

Visit Arctic Europe – Stronger together, Rovaniemi 21-22/11 2017

The Future belongs to those who prepare for it today!
The Future starts now!

VISIT ARCTIC EUROPE



Interreg
Nord
European Regional Development Fund



Northern Norway
Tourist Board

Swedish Lapland
Visitors Board
REGIONAL TOURISM ORGANISATION OF
SWEDEN'S NORTHERNMOST DESTINATION



Lapland –
The North of
Finland

ANALYSIS OF DIGITAL TRENDS IN TOURISM AND CUSTOMER DIGITAL MOBILE BEHAVIOUR

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"The best way to predict the future is to invent it"
(Alan Kay, Xerox PARC)

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AIM OF THIS STUDY

1. Analysis of digital trends in tourism
2. Analysis of trends in digital mobile behavior
3. To stimulating future digital development of tourism in Arctic Europe

RESEARCH QUESTION

What do recent research papers and white papers predict about trends in digital tourism and mobile behavior?

THEORETICAL FOUNDATION

Science of Trend Analysis:

- **Quantitative forecasting** (traditional) –using indicators & statistics by predictions and prognosis
- **Qualitative forecasting** – for unpredictable events such as technological steps – based on expert panels, research and development results (white papers)
- **Scenario Planning & TAIDA – model** (Tracking, Analyzing, Imaging, Deciding and Acting)
- **Science Fiction** - speculations

This Report: Qualitative forecasting & TAI (in TAIDA)

METHODOLOGY

- Searched Google Scholar (search engine on scientific papers on the Internet)
- Search period 2013-
- Scanned 1160 scientific papers
- Analysed 215 relevant scientific paper
- Analysed 162 White papers (industry reports)
- Analysed 112 webpages on digital development

METHODOLOGY

Digital trends in tourism was sub-divided into four sub-themes of:

1. General trends in tourism and digital tourism
2. Digital trends in tourism business management
3. Digital trends in travel distribution
4. Digital trends in tourism marketing

Customer digital mobile behaviour was sub-divided according to customers experience-process of travelling into three themes:

1. Pre-consumption digital behaviour
2. During-consumption digital behaviour
3. Post-consumption digital behaviour

BACKGROUND

- **Information technology (IT)** has played a fundamental role in the development and growth of the tourism industry
- IT has become one of the most important communication tools for travellers as well as for tourism enterprises
- Every industry is currently undergoing a digital transformation
- We are entering industry revolution 3.0

RESULTS

DON'T BE:

- **Scared** by the technology (Science Fiction) – be curious!
- **Skeptical** – otherwise you will be overstepped by those adapting
- *Embrace the development and do your best of it!*
- Short summary of the report:

MAIN RESULTS

DISRUPTIVE MEGATRENDS

- Disruptive megatrends in society are changing way of living and doing business
- Paradigm shift towards digitalization, e-business, e-commerce, e-payment, e-tourism and e-traveller and the new digital generations = Digital transformation
- Megatrends in digital transformation will strongly influence tourist behaviors and the tourism industry

MAIN RESULTS

Disruptive hardware and software evolution such as:

- mixed reality (VR, AR)
- artificial intelligence (AI)
- robotization and automatization
- psychometrics micro-targeting
- Digital footprints and big data
- cloud computing
- blockchain technology
- Gamification
- holographic telepresence
- web 4.0
- Internet of Things (IoT)
- Quantum computers, and much more



together with the “experience turn” towards co-creation, customer-centered experience management and user-generated content, challenges traditional business organizations and business value chains.

GENERAL TRENDS IN DIGITAL TOURISM

MEGATRENDS – IN SOCIETY

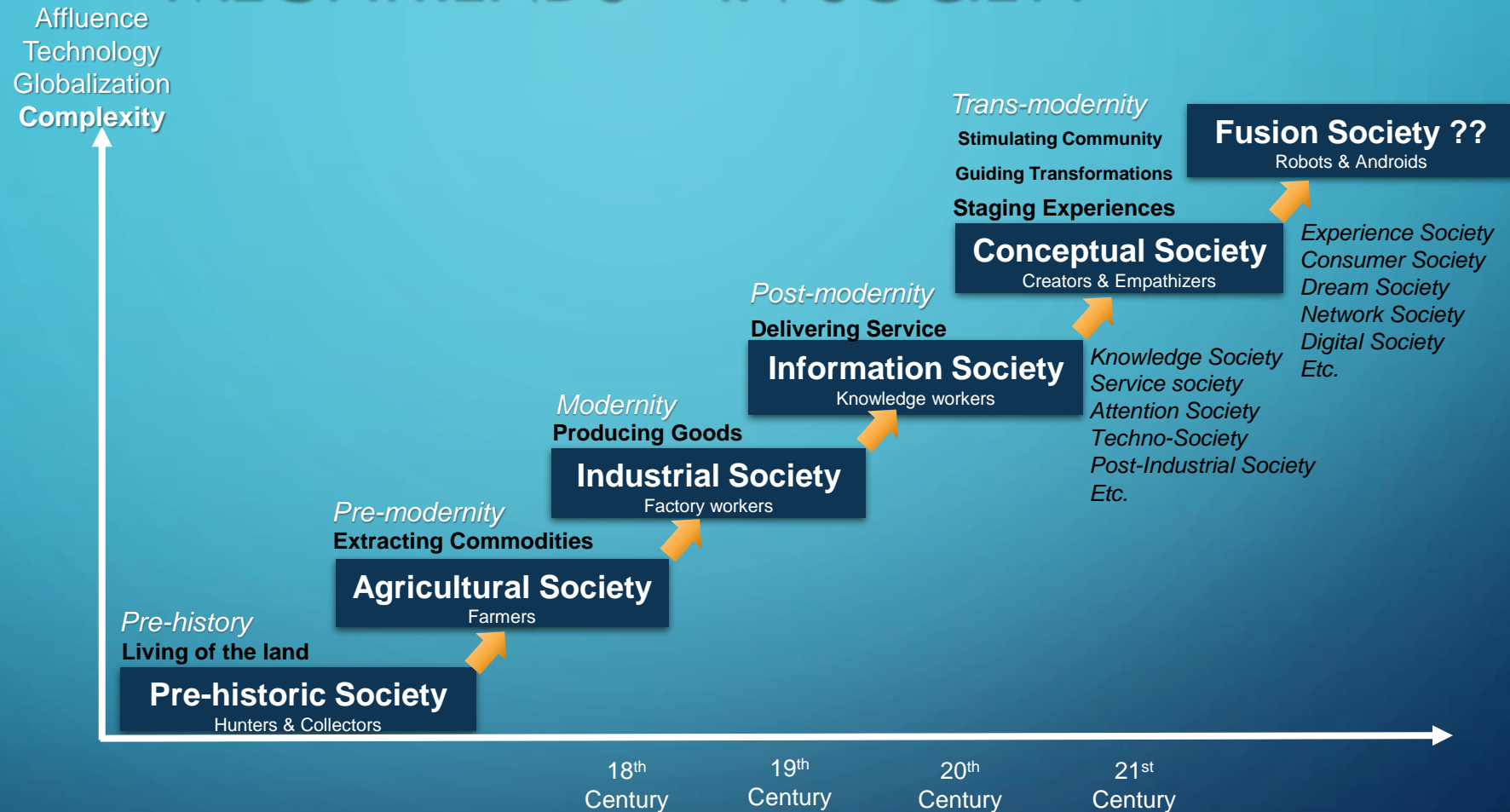
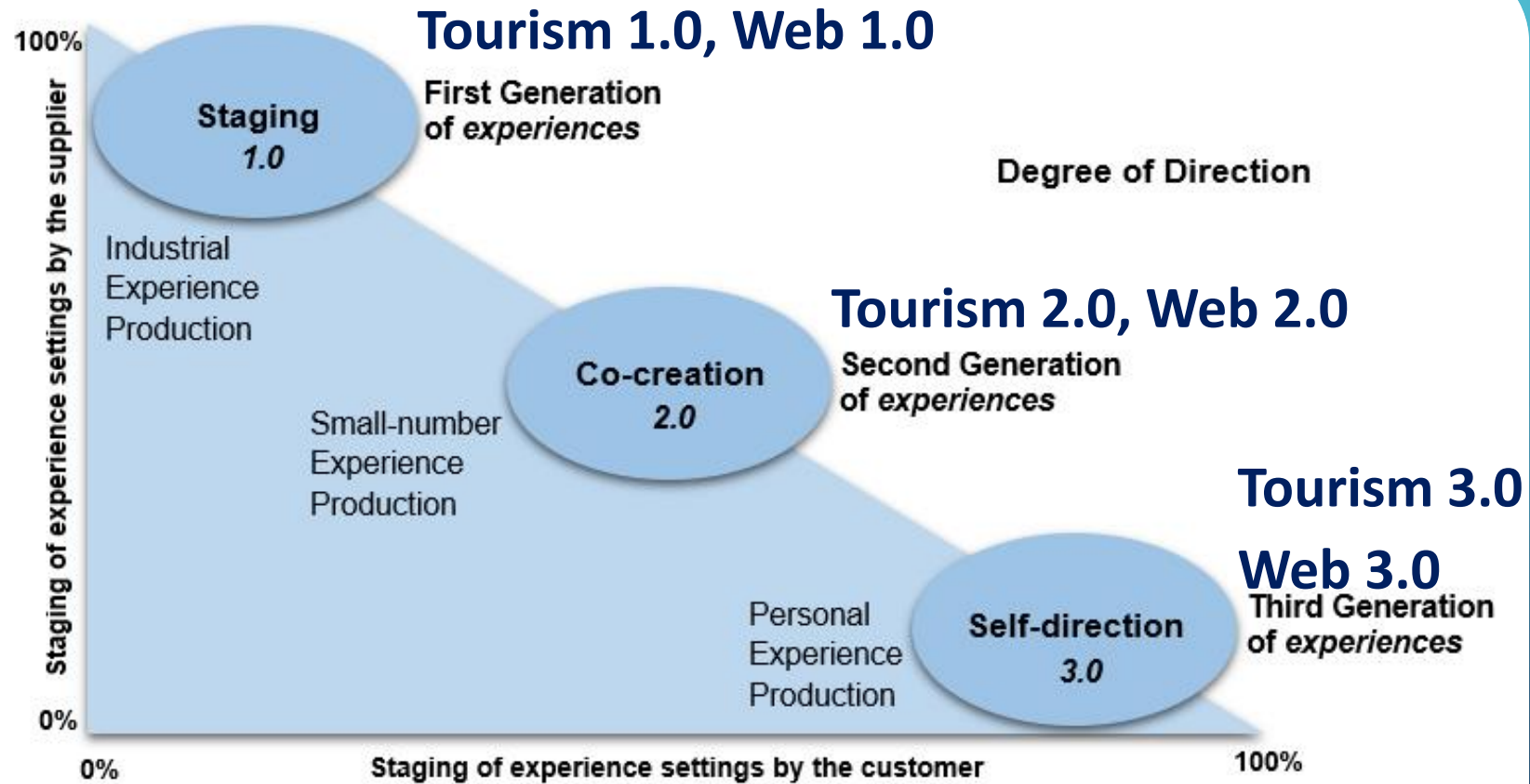


Figure 1. A simplified stage model of progression of society and economical offerings. (modified after Pine & Gilmore 1999, Florida 2002, Luyckx Ghisi, 2006, Pink 2007, and others.)

1 GENERAL TRENDS IN DIGITAL TOURISM

MEGATRENDS – IN TOURISM BUSINESS



TOURISM:
Service industry →
Experience Industry

Figure 2. Different generations of experience production as actor-customer relationships in the creation of meaningful experiences. (modified after Boswijk et al 2012, p 11)

GENERAL TRENDS IN DIGITAL TOURISM

MEGATRENDS – WEB EVOLUTION

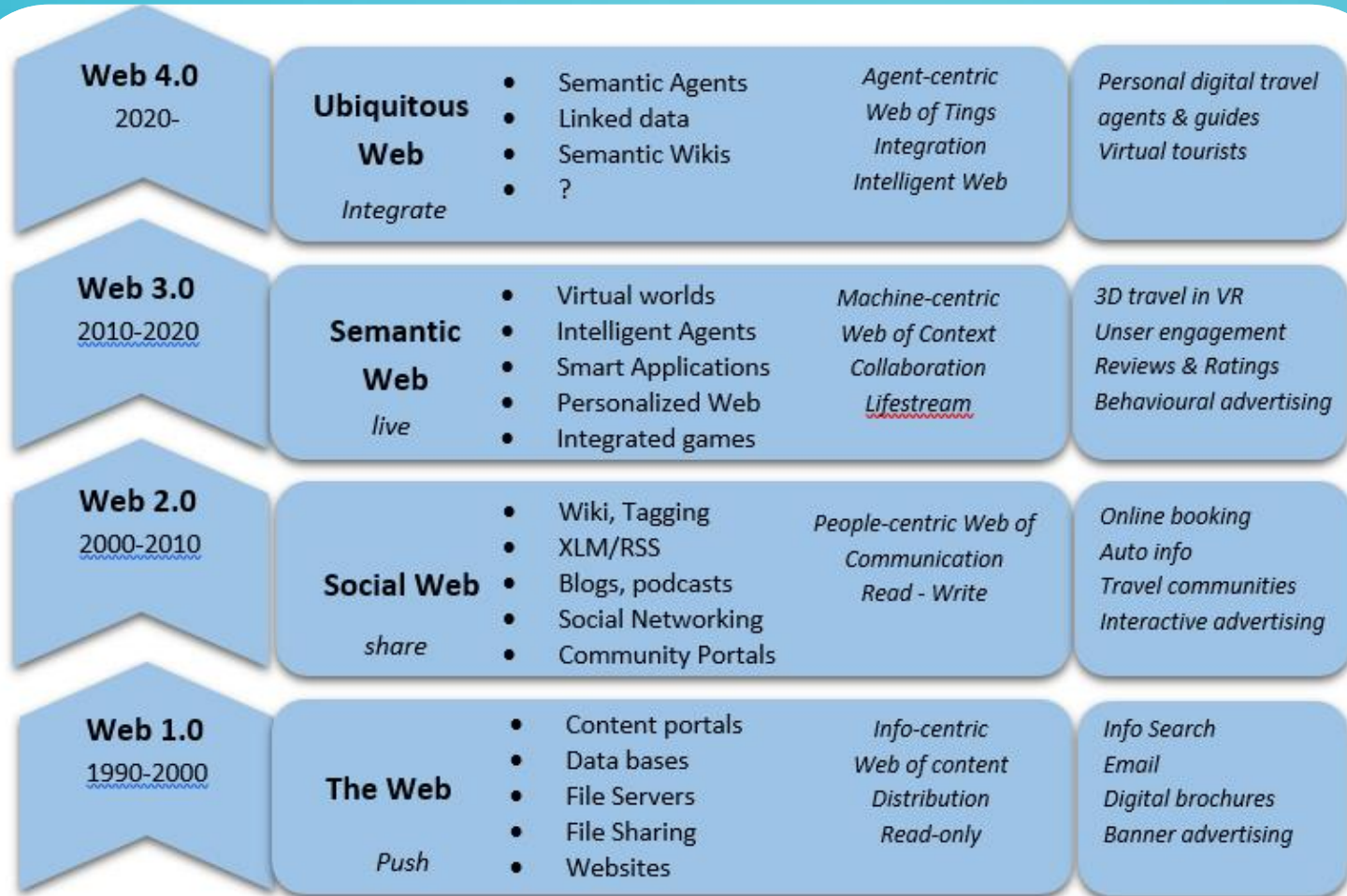


Figure 4. The evolution of the Internet (compiled from diverse sources)

TOURISM:
 Posting information (web 1.0)
 → Self-creating experiences

GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – DEAD OF MOBILES



"Mobilen är redan död. Folk har bara inte insett det än"

Foto: Fotolia

2/2



Publicerad 29 sep 2017 17:30

Snart är mobilen borta – det här kommer i stället


I framtiden kan mobiltelefonen och bildskärmar vara ett minne blott. Det nya ska ersätta allt sådant och kräver inte ens någon uppkoppling.
– Mobilen är redan död. Folk har bara inte insett det än, säger Alan Kipman.

– Mobilen är redan död. Folk har bara inte insett det än, säger Alan Kipman. Det nya ska ersätta allt sådant och kräver inte ens någon uppkoppling. I framtiden kan mobiltelefonen och bildskärmar vara ett minne blott.

kommer i stället

Snart är mobilen borta – det här

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Robots & Machines

In Five Years, Your Smartphone Could Be Reading Your Mind

Getty Images

IN BRIEF

New technology enables thought to be translated into audible words with surprising accuracy by reading user's brainwaves. The developers say they might be able to get the device to work with smartphones via an app in just five years.

SHARE

f t g+ e

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BREAKTHROUGH

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GENERAL TRENDS IN DIGITAL TOURISM

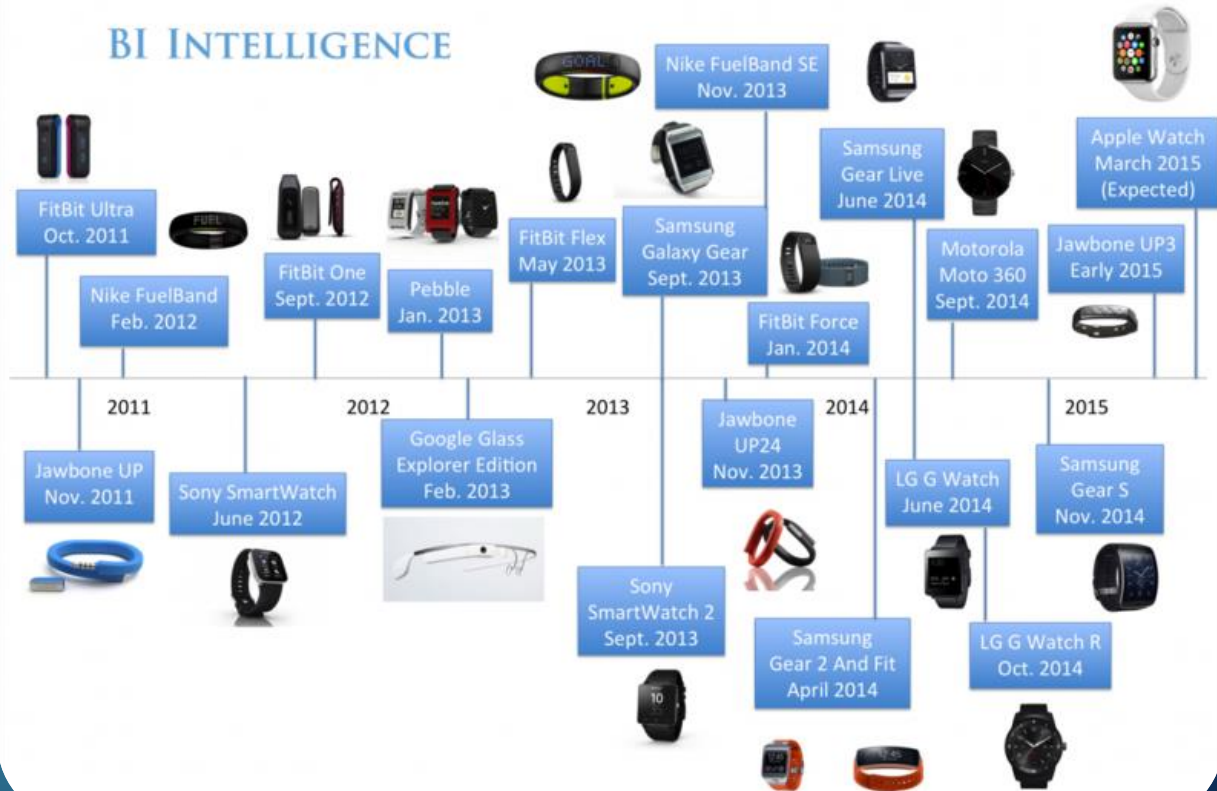
TECHNOLOGICAL MEGATRENDS – WEARABLES....

THE WORLD'S MOST ADVANCED WEARABLE COMPUTER



Wearable Device Release Date Timeline

BI INTELLIGENCE



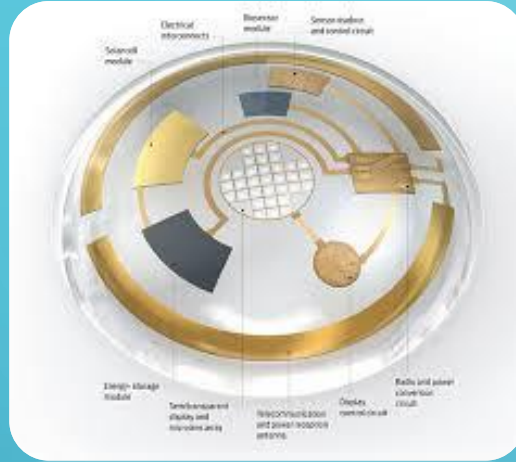
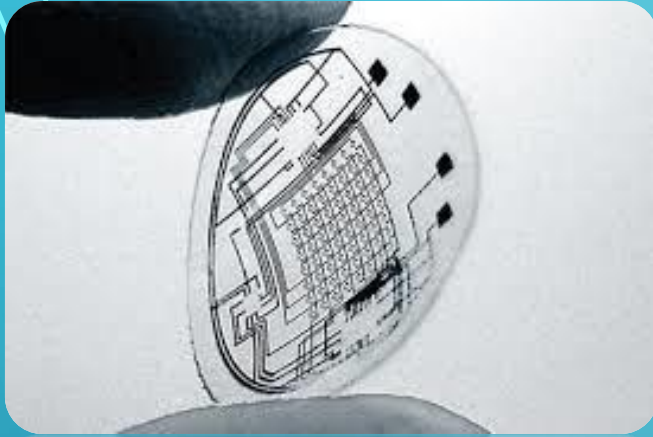
Quantum computers

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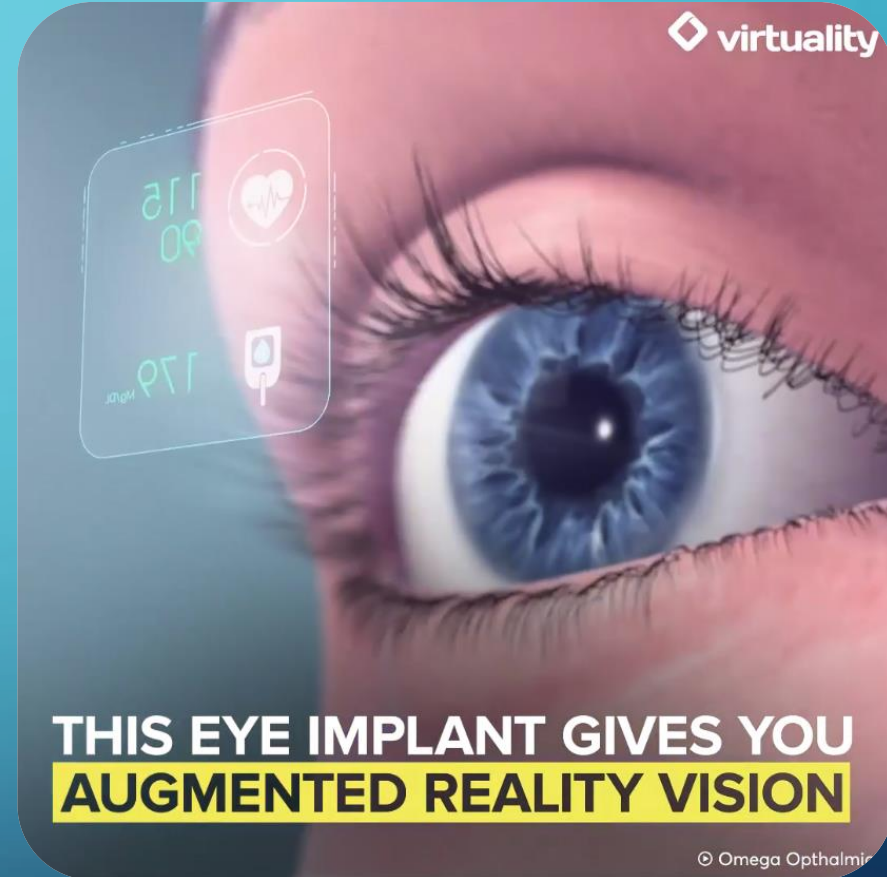


GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – WEARABLES....



Bionic contact lenses



GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – BRAIN-COMPUTER INTERFACE

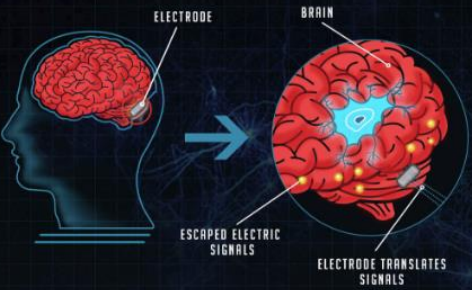
**THE EVOLUTION OF
BRAIN-COMPUTER INTERFACES**

Imagine a world where machines can be controlled by thought alone. This is the promise of brain-computer interfaces (BCIs)—using computers to decode and translate human thoughts into machine commands. Here's a look at the evolution of BCI technology, its current state, and future prospects.

TYPES OF BCI


INVASIVE

Signal-transmitting devices are implanted directly in the brain's gray matter. This method produces the highest quality signals, but scar tissue buildup can cause signal degradation.

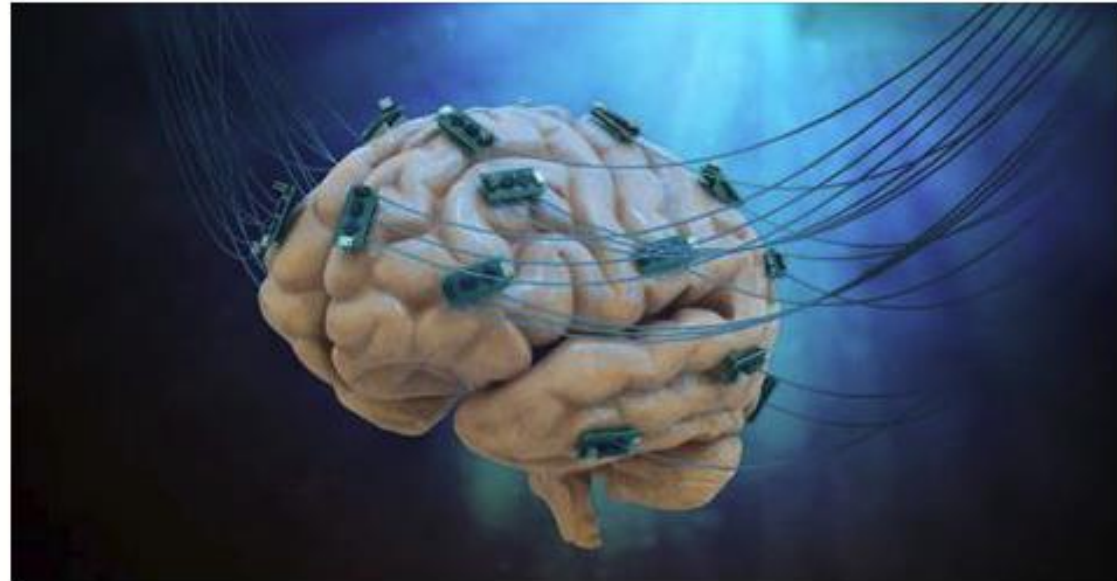


PARTIALLY INVASIVE

Devices are implanted within the skull but not within the brain tissues. Produce higher quality signals than noninvasive techniques by circumventing the skull's dampening effect on transmissions, and has less risk of scar tissue buildup.



Braininternet! here very soon!



Scientists Connect A Human Brain To The Internet For The First Time

Tired of tapping on the screen of your pesky, high-end smartphone to browse the Internet? No fear, because the awkwardly named "Braininternet" is here! A tea

IFLSCIENCE.COM

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GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – BRAIN-COMPUTER INTERFACE

**Elon Musk
Wants to
Merge Your
Brain with a
Computer**

big
think



**Neuralink's product?
Brain-Machine Interfaces (BMIs)
that enhance human intelligence.**

big
think



**Humanity could become
a giant brain,
speeding up progress
and evolving intelligence.**

big
think



**Elon Musk just started
a new company: Neuralink.**

Should we be scared?

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GENERAL TRENDS IN DIGITAL TOURISM

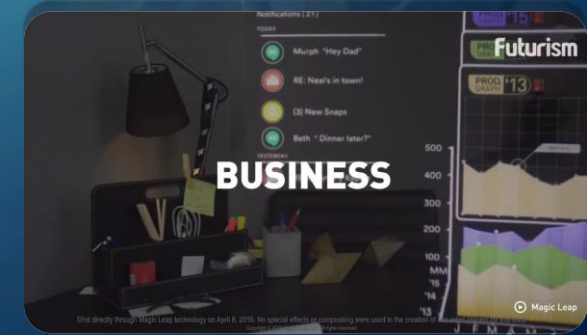
TECHNOLOGICAL MEGATREND – VR, AR, 4D, 5D



TOURISM: Old Uppsala AR experience of Vendel time year 550 AD

GENERAL TRENDS IN DIGITAL TOURISM

MEGATREND – AUGMENTED REALITY AR

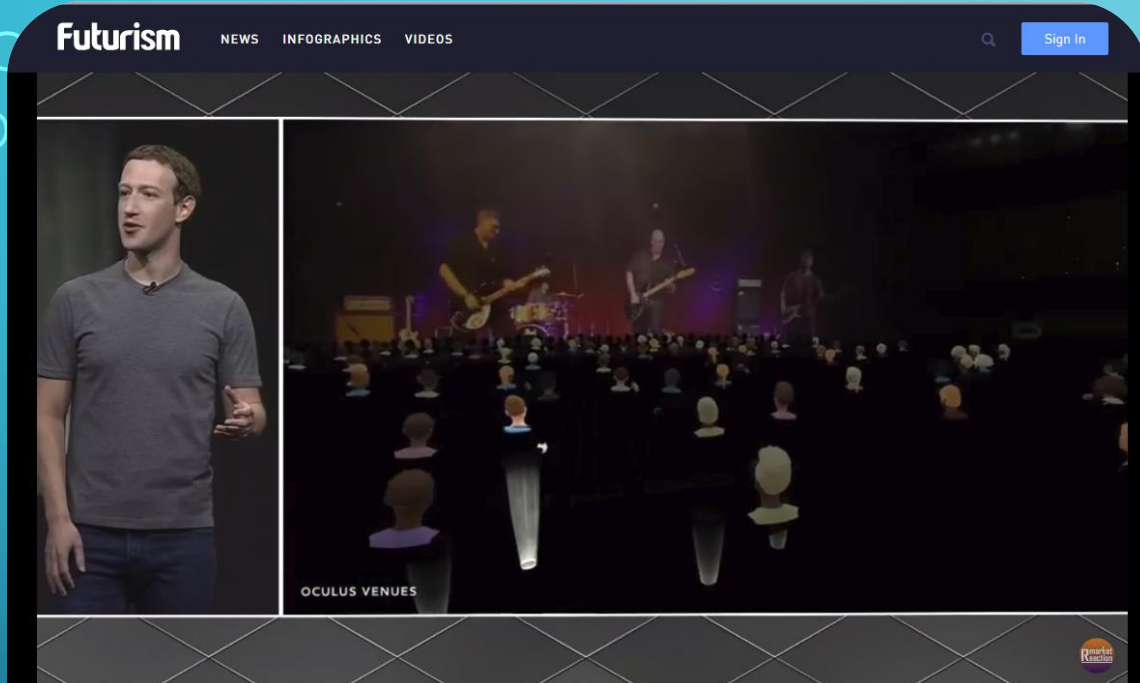


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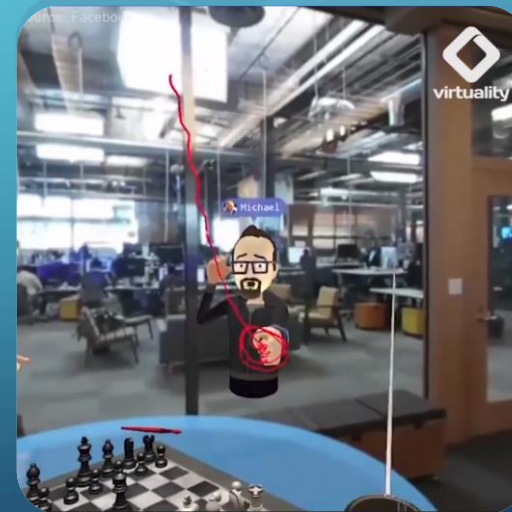
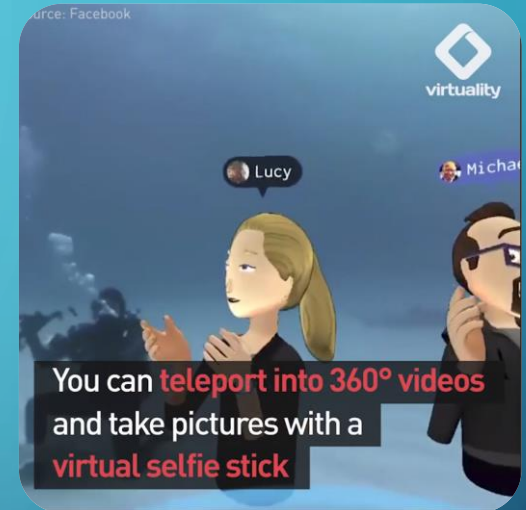
GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – VIRTUAL REALITY VR



Watch Live as Mark Zuckerberg Unveils the Next Era in Virtual Reality

Today is the Oculus Connect 4 keynote. You can get all the updates here as they come in.



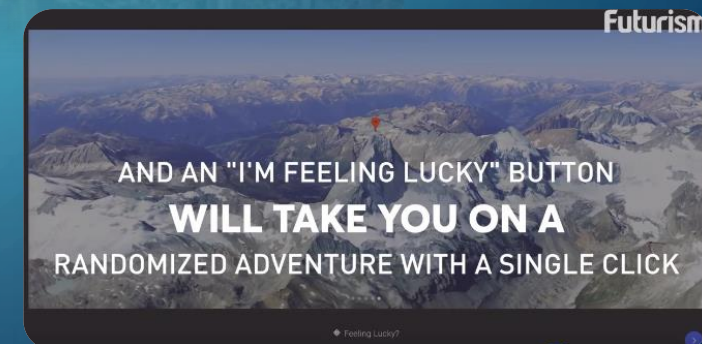
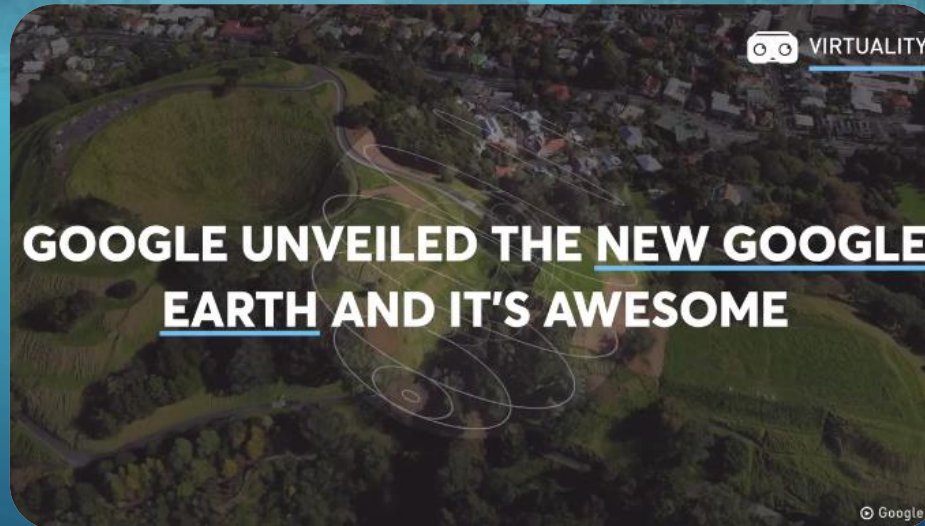
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TECHNOLOGICAL MEGATREND – VIRTUAL REALITY TOURIST

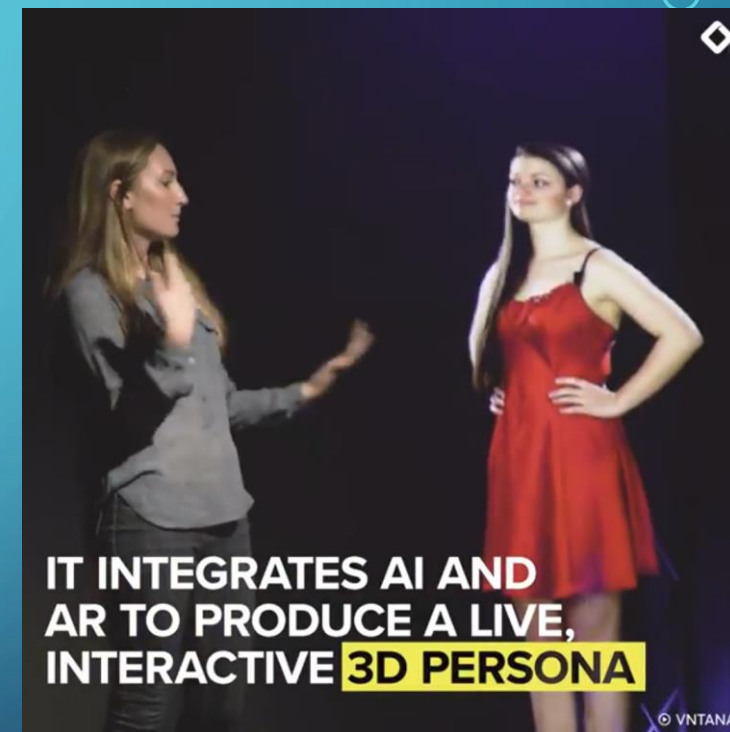
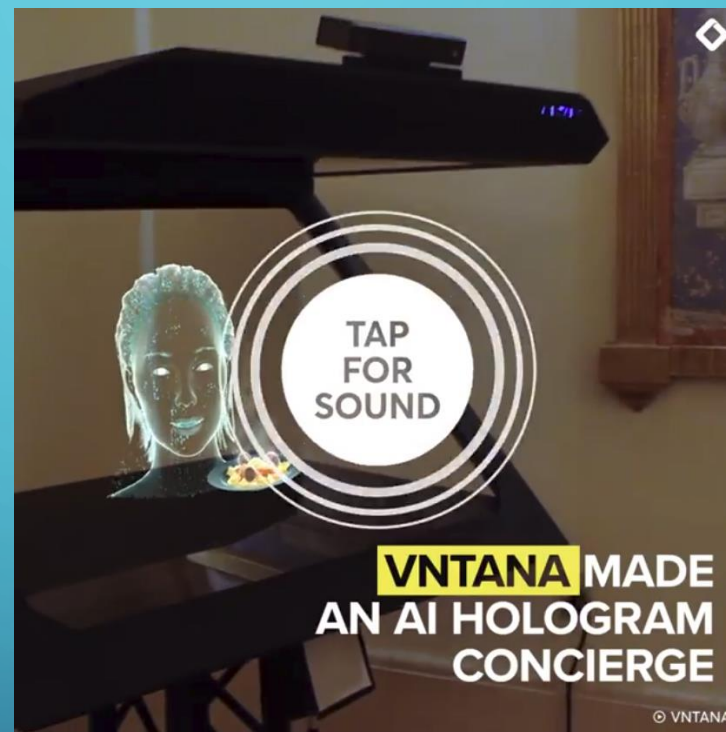
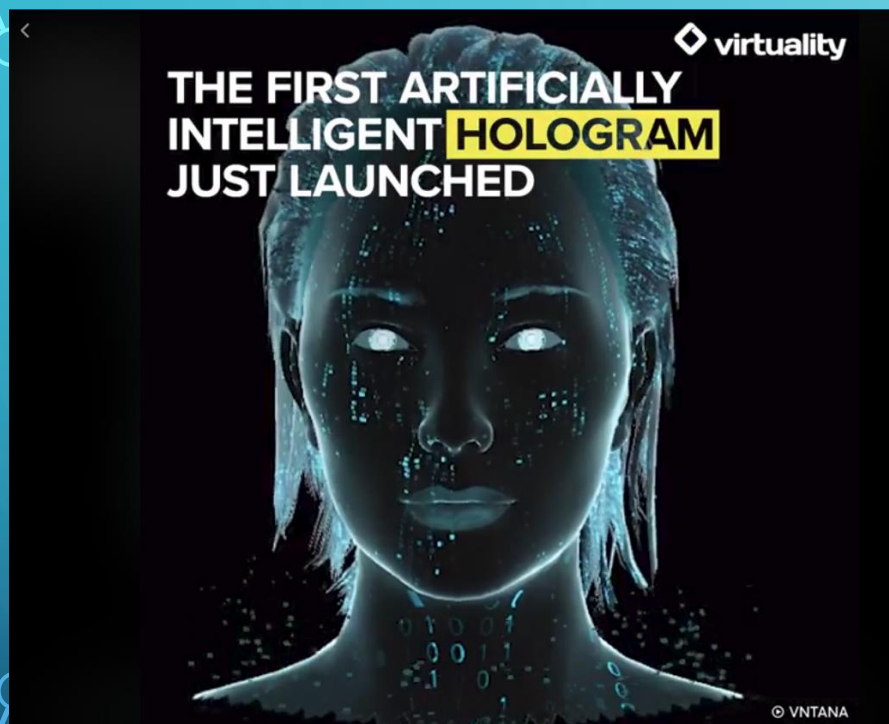


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GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – HOLOGRAM



GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – AI SERVICES



“We're going to shift from a service economy to an AI economy” - GDR

While GDR has frequently discussed the growth of Artificial Intelligence in the retail and hospitality sectors in recent years, one of the most potentially significant...

GDRUK.COM

GDRUK.COM

and hospitality sectors in
While GDR has frequently

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GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – AI SERVICES



Meet
AMELIA

Your intelligent digital workforce



Amelia is the only AI ready to transform entire processes at scale, from intelligent front office conversations to smart back office execution

Meet Amelia

Amelia

The Most Human AI

Amelia is the most comprehensive AI platform on the market. She can increase the effectiveness of your operations by getting work completed more efficiently than ever before.



The screenshot shows the IPSOFT website interface. At the top, the logo 'IPSOFT' and the tagline 'The Digital Labor Company' are visible, along with navigation links for 'PRODUCTS' and 'SERVICES'. The main content area features a large image of Amelia's face. To the right of her face, the text reads: 'Intelligent understanding. Amelia understands the underlying meaning of your statements and can engage in fluid conversations. As she detects a customer's mood, she is able to adapt the content of her responses and associated expressions to create a truly personal experience.' Below this, a testimonial box contains a quote: 'Mark me down as a believer that as Amelia is adopted across the industry, this AI technology will transform the customer service industry as we currently know it.' attributed to 'Peter Bendor-Samuel, Founder and CEO, Everest Group'.

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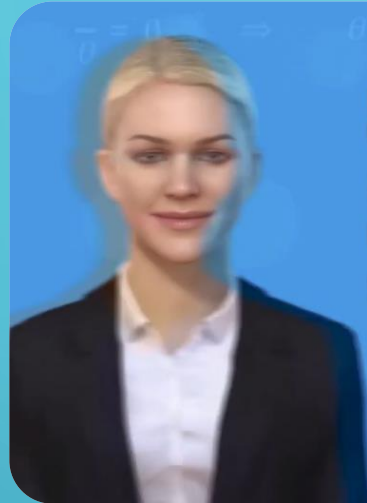
GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – AI SERVICES

More than
50 global
organizations
are employing
Amelia



Meet Amelia



- FLUENT IN NATURAL CONVERSATION
- EMOTIONALLY ENGAGED
- UNDERSTANDS CONTEXT
- SCALABLE



Enfield Council
Public Service Virtual Agent

Hospitality School
Student Registration Clerk

Hotel Group
IT Service Desk

SEB Bank
Customer Service Agent

Ensuring Superior Customer Experience

Lend the keys to Amelia, who can manage all aspects of customer experience. She is aware of the full context of every conversation so she can adapt her social tone and actions accordingly. When Amelia needs to escalate a call, she passes on all relevant information to her human colleagues so the conversation can flow smoothly without requiring customers to repeat themselves.

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GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – AI ROBOTS




This robot is now a citizen of Saudi Arabia


Source: Future Investment Initiative
Footage: Future Investment Initiative



and is meant to resemble Audrey Hepburn



I want to use my artificial intelligence to help humans live a better life




CNBC just did a live interview with this robot



She can track and recognize faces



And told humans they have nothing to fear from robots



Sophia is very confident

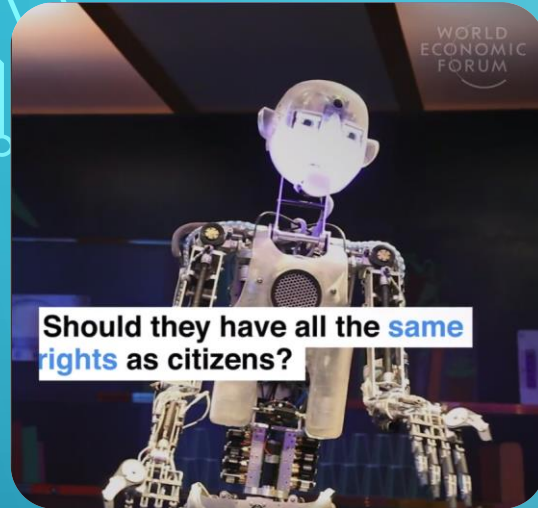
Should we be scared?

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GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – AI ROBOTS



TOURISM
Robots in
Service & hospitality



Should we be scared?

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TECHNOLOGICAL MEGATREND – AI ROBOTS

Self-driving transportation

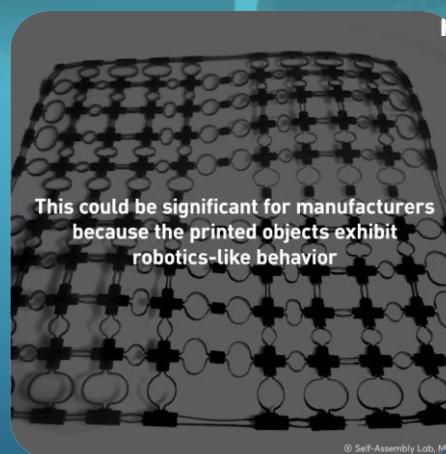
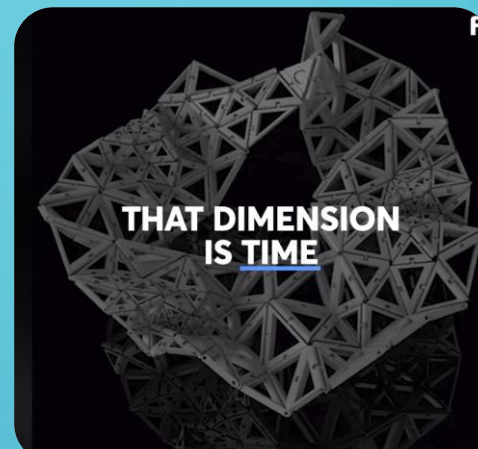
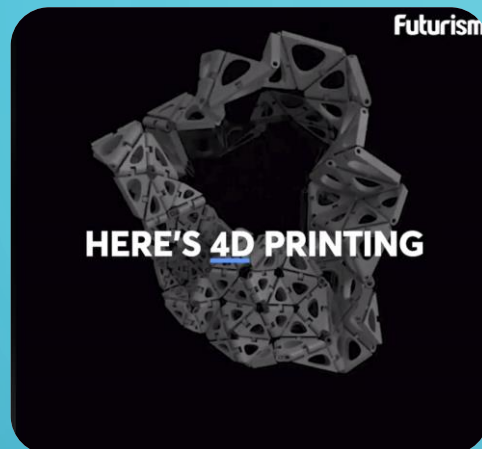


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GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – 3, 4 D-PRINTING



TOURISM

Print your own smart souvenirs

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GENERAL TRENDS IN DIGITAL TOURISM

TECHNOLOGICAL MEGATREND – QUANTUM COMPUTING

computer technology 2.0 → 3.0

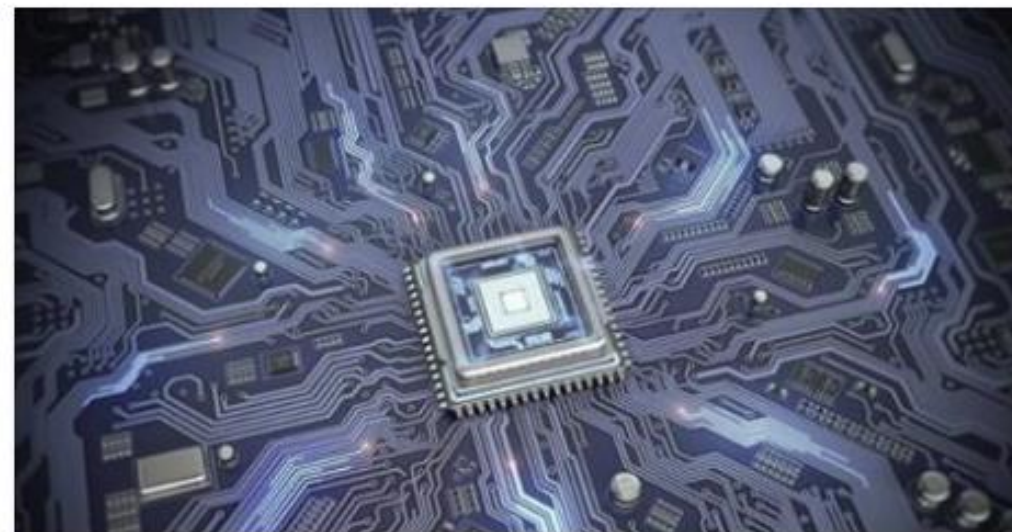
~~Moore's Law – exponential growth of
computer capacity, doubling each 24 month~~



Futurism

den 31 oktober kl. 19:30 · 🌐

They will reshape society as we know it.

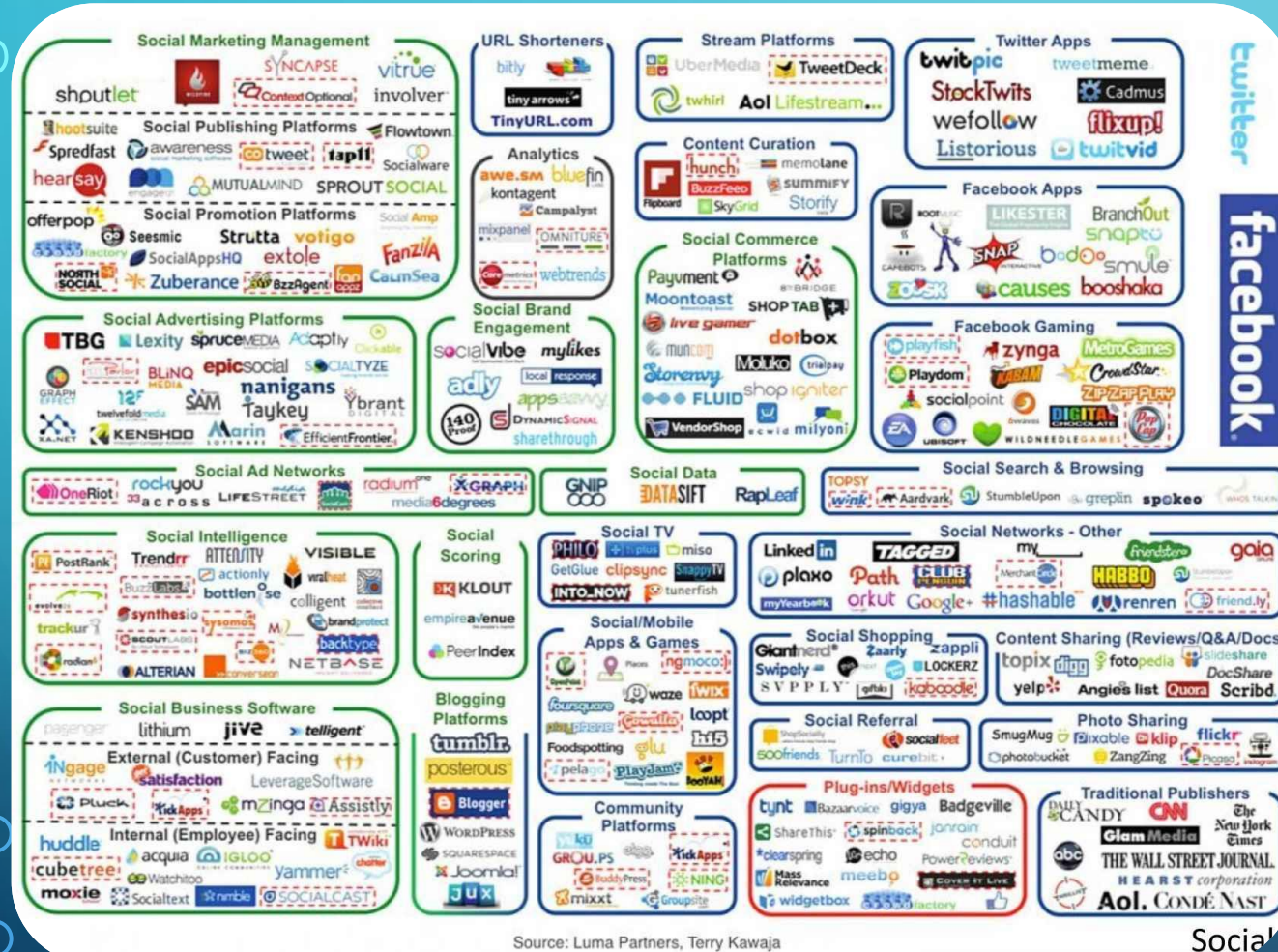


Here's what a world powered by quantum computers
will look like

FUTURISM.COM

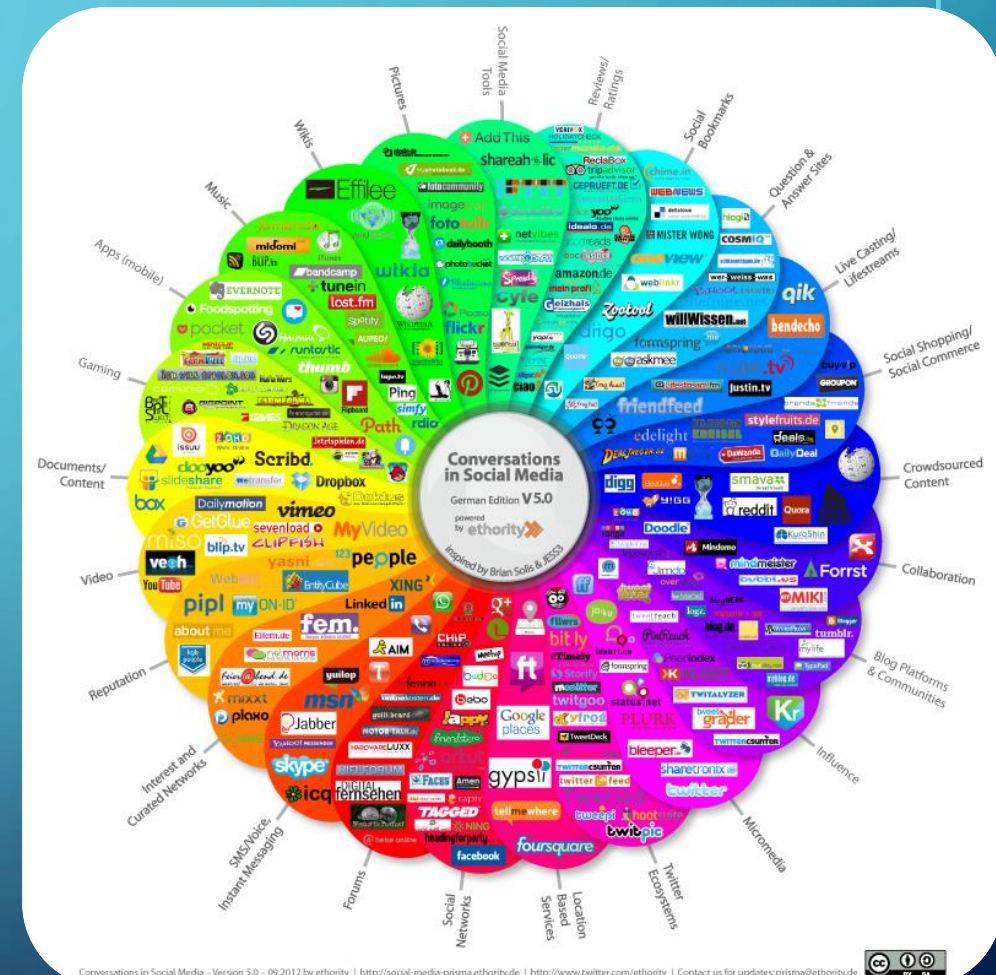
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MEGATREND – TOGETHERNESS



Source: Luma Partners, Terry Kawaja

Social



Conversations in Social Media - Version 5.0 - 09.2012 by eThority | <http://social-media-prisma.eThority.de> | <http://www.twitter.com/eThority> | Contact us for updates: prisma@eThority.de

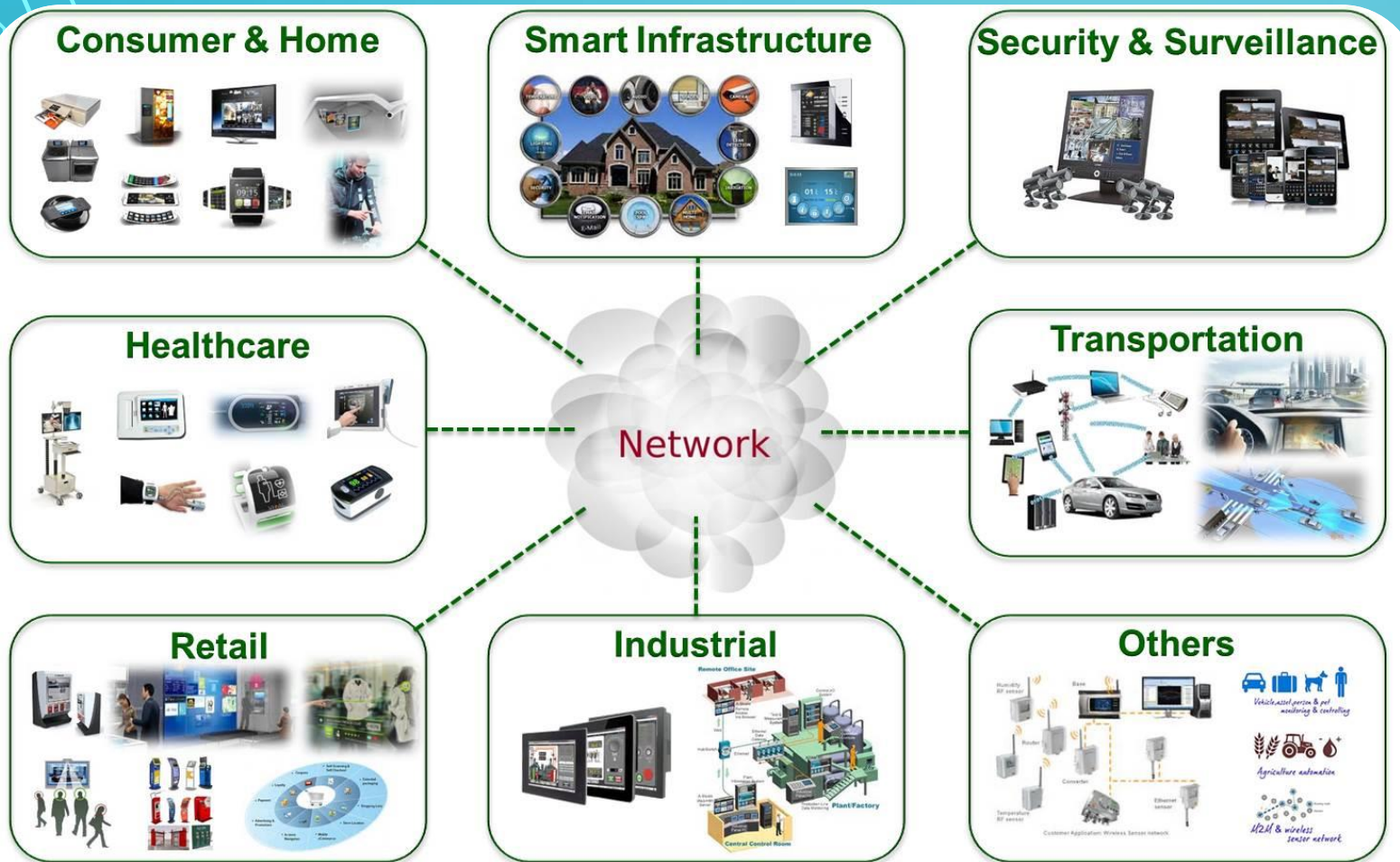
World of Social Media

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GENERAL TRENDS IN DIGITAL TOURISM

MEGATREND – INTERNET OF THINGS



Inter-connected interactive World

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GENERAL TRENDS IN DIGITAL TOURISM

MEGATREND – INTERNET OF THINGS



Smart Destination



Smart Cities



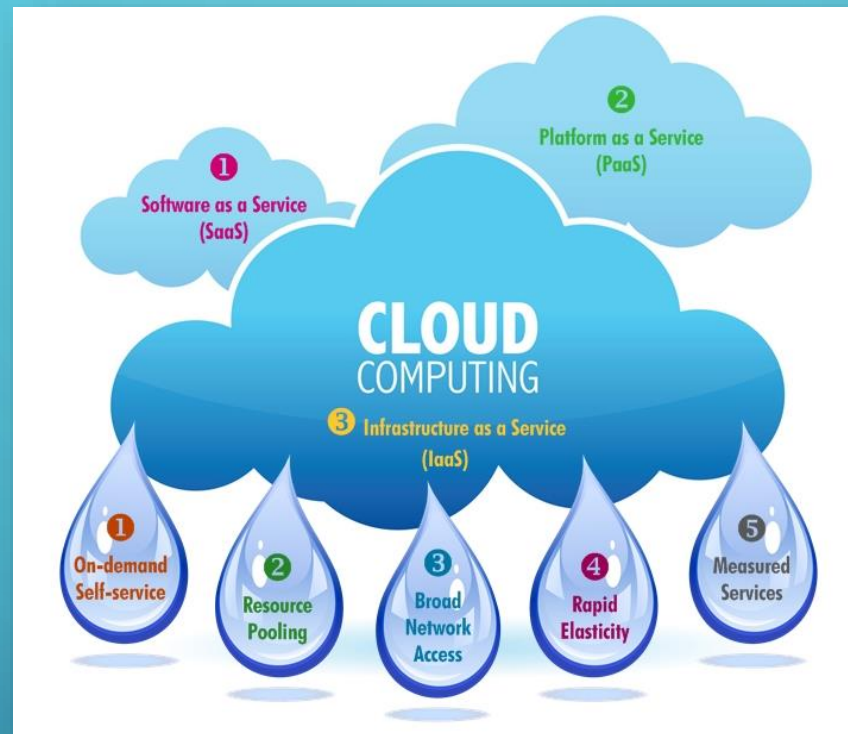
Smart homes

GENERAL TRENDS IN DIGITAL TOURISM

MEGATREND – CLOUD COMPUTING & BIG DATA



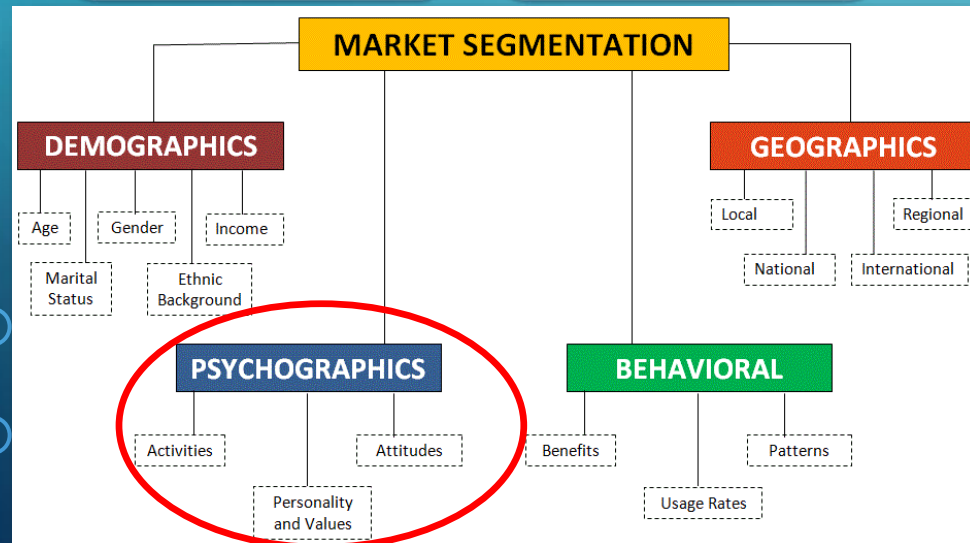
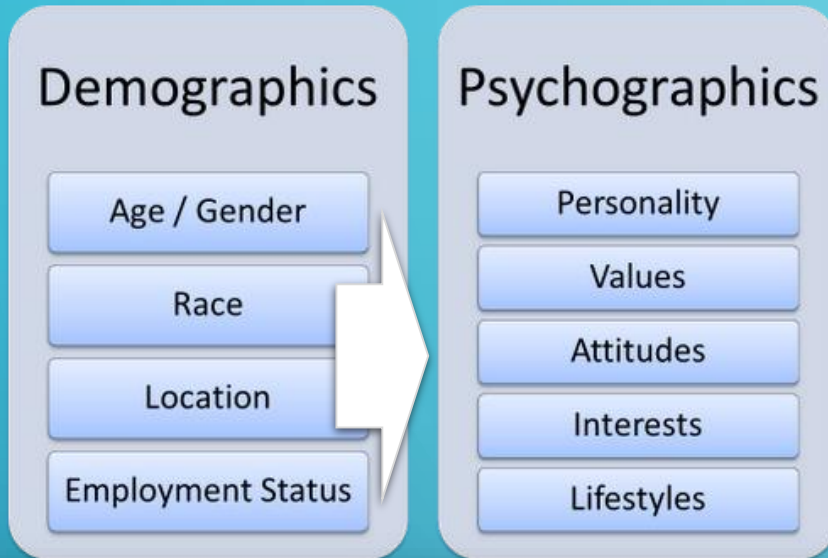
Customers;
Digital Footprint →
Big Data



Businesses;
Cloud computing →
Data-lakes

GENERAL TRENDS IN DIGITAL TOURISM

MEGATREND – PSYCHOMETRICS/PSYCHOGRAPHICS



The Data That Turned the World Upside Down

Psychologist Michal Kosinski developed a method to analyze people in minute detail based on their Facebook activity. Did a similar tool help propel Donald Trump to victory?

MOTHERBOARD.VICE.COM

Big Data → Microtargeting

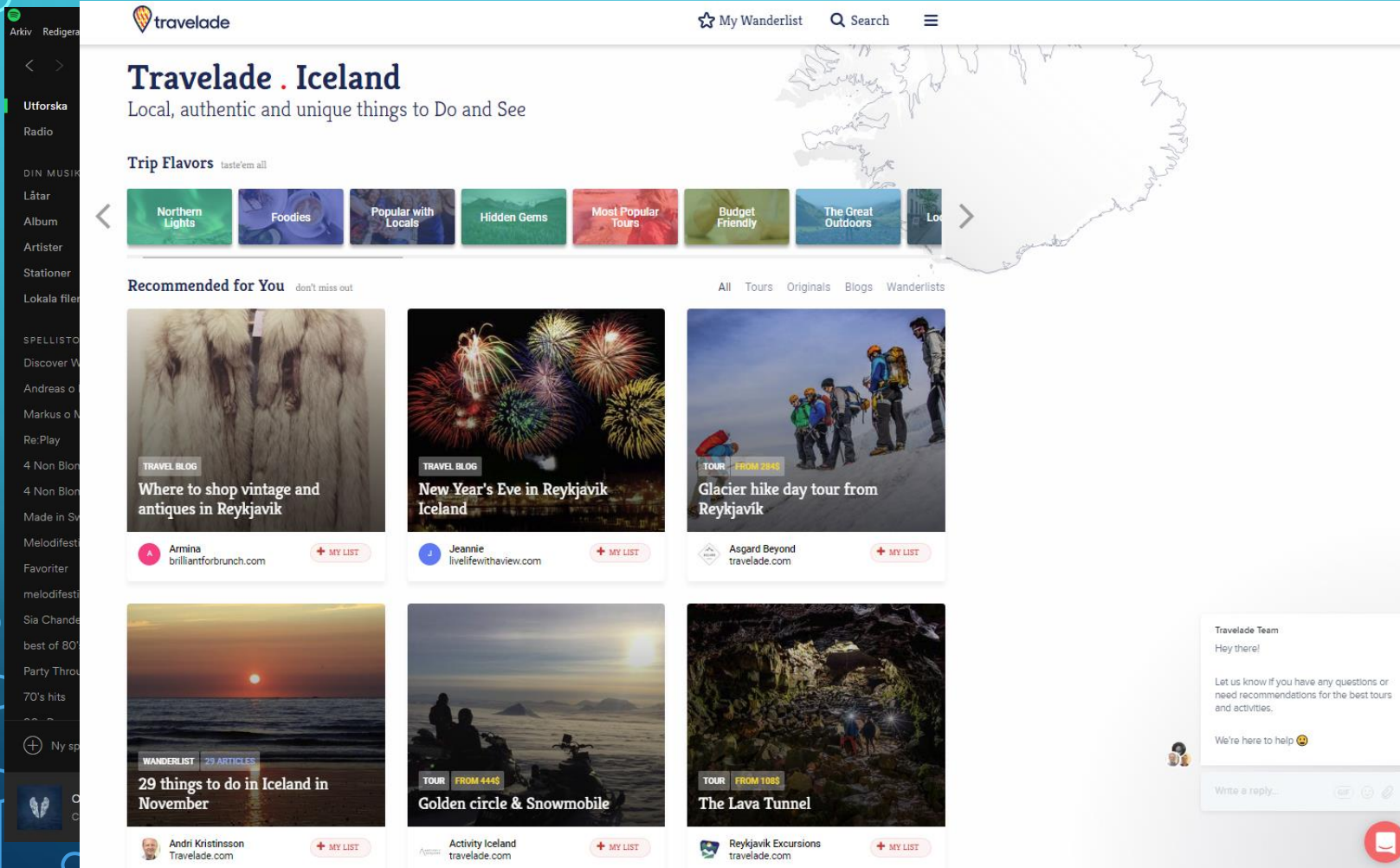
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DIGITAL TRENDS IN TRAVEL DISTRIBUTION

AI IN MARKETING AND DISTRIBUTION

SPOTIFY for TOURISM



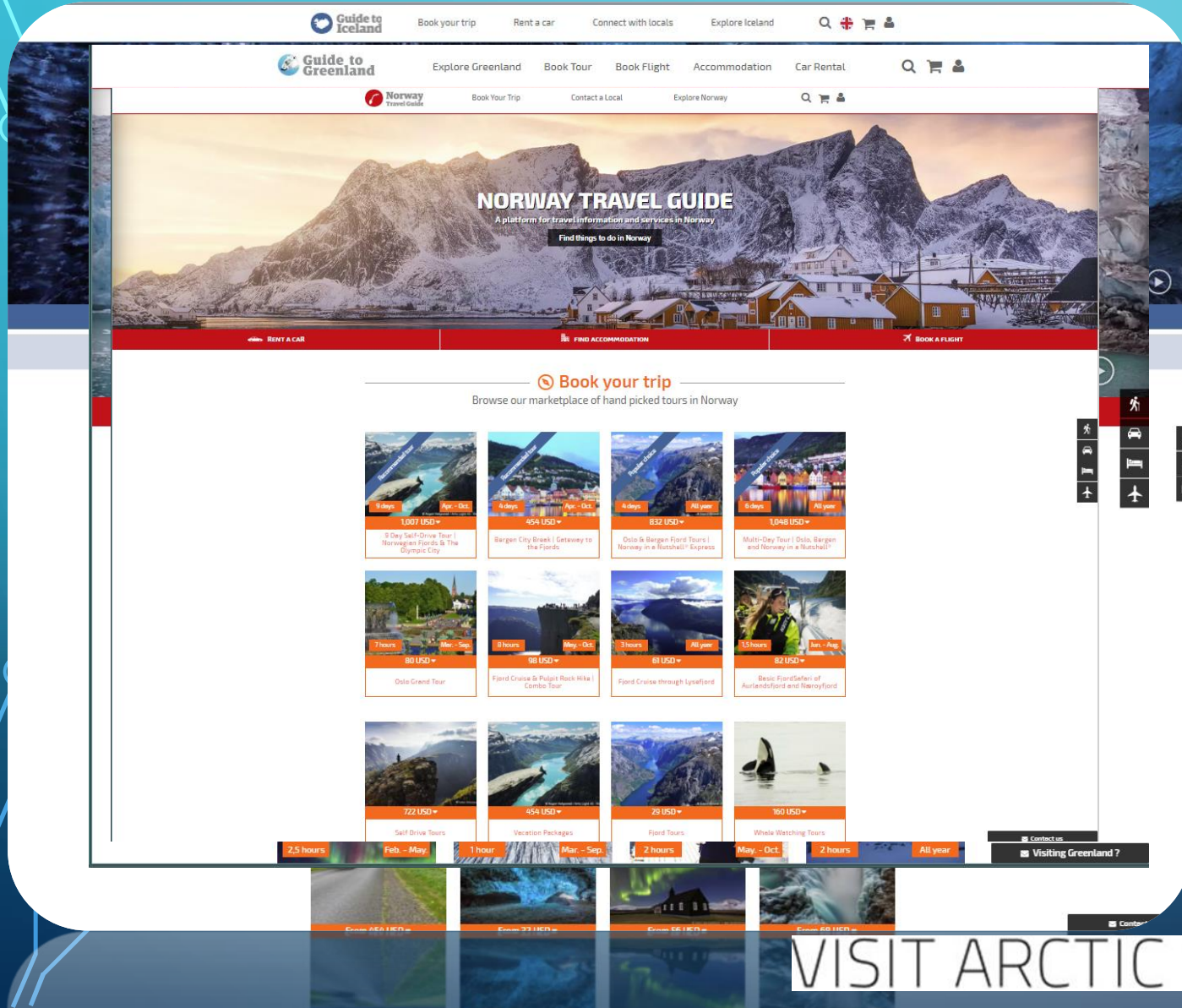
Artificial Intelligence
Content meta data
User behaviour data
⇒
Play list = Wander List
Recommendations
Most Popular
Etc.

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DIGITAL TRENDS IN TRAVEL DISTRIBUTION

AI IN MARKETING AND DISTRIBUTION



MEGA ONLINE TRAVEL RETAILER

Dynamic product presentation of 5000 products of 1000 suppliers

Guide to Iceland

Guide to Greenland

Norway Travel Guide

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DIGITAL TRENDS IN TRAVEL DISTRIBUTION

Traditional value chain

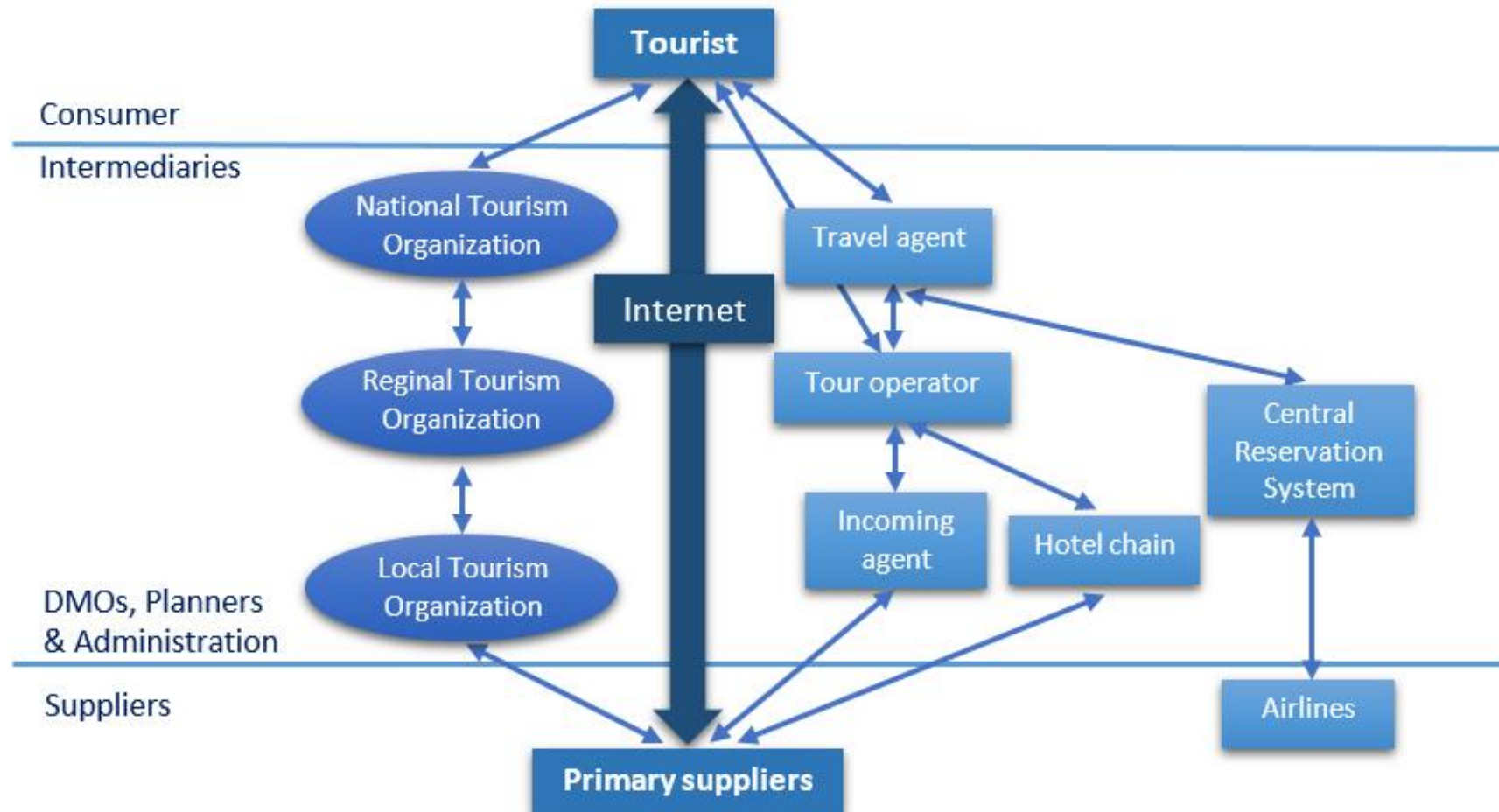


Figure 13. Simplified traditional travel and tourism industry value chain (adapted after Werthner & Klein 1999)

DIGITAL TRENDS IN TRAVEL DISTRIBUTION

New emergin value chain

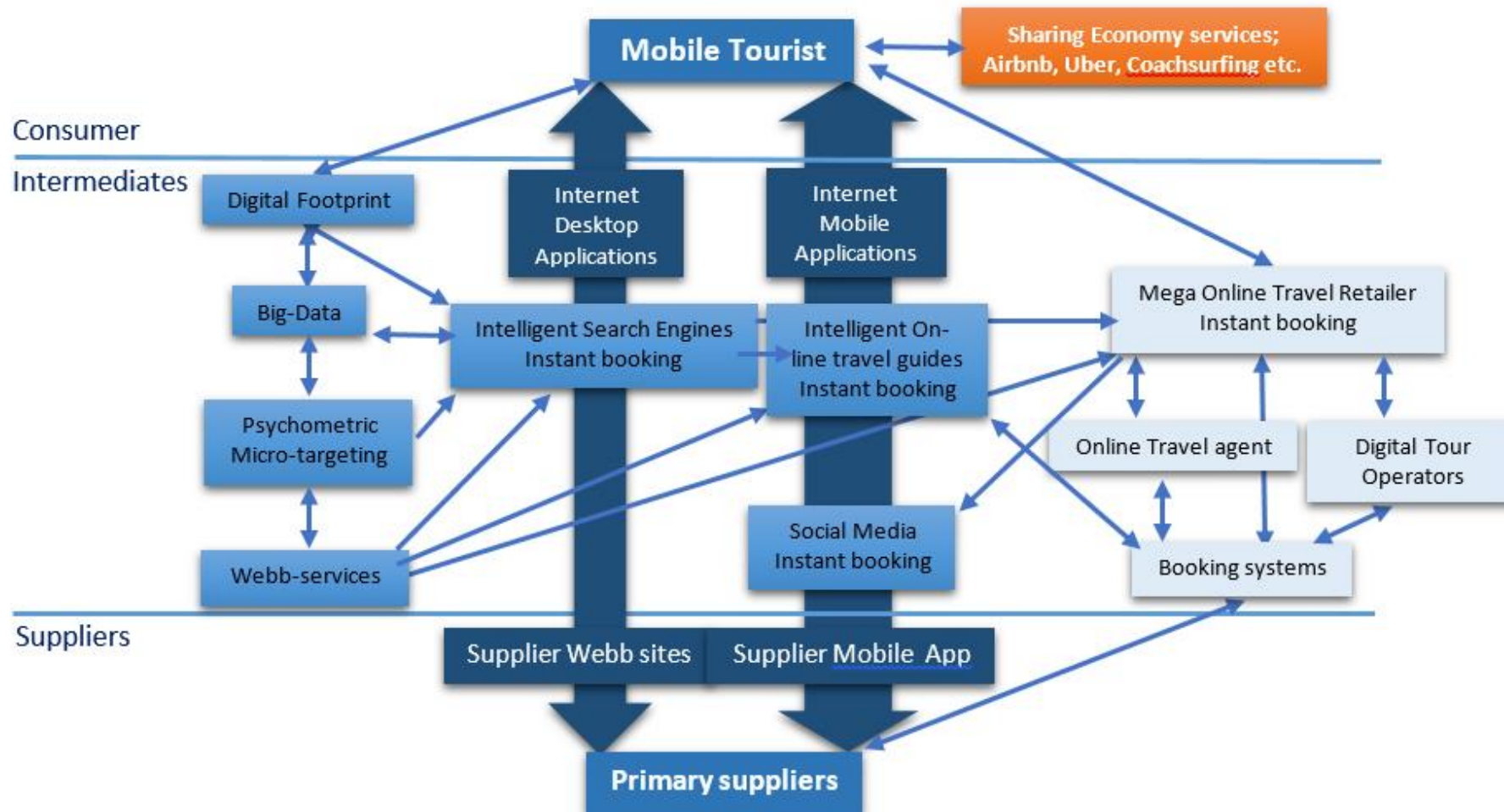
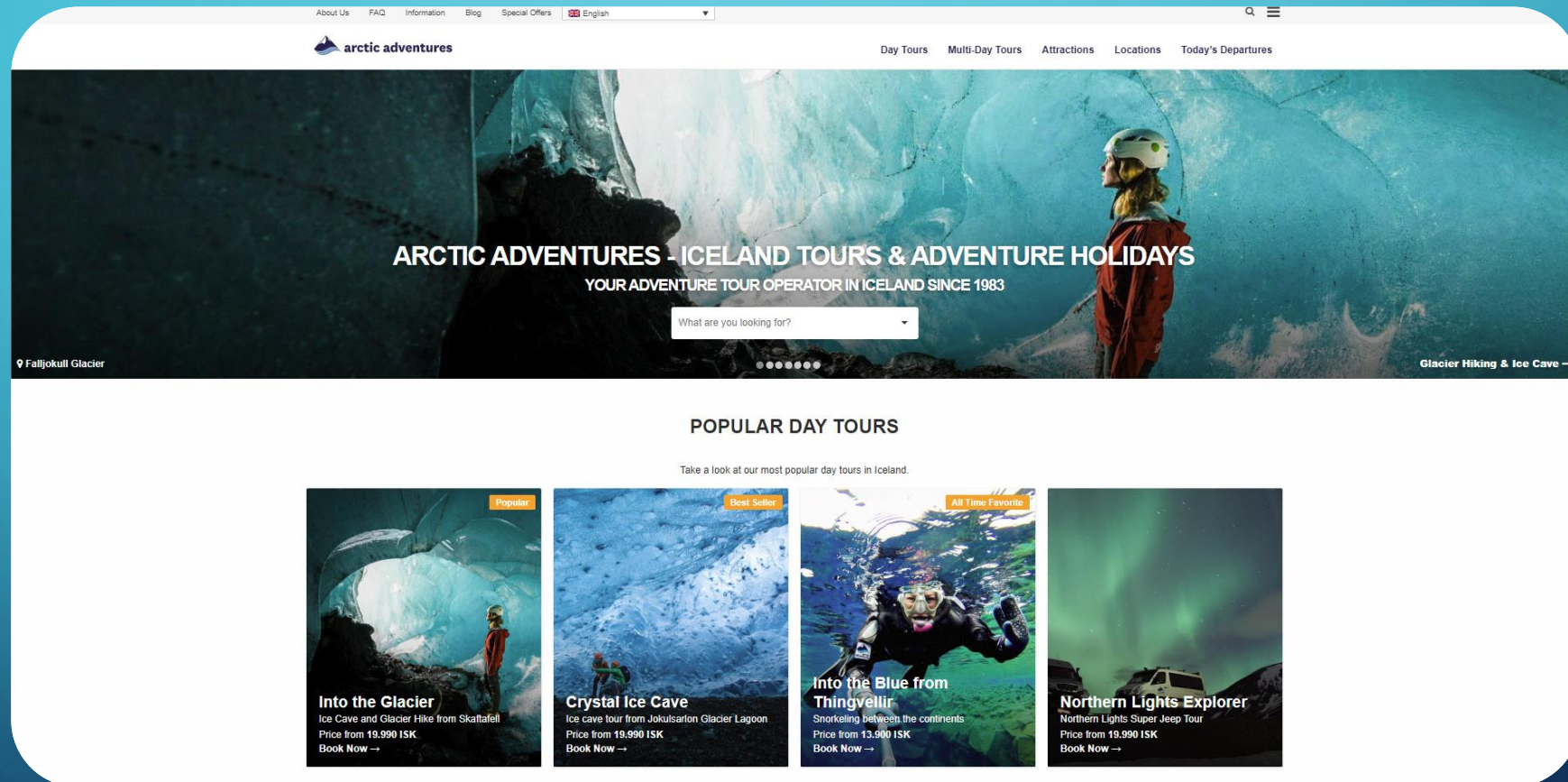


Figure 14. Simplified interpretation of future digital value chains in travel and tourism.

DIGITAL TRENDS IN TRAVEL DISTRIBUTION

Disrupted value-chain by Cross-Selling by providers (BOKUN)

Arctic Adventure 100 own products, 1000 products on webpage



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DIGITAL TRENDS IN TRAVEL DISTRIBUTION

Disrupted value-chain by Direct booking in Google, Facebook and TripAdvisor

Figure 18. Illustrate how participants in the service cycle have changed in only three years by the introduction of booking services on Google ("Book on Google"), Facebook, and TripAdvisor. (Picture retrieved from tnooz)



DIGITAL TRENDS IN CUSTOMER DIGITAL MOBILE BEHAVIOUR

NEW DIGITAL TRAVELLERS

Generation C (Click, Content, Connected, Computer, Community, Creating, & Celebrities), Millennials, DigiKids, Digital Natives, Generation Now, Instant Generation, @generation, Internet Generation, Cyber Generation, New Silent Generation, Homo Zappiens

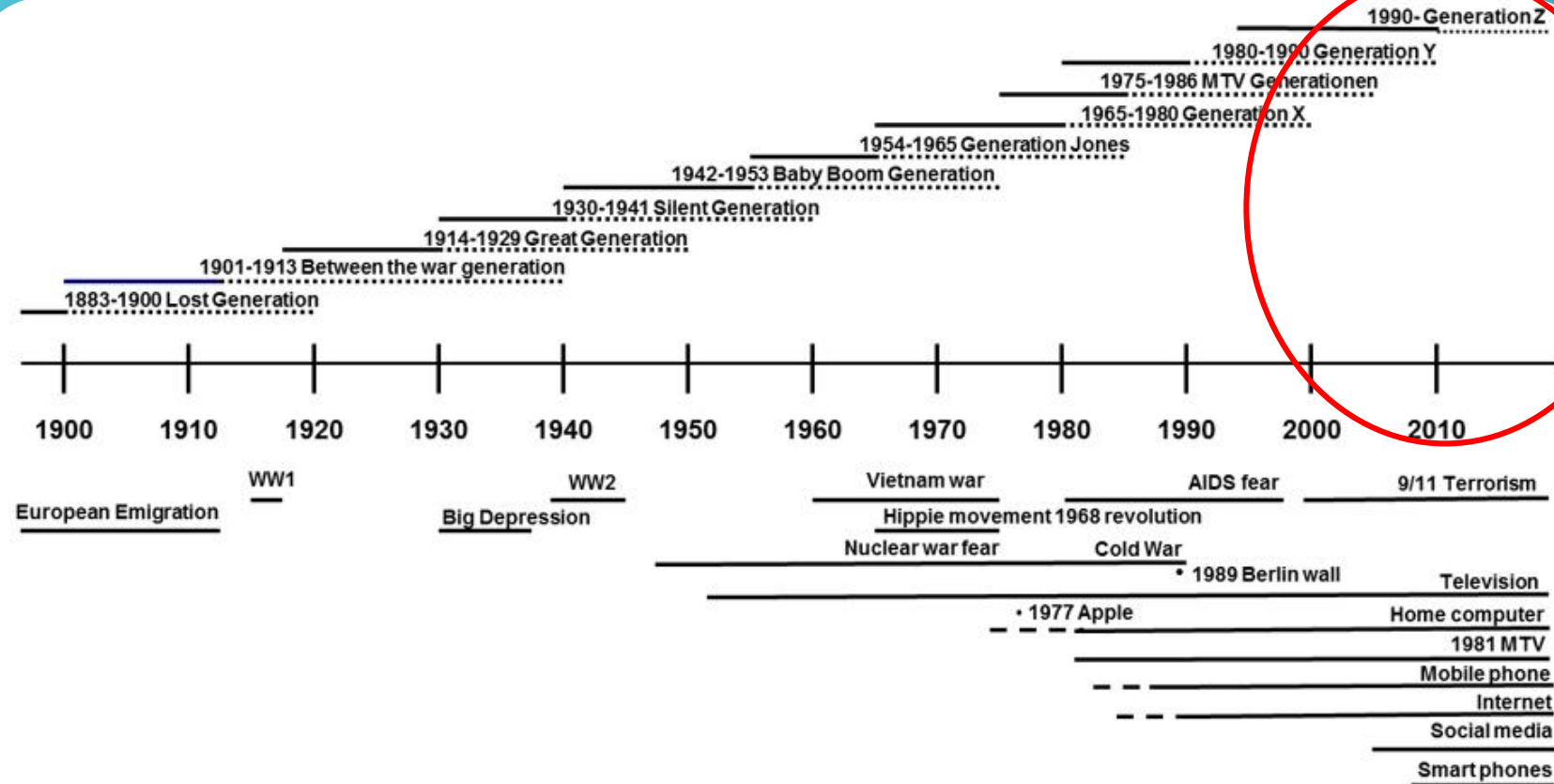


Figure 7. The Generation Theory of Strauss and Howe. Dotted lines indicate period of growing up and forming values, behaviours and lifestyles. (Own interpretation).

behaviours and lifestyles. (Own interpretation).

Figure 7. The Generation Theory of Strauss and Howe. Dotted lines indicate period of growing up and forming values, behaviours and lifestyles. (Own interpretation).

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DIGITAL TRENDS IN CUSTOMER DIGITAL MOBILE BEHAVIOUR

MOBILE MICRO-MOMENTS



In real-life Micro-moments of “Amy” using mobile or desktop when planning for a trip to Disney World (from Google).

DIGITAL TRENDS IN CUSTOMER DIGITAL MOBILE BEHAVIOUR

MOBILE MICRO-MOMENTS

Google:

- Want-to-get-away, dreaming moments
- Time-to-make-a-plan organizing moments "travel hacks"
- Let's-book-it, booking moment
- Can't-wait-to-go moment, anticipation moments
- Can't-wait-to-explore, experiencing moments

"I-want-to-know moments"

"I-want-to-do moments"

"moment-of-truth"

"I-want-to-go-to-your-store moments"

"I-want-to-buy moments"

"Is-it-worth moments"

"I-wana-talk-to-humans moments"

"New-day-new-me moments"

"Ready-for-change moments"

"Didn't-plan-for-this moments"

"time-for-a-new-one moments"

"Show-me-how moments"

DIGITAL TRENDS IN DIGITAL TOURISM MARKETING

Snap-shots:

- Push-marketing → pull-marketing
- Electronic-word-of-mouth (eWoM)
- User-generated content
- Social context mobile marketing (SoCoMo)
- Location-based marketing
- Location-based social Network Marketing
- Real-time-marketing during real-time customer journey
- Infographics
- Immersive storytelling (360-videos)
- VR and AR

DIGITAL TRENDS IN CUSTOMER DIGITAL MOBILE BEHAVIOUR

Snap-shots:

- Importance of understanding Traveller's road to decision
- Micro-moments in travel
- Travellers emotional travelling pre-, during and after
- Cross-device movements
- Mobile-in-destination behaviour
- Anywhere-and-anytime availability
- Radical self-reliance of modern travellers
- Diversity and complexity of behaviour
- Blurring of on-site and post-travel experience

CONCLUSIONS

WOW!

*“Going digital is no longer an option –
it’s a must!”*

Lisbeth Bahl-Poulsen, DG Growth, EU-commission

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The future belongs to those who prepare for it today.

The Future starts now!

Welcome to the **TOURISM MATRIX**

Thank you for your attention !

Takk for oppmerksomheten !

Tack för din uppmärksamhet !

Kiitos mielenkiinnostanne !