

A nighttime photograph of a city skyline, likely Chicago, with prominent skyscrapers like the Willis Tower. In the foreground, a multi-lane highway shows long-exposure light trails from cars. Overlaid on the image are several white, curved lines that connect different points across the skyline, suggesting a network or data flow. There are also a few small orange diamond shapes scattered in the upper left area.

2019 Outlook

A world full of change

Trend Report 2019

the next  organization
growing business

In a world full of change...

... one of the certainties is that **The Next Organization** offers you a yearly overview of the most important trends and developments that could impact your organization in the upcoming year.



In a world full of change...

Consumers start to understand the current impact of human beings on our planet and raise their voice. People start to live healthier, consider the sustainable aspect in their brand choices and unite for a better tomorrow. **A better self, a better world.**

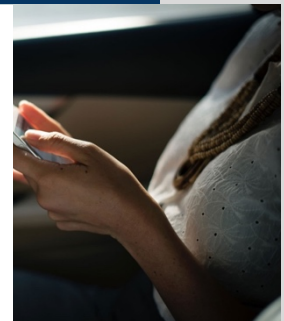


In a world full of change...

Technology moves **beyond human capacity**. Ongoing advances in Robotics, Artificial Intelligence, Machine Learning and 3D printing bridge the gap between the physical and digital world in ways that were unimaginable before. Tech for the good.

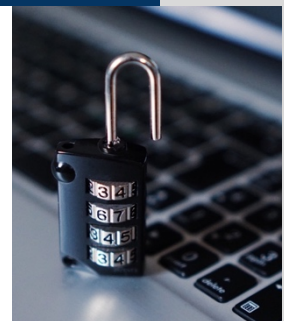
In a world full of change...

Consumer interactions rise to a new level. The experience economy finds itself a new definition and Augmented/Virtual Reality move from endless opportunities to true added value to mankind. Still in doubt? Ask your voice assistant.



In a world full of change...

Secured sharing becomes a fundamental discussion. A rise of reluctant sharers, open ecosystems and blockchain initiatives result in tons of opportunities but also put pressure on current frameworks. Transparent ownership for everyone.





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2019 Outlook



1. Better self; better world

Consumer wellbeing

People start to realise that their way of consuming needs to be changed, with a healthy and sustainable lifestyle as a result.

Case
Adidas and Parley for the oceans



Middle class movements

The middle class is booming in developing countries, but struggling to maintain position in developed countries. As a result, people raise their voice.

Case
Hello Lamp Post



Sustainable Business Models

The theory of Business Models was developed at a time when we did not comprehend the natural limits to growth, but that is changing.

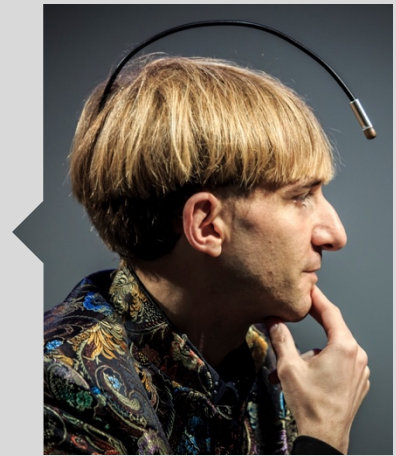
Case
Groene Bouwhekken



Biohacking and e-health

A crazy-sounding name for something not crazy at all; the desire to be the absolute best version of ourselves. On its way to reality sooner than you think.

Case
Eyeborg – Cyborg Antenna



Better self; better world

Consumer wellbeing; towards a more ethical lifestyle

Consumers start to understand that the current impact of human beings on the world needs to be changed. This means that people not only start to live healthier (nutrition), but also want to have more insights in the origin of food and goods.

From eating a more plant-based diet to searching the supermarket for plastic-free produce, a growing number of consumers are trying to live a more ethical lifestyle. This is because they are more concerned about the impact we have on the environment. As a result, consumers have started shopping with retailers with more ethical or sustainable practices and the demand for sustainable goods is increasing.

Moreover, from consumer packaged goods, to big tech to fashion brands, ethics and sustainability are moving from a nice-to-have, to a base rate expectation of brands.

In 2019, the following ethical trends will predominate: plastic-free produce, plastic-free packaging, compostable carrier bags, plant-based foods, natural fabric clothes, clothing re-sale and recycling schemes.

To be fair, the average consumer is not going to be a zero-waste consumer for a long time. However, retailers that respond to this trend quickly, will have a competitive advantage.

In addition to the main trends, two other emerging consumer behaviours will become increasingly important. Consumers are eating less meat and their attitudes towards leather are changing. To service these behaviours, retailers are responding with broader offerings. And it is recommended to respond, because there is a growing audience waiting to be catered for.



Case | Adidas is working with Parley to prevent plastic entering the oceans and transforms it into high performance sportswear

Adidas and Parley for the oceans



Case description

Adidas is a global brand that produces sports and lifestyle products. Part of Adidas Group are the brands Adidas, Reebok, TaylorMade and Runtastic. Adidas has the mission to be the best sports company in the world. In line with its vision to become more sustainable and eco-friendlier, Adidas is working with Parley for the oceans, which is an organization that addresses major threats towards the oceans.

- The goal of the collaboration between Adidas and Parley is to prevent plastic entering the oceans and transform it into high performance sportswear. Spinning the problem into a solution. The threat into a thread.
- Parley AIR (Avoid, Intercept and Redesign) is the strategy to end the fast-growing threat of marine plastic pollution. They believe plastic is a design failure, one that can only be solved by reinventing the material itself.
- Adidas and Parley launched several lines, for example 'Parley x Adidas Outdoor' including clothing and footwear and 'Adidas Tennis x Parley' consisting of a tennis collection to transform the 2019 Australian Open into a campaign for the oceans.
- To create change, one can stop producing more plastic right away and use up-cycled marine plastic waste instead. Everyone has a role to play; avoid plastic wherever possible, intercept plastic waste and redesign the material itself.

Facts and figures

260 ton

of plastic collected from the ocean

3 million

pairs of shoes made with these Parley plastics

11

plastic recycled bottles per pair; in the shoe laces, heel linings and sock liner covers



Middle class movements; rise vs. retreat – different evolutions in different parts of the world

The middle class have always been an important target group, as they are both the foundation and driver of consumer markets. The 'Middle Class Rise vs. Retreat' asserts that while middle classes are booming in developing countries, they are struggling to maintain the economic position they enjoyed for decades in developed countries.

Accelerating economic growth in various countries in Africa, Asia and Latin America, has led to a decrease in between-country-inequality, helping billions of people out of extreme poverty over the last decade. The notion is that this trend, commonly referred to as 'the rise of the new global middle class', has important consequences for global consumption and investment patterns and will act as an accelerator of further economic, social and political development in the developing world.

In the developed world, on the other hand, middle-class households have not seen any significant improvement in standards of living since the 2008 financial crisis, as a result of weak income growth and continued economic uncertainty. The 'yellow vests movements' that began in France in 2018; claiming that a disproportionate burden of governments tax reforms were falling on the working/middle class, is one of the concrete expressions of dissatisfaction. It is important for brands and businesses to understand the impact of this on customer's behaviour and habits.

In 2019, the middle class are moving away from conspicuous consumption, as they focus on obtaining the most value for money and optimising their limited resources. Underlying drivers of this are rooted in the reassessment of values, ownership and priorities.



Case | Hello Lamp Post facilitates conversations between citizen and street objects, in order to hear and often unheard layer of society

Hello Lamp Post

The playful, city-wide system that lets you talk to street objects.

Deploy to your city →



Case description

Hello Lamp Post invites people to talk with the city they live in. Using text messages, conversations between citizens and familiar street objects are facilitated. By giving a 'human character' to an urban environment, Hello Lamp Post succeeds in capturing the public opinion on different (and sometimes difficult) topics in a fun and creative way.

- Hello Lamp Post is a playful platform with a flexible and scalable system, inviting people to strike conversations with street objects using text message.
- Artificial intelligence ensures that thousands of pre-existing identifier codes label items of street objects across a whole city. People can therefore have interesting and surprising conversations with particular objects, including (but not limited to) lamp posts, post boxes, bins or telegraph poles.
- Acquiring not only ideas, but also memories thoughts and feelings, Hello Lamp Posts accomplishes to hear an often unheard layer of the city and learn about the hidden lives of the city's population.
- Hello Lamp Post serves different objectives, of which community engagement and urban planning engagement are the most important ones.
- In most cities the data captured is not for the highest bidder, but freely available, challenging policy makers, urban planners and creative minds to use the data in a way it favours all citizens.

Facts and figures

14

cities around the world engage residents, tourists and communities with street objects; from Austin (USA) to Utrecht (The Netherlands) and Astana (Kazakhstan)

40-50

interactive objects can arise in a city (depending on city size), ensuring many unique and valuable conversations in a couple of months



Sustainable Business Models; from increasing profit as social responsibility to generating profit with a reduced impact on the world

Many business professors still teach the 1970's doctrine of Milton Friedman: "The social responsibility of business is to increase its profits". Growth, therefore, is at the heart of the business model. But the foundation of this model was developed at a time when we did not comprehend the natural limits to growth. Over the last year a new term has been rising up – the sustainable business model (SBM).

SBM's aim to generate profit by providing products and services that directly and/or indirectly reduce the pressure on the (social) environment. With the upcoming 2020 climate goals of the European Union and significantly increased general awareness, SBM's are emerging rapidly. Within the wideness of the term, there are two trends that appear to be having the most impact in the upcoming year: (1) from ownership to pay-per-use and (2) circular supplies and resource recovery.

(1) Shows a shift in the way that a customer pays for a product or service. Instead of a high initial investment, the customer pays a set fee (often per use or in a way of a membership) over a set period of time. This reduces ownership of items we do not use and in the case of a fee per use increases our awareness of our consumption pattern – hence reducing environmental impact.

(2) Shows an increased longing for circular goods, in a way that production is done in an (social) environmentally neutral (or positive) way and used products are recycled up to a level where the product in its entity can be used again.



Case | ‘Groene Bouwhekken’ leases ‘green’ construction fences; produced and maintained by people with poor job perspectives

Groene Bouwhekken



Case description

‘Groene Bouwhekken’ leases ‘green’ construction fences. They improve the image and decrease the nuisance experience of construction sites. In production and maintenance they create workplaces for people with poor job perspectives.

- ‘Groene Bouwhekken’ leases ‘green’ construction fences to contractors, available with or without plants.
- The fences are build in such a way, that they can easily integrate with regular construction fences.
- The fences are created by Stichting Bouwloods Utrecht, which offers education and experience to people that, due to different reasons, do not have a self-sufficient place in the labor market (yet).
- Maintenance of plants is done by local social workshops, for example ‘Leger des Heils 50/50’, who helps disabled and socially troubled people increase their chances on the labor market and assists in reintegration.
- The fences reduce the nuisance experience of construction sites and hence improves the image of the environment (and with that, the image of the contractor and/or township).
- Their existence is completely based on the sustainability longings of other parties – their fences are more expensive than regular fences.

Facts and figures

100%

social return; with every step in the production and maintenance process, they make a social impact

30

projects; a reasonable growth from 0 to 30 outstanding projects in 2 years – including a notification in the ‘Duurzame Jonge 100’ for the founder

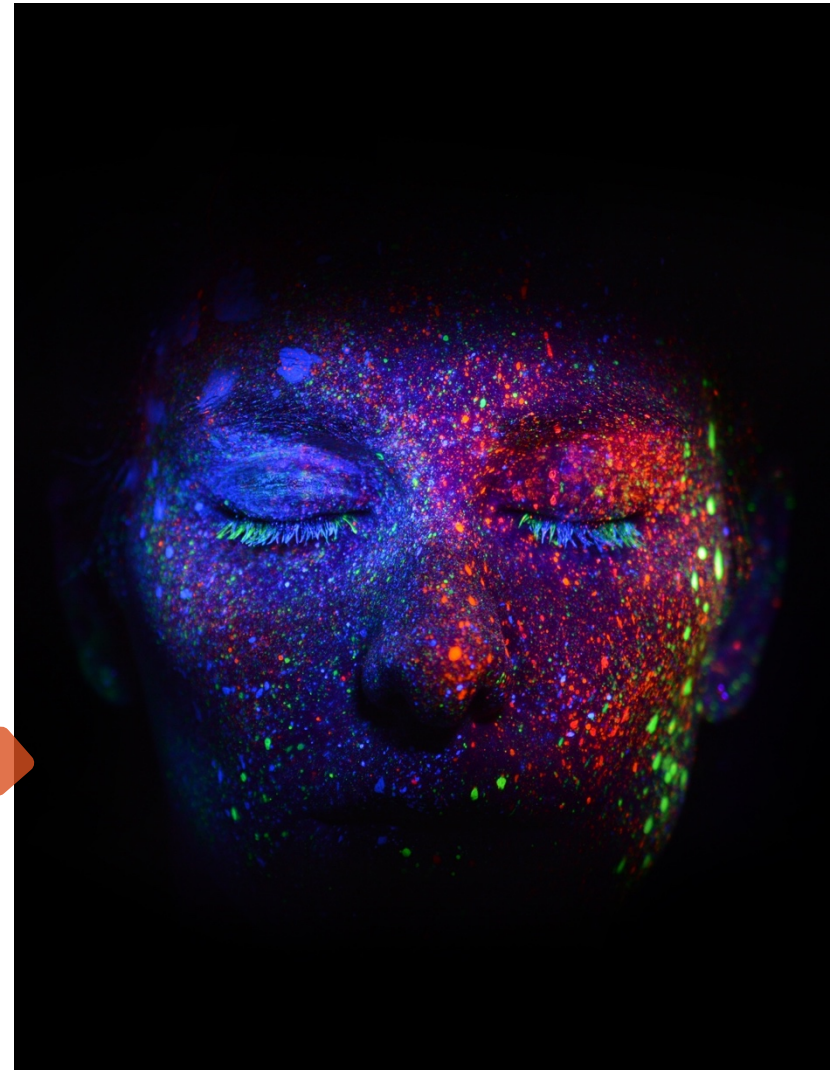
Biohacking; maximising the body's physical and mental performance

People are getting more and more aware of their health and the methods they can implement in order to prevent diseases. With this movement, a new trend has emerged and will rapidly grow in 2019: biohacking.

This movement basically involves controlling external stimuli leading to the creation of the optimal self. It is about hacking the body using natural or technological resources to maximise physical and mental performance. In 2019, the trend will gain a lot of popularity, as a growing number of people are consciously wanting to improve their health. Biohacking involves things we eat, drink, smell, touch, hear, and see. The difference however between biohacking and a general healthy and conscious lifestyle is to think of our biology as a physical system, which can be enhanced by conducting measurements, monitoring and feedback.

One of the first biohackers is Dave Asprey, the author of the 'Bulletproof Diet'. He is an ambassador of do-it-yourself biohacking methods to gain a more energised life. An example is Asprey's bulletproof coffee. This is a special drinkable mix that gives you the same energy as normal coffee but without the mid-afternoon crash that most people have after drinking coffee. Other biohackers use technology to enhance their capabilities and improve their lifestyle.

Imagine the impact biohacking will have on society once people see the effect of it. It will influence the working world as the level of productivity and cognitive function increases. Next to that, social relationships for example, will improve with people having better moods and more energy. Companies and brands can adjust to this movement and seize new opportunities that develop over time.



Cyborg Antenna helps a color-blind person perceiving the colors behind a limited grey scale

Eyeborg – Cyborg Antenna



Case description

The idea of Cyborg Antenna came from artist Neil Harbisson – born with achromatopsia. Together with his team he developed an eyeborg with software capable of converting colours to vibrations (first image). This antenna helps translating colour frequencies into sound frequencies.

- Neil Harbisson founded the Cyborg Foundation; an online platform with the mission to help people become more like a cybernetic organism (which means a being with both organic and biomechatronic body parts; in short cyborg), promote cyborg art and defend cyborg rights.
- This is a platform for research, development and promotion of projects related to the creation of new senses and perceptions. They do so by applying technology to the human body. For example a sensory organ that allows people to sense atmospheric pressure changes and predict the weather (third image).
- The Cyborg Foundation focuses on Artificial Senses where the stimuli is gathered by the technology but the intelligence is created by the human. This is the opposed to Artificial Intelligence where the intelligence is created by the machine itself.
- By creating new senses one reveals a reality that our natural senses do not allow us to perceive. Therefore the Cyborg Foundation do not subscribe to Virtual Reality or Augmented Reality; they strive for Revealed Reality.

Facts and figures

1 of 33.000

people is completely colour blind, which means seeing only in grey-scale

2010

was the year in which the Cyborg Foundation was established





2. Immersive interactions

Experience economy

People start to spend less time and money on goods and services, but more on the experience to be engaged in a memorable way.

Case
Airbnb



Augmented Reality and Virtual Reality

A shift from endless opportunities to concrete applications make Augmented and Virtual Reality move to Actual Reality.

Case
DustSee by Seoul City Government



Voice

The adoption of voice assistants is booming, leading to a different form of information consumption opening up new ways to interact changing our daily lives.

Case
Alexa and Saint Louis University



Immersive interactions

The experience economy; extraordinary experiences becoming the standard

The experience economy has already been introduced two decennia ago. In this view, organizations fulfil a different role in society and serve customers differently. Namely, they do not merely provide customers with product and services, but they focus on providing customers with personal and memorable experiences.

Moving from extracting commodities, making goods, delivering services to creating experiences, that is where the origins lie of the experience economy. Despite it has already been mentioned years ago, it is today that the experience economy gets shape. Organizations increasingly focus on providing their customers with an experience instead of 'just' and sec products or services. People care less about owning things, but want to be flexible and do not mind sharing things with people to extract value out of experiencing products or services. This is also in line with the concept of the sharing economy.

Providing experiences is important because people are more demanding than ever. They are not just asking for good products and excellent 'one-off' services, but they look for entire experiences. They demand extraordinary experience along their entire journey, starting already in their 'orientation' phase. If organizations smartly think about what their customers want, through maintaining and creating continuous dialogue, they are more likely to succeed and differentiate from competitors.

In 2019, the experience economy will evolve further. Organizations, mainly in the B2C landscape, that actively think about turning their offering into extraordinary experiences will differentiate from their competitors and facilitate customers with greater value.



Case | Airbnb expands its services through offering people local and one-of-a-kind experiences offered by locals

Airbnb Experiences

Welcome to the world of trips.



Case description

Airbnb is known for their online platform where people can rent apartments that are put for rent by others. Besides this, Airbnb expanded their service by providing people experiences, offered by locals. Despite the fact that Airbnb only offers the platform (including the magnet, toolbox and matchmaking), the idea of offering experiences illustrates the experience economy and shows the impact it has.

- Airbnb experiences are unique activities organised, designed and hosted by locals.
- Experiences go beyond just a regular workshop or tasting tour, they go beyond the activity itself and offers something unique.
- Hosts provide people with special knowledge, skills or private access to areas which offers people with extraordinary experiences that let them immerse into local's world.
- Whether you visit The Louvre with a local art historian or walking through Seville's streets to enjoy local wines with the best Spanish ham, Airbnb provides it all.
- According to Airbnb, key success factors are: access, perspective, participation and passion.

Facts and figures

2,500%

growth in experience bookings in 2018

\$200,000

individual earnings per year for popular hosts



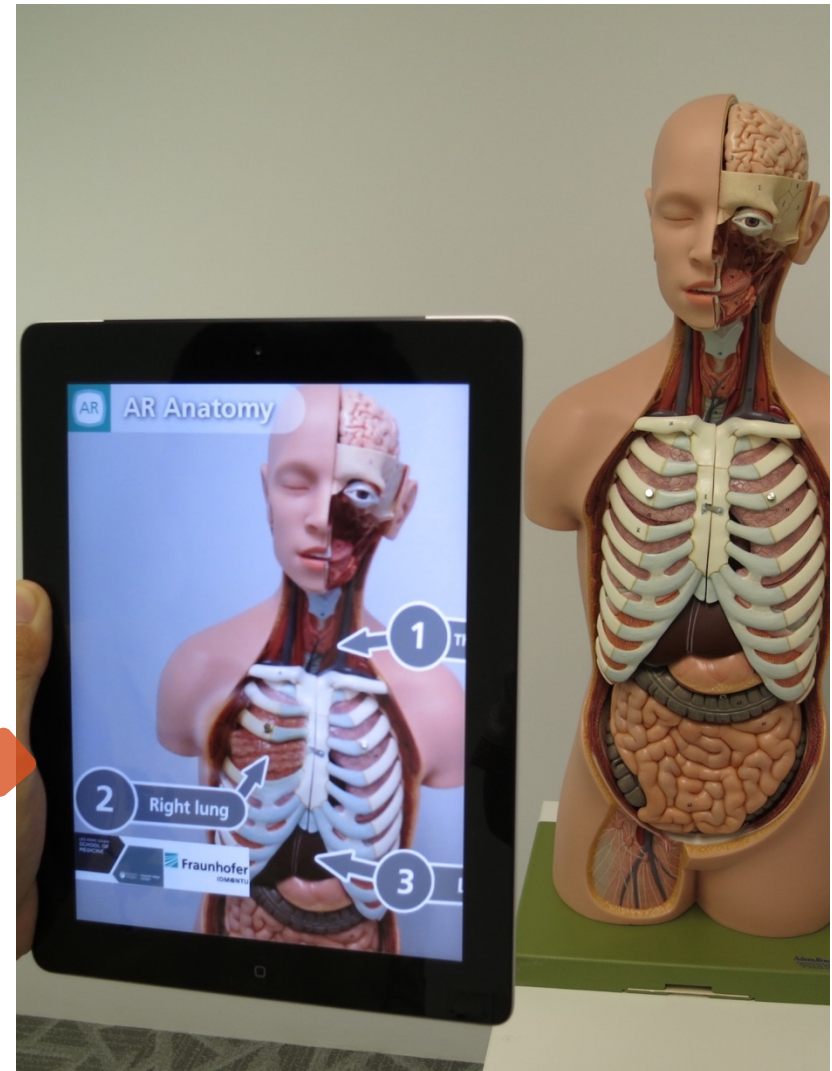
Augmented Reality and Virtual Reality; on its way to finally become Actual Reality

It has been several years since the concepts of Augmented Reality (AR), adding digital elements to a live view by often using a camera on a smartphone, and Virtual Reality (VR), offering a complete immersion experience out of the physical world, were first introduced and possibilities seemed endless.

Up until 2018, however, both concepts did not evolve as fast paced as was predicted. Several technological boundaries have prevented these technologies from really picking up steam. For 2019, some of these boundaries will be removed, creating possibilities in both B2C and B2B contexts.

Especially when looking at AR in comparison to VR, AR has the advantage that smartphones enable the required technology. The hardware is already widespread and has a strong developer base. Current AR solutions are suitable and work correctly, however, will prove inconvenient moving forward. Consumers do not want to locate their phone and hold it at eye height for longer periods of time. The real breakthrough will come when head-mounted displays (HMDs) will be combined with AR technology. These AR HMDs are expected to really boost AR usage after 2020 in the end consumer market. In manufacturing and healthcare applications, AR has already seen a spike which will continue throughout 2019.

VR on the other hand has seen limited growth over 2018. Biggest factor in the low adoption of VR technology is the hardware part of this technology. Unlike AR, VR requires separate hardware which makes adoption numbers stagger. For 2019, VR is expected to grow, just slower than originally anticipated. In 2019 and beyond, VR will benefit from development in VR technologies, pushing adoption of the potential benefits compared to AR.



Case | Seoul City Government in South Korea launched the DustSee app that enables the user to see fine dust in the air using AR

DustSee by Seoul City Government in South Korea



Case description

Seoul City Government in South Korea launched DustSee: an AR app for smartphone cameras which allows users to see a visual representation of fine dust in the air. The micro-particles are invisible to the naked eye, and the app also offers real-time 'fine dust status' of the users' locations.

- South Korea is ranked 174th worst out of 180 countries for fine dust exposure; Seoul the 2nd worst city in the world for air pollution. Yet many people are unaware of the danger because they cannot see it.
- People breathe in microscopic dust particles, which enter the lungs and the bloodstream causing cardiovascular and respiratory diseases, and even death.
- DustSee, which was introduced by the Seoul City Government, shows these harmful particles in their AR fine dust and air pollution app. It also tells users when to wear a face mask.
- The app uses live-sensing to calculate current location, real-time air pollution levels, wind direction and speed as it visualises the fine dust and air pollution around you.
- It also allows the users to share photos and videos of the air (pollution) on social media, alerting everyone to the danger by creating awareness.

Facts and figures

5 million

people get killed by air pollution each year

37%

of people bother to wear masks when the air dust level is classified as 'bad'



Voice; Do you hear it? Voice technology has arrived and is about to change our daily lives

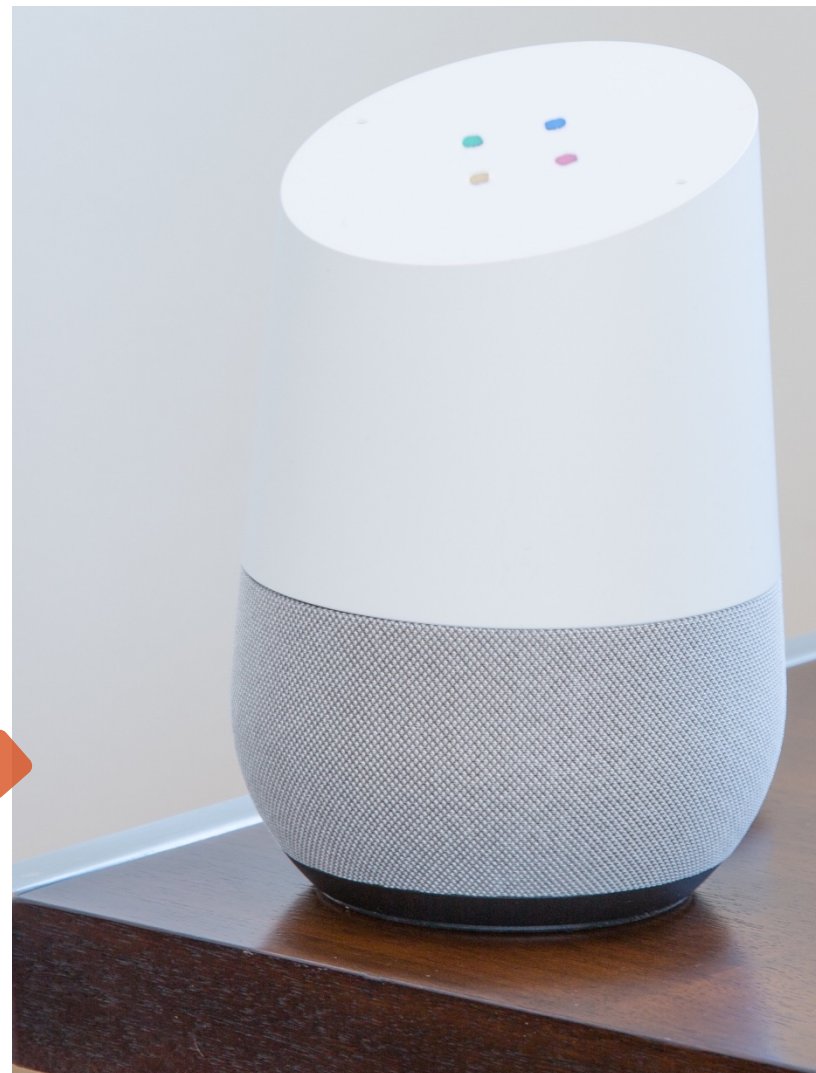
The rise of voice technology is clear and everyone sees that in 2019 it definitely has arrived and here to stay. The technology enables voice assistance through a smart speaker which creates a three-way interaction between devices, services and people.

The trend has been developing itself in the last couple of years reaching the status in 2018 of the existence of voice directed lights, doors, cars, bins and even toilets. However, the doubt rises about the actual added value of these products.

One thing is sure, the most popular device is the smart speaker of which Amazon takes the lead in the market. Every fifth living room or kitchen in the USA is equipped with a smart speaker nowadays and 73% is using it mainly for actualities and entertainment (e.g. news and music).

This technological trend has a huge impact on everything. For example, experts say that by the year 2020, 50% of all online searches will be done with voice search. Consequently, brands have to adapt their way of promoting their products and services. Companies will change the way they are organised as internally knowledge can be shared more easily resulting in new workflows and communication streams and the broader possibility to multitask leads to an increase of productivity.

Challenges for the further development of this trend in 2019 lie in security and privacy matters and mostly in SEO and online marketing of brands. It is crucial for brands to think about the right voice (male or female), language, accent, tone and use of words when reaching their audience. Experts say, that a voice assistant is used in a more human manner by people than they use a computer. Therefore, 'emotional connection is king' and key for the success of voice assistance.



Case | First university in the USA to install Alexa-enabled Amazon Echo Dots in every single dorm room across the campus

Alexa and Saint Louis University (SLU)



Case description

Founded in 1818, Saint Louis University is one of the oldest and most prestigious universities in the United States of America (USA). It is a private Roman Catholic university, offering more than 20 graduate and undergraduate programmes. Saint Louis University is the first university in the USA to install Amazon Echo Dots in every dorm room of the campus.

- Saint Louis University is situated on campuses in St. Louis, Missouri (USA) and Madrid (Spain). In 2018 it celebrated its 200 years of existence.
- The Amazon Echo Dots are programmed to answer over 100 specific questions about the campus and student activities.
- There is 24/7 access to campus information, which leads to less load on the staff of Saint Louis University. For students there's no need anymore to dig through the university website or call the helpline to get the answer to questions.
- Everything is operated by a central system and not tied to students individual accounts (so no personal information will not be retained).
- Students with privacy concerns about intelligent assistance can unplug the device.
- There are no costs involved for students.

Facts and figures

2,300

Amazon echo dots in the university residence hall and student apartments

100+

common questions can be answered by the Amazon Echo





3. Beyond human capacity

Artificial Intelligence and Machine Learning

Being able to offer highly personalised, innovative services is becoming a key skill to align with the dynamic needs of customers.

Case
Zalando



3D-printing

A new range of game-changing 3D-printing applications increasingly proves the added value to the mass.

Case
Food Ink



Internet of Robotic Things

IoT extended with Robotics leads to a new concept; Internet of Robotic Things. Not only sensing, but also physical and mental abilities by robotics will slowly become normal in our daily lives.

Case
Henn-na hotel



Beyond human capacity

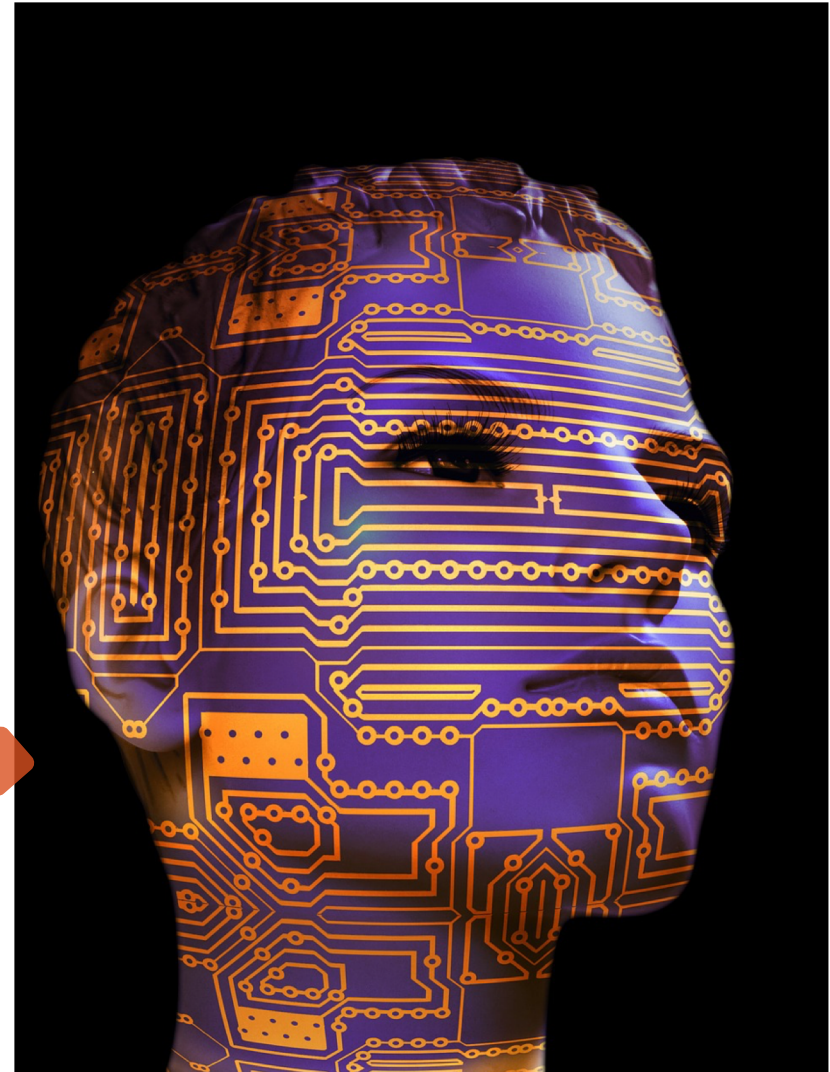
Artificial intelligence and Machine Learning; shaping the future of content marketing and personalisation

Artificial Intelligence (AI) and Machine Learning (ML) are hot. Marketers will increasingly adopt AI and ML technologies in order to stay ahead of the game and remain relevant in an extremely dynamic corporate space. Key word for 2019: hyper personalisation.

AI and ML are often used interchangeably but are not exactly the same. AI refers to the broader concept; the ability of computer systems to perform tasks commonly associated with 'intelligent (human) beings'. ML allows a computer application/program to recognise and learn from patterns in data as well as to improve capabilities without human assistance. AI and ML will play a crucial role in delivering personalised content experiences.

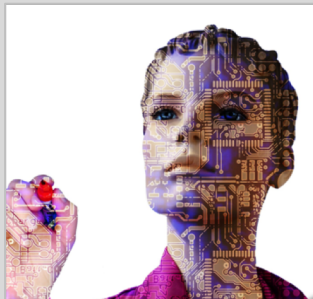
The promise of 1-to-1 marketing has already been around for two decades, but brands still send consumers an overwhelming amount of irrelevant marketing messages. When shopping online for example, many companies give recommendations based on items previously purchased or browsed. According to recent studies, 60% of content marketers struggle with personalisation. This is a serious problem at a time when consumers are seeking highly unique, interactive experiences with retail brands.

In 2019, retail recommendations will become much smarter. AI-powered tools and solutions can effortlessly automate type of content, timing and communication channels – allowing marketers to align with the dynamic needs of every customer. This is achieved with ML integration that allows marketers to collect, analyse and store huge volumes of data. A clear data philosophy and strategy in line with the company's view of value creation is crucial to unlock the potential of the digital data era.



Case | Zalando aspires to become the all-knowing operating system of the European fashion world

Zalando



Case description

The German – and Berlin based – online store Zalando wants to become the central and all-knowing operating system of the European fashion world. Artificial intelligence will provide the necessary thinking power.

- Zalando positions itself as technology company that sells fashion, instead of fashion retailer. In terms of employees, 1 on 7 people focus on technology.
- In 2016, Zalando launched 'Zalando Research' - a small yet growing unit within Zalando Technology, that solely acquires people that are passionate about data science, machine learning and artificial intelligence. It is an endeavour to place Zalando at the forefront of cutting-edge research.
- With data scientists and research engineers Zalando tries to know as precisely as possible what sizes and tastes of customers are. Ultimate goal is to develop a system that uses the past to predict which sizes, colours and styles will be sold in the future.
- 'Perfect personalisation' is the central topic for the coming years. Zalando's personalisation team has a photo metaphor of its shared goal; the image shows a warehouse full of products transforming into a personalised boutique for each and every customer.
- The effects of the technology strategy are being noticed elsewhere in the company; in 2018 hundreds of marketing and communication roles have been replaced by artificial intelligence and algorithms.

Facts and figures

25 million

active users in the 17 European countries Zalando is active in (in 2018)

29 million

orders processed by Zalando every quarter, making it Europe's leading fashion platform



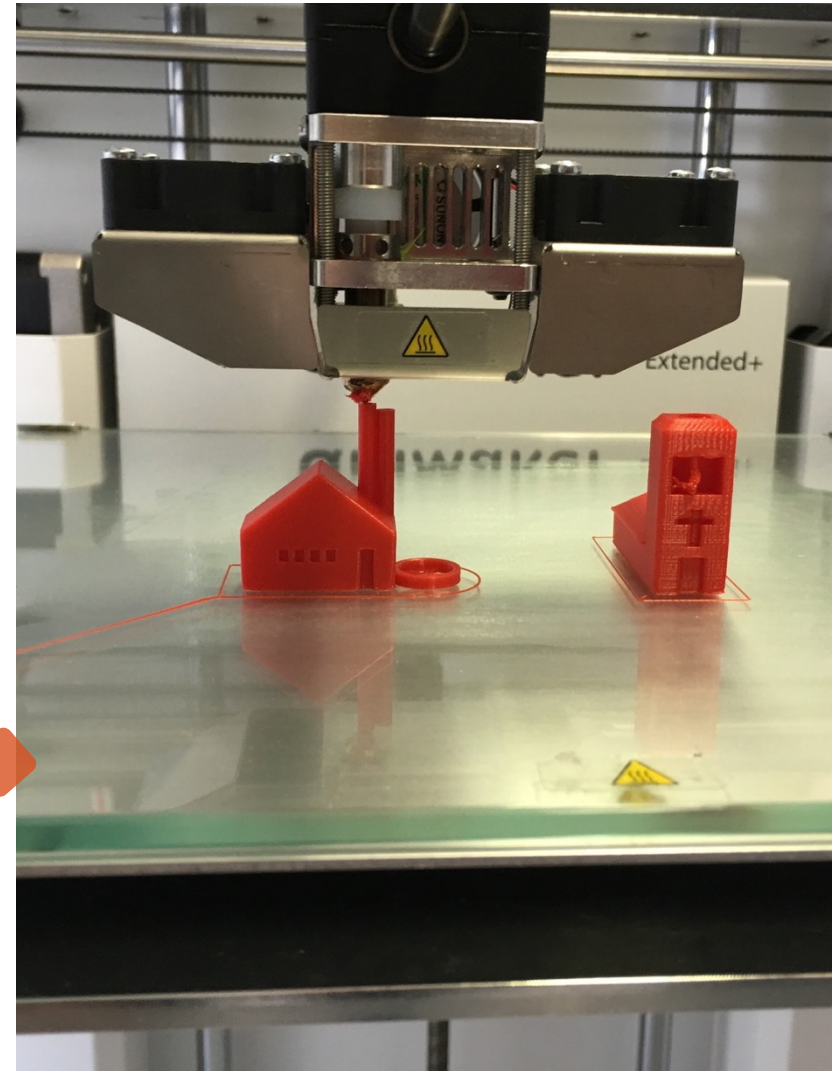
3D printing; from a technology driven approach to an application driven approach

In 3D printing (3DP) – also known as additive manufacturing (AM) – someone creates a design of an object using software, and the 3D printer creates the object by adding layer upon layer of material until the shape of the object is formed. The object can be made using a number of printing materials, such as plastics, powders, filaments, paper or fabric, but also living tissue (bioprinting). 3DP offers the possibility to create whatever you can think of, you name it and a 3D printer can make it.

3DP is not yet visible at the consumer side but is making big steps in the industrial manufacturing industry. In the past few years, there was an increased awareness in the industrial segments of the applications that AM can support. These days, 3DP becomes more than a test technology used in research since companies such as HP, GE, Boeing and Nike already incorporated 3DP in their supply chain. The biggest benefits to use 3DP are because it is cheaper and easier to create prototypes (no expensive molds or external parties needed, it can be made inhouse) and it is easier and cheaper to create complex parts (just one machine is necessary).

Another example of the application of 3DP can be found in the healthcare industry. Players in this industry are able to create a human tissue such as a liver or skin. Furthermore, in space stations 3D printers are used to create spare parts when something is broken so they do not need to bring every single part extra but print what they need.

In 2019, 3D printers will be more visible in daily life. 3DP is becoming cheaper and the technology is more advanced today. This means that more companies and more industries will use the benefits of 3DP.



Case | Food Ink is the world's first 3D printing restaurant

Food Ink



Case description

Food Ink is founded by Antony Dobrzensky in 2016 and collaborates with byflow, a Dutch producer of 3D food printers. The ultimate goal of Food Ink is to increase awareness about the wide range of possibilities that come with new technologies. In the end, Food Ink hopes to serve as a platform that stimulates the dialogue on how emerging technologies are rapidly challenging and changing the way we eat, create, share, and live.

- Food Ink is a one-of-a-kind gourmet experience in which all the food, all the utensils and all the furniture are completely produced through 3D-printing in an immersive futuristic space.
- The team of Food Ink is characterised by wide diversity of its employees: architects, artists, chefs, designers, engineers, futurists, industrials, inventors and technologists.
- 3D printed food is more than just visually appealing food; the menu can be personalised to someone's needs and diet. For example, if someone has a deficiency in vitamin D, it is possible to add some extra vitamin D. Or if someone faces difficulties in eating enough, it is possible to add some extra energy in the food in form of proteins or fats.
- Food Ink is putting to work the most innovative technologies, like 3D-printing and virtual reality, in order to present the most exquisite interactive edible experience.

Facts and figures

\$4,000

is the average price of a 3D food printer; cheaper models offer a more limited capacity for ingredients

2012

was the first year in which 3D printed food came on the menu



Internet of Robotic Things; bridging the digital and physical world

Internet of Things (IoT) and Robotics are trends that are not new in itself. While robotics for automation purposes already exists for decades, adding IoT into the mix will change the rules of the game: Internet of Robotic Things (IoRT) is making an entrance.



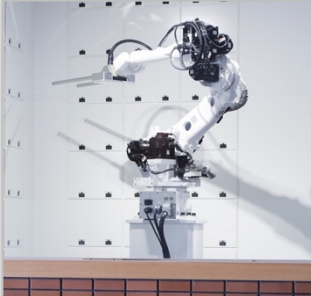
The acronym 'IoT' refers to a network of billions of physical devices around the globe. These devices are equipped with Internet-connected sensors that provide ongoing data collection and sharing. There is no shortage of IoT devices and applications. Many people are reaping the benefits of smart light bulbs, smart thermostats and activity trackers.

IoRT is the next level of IoT; integrating sensors into robotic systems. In fact, Artificial Intelligence is built into robotics systems to process the data delivered. This enables the system to observe, interpret, evaluate and take decisions, comparable with the human way of processing tasks. Combining robotics and Artificial Intelligence by sensor technology is also referred to as 'Embodied Cognition' – implying robotic systems to perform tasks that are learned by means of training (and by which they become self-learning).

In 2019 – and years to come – smart robots will impact both B2B and B2C. 'Collaborative robots' will be of help in various crafts, such as welding and painting. It is expected that robots, performing autonomous tasks, can solve the problem of labor scarcity. Daily life assistance is seen as another area of growth. The 'domestic robot' is not only considered as a smart device, but also as an artificial creature, improving its capabilities in a continues process of acquiring new knowledge and skills. The long(er) term vision is that robots relieve humans of all heavy, monotonous and/or irksome tasks.



Case | Robothotel Henn-na; if you do not want to be around humans

Henn-na hotel		
  	Case description	Facts and figures
	<p>Henn-na Hotel, located in Japan, is the first hotel in the world run by robots. Except for people cleaning the rooms, there is no staff around. Henn-na means change. The owner of the hotel wants to adapt to a changing world; in terms of technological change and in terms of societal change (the latter referring to an ageing population, making it more difficult to find young and qualified people).</p> <ul style="list-style-type: none"> • The building and interior are minimalistic in order to keep costs down. All tasks are performed by robots. • The receptionist (a dinosaur) is able to speak multiple languages, recognise emotions and anticipate on body language. It even provides tips on good restaurants. • Next to the dinosaur there is Nao; the concierge of the building, storing luggage and leading people to their room. • Each room has a personal assistant, Churi-Chan (like Google Home) who adapts room temperature/lights and answers all sorts of questions about the neighbourhood. • Guests do not need a key card to enter the room; the room opens based on face recognition. • The owner of the hotel aspires to open more hotels; especially knowing that a shortage of 3000 rooms is expected during the Olympic Games in 2020. 	<p>7 staff members for 140 rooms. To compare: a normal 140 room hotel has 30 staff members</p> <p>8 more hotels are planned to be opened in Japan and 4 hotels extra in Tokyo. Currently there are 2; 1 near Huis Ten Bosch and 1 in Tokyo</p>



4. Secured sharing

Privacy, morality and trustworthiness

A transition towards a connected society where we trust our lives to digital services puts privacy, morality and trustworthiness on everyone's agenda.

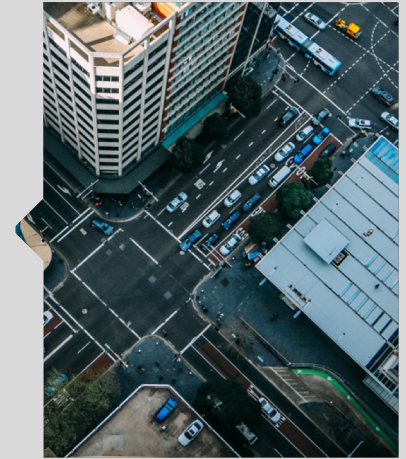
Case
DuckDuckGo



Open ecosystems

Digital ecosystems will move to a new playground, where collaboration and openness between different stakeholders realise benefits to all.

Case
SharedStreets



Blockchain

Moving away from its cryptocurrency image, the blockchain will bring pioneering solutions to fundamental problems in the world.

Case
Moyee Coffee



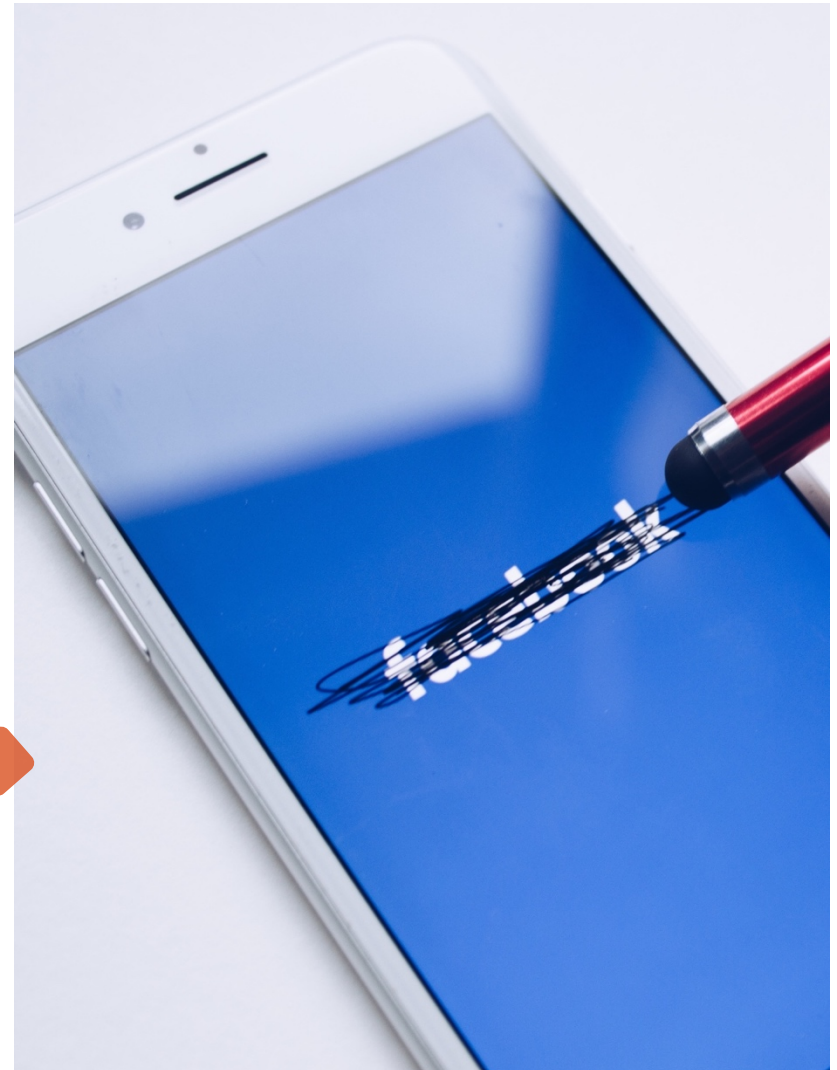
Secured sharing

Privacy, morality and trustworthiness; to share or not to share


A world where we trust our lives, economies and societies to technological innovations is evolving. One question that becomes highly relevant is if one can live a digital life without giving up on privacy. In 2018, Facebook usage declined for the first time ever, mainly driven by trust issues. These trust issues continue to grow in a larger discussion on moral standards and privacy, since these form the fundament for every organization to remain a footprint in our daily lives.

The current lack of trust created a group of consumers that can be classified as 'reluctant sharers'. These are "people who are concerned about or would prefer not to be, sharing their personal details, but feel compelled to do so in order to gain access to a service or product". With the introduction of the GDPR this group is growing and growing, since they are now empowered with rights over 'their' personal data. Consequently, there's a re-balance of the rights and powers between an individual and the supplier, which puts an urge on taking a serious look at privacy standards and ethical frameworks.

Lastly, due to advances in Artificial Intelligence and Machine Learning, autonomous technologies (voice-assistants, robotics, cars) become more normal in the upcoming year. However, it is also expected that these behave ethically towards living things. One problem: the current ethical frameworks do not hold. New moral discussions will come up relating to the question: what kind of society will become the normal? In 2019, a tipping point is expected, starting with a mass following the smaller group of reluctant sharers that expose a bottoms-up societal need.



Case | Search engine DuckDuckGo brings privacy back to users; no profiling, but showing everyone the same search results

DuckDuckGo		
 DuckDuckGo	Case description	Facts and figures
	<p>DuckDuckGo (DDG) is an Internet search engine that emphasises protecting searchers' privacy and avoiding the filter bubble of personalised search results. DuckDuckGo distinguishes itself from other search engines by not profiling its users and by deliberately showing all users the same search results for a given search term.</p> <ul style="list-style-type: none">• DuckDuckGo is founded in 2010 as a search engine. Since then over 25 billion searches have been processed, and the number is growing rapidly.• Vision of DuckDuckGo is that people deserve privacy, as too many companies are making money out of people's private information without consent.• For example: Google trackers are lurking on 75% of websites. This means they are not only tracking user's search terms, but also tracking which websites they visit. Additionally, they let advertisers follow users across two million different websites and apps.• DuckDuckGo's goal is to set a new standard of trust online, empowering people to take control of their information• Every year since 2011, DuckDuckGo has been donating to organizations that contribute to their vision of raising the standard of trust online. So far this is \$1.3 Million.	<p>9 billion searches in 2018</p> <p>50% growth in the past year</p> <p>30 million searches a day</p>



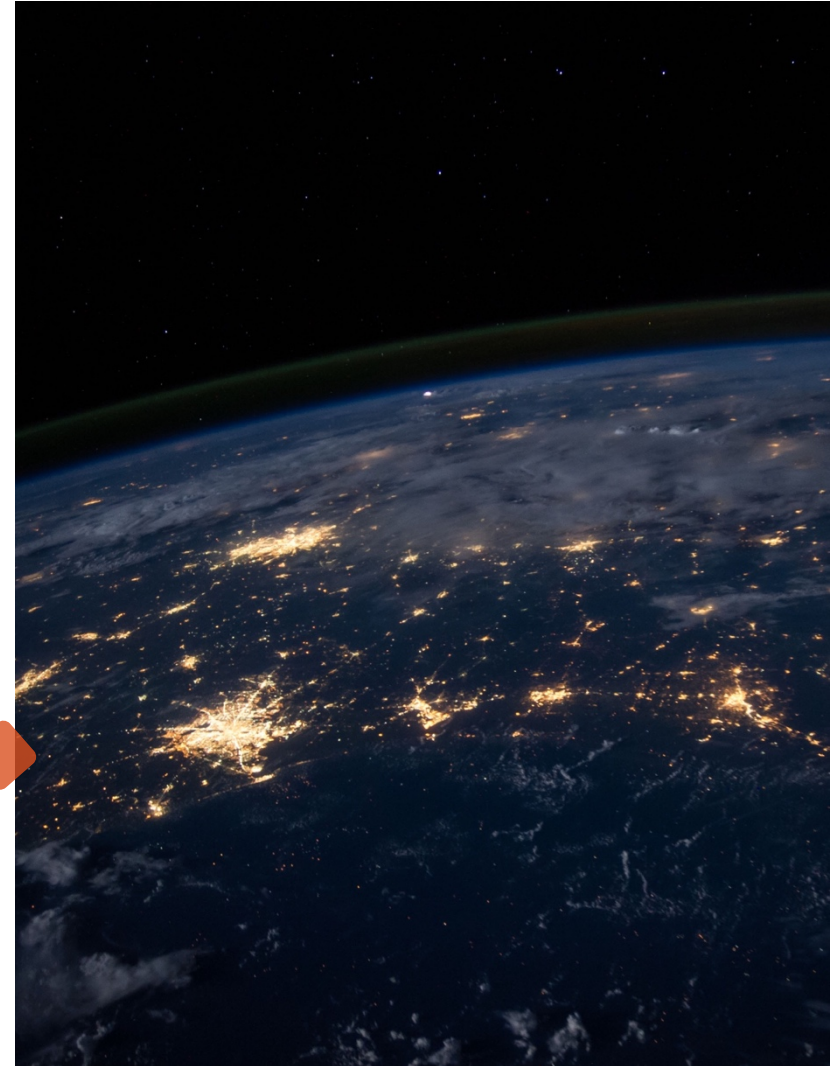
Open ecosystems; collaborations and integrations bringing benefits to all

As we saw a rise of digital ecosystems such as Airbnb and Booking.com, facilitating mainly customer-focused needs and problems, ecosystems will evolve even further with a very 'open' character. Competitors might share or give away their resources to solve shared problems instead of a focus on the commercial win. Three key elements: data, speed and transparency.




There is a shift from using closed technical infrastructures to open platforms that enable a complete (digital) ecosystem available to everyone. In short, an ecosystem has one central database in which all relevant information is stored. Based on this data, the system can provide relevant information real-time. Moreover, if a company opens up their platform to users, partners or others willing to contribute, it can perfect its market offering using input from its collaborators. This allows them to react faster to flaws or jump in on opportunities exposed by the data in the ecosystem platform. Also described as open data or open innovation, these platforms are mainly based on the idea that a group of experts can do more than a single company.

In 2019, the three key elements of ecosystems keep on evolving. With more and more devices connected, the amount of data available is endless and with the first 5G devices entering this year, the availability and speed of data will rise. Moreover, businesses with different profiles but operating in common markets with common customer profiles will seek for partnerships for the mutual benefit.

Combine this with the fact that mega-brands (e.g. Starbucks) keep getting bigger, their global footprint also becomes bigger. When trying to differentiate from a sustainable point of view, as consumers expect, open ecosystems might be the key to leverage this need with powerful innovations.



Case | SharedStreets is a public-private data platform by Ford, Lyft and Uber with the objective to solve urban planning issues

SharedStreets		
  	Case description	Facts and figures
	<p>SharedStreets is a non-profit organization creating a ‘digital language’ for the street. It is a data standard and platform that serves public-private collaborations and is a clearinghouse for data exchange. More than lines and points on a map, SharedStreets is a system for sharing actionable information across city and company lines. It helps communities around the world to better understand and manage their streets.</p> <ul style="list-style-type: none">• Not only Ford, Lyft and Uber collaborate, but also public institutions are involved in this ecosystem; the National Association of City Transportation Officials (NACTO), the Open Transport Partnership and Bloomberg Philanthropies, the consortium behind the innovative SharedStreets data platform.• The available data provided by the companies will give public and private sectors new tools to manage urban spaces. This reduces congestion and emissions that cause climate change; it improves the efficiency of city streets by making it easier for everyone to get around; and save lives by preventing traffic crashes. In short, it improves urban mobility.• This initiative is unique since public institutions and business meet to create a shared benefit for all stakeholders, especially society in the end.	<p>2018 is the year in which this open ecosystem is launched</p> <p>30 cities globally, including Paris, Melbourne and Washington DC, actively use SharedStreets</p>

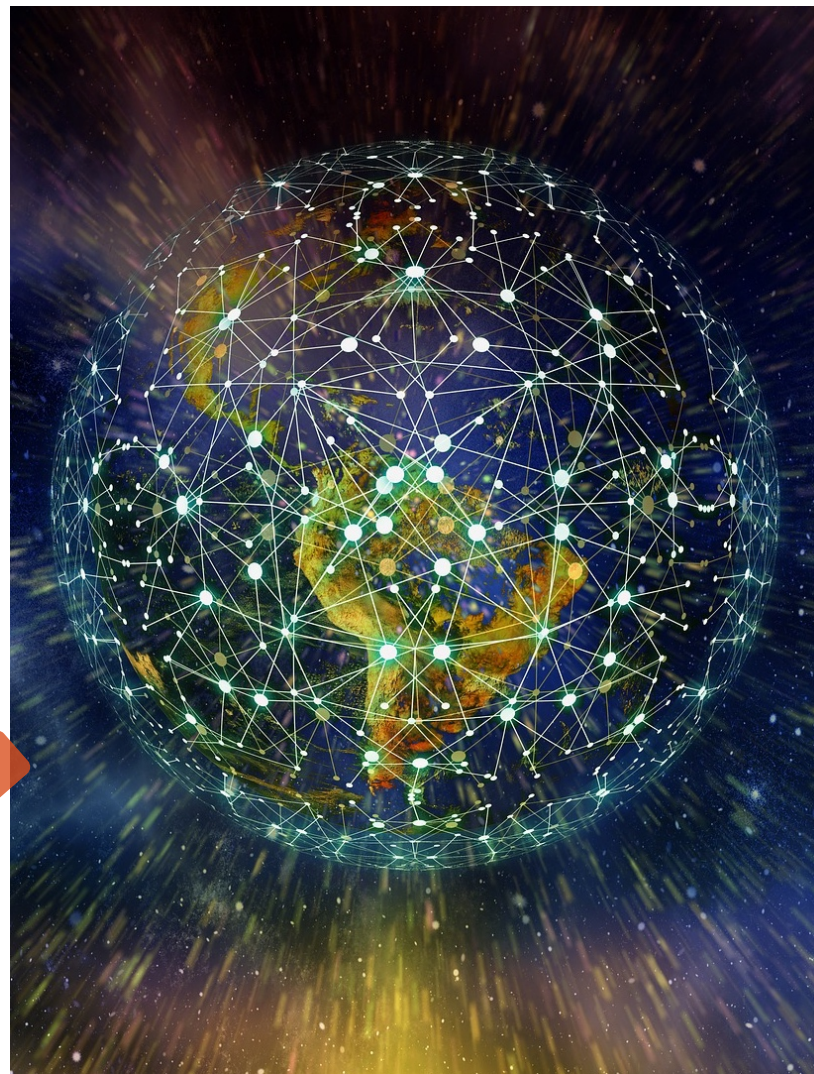


Blockchain; more than just the foundation of cryptocurrencies, 2019 will be about pioneering as well as concrete solutions

The blockchain technology, first conceived in 1991, could have the potential to change the way people trade, make contractual agreements and even get paid without a third party involved. In the past year, more and more organizations started experimenting and building with the blockchain technology. Start-ups worked on ground-breaking blockchain products and solutions, but also the more established organizations used and implemented the technology in different ways.

Blockchain technology is a technique to store information in a decentralised manner in order to achieve transparency. In short, a blockchain is a distributed ledger across a peer-to-peer network with miners that make sure the interactions done on the chain are legit. This makes the blockchain a very safe tool, since interactions are checked by everyone in the blockchain and cannot be reversed or deleted once connected. Consequently, all stakeholders of a chain can look into to the status of an interaction. The only issue with this technology and the current GDPR (EU law for privacy) is that everybody in the blockchain essentially owns all the data in the chain and past entries cannot be edited or deleted.

Although blockchain is a stand-alone technology, often it is still seen as one concept with cryptocurrency. This perception will change in 2019. Concrete use- and business cases will play an important role in proving the positive impact of this technology. Also new in the blockchain is the use of smart contracts. These are contracts bound to transactions that can mutate or cancel the transaction in question. Lastly, there is a great potential in combining the blockchain with other technologies such as the Internet of Things, Machine Learning and Artificial Intelligence. Therefore, the upcoming year could surprise us with pioneering solutions.



Case | FairChain coffee brand Moyee uses blockchain technology to create full transparency within the value chain; from production to sales

Moyee Coffee



December 25, 2017 11:11	SHERIF A./GARGA A./BORRA
Cherry collection	18kg
Location	Sulu
Market price per kg	11 000 per kg
Market price	353 per kg
FairChain price	435 per kg

December 25, 2017 11:11	KEDIR A./JORGA A./DHABI
Cherry collection	18kg
Location	Sulu
Market price per kg	11 000 per kg
Market price	1650 per kg
FairChain price	1980 per kg

December 25, 2017 11:11	JHAD SHERIF SH/A/GAMAN
Cherry collection	18kg
Location	Sulu
Market price per kg	11 000 per kg
Market price	1298 per kg
FairChain price	1557 per kg

Case description

In 2012, Moyee was founded with the objective to redefine the coffee chain to a fair chain, which goes further than just fair coffee. Moyee strives for a 50/50-distribution, in which half will be earned in the producing country and half in the consuming country (right now only 2% of the value of every cup of coffee goes to the coffee producers). Moyee started a project using the blockchain technology to create transparency in the coffee chain for the consumer.

- Moyee works in Ethiopia with an own coffee roasting company, so that coffee can be roasted there before packaging. Since 2018, the company has been carefully outsourcing activities to Kenya and Colombia.
- FairChain consists of three important parts: Economical, Social and Environmental impact.
- The blockchain secures all actions in the production and sales chain - from harvesting to packaging to selling - and shows everyone what Ethiopian farmers exactly earn from a sold Moyee product in Europe.
- Moyee's blockchain shows a picture of each farmer together with their market price (for a quantity of beans) and the FairChain-price.
- Looking into the future, the blockchain can create the possibility to tip farmers directly. When drinking coffee in a café, customers can, besides tipping the barista, also tip the farmer by using a special token.

Facts and figures

16 million

cups of coffee roasted since 2013

55%

of sales value of The Netherlands stayed in Ethiopia ('big coffee' brands only do 15%)



Do you wish
to *discuss* the applications
of these TRENDS in
your organization ?

The team of The Next Organization formulated this Outlook by consulting various sources. List of references is available upon request.



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