch](http://elearning.ticino.ch) | [www.elearning4tourism.com](http://www.elearning4tourism.com)



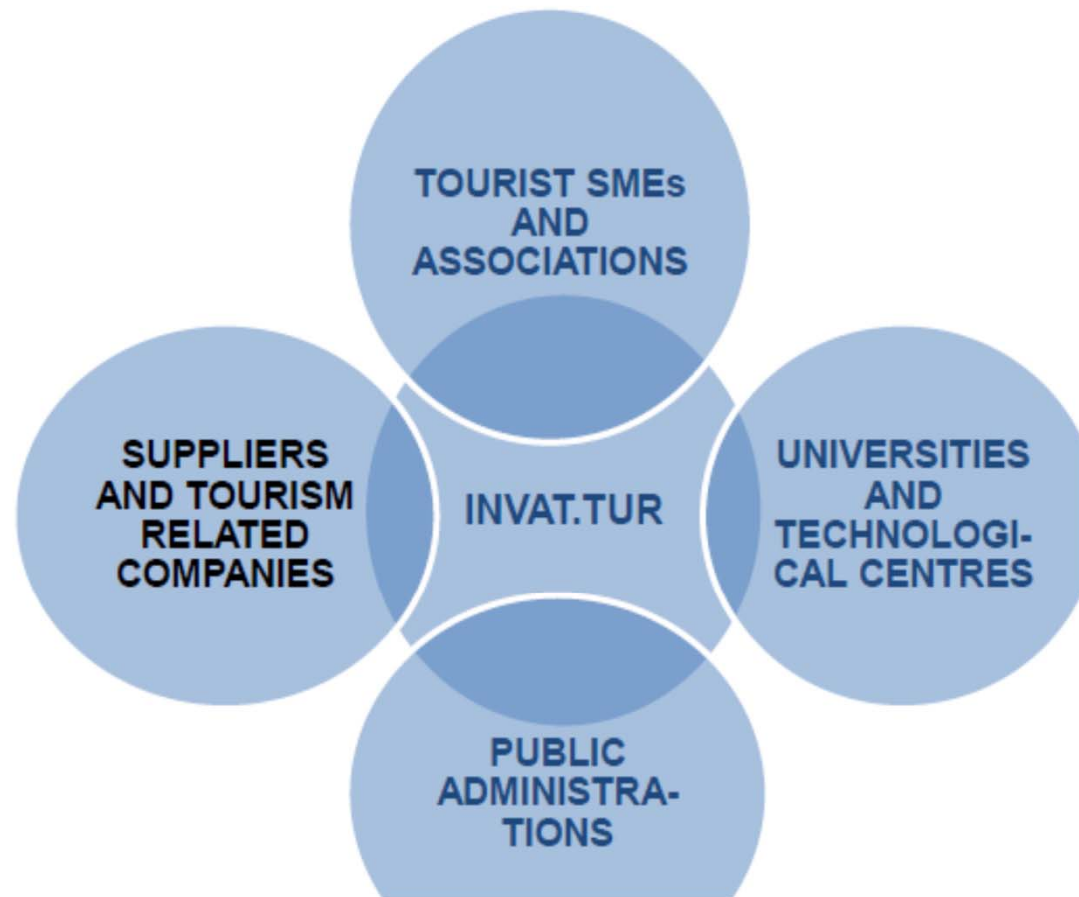
Source: L. Cantoni „ICT for Sustainable Tourism in World Heritage Sites. An Overview and Some Cases. UNESCO chair in ICT



# Best Practice ICT & Sustainable Tourism: INVAT·TUR – ICT as an Enabler of Multi-Stakeholder Cooperation and Innovation

Invat.tur is conceived as an encounter and collaboration platform for all the tourism agents, a meeting point of tourism in the Region of Valencia.

Public and private stakeholders play an important role in the development of the activity and projects of the center role.



# Best Practice ICT & Sustainable Tourism: Inclusive Tourism

- **INVAT.TUR** (Valencia), in close collaboration and co-operation with the tourism sector, develops activities and projects in six areas to achieve the following strategic goals:
  - To **generate and transfer knowledge** in the tourism sector throughout Research, Development and Innovation activities (R+D+I).
  - To develop **R+D+I activities tailored to the needs** of the industry.
  - To **foster innovation culture** as a tool to **improve competitiveness** in tourist companies.
  - To develop an **useful market intelligence** area aimed to facilitate strategic promotion and marketing decisions in the destination management process.
  - To **encourage collaboration between public and private institutions** in actions of R+D+I.
  - To **facilitate access to knowledge**, to anticipate and to adapt Valencian tourist offer to the new market trends.

# Best Practice ICT & Sustainable Tourism: European project DANTE



# Best Practice ICT & Sustainable Tourism: DANTE

## 4. Listening platform of tourist users' needs (Italy) (GP1\_4)

### Motivation:

- Understand needs and requirements of tourist groups

### Issues Tackled:

- Collect, exploit and analyze information related to tourists

### Objectives:

- Listen to the users' needs via multiple sources, including social networks.
- Determine whether ICT solutions increase tourist inflow

### Innovation:

- Data standardization to integrate multiple sources of information.
- Semantic interpretation of DATA

### Categorization: "consumer"



# Best Practice ICT & Sustainable Tourism: DANTE

## 7. New product and service development for rural tourism on farms (Germany) (GP1\_7)

### Motivation:

- Sharing information and experience among rural businesses

### Issues Tackled:

- Advance networking and cooperation within a consortium of rural SMEs.
- Support bottoms-up innovation (new ideas created by SMEs)

### Objectives:

- Develop new rural tourism services using ICT and social interaction.
- Follow the evolving needs of rural tourists.

### Innovation:

- Combination of social and ICT technologies to drive creativity enhancing workshops.

### Categorization: “back office”

# eFitness Zermatt: Supporting and educating stakeholders in a mountain resort

eFitness Zermatt (ritzzy\* and Zermatt Tourism)

<http://ztnet.ch/e-fitness>

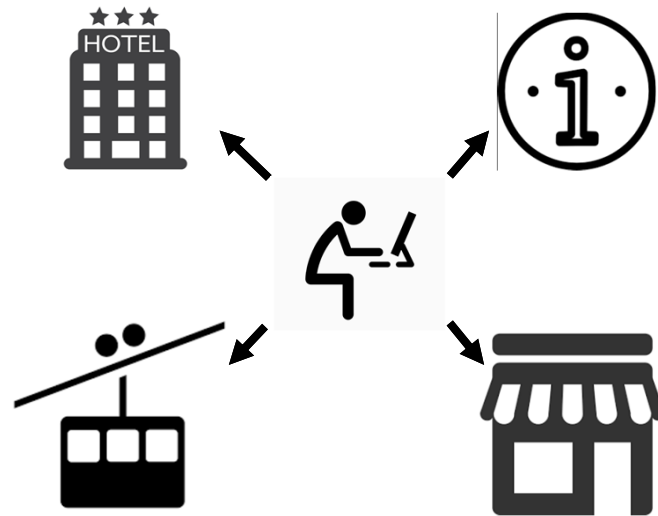




# ICT as an enabler for a real digital «Sharing» Economy

Focus	Description	Value added
Shared Services	Offer <b>support services</b> that can be used <b>across organizations</b> . The services enable the <b>efficient use of available systems</b> .	Shared services to support the individual implementation pragmatically with specialists.
Shared Systems	Offer of <b>systems (software)</b> which are <b>used across organizations</b> .	Shared systems, because no differentiation can take place via systems and standardization helps to reduce costs.
Shared Data	Provides <b>data</b> that can be <b>used across destinations for systems and analyses</b> .	Shared data to open and link data silos to reduce data management efforts and improve information quality.

## Cases of Shared (digital) Services



# Shared Services @ Graubünden Ferien (CH) -> Regional Tourism Organisation offering Services for Stakeholders in Region

## Shared Services.

Kundengewinnung und Kundenbindung

### Content

- SEO
- Bild, Video, Text
- Eigene Website
- Ext. Präsenzen (Reiseportale, Bewertungsplattformen, etc.)
- Social Media

### Marketing

- SEA / GDN
- Performance Marketing
- Content Marketing
- Social Advertising
- Permission Marketing

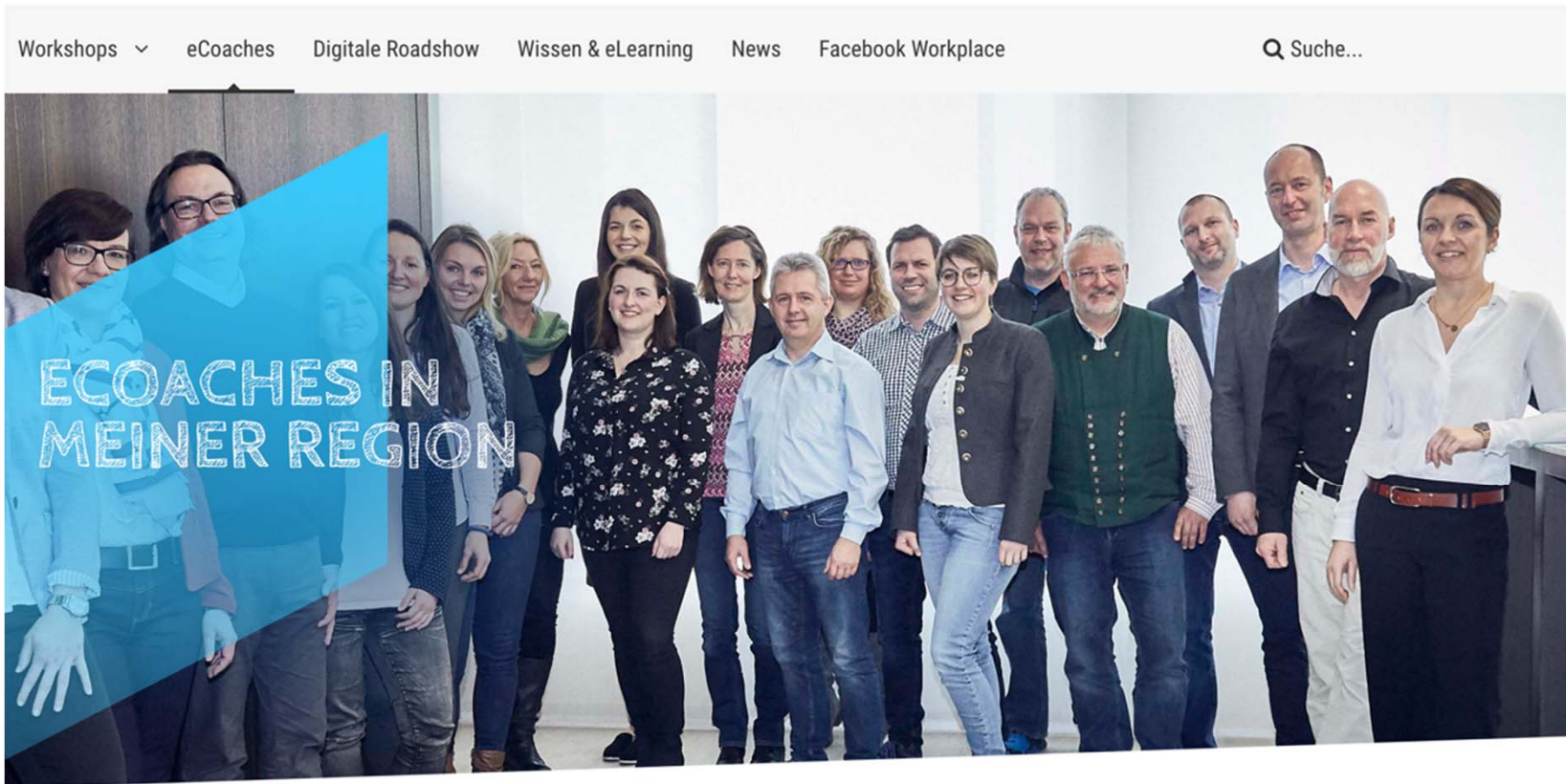
### Distribution

- Datenqualität
- Verfügbarkeiten
- Stornobedingungen
- Preisgestaltung und -steuerung
- Vertriebsnetze
- Direktbuchung
- Zertifizierungen

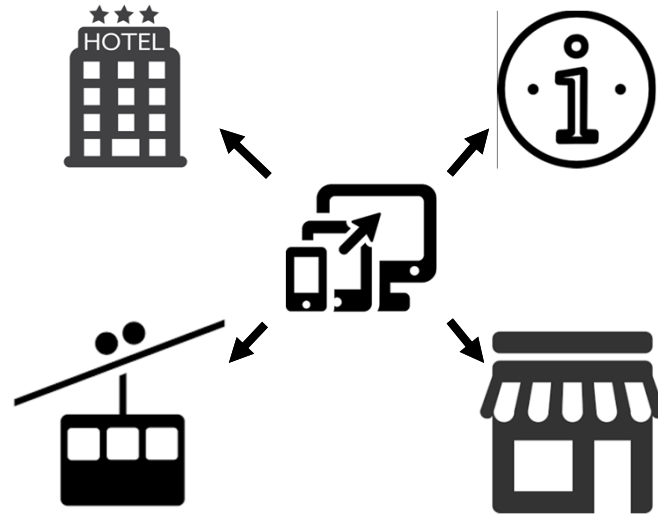
Prozesse / Tools (Social Media HUB, CRM, ICT-Lösungen)

graubünden

# eCoaches supporting SMEs in digital transformation process (Oberbayern Tourismus, Germany)



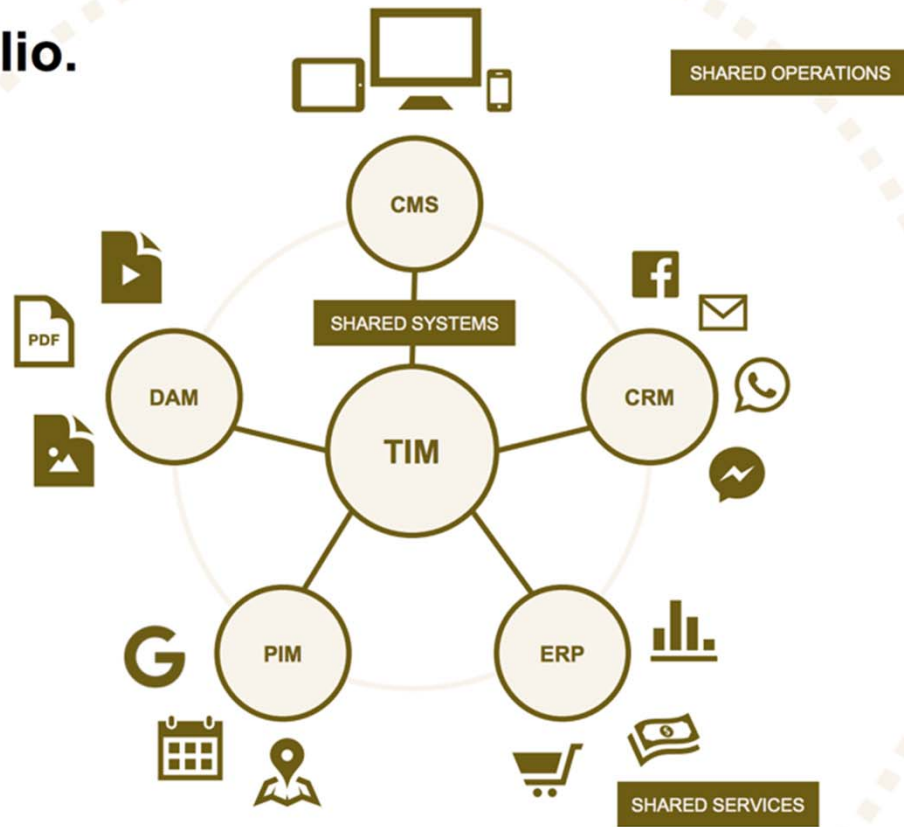
## Cases of Shared Systems



# Shared Systems @ Tourismus Services Ostschweiz (Switzerland)



**Portfolio.**



 Contao	 ABACUS Business Software
 Wilken	 Userlike
 TOMAS	 bexio
 akeneo	 facelift
 bynder	 guide
 ATLASSIAN	 Google Analytics
 Office 365	 G Suite



# Shared Web Systems in Western Switzerland

## PARTNER WEBSITES

RÉSEAU VAUDOIS DES SITES INTERNET TOURISTIQUES



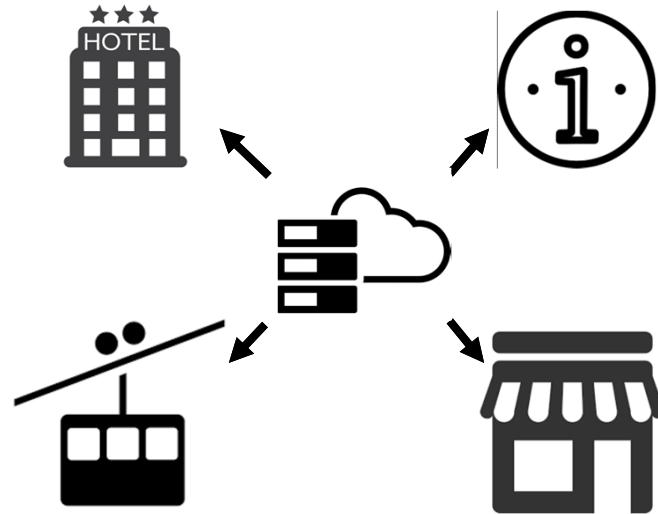
Dans un monde où les technologies du web évoluent à une vitesse frénétique, la mise en commun des ressources et la coordination inter-acteurs d'un même secteur est devenue une priorité.

Le réseau des Partner Websites vaudois est le fruit d'une réflexion globale effectuée par toutes les destinations touristiques vaudoises. Il vise à favoriser les synergies, les réflexions globales et le déploiement coordonné de nouvelles technologies.

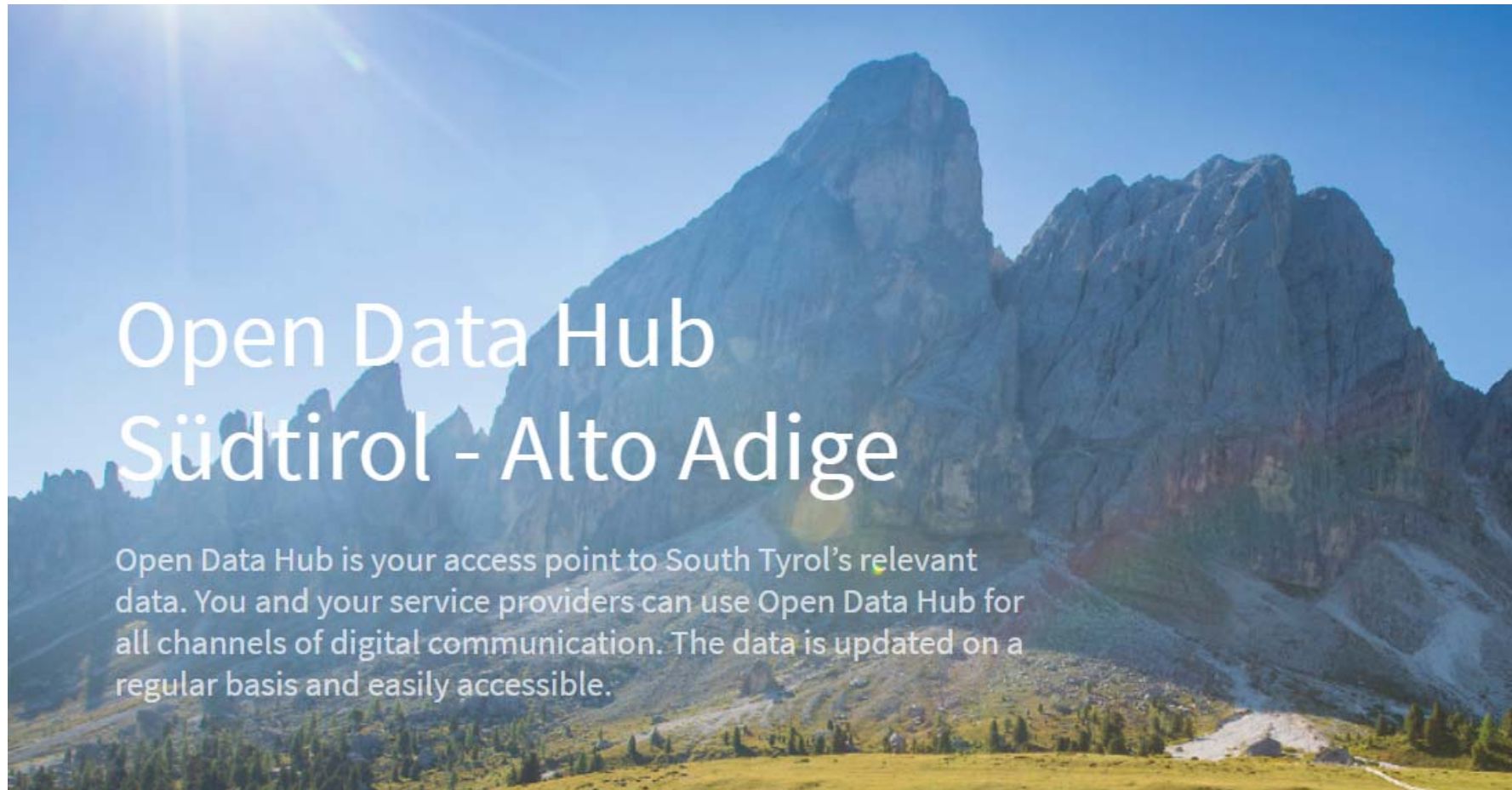
La mise en ligne des différents sites web a débuté en décembre 2016. Mi-2017, 13 sites de destinations, partenaires ou prestataires se trouvent sur le réseau des Partner Websites:

- ✓ Région du Léman
- ✓ Montreux Vevey Tourisme
- ✓ Pays d'Enhaut Tourisme
- ✓ Villars – Les Diablerets
- ✓ Château de Chillon
- ✓ La Côte Tourisme
- ✓ Morges Tourisme
- ✓ Yverdon-les-Bains Région

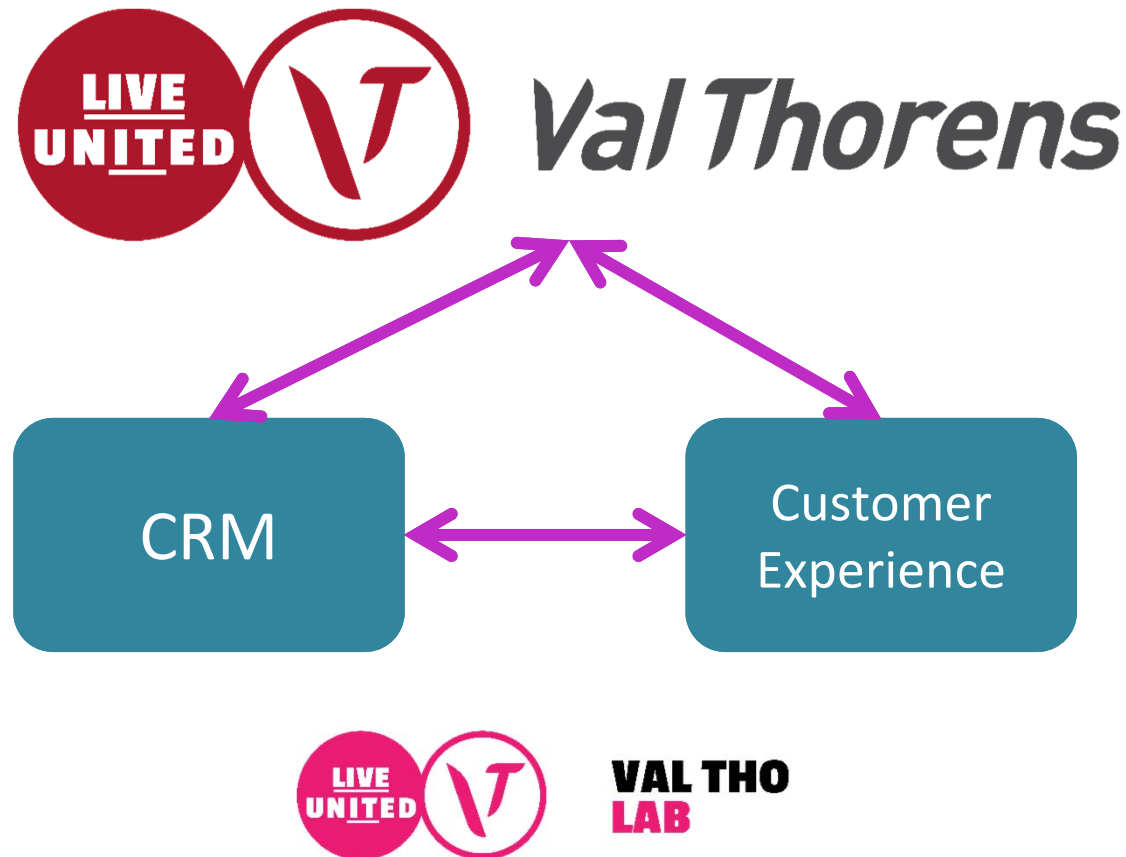
## Case of Shared Data



# Shared Data @ Südtirol (Italy) Open Data Hub



# The brand and shared data (CRM) as a strategic development tool



<http://www.innovation-touristique.com/content/val-thorens-%C2%ABsmart-data-de-l%E2%80%99or-blanc-aux-clients-en-or%E2%80%A6%C2%BB>





# Agenda

- Digital Transformation & Tourism
- eTourism: travel search and booking trends
- Online Travel and the Global Players
- Sustainable Tourism and ICT
- Case studies
- **Implications**



# Conclusions

- Human and organizational factors
- Cooperation and framework conditions
- Regional initiatives and public funding important
  - ✓ SMEs do not have Ra&D department -> need of PPP, role of universities!
- Digital Mindset -> investment in skills
  - ✓ Agility and pace (trial and error)



# The Digital Transformation challenge

Take Businesses/Stakeholders out of Isolation

- Facilitate Knowledge Exchange
- Create Platforms for Best Practice
- Allow Industry Leadership
- Foster Innovative Developments



<http://ec.europa.eu/DocsRoom/documents/9706/attachments/1/translations/en/renditions/native>

# Thank you!



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