Who Is Who?

The Complex World of the European Digital Consumer



You're paying, but are you the customer?

The European Digital Consumers' Rights Report By Peter Warren, Future Intelligence





Per Strömbäck, Netopia

Devouring the Digital Single Market

Consume – from Latin consumere: to devour

Netopia has covered the policy-making around the digital single market vision since it was first articulated by the Juncker Commission in 2014. This has made for many intriguing questions, debates and angles. Besides the drama around fake news, dominant platforms and cyber-crime, this writer has been fascinated by the emphasis on digital consumers. Not citizens (or "netizens" as they were called in the early days of the internet) with rights and obligations, actors in their own right. But consumers, whose right is to be satisfied and whose return is money (or in many cases personal data). These consumers were expected to demand services offered in other member states, kept from them by rigid business models or whatever reason.

To consume is to devour. Once something has been devoured, it is gone, exhausted. Consummated. (Perhaps some bones remain.) Do we devour digital services? Or is consume too narrow a perspective? Considering that another current policy concerns the protection of personal data, the traditional perspective on the consumer as one paying in return for

a good or service does not give the complete view. Also, as users of online services, we may have obligations that go beyond the traditional consumer. A lot of what we do online is connected to speech, information, action words that don't really fit the consumer mold. And the platforms that provide so many of the digital services, do they really treat us as consumers? Or more like a raw material for data? A consumer is also a client. And the client is always right, as you know. But that is rarely the case with the take-it-or-leave-it terms and conditions for digital services. If we're lucky to find customer support, it is rare to be treated like a client, and in most cases we are referred to online forms and FAOs rather than personal service.

Thoughts such as these inspired Netopia to ask Peter Warren and Future Intelligence to take a closer look at the concept of the digital consumer. This report is the result. I hope you will enjoy reading it. Perhaps you will even devour it.

Brussels, June 7th 2018, Per Strömbäck, Editor Netopia

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The purpose of this report is to examine the notion of the 'digital consumer' and its relationship to the European Union's proposed digital single market.

In a series of interviews with academics, lawyers, digital media experts and people working in digital media from across Europe and around the world, Future Intelligence sought to discover whether, in the fast-moving digital world, regulation is keeping pace with technology.

Executive summary

This report looks at the concept of the "Digital Consumer", which has been one of the key parts of European policy for several years. The authors of this report think that this concept is misleading. The authors think that due to the adoption of technology by consumers that the distinction of 'the digital consumer' is now obsolete and that there are no digital consumer, only consumers who move between offline, online and mobile consumption. Consumers demand immediacy, value, convenience and tailored offerings, but their preferences vary greatly across demographics and geography. All consumption is local in some sense. Making policy for digital consumers requires an understanding of this heterogeneity, and policies must allow for flexible offers and cultural diversity.

Key findings

- The concept of the digital consumer is outdated. All (bar one) of those interviewed for this report stated that there was no such thing as a digital consumer. They said all consumers are now digital, and that they switch between 'the High Street' and 'the virtual' in everything that they do. Consumption is always local.
- Conversely the same is not true for businesses, with many of those interviewed pointing out that SMEs - particularly in the retail sector - are lagging behind in their use of internet technology.
- Massive challenges confront the development of the digital single market due to the global nature of the internet.
- Some of those challenges, such as the maintenance of cultural diversity by

- subsidising, for example, the film industry or artistic heritage in small European ethnic groups throw into question whether single market principles can really be deployed. Some experts pointed out that demand for local cultural content was not served well by the removal of geo-blocking.
- Additional challenges were raised by the development of 'fake news' and the need to assert 'true news' against it by supporting the traditional news industry which was in longterm decline even before it lost its main source of revenue - advertising - to the internet.
- There was much concern about the ability
 of legislators and lawyers to keep pace
 with technological change. This point is
 even admitted by the policy makers, with
 technologists, those in the film industry and
 consumer experts all arguing that policy
 makers must have a deeper understanding of
 technology if they are to legislate on it in the
 interests of all citizens,
- There is an urgent need to raise awareness among consumers about the techniques used by the internet community to acquire consumers' data and the ways the technology industry uses people's data.
- Thought should also be given to the power of the AI technology that can now be deployed by large companies like Google and the ability of consumers to make informed decisions without being influenced by the commercial interests of powerful internet companies and their clients.
- Although the EU's aim of developing a Digital Single Market was ambitious, laudable and consistent with the principles that underpin the EU, the fact that it is based upon technology developed outside of the EU does also present challenges.

- Interestingly, consumers now break into two distinct groups online: those who are prepared to pay, and those who think they use free services but unwittingly pay with their personal information and by agreeing to view advertising.
- Local content offers are in the interest of the consumer, rather than something forced upon them via contracts or business models. This aspect must be considered when making policy for the digital consumers.
- The idea that there is a need for a different system of laws and penalties to be developed to deal with online activity, or that a different set of norms and behaviour exists online is misleading and should be vigorously challenged.

Recommendations

Based on these findings, we feel that the following measures should be developed by the EU:

- The development of technology that can both make data anonymous and produce data that is of benefit to society. We would extend this and add 'also beneficial to the individual' rather than the current situation which sees huge internet companies being the main beneficiary.
- The development of 'device sanctity': ensuring that computing devices are loyal to the person who owns them. Devices considered to have 'a human interest' need to be properly protected against incursions from the state and from criminals.
- 3. That the owner of a device should have 'primacy of interest'. Currently, a number of different organisations claim to have a share in an individual's computing devices -ranging from the person who bought it, telecommunications companies, internet companies like Google, LinkedIn etc to whom we have granted an interest in our whereabouts, the police and governments.
- That the EU actively encourages and supports the development of a cyber-security industry to look after the consumers' interests regarding data.
- 5. In line with this that the EU actively encourages

- and supports the development of an encryption industry that looks after the interests of both industry and the consumer, to protect intellectual property and preserve jobs.
- That the EU actively encourages and supports the development of a micro-payment industry.
- 7. That the EU should protect freedom of contract for creative content producers. Consumers demand local content and the proven way to deliver local and tailored offerings is to allow the suppliers to design offers freely to meet the demand. This allows for innovation in content, services, licensing and technology. The opposite would be banning "geo-blocking", which is the execution of a territorial licensing agreement. Instead, freedom of contract should be framed to allow for geo-targeting services, offering content at prices in line with local demand and purchasing power, translated and adjusted to local context and other consumer preferences. This in no way excludes the possibility for European-wide licensing, when the consumers demand it.
- 8. That there was an urgent need for the creation of a new European technology regulation body. This body would govern the introduction of technology to ensure that it was in the public and consumer interest. That this body would be responsible for the raising of consumer and political awareness of technology, how it is used and its ramifications. A recent study by the UK's Open Data Institute found that in February 2018:

"Trust and knowledge of organisations increase consumers' likelihood to share personal data about themselves: 94% said trust was important in deciding whether to share personal data. 64% would share some personal data with an organisation they know, compared to just 36% for an organisation they don't."

"ODI calls for organisations to explain to customers how personal data will be used and shared. A third (33%) of respondents said this would make them feel more comfortable sharing data.""

Introduction

Since 2015 the European Union has been promoting a policy known as the Digital Single Market (DSM). The EU defines it thus:

"A Digital Single Market is one in which the free movement of persons, services and capital is ensured and where the individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence."

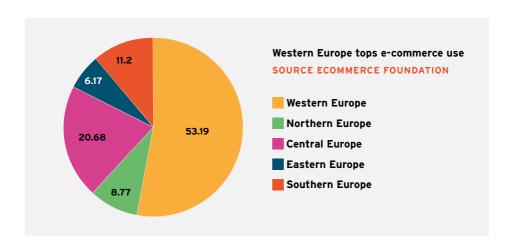
The European Commission identified the completion of the Digital Single Market (DSM) as one of its top 10 political priorities and has appointed Vice-President Andrus Ansip to lead the project which was named "A Connected Digital Single Market".

The strategy includes 16 specific initiatives which were adopted by the EU on the 6th of March, 2015. The aim of the exercise, according to EU documents, is to create a market worth around €415 Bn a year, in a market of 500m people that would create opportunities for new start-ups as well as existing companies, create jobs and also transform public services².

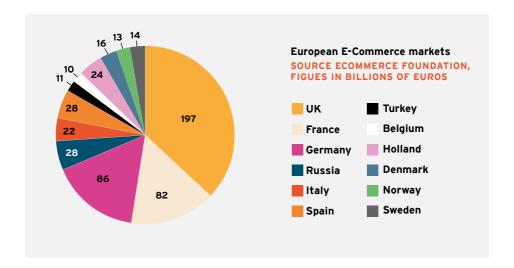
"An inclusive DSM offers opportunities for citizens also, provided they are equipped with the right digital skills. Enhanced use of digital technologies can improve citizens' access to information and culture, improve their job opportunities. It can promote modern open government."

The aim of the exercise from the EU's point of view is to align Europe with perceived trends in technology to make sure that the continent stays abreast of the information revolution.

According to Ecommerce Europe which launched the "Cross-border Ecommerce



- 2. This figure is disputed: The eCommerce Europe estimate the market for 2016 to be worth €530bn and project a rise to €602bn for 2017. Netopia, the organisation that commissioned this report has challenged these figures http://www.netopia.eu/vp-ansips-funky-maths-or-the-fastest-growing-digitalsinglemarket-in-the-world/
- 3. https://ec.europa.eu/digital-single-market/en/policies/shaping-digital-single-market



Barometer" in 2016 following a survey amongst its 25,000 online shop members across Europe,

"...online merchants with cross-border ambitions are often held back by barriers such as legal uncertainty due to unclear or very different rules, taxation and payment systems that differ greatly, or high prices of delivery due to a lack of transparency in the market."

Ecommerce Europe's survey also highlighted barriers to overcome. They include online payments, competition issues, language, client relationships and marketing.

The year 2017 saw a turning point: the device most people prefer to use to make purchases online is now the mobile phone.

Prior to 2017 European consumers had favoured both laptops and desktop PCs for making online purchases. Experts speculated that it was felt that this method conferred a greater sense of security and allowed products to be better displayed.

This conservatism has made Europe the slowest adopter of the mobile as a purchasing tool. More consumers in emerging markets – Brazil, Chile, China, India, Malaysia, Mexico, Poland, Russia, South Africa, Thailand, Turkey and the Middle East are using mobile devices to make online purchases than those in established markets. As an example, 56% of buyers in these emerging markets purchase online via a tablet, compared to only 43% of consumers in established markets. In addition, 46% of consumers in emerging markets purchase via wearable technology, as opposed to only 30% of consumers in established markets.

However, in the UK, Europe's most developed digital market, for the first time the mobile phone has outstripped the more traditional PC and laptop as the device of choice to make online sales. That's according to research from IMRG and Cap Gemini that found that smartphones and tablets accounted for over half of online sales in the United Kingdom. During the period November 2015 to January 2016, 51 percent of UK online retail sales took place using smartphones and tablets.

The figures collected for the IMRG and Cap Gemini research were based on the online retail sales in the United Kingdom during the last quarter of 2015. It found out that the desktops and laptops accounted for 49 percent of total ecommerce sales. Tablets were used in 33 percent of cases and smartphones accounted for 18 percent of sales.

"Smartphones have really started to become a major component of the checkout process and that's what is driving this leap in mobile penetration", said Tina Spooner, chief information officer at IMRG.

"In January sales via smartphones grew 95.6% year-on-year for example – over 7 times the rate of sales via tablets."

Commenting for Capgemini, Richard Tremellen said that the 51% of UK ecommerce sales that happened via mobile devices were a significant milestone in the history of the online retail sector.

"And it reflects the work retailers have put into improving the customer experience on smartphones. Not only have mobile platforms become more secure, but the payment process is also much slicker. The result is smartphone conversion rates that are 70-80% higher than this time last year."

Even so according to Duncan Keene, the UK managing director of the French internet analysis company Content Square:

"If you look at stats across Europe, mobile accounts for probably about 50-55 percent of website sales on mobile, in Asia Pac particularly Japan and China we're talking 80-90 percent. I think over the last 10 years it's kind of risen in the European markets. I think it's risen at a much, much quicker

pace in Asia Pacific - actually probably because they were behind on other forms of communication." said Keene.

But the evidence is clear. The trend is towards the use of the mobile phone as the principle mechanism for accessing and purchasing goods and services online. What has driven this is the adoption of smart phone technology.

This trend towards the use of mobile phones as an essential component of life has meant that they travel with us and are used continually while we are shopping. This has caused the development of an entity that marketing experts have dubbed the 'connected consumer', (see page 20) though recent research has also indicated that there is still some complexity in the trend due to regional technological differences.

A recent study by the European online auction house Barneby's found that many of the millennial mobile consumers move back to desktops if they need to make a purchase on sites such as E-Bay or to secure an airline ticket, because they know a particular computer will have a guaranteed connection.

Much of Barnebys' traffic comes from people who are using their search engine to find the right auction house for live online bidding. So reliable connectivity and excellent broadband speed are essential to prevent a break or delay in service at the crucial moment in bidding.

"Feedback from users points to this being the main reason for moving back to desktop, where, unlike mobile phones and tablets, computers have permanent wifi connections that operate at acceptable speeds. However, other reasons undoubtedly come into play as well because the changes are neither linear nor consistent across markets. "Noticeable differences in trends occur between the US and UK, both of which represent major mature markets for Barnebys," said co-founder and Head of Content Pontus Silfverstolpe.

"While mobile usage is down across all age groups in the US, in the UK it has doubled among those aged over 55, grown significantly among those aged between 35 and 54, but notably shrunk among those under the age of 35, with 18 to 24-year-olds using mobile less than half as much as they did a year ago."

Silfverstolpe and his colleagues have undertaken further research to uncover the reasons for this

"Anecdotal evidence points to poor connectivity as the culprit, while other significant factors appear to be limited mobile data allowances and the cost of using online data," he explained.

"If you think about it, the first thing teenagers and twenty-somethings ask for when arriving at a friend's house or a café is the wifi password because they don't want to be racking up bills or using up their coveted monthly data allowances. If you also factor in poor connectivity, which can add to the pressure on costs while resulting in missed bidding opportunities, these trends start to make sense."

Barnebys has been taking note of the rise of 'drop' marketing on sites like Supreme, Yeezy and Off-White. These 'drops' involve releasing a limited run of expensive clothing from leading brands for sale at knockdown prices at a fixed time advertised well in advance. This creates a feeding frenzy among young people, who are increasingly relying on desktop

computers to ensure they win the items.

One young user told Barnebys: "A friend of mine was on the train when he wanted to buy a pair of shoes on one of these drops, but asked me to buy them for him because he knew I would be at home and didn't risk losing the connection or bidding in a wifi cold spot."

This increased use of the mobile phone blurs the line between the digital consumer and the 'real world' consumer, making the distinction somewhat academic.

Most of those interviewed for this report felt that the distinction was either outdated or an attempt at a political distinction that lacked credibility.

Method

We have interviewed a number of people involved in the UK e-commerce market for the simple reason that the UK market is the largest in Europe and at €197bn is larger by €1bn than the next three largest markets Germany, France and Spain combined. However, it should be stressed that there is a high degree of cross-over between all of those markets.

While the UK may presently have a leading role there are signs that it may soon lose out to Germany.

Anab Jain, Professor of Industrial Design at the University of Applied Arts in Vienna and co-founder of Superflux, pointed out the value of the UK's creative and digital sectors to the country's economy in an introduction to a pro-Europe speech at London's Somerset House at an anti-Brexit event organised by the UK's Creative Industries Federation in March 2018.

"The creative sector is the fastest growing part of the UK economy and is worth £91.8 Bn, more than the automotive, aerospace, oil and gas and life sciences industries combined.

"It is a sector that draws on international talent, much of it from the EU...the EU is a prime trading partner. Membership of the EU has been crucial to that significance due to the digital skills shortage. Brexit now means that much UK digital talent is now relocating to Berlin."

Commercialisation of the web

This change to the digital consumer since the start of the commercial internet in 1995-6 has largely been attributed to the iPhone. But its roots go even further back than that, even to the start of the internet itself.

In the early days of the web, sites were suddenly swamped by demand, bandwidth became congested and the internet infrastructure creaked under the sheer numbers of people coming online.

It was a development that Mike Lynch, the English internet billionaire who controversially sold Autonomy, a company developed in Cambridge that specialised in extracting value from unstructured data, to the US computer company HP for £8.2 bn⁴ noted in an interview with one of the report's authors at an hotel at Heathrow in 1998.

"I would advise you to set up a business selling information on the internet. Don't worry about how it will make money. Just get something up and running and someone else will work out how to make money from it," said Lynch, adding that he was in a unique position.

"There's a gold rush on and I make the shovels."

Most technology companies though have opted for 'the Rumpelstiltskin bargain'. We will provide you with services, if you give us permission to turn your data into gold. Let us harvest information on what you are doing, how you are accessing the internet, what interests you and what you are buying and we will provide you with a service.

As Gianfranco Chicco, European Marketing Director of the internet industry Oscars known as The Webby & The Lovie Awards notes, the internet has fast become corporate. Gone are the simple websites of its beginnings, now technology giants like Google and Facebook have become our gateways to the internet through portals that track us from the moment that we engage with them, as part of a diabolical contract that consumers have blithely accepted. In the words of a former UK Information Commissioner, "internet users appear to have sleep-walked into a surveillance state."

Quite how easily we have accepted this can be gauged from a meeting attended by one of the report's authors with senior executives from the data search company Splunk in a hotel in Hammersmith in 2007.

On Splunk's company website it states, 'any question, any data, one Splunk', and at the meeting the executives pointed out that in Germany censuses had often provoked pop-

^{4.} http://uk.businessinsider.com/the-life-of-mike-lynch-autonomy-hp-2017-5/#michael-richard-lynch-was-born-in-ilford-essex-on-june-16-1965-1

ular resentment because the questions were considered intrusive and personal. Now, said the Splunk executives, people happily supplied such data to social media sites such as Facebook and tools such as Splunk could easily make that data available to governments.

It is a point that is made by Professor David Birch, author of 'Identity is the New Money', one of the world's leading experts on digital currency. Birch points out that not only is our concept of privacy and identity changing but it is also becoming a currency.

"Not only is identity changing profoundly, but money is also changing equally profoundly because of technological change, and the two trends are converging so that all we will need for transacting will be our identities."

"The technological change I'm talking about here centres on the evolution of social networks and mobile phones."

It is this evolution that is creating one of the biggest issues for policy makers due to the essential conflict between privacy and the development of the new internet economy that entwines our virtual and real worlds.

This trend, outlined in the following pages, presents policy makers around the world with one of the greatest challenges that they will ever face. They must manage the transition from a post-industrial world based largely on mechanical devices to the new digital systems of the information age.

The issue is to develop technological systems that allow the consumers to achieve value for themselves from their data, while at the same time safeguarding their privacy and anonymity.

In short, we need to develop the same system that we are used to in real life when we enter a shop while at the same time providing an enhanced consumer experience which is not exploited by businesses to the consumer's det-



riment by manipulating the consumer using stored data about preferences and behaviour.

In Future Intelligence's well received 2014 report: 'Can We Make the Digital World Ethical? Exploring the dark side of the Internet of Things and big data' experts contacted by Fi recommended among other things:

- that there was an urgent need for the creation of a new European technology regulation body.
- 2) The development of technology that can both make data anonymous and produce data that is of benefit to society. We would extend this and add 'also beneficial to the individual' rather than the current situation, which sees huge internet companies being the main beneficiary.
- 3) The development of 'device sanctity': ensuring that computing devices are loyal to the person who owns them. Devices considered to have 'a human interest' need to be properly protected against incursions from the state and from criminals.
- 4) That the owner of a device should have 'primacy of interest' currently a number of different organisations claim to have a share in an individual's computing devices, ranging from the person who bought it, telecommunications companies, internet companies like Google, LinkedIn, etc., to whom we have granted an interest in our whereabouts, the police and governments.

Put simply: the online world should deliver the same protections that we have grown to expect in the real world and the same protections, rules and behaviour that we have become accustomed to in the real world should also apply to the online world.

The differing cultural attitudes of businesses and consumers on the web

This change in attitude has much to do with the libertarian free-for-all that permeated the internet until the bursting of the dot.com bubble in 2001. Information as currency is part of that enduring legacy.

For instance, many people do not realise that companies like Google and Facebook actually not only establish your identity but that they also - given the relevant permissions - know where you are. And they can use that data to further confirm your identity by being able to track your behaviour and location and being able to map that against your historical patterns of data usage. This is something that the companies find uniquely valuable. Google sells identity verification as a service to Government departments in the US. And this is a service that Facebook had considered offering to UK Government departments. Most of us are unaware of data's huge money-making potential, as internet pioneer Sir Tim pointed out in a March 2017, Guardian article (see footnote 10). Berners-Lee considers that we should both understand how this money is made from our data and be actively engaged in the money-making process.

It is an attitude that has had profound implications for the modern consumer because in the early days of the internet, as Lynch points out, there was little thought of making money but there was an awareness among those involved in the internet from the start that they should collect information on the people visiting their websites and who they were.

This had occurred for two reasons: the internet infrastructure needed to be paid for and the 'all you can eat' model that granted

unlimited internet usage for a fixed fee was creating revenue issues [for the telecommunications companies].

Content was the lure to get people to go onto the internet, but they wanted to spend as much time as they liked browsing through content that they were unwilling to pay for.

This behaviour led to the development of an all-you-can-eat model for internet users who also sought an all-you-can-eat-at-no-cost model for content. It is an attitude that has inevitably led to the development of internet advertising and information capture for content and service providers, while for the ISPs the demand for internet connectivity, driven by an appetite for content, has seen an ever-increasing demand for bandwidth.

As Moray Rumney, an expert on mobile telecommunication technology, points out: in what is called the technology ecosystem, the mobile phone companies sit at the bottom with revenues that are tiny compared to information companies such as Google and Facebook.

"I like to think that the profits from the previous generation are what's kind of financing the next generation tech companies providing connectivity like the mobile operators are I think near the bottom of the tech profitability ratings.

"If you look at some of the big ISP names and how profitable they are compared to other tech companies like Google, I don't think the mobile operators are doing particularly well and they're always being pushed to deliver new infrastructure to deliver the next big thing.

"So you have this sort of constant figure you know whatever it is 30 quid a month seems to be the figure that people are prepared to pay while demanding more and more service.

"It means they end up investing money in networks which then results in users consuming more data and users not spending any more money, but the infrastructure that's behind that continues to get more and more sophisticated and expensive and 5G is just the next step in that journey."

This demand for content and services was even creating issues for successful websites and services as Attila Szanter discovered.

Szanter was the founder of IwIw, an innovative Hungarian social media network that pre-dated Facebook by two years. Szanter's network grew explosively and at one point included every internet user in Hungary, around four million people.

"When we started up we had no idea how we were going to get money," said Szanter. "We knew it was going to be big so we focused on the technology. We did not focus on the business side of it and we folded when we started to actually grow. We sold it in 2006 and we had to sell up because back in that time in Hungary the equity and venture capital industry was not as well developed as it is now. We didn't have the resources to make it run. We had investors coming to see us and asking for company documentation so they could do due diligence and all we had was a paper folder with 20 foolscap pages in it"

But in the more tech-friendly US and in parts of Europe this had begun to change. The digital consumer, inspired by the early libertarianism of the web had become used to free services, with unlimited broadband and

fast response times and digital services had begun to mirror the services that people had once accessed via the High Street.

The disruptive model

E-Bay became the first online market place, allowing people to sell anything to anyone, anywhere. E-Bay was one of the main pioneers of e-Commerce. The first commodities to go on line were books and music with a virtually disastrous impact on the retailers who used to sell those things. Record shops vanished, and book retailers' chains shrank, as is discussed later in this report.

Even more disastrously, the industries that supplied the books and records - the publishers and the record companies - started to feel the impact of the digital due to the capability of technology to copy material. By definition any product that can be transferred digitally can be copied, and while the internet slashed production costs in those areas, it also massively increased the amount of pirated material. This practice was rigorously championed by the early internet citizens who had inhabited the digital domain before the arrival of the commercial internet.

Indeed, many of the software developers who had also built parts of the early internet also idealistically held the idea that software also should be free. This idea was promoted by amongst others Richard Stallman the US software freedom activist, who launched the GNU Project, and founded the Free Software Foundation . Stallman tried to sum up the argument of the internet libertarians with the slogan: "Think free as in freedom of speech, not free beer".5"

Ironically, Stallman has now introduced a licence fee for his own software though the

software promoted by the GNU foundation still remains free. Though the ideas of Stallman and others like him sat easily with the new chaotic ethos of the web.

These ideas of a digital free-for-all, that was cost-free for all, became ingrained in the attitudes of those consuming the digital and have set the tone for many of the companies that ventured onto the web at that point.

Initially the lack of completely trustworthy payment systems on the internet and the public appetite for free goods has seen the development of information as a currency. While most consumers were not prepared to pay for services that they had been offered for free and had appeared to be when they first arrived on the internet, they were ironically only too happy to provide information in exchange for services, viewing this as an acceptable trade.

It is a trade that Professor Michael Mainelli thinks that most consumers are unaware of. He is the chair of Commerce at Gresham College, an expert on blockchain and the founder of Z/Yen, a leading City of London commercial think-tank and venture firm. Professor Mainelli, out of all of those interviewed for this report was the sole defender of the term 'digital consumer' for the simple reason that it raises awareness of the difference between being a traditional consumer from the High Street and their new digital counterpart.

"What the EU is trying to emphasise is two things. The first is just getting with the digital program globally; more and more the interaction of consumers with people who provide goods and services is digital. That's sort of obvious. I think the second thing is understanding that digital consumers leave

^{5.} https://en.wikipedia.org/wiki/Gratis_versus_libre

a deeper and longer, more enduring trail than you might imagine. So, you walk into a shop and you walk out again. I really don't know a lot about you. Digitally I know a tremendous amount about you if you're on a website and that changes the power relationship between the consumer and organisations they've traditionally felt that they had some control over."

Which for Professor Mainelli, is a major issue due to the strange economics of the internet. As we have pointed out earlier, since its genesis the internet has become very good at developing personal data as a currency.

"We consume a lot of free services in return for paid advertising. It affects probably the largest bit of the industry. I don't have the numbers to hand but it's huge. That's the Pure Digital unpaid, it looks unpaid but you know that famous expression that: 'if you're getting something for free you're not the customer'."

It is this area of the internet that Professor Mainelli thinks that people are not aware of, and it is this area that needs closer examination in the consumer's interest.

"You are what's being sold and that's huge absolutely enormous in this sector. You're using Google all the time and they're clearly making a lot of money out of you, you can see that and all that money is being made out of advertising as people try to get at you. The more they know about you, the more efficient and effective that is for them. So that's the biggest area of the web.

"The second area of the web is of course the direct retailing that's actually tough to pull apart. When I get a book from Amazon is

that a digital product or not? Well that's certainly a digital product if I get it on Kindle but is a digital product or a product of the physical book? You could probably make an argument back and forth about that.

"Then you move into another vaguer area, where the digital consumer element is being foisted upon you. For instance, I do far more work booking a flight than I ever did before. Okay I'm getting a cheaper flight - let's not knock that - but a lot of that has got to do with competition policies that aren't necessarily anything to do with the web. I'm doing the same thing on my banking services, I'm doing the same thing on my home shopping for groceries. So, you are doing a lot more work than you used to do, I would contend, for people who are providing you with services and they're getting that (work) out of you digitally."

This willingness to unwittingly volunteer labour has not gone unnoticed by governments, with many government websites now relying on visitors being willing to take over tasks that used to be handled by civil servants.

"It's difficult to see in the UK that there are certainly a good handful of countries. Sweden comes to mind, Estonia I mentioned already, Germany is definitely moving that way where you know a lot of government services are now digital."

And as Professor Mainelli points out, that unpaid work particularly for large internet companies bypasses conventional taxation because it is not being seen as a monetary transaction.

"It's in these soft bits. It's not just about

money transfer. People often forget but you know 25 to 40 percent of global trade, believe it or not, is non-monetary. So, you know we say it doesn't matter if I don't see it in Euros or pounds, well fine live in another world, but in a world where up to 40 percent of that trade is non-monetary, I care about the physical elements that are being shipped, as much as I care about whether or not somebody has put the right price tag on them. And we're finding that with advertising, where we are winding up spending our time and our relationships online, doing work for other people, that hitherto was done for us and not quite understanding where they're using our data and making money from it."

As Professor Mainelli points out in the virtual world of the internet where everything is tracked, new relationships are developed and stealthily monetised by the companies that own the virtual world, and most of those engaging in this world are completely unaware of what is going on.

This situation raises one of the biggest and thorniest issues for policy makers and one that until now they have ducked - the issue of a tax on technology. As we mentioned on page 7, the online world is now 23 years old, an adult, and should be treated in the same way as the real world.

I want it now: the internet fast food culture

Consumers also demand immediacy. Internet research by Akamai, the world's biggest content delivery network found that in 2017 consumers will abandon a website if it does

 https://www.akamai.com/uk/en/about/news/press/2017-press/akamaireleases-spring-2017-state-of-online-retail-performance-report.jsp

not deliver a webpage in four seconds⁶. This frustration in the early days of the internet before the growth of broadband connections saw consumers deploy ad-blockers. This trend saw further potential losses of revenue to companies providing information websites such as media companies. The advertising model that had been trumpeted as the salvation of the commercial internet hit its first barrier.

The demand for gratification has seen no signs of abating, according to Duncan Keene of the Content Square company.

"I think if we just look at the changing landscape of how people engage with everything, a lot of that is now done online. Whether that is the consumption of content, of news, the purchasing of products or trying to book a test drive for a car; the digital consumer wants the information that they require much, much quicker than they can currently get it. I think the consumption of all types of information online is super important but it's actually the speed and availability that really drives the digital consumer."

This demand for immediacy also reveals one



piece of fascinating insight: that the essential driver for this demand is the desire for a sensation that actually comes from the High Street itself and has been around since the first item was traded.

According to the researchers spoken to for this report, the buying experience that all online consumers crave is to get the same instant gratification we have always had from 'the High Street', by paying for what we want in cash and walking away with it there and then. The problem at the moment though as Professor Mainelli stated above, when you walked out of a shop before the internet, you only left your payment behind. Now when you leave a website you leave your digital footprint behind, and soon because of a trend among High Street shops to digitally capture 'you' that will let the shops gain access to your location data, the shops too will be aiming to unite your real-world self with your data.

There is another side to the consumer demand for immediacy that can easily be exploited.

In the US, the debate over the repeal of President Obama's Net Neutrality legislation



in late 2017 suddenly became important. Net Neutrality states that all data should be treated fairly and that the data belonging to big business or companies like NetFlix, for example, should not be given preferential treatment because potentially it unfairly skews the delivery of information to the highest bidder. Such a preferential treatment of data could have profound implications in a world where fake news has become such a big issue, given the media dictum that: 'a lie is halfway round the world before the truth has got its boots on.'

The ability to preferentially speed up the delivery of information could mean that a determined and well-resourced political opponent - willing to exploit the potential that fake news has already demonstrated - could obtain an even greater advantage from the tactic to unfairly influence the outcome of a vote. Thus, immediacy can also be easily exploited.

The victory of the twitter plaintiff, the troll and the instant gratifier

This potential led to Berners-Lee lobbying against the repeal of the legislation in Washington DC because of the potential for fake news to be spread quickly even with Net Neutrality operating.

"The net result is that these sites show us content they think we'll click on – meaning that misinformation, or fake news, which is surprising, shocking, or designed to appeal to our biases can spread like wildfire," he said. "This allows for people with bad intentions and "armies of bots" to game the system

^{7.} https://www.theguardian.com/technology/2017/mar/11/timberners-lee-online-political-advertising-regulation

to spread misinformation for financial or political gain⁷"

There is a similar instant demand for internet services. People are unwilling to wait for an internet service that they have decided to use. This has seen the development of the Terms and Conditions tick-box culture, where companies create enormous and binding legal documents that those wanting to use a service have to sign in order to obtain the service. For the consumer, this may be evidence of the continuing free ethos of the internet but it also represents a significant erosion of privacy.

The result of this was the growth of the 'free-mium' and 'premium' internet models. For those consumers who still viewed the internet as a place of free services, a stripped-down freemium model is available in exchange for a variety of pieces of information. Typically, this will be access to address books, internet histories, possibly email and the right to monitor behaviour and perhaps to run adverts on someone's machine. If the service is being installed on a mobile phone it will typically seek access to text messages, internet searches, phone call patterns, address books and other information.

On the other hand, the Premium service will just simply allow you to own and run software in what pre-internet people would consider a traditional way with one important caveat: that the software provider will generally retain the right to collect behavioural information on the individual, using the software to ostensibly improve their experience.

US marketers analysing web trends see free services as a very useful technique to achieve a foothold with a consumer that can relatively easily be turned into a Premium paying customer, as this quote from an article from the 'software as a service' publication Impact shows.

"The magic of the freemium business model is its ability to grow a business at a rapid-fire pace through advocacy.

"In October 2014, Slack, an instant-message style communication tool for teams, became one of the fastest growing business apps of all time.

"Today, with over 4 million daily active users (1.25 million paying) and a valuation of \$2.8 bn, Slack owes a great deal of this success to word-of-mouth, or as their CMO, Bill Macaitis, calls it "customer-referral growth."

"We don't care if we get the first sale....
We care if they recommend us," Macaitis explained on HubSpot's 'The Growth
Show'. Instead of overtly selling, Slack's team strives to create a product that makes users so happy they feel like they have to recommend it (or even pay for it.)

"Offering a Freemium plan, like Slack's, is an easy way to get people to give your product or service a try and for you to win them over.

"While they get to experience the benefits of your product without risk or losing anything in the process (psychologically, this is huge), you get their foot in the door and can capture their contact information.

"From there, you can then nurture the contact into a paying customer or even just let the greatness of your product do the talking for you, like Slack.

"Overall, if you can make a user love and depend on your product as a Freemium, they're more likely to pay to get more out of

 $^{8. \ \} https://quicklymoneyonline.com/blog/10-phenomenal-free mium-models-that-are-putting-yours-to-shame.html. A proposed and the proposed$

it, and most importantly, they will take it upon themselves to spread the word to their friends.⁸"

This statement chimes in with Content Square's analysis of the new young generation of internet consumers.

"We've done some research recently looking at Generation Z. The upcoming 18 to 24-year olds group. They're buying based on experience, knowing less about the brand. So, what they're looking for isn't necessarily speed but something that engages with them, that's relevant to them, that's quick and enables them to be more immersed in an experience - whether that's on mobile or on desktop. But the key things are that experience and speed will overcome the brand eventually."

Here's proof that the business world has learnt an online trick from the belief system of the libertarian culture and used it to lure the consumer into the new corporate internet, not only achieving a sale but also still coming away with that all-important consumers' data.

It is a situation that worries Bernard Dupre, the President of the Association Francaise des Utilisateurs de Telecommunications, which informs and defends consumers on information and communication technologies.

"Digital is changing the relation between customer and provider. I think it's a very important point because sometimes you can empower the customer because they can complain on the web quickly and exert some pressure on the provider.

"So, it is claimed that the balance between the customer and provider is in a disruptive situation today but the question is: who is the winner? Because on the other hand of course providers are using all the data and all the tracking information and digital information to know a lot more about you and to push new products. So, it's a situation that's not completely stable.

"I think it is difficult to find a very good balance between the power of the customer and the power of the provider."

Dupre has reason for concern. As Content Square's Keene points out, the new world of the mobile internet and social media is absorbing information on the consumer at a frightening speed.

"The purpose of our business is to enable businesses to understand every aspect of their users' behaviour across their web estate, their mobile apps and websites. If you can understand your customers, you can build amazing experiences like Uber and Apple and other leaders in the market.

"Though it's not just about understanding the user experience. Actually the most powerful part of our product is being able to empower teams across businesses, so suddenly marketers can understand how people are engaging with their content. Is it good content, is it driving the behaviours we want? User experience teams can understand all the user journeys through the site. How did the French behave versus the Germans, for instance? You know the content team can understand how they're engaging and then obviously businesses are making much smarter decisions at a much quicker rate."

Essentially this means that a customer's experience on a site can be fine-tuned - to improve

their experience perhaps - and perhaps also make the chances of a sale or of adoption of the service much more likely. By understanding the consumer's behaviour, the consumer can be influenced by their experience of a site.

The threats generated by instant gratification

As we have seen, this has seen the development of a relatively reckless attitude by the general public to personal data, which when coupled with a cavalier attitude to cyber security has only increased the risks to other consumers and to companies on the internet.

Put quite simply, many people are unwilling to pay to obtain services that they can get for free.

Perhaps the most dangerous manifestation of this is an unwillingness to pay for cyber security products, despite on-going evidence that cyber-crime could currently be described as out of control. This unwillingness to pay for services extends right across the range of digital services available on the web and in the area of computer games, films and TV has also seen the development of a grey market which shows that people are willing to provide information or download material from illegal sites so that they can gain access to expensive computer games titles, films and TV particularly live events such as pop concerts and sporting fixtures.

It is an issue that concerns many involved in the generation of content:

"I think we do need to look at copyright theft. I don't think it's taken seriously enough, I think that people are getting too much access to too much material that has cost an awful lot of money to produce and someone is paying for it and we have to look really closely at that. And if that means

restricting people's access and they can't get it for free any more, then I am afraid that I am on the side of charging for it, preferably only a small charge, but people have to recognise that the content - whether it's in film, music, or newspapers or books - that content has value. Time is money and effort is money and if a lot of time and effort has gone into producing that content, then why should people have it for free?" said Chris Blackhurst, former Editor of UK national newspaper, The Independent, and Business Editor of the London Evening Standard for 10 years."

The grey markets also highlights another significant issue for the European DSM, a market in goods that are not intended to be sold in a particular area.

Goods such as these are known as "grey" products or parallel imports.

According to the International Trademark Association (INTA), these goods are genuine in that they have been manufactured by, or for or under licence from, the brand owner. They are cheap because they are not being sold through official channels and are being brought in from another country.

Expensive goods such as luxury watches and electronics are the most appealing buys, and there is a host of websites dedicated to selling them. Some US websites specialising in watches offer leading brands such as Omega at discounts of up to 50%, by not being authorised by Omega as a dealer.

"If the brand owner has misjudged the size of a market in one country and an official distributor has surplus stock, parallel traders make a handsome profit by selling the surplus to buyers in countries where the goods are not authorised to be sold," INTA says. It adds that in the past 12 months everything from medicines and car parts to tablet computers and lubricants have entered the grey market in this way.

But grey markets have risks. Often manufacturers will not guarantee products bought in this way and they may not provide spare parts and often the products may be counterfeit.

There are also Terms and Conditions traps, as the Finnish police underlined in mid-December 2017. They identified the grey market as one of the main sources for a new crime trend known as subscription traps, otherwise known as 'unsolicited recurring payments'.

According to Detective Sergeant Juuso Tschokkinen from the Finnish National Bureau of Investigation, International Affairs, the criminals advertise a product on an e-tail website for a bargain price, often far lower than the normal market price.

This criminal practice is becoming increasingly popular, said Tschokkinen:

"The offers associated with subscription traps are constantly being made more attractive, with lower prices and seemingly higher quality goods, so more consumers are falling into these traps."

The criminals, like so many other organisations operating on the web, require the buyer to accept a Terms and Conditions agreement, which - as is the case with legitimate companies - the buyer agrees to without reading it, as this has become accepted practice among web users. However, the Terms and Conditions agreement will contain clauses that commit the unwitting buyer to make regular payments for a product instead of the one-off payment that they think that they are making as T and Cs are legally binding.

"Subscription traps are a worldwide issue that could affect anyone who uses the internet. Across Europe, most of us are frequent users of email and social media, which are two of the main channels where fraudsters advertise their products," said Tschokkinen.



"Subscription traps rely on people's good faith. Consumers are used to being able to trust retailers, and tend to only glance at terms and conditions. Subscription traps take advantage of this behaviour.

"There are different types of subscription traps, some of which are easily identifiable as fraudulent and criminal. However, some fraudsters operate in a legal 'grey zone'. An example of this is when a consumer believes that they are making a one-off payment, but the retailer also initiates ongoing, regular payments, which are not communicated clearly to the consumer. A retailer operating in the legal grey zone could include details of the recurring payments in small print in the terms and conditions – where they are available in principle, but in practice, presented in a way that means the customer is unlikely to be aware of them."

As Detective Sergeant Tschokkinen illustrates, moving into the 'grey zone' not only begins to blur your rights. It increasingly draws you into contact with people who may also have a blurred conception of rights. This was discovered by research carried out by the cyber security company AdGuard in mid-December 2017.

According to AdGuard it discovered that four streaming websites had put in place techniques to evade adblocking software like that produced by AdGuard so they could secretly conduct cryptocurrency mining on the computers of people using their services.

The four websites- Openload, Streamango, Rapidvideo, and OnlineVideoConverter, have as many as 992 million visits monthly and according to AdGuard, could be making as much as €275,880 every month from their

concealed cryptocurrency mining.

"Three of the four sites provide media players that are embedded on third-party sites. We doubt that all the owners of these sites are aware that the hidden mining has been built into these players. All four sites place a miner on pages where users spend a large amount of time," said the company.

There are other dangers too, particularly if you buy digital content according to Nick Peart, Marketing Director for the market research company Cloud IQ.

"I think there will always be a black market and there's always going to be the grey market. There's always going to be people trying to get around any restrictions and regulations. I think the consumer needs to be more concerned about the grey market because obviously they're also going to be collecting data.

"If you're signing up to a service, this is actually one of the bigger challenges of consumers perhaps sometimes not really understanding what it is they've given up. Because if you have to sign in to a grey market provider to get access to a piece of content you've given them an email address probably and a password and sadly, too often people use the same email address and the same password on numerous services.

"So, by diving into the unregulated world to get access to one piece of content that you could pay two pounds for, you risk opening yourself up to your username and password falling into the wrong hands and being exploited in a different way."

It is a consistent internet trend that has considerable ramifications, as not only does

it weaken the markets for the digital media that it affects, it also provides organised cyber criminals with user names and password details for individuals and potentially gives them access to an individual's computer. Thus, it is simultaneously increasing the opportunities for organised crime groups to further destabilise trust in the internet by building up databases of addresses that can be used to attack small businesses. It also gives them additional computers to add to the botnets - groups of criminally hijacked computers from all around the world that are networked together by hackers to launch co-ordinated attacks on servers and websites to shut them down9 - since 2005 they have become an essential tool in the cyber criminal's armoury.

Much more importantly, it highlights another trend which often goes unmissed, which is that although legislation such as the General Data Protection Regulations has been seen as a welcome response to the wholesale appropriation of consumer data by businesses, the legislation is also helping develop a grey market in data, as criminals recognised very early on the value of the data economy.

So just as companies now view data as the new oil, so too do the cyber criminals who are now developing an illegal unregulated market in data that they are also prepared to analyse for their customers, using exactly the same software tools that are deployed by the regulated market.

Geo blocking: the controversial content policy of the Digital Single Market

According to Dr Jonathan Reynolds, Academic Director of Oxford University's Institute of Retail Management, the EU's moves towards the

DSM mark a valiant attempt to bring European market principles into the digital era.

It is a particularly controversial issue for the EU. The European Commission has brought forward several policy proposals aiming to restrict geographical restrictions in various ways. The word "geo-blocking" itself may suggest a one-sided view, however. It can also be understood as the execution of an agreement of territorial licensing, which in turn is brought on by consumer demand. For example, a broadcast of a game of cricket is in high-demand in certain parts of Europe, and in very little demand in others. By licensing the rights to the cricket broadcast with different terms in different territories, service can be tailored to local demand, providing it at a very low-cost (or for free) where demand is weak, and charging more where demand is strong. This way cricket fans in Austria can receive the broadcast cheaply. Without this geo-targeted licensing system, the broadcast would be made available at the same price across to all Europeans.

The first policy around this issue is the Portability Regulation, which allows users to bring their content services with them when they visit other member states. The second policy is the Geo-Blocking Regulation, which restricts the possibility to deny access to online services to users from other member states. In this regulation, audio-visual services have been exempted (to be re-visited and evaluated in 2020). The third policy is the suggested extension of the Satellite and Cable-directive of 1994 which gives exceptions from territorial licensing rules to cable and satellite broadcasters who may have difficulty restricting the signal to a specific territory for practical, technical reasons. The proposal

^{9.} https://en.wikipedia.org/wiki/Denial-of-service_attack

would extend the Satellite and Cable-directive to the internet. Critics have pointed to that the internet is global, whereas satellite and cable broadcasts are limited in reach. The European Parliament and Council are against the proposed extension. Negotiations are on-going at the time of writing.

The EU has banned geo-blocking in a bid to push through those basic European Digital Single Market principles as Commissioner Elżbieta Bieńkowska, in charge of Internal Market, Industry, Entrepreneurship and SMEs, has pointed out:

"We are upgrading the EU Single Market to the digital world by giving consumers the same possibility to access the widest range of offers regardless of whether they physically enter a shop in another country or whether they shop online. Next stop: bringing down prices of cross-border parcel delivery, which still discourage people from buying and selling products across the EU."

This is an admirable objective that many would support as it opens up goods and services to consumers via the internet across Europe. Theoretically it allows someone in Germany shopping for French champagne to go direct to the vineyard and someone in Brussels to buy Italian shoes from Florence and someone in Italy to buy insurance from Frankfurt.

But while this may work for some things, according to the digital content industry it does not work for them. They claim that removing geo-blocking on their products risks damaging industries that have already been battered by the disruption of the internet. Worse, it destroys cultural diversity.

This situation is graphically underlined by

US VoD services in Europe

- The number of "promotional spots" available on the ondemand services varied widely between services, due probably both to technical constraints and to the marketing strategy of each service.
- In October 2016, recent films (produced in 2015 or 2016) were allocated on average 93% of all available promotional spots.
- European films were allocated on average 22% of promotional spots, with figures varying from 33% (in France) to 15% (in the United Kingdom). Among promotional spots allocated to European films, the majority were allocated to national films in France and the United Kingdom, whereas the majority was allocated to European nonnational films in Germany, the Netherlands and Belgium.
- The comparison of the share
 of European films among films
 promoted (33%) and of the share
 of promotional spots allocated
 to European films (22%) leads
 to the conclusion that a given
 US film benefits from more
 promotional spots than a given
 European film. In other words,
 promotional spots are primarily
 dedicated to a limited number
 of recent "blockbusters", mainly
 US films.

Source: European Audiovisual Observatory - Origin of films and TV content in VOD catalogues in the EU & Visibility of films on VOD services. research for the European Parliament into the European film industry:

"The fragile balance between cultural and industrial components of the film industry is the source of significant tension between creative and market considerations. The fact that it is a 'prototype' industry – i.e. with fluctuating demand, high fixed production costs and relatively low reproduction costs – accounts for its strong reliance on public funding and the extensive regulation framework that accompanies it.

"In addition, there is a weak relation between the quality of a film and the price of a ticket (which remains stable regardless of production costs or demand). In other words, films need to achieve critical mass to be profitable (so-called 'blockbusters') and to offset the costs of less lucrative productions.

"Risk is however inherent within filmmaking (notably in terms of demand) and for many years, the industry's main focus has been on developing strategies of control. One way of dealing with risk is spreading out fixed costs across larger international markets.¹⁰"

Though the above research was carried out in 2014, the picture for the distribution of content remains constant.

The European film industry in the last two years has seen a sustained though small increase in cinema audience figures, mainly through efforts by the cinema industry to "MORE THAN 50% OF CINEMA-GOERS DISCUSS THEIR EXPERIENCE ON SOCIAL MEDIA PLATFORMS"

Source UNIC 2017

provide an experience for cinema goers, part of the new 'experientalist' culture¹¹.

Innovation is not limited to the various kinds of online digital services, the push to provide an experience at cinemas (see future entertainment systems later on in the report for more details) is currently being seen as an example of innovation on the first and original mode of film-watching.

"The cinema theatre remains the place where value is created around individual film releases. Whereas the average revenue per view on a subscription VOD service, such as Netflix, is around €0.20 the average price for a cinema ticket in the EU is €6.6 – a striking multiple of 33 compared to the latter. Audiences therefore clearly continue to attach great value to the shared experience of seeing a film on the big screen and are ready to reward creativity as well as the investments made into providing state-of-the-art cinematic experiences.¹2"

Such cinematic innovation according to Phil

^{10.} http://www.europarl.europa.eu/RegData/etudes/BRIE/2014/545705/EPRS_BRI(2014)545705_REV1_EN.pdf

^{11.} Experientialism, we are defining as: "The desire to advertise yourself on social media as being seen to be having a good time that is advertised to your peers. Interestingly, the new 'see me' world of the internet, that under-pinned the millennial's change to data profligacy and an abandonment of privacy that in later generations such as 'Generation X and Y' is now undergoing a reverse. Increasingly, younger internet users while still seeking to advertise their lives, are using services such as Snapchat and What's App, which can destroy data after 24 hours if required, to remove embarrassing images and incidents."

^{12.} https://www.unic-cinemas.org/wp-content/uploads/2017/06/UNIC_AR2017_EN_online.pdf

Clapp, of the Brussels-based Union Internationale des Cinemas:

"In the highly dynamic area of data analytics, experts promise a 10–20 per cent increase in admissions if cinemas, who increasingly possess personalised customer insights, and film distributors, who are responsible for the vast amount of marketing efforts around a film release have the shared data in order to make cinema marketing more fine-grained and personalised. Similar transformative impacts could be unleashed in other fields, including for example mobile ticketing, dynamic pricing or brand partnerships with third parties."

This 'experientialist' edge using the new data of the connected consumer is something that the cinemas and the film industry will have to work very hard on: there are a number of forces that are combining against them, because paradoxically the mechanism for the collection of data - the mobile phone - is potentially the European film industry's nemesis due to many of the factors already discussed in this report, the main one being that it is generating a growing market for the consumption of digital content via phone rather than cinema.

And this development again raises many issues for the entire artistic content generation industry including film, music and publishing because of the pressure on it from tech giants like Google¹³ and Amazon to remove copyright and to push down revenue for content producers such as authors¹⁴ and musicians¹⁵.

Commenting for this report, a spokeswoman

for the EC said that the Digital Single Market was simply an attempt to bring the European Single Market into the 21st century. Curiously, though, for many of those interviewed the EU and the Commission are actually out of step both with the evolving use of the internet and with fast-developing technologies such as the Internet of Things and the inter-relationships that are being developed to engage with consumers.

But it is copyright and digital content that appear to be causing the EC most problems at the moment as Nathalie Vandystadt, the EC spokeswoman for the Digital Economy and Society accepts.

Speaking following the recent defeat of the EC's SatCab proposals Vandystadt said: "We would have welcomed a more ambitious result from the European Parliament when it comes to the scope of application of the cross-border regulation.

"We would have expected more because the European Parliament has often been included in the debate and discussion on geo-blocking and the requests for more content to be available cross-border for Europeans. This has been quite intensively debated before, copyright is usually intensively debated and that has been the case for many years."

The vote on the SatCab proposals are intended to allow public service broadcasters to make content available online without licence from the rights-owners. They effectively take away the freedom to make territorial contracts. According to

 $^{13.\} https://www.theguardian.com/technology/2012/may/24/google-million-requests-copyright$

^{14.} https://www.theguardian.com/technology/2016/apr/26/authors-lose-out-again-in-amazon-pay-per-page-scam

 $^{15. \} https://techgage.com/news/google-play-pays-musicians-more-per-listen-than-any-other-streaming-service-but-overall-payouts-remain-embarrassing/k$

critics, rather than operating in the interests of consumer, the EC is simply interested in pushing through an ideological position that is more in line with political ambitions than the interests of the consumer or of Europe.

"Well I think it's a political construct of the European Union. It's one of the high priorities of President Junker to have this digital single market and vice president Ansip, who is sort of overall in charge of it, has made a big play that consumers should be able to access and obtain paid-for content anywhere regardless of where it comes from and regardless of where they live. And I have no problem with that as a as a concept but I think in reality, it doesn't really reflect the reality of either consumers or certainly not the markets," said Angela Mills-Wade Executive Director of the Brussels based European Publishers Council.

For the EC as Vandystadt stated, anything to do with copyright is a contentious issue. This is the nub of many of the issues that are currently affecting the EC and the EU in so many different areas and in focusing on only one facet of the new digital world, the EC is indeed demonstrating how out of step it actually is with the information age.

The principle reason for the EC's disaffection with copyright on digital content would appear to be because it views the practice not only as antithetical to the European market concept but also as a symbolic: individual state copyright agreements stress national distinction rather than subscription to the European Project.

"The EC talks about this hated market segmentation without realising that it was actually a function of practical things like where people's credit cards are linked to where they live. Often the online retailers don't like moving out of that kind of comfort of knowing that the person who is ordering is paying with a card that's linked to their address and all that sort of thing.

"So, there were kind of practical considerations for the retailers and it is true that certain types of content, especially audio-visual content are sold on a market basis, territory by territory," said Mills-Wade.

Other interviewees that we spoke to seemed to disapprove of copyright also on ideological grounds. Professor Mainelli for instance:

"In terms of the exemptions on geo-blocking, my personal view is that I don't like geo-blocking at all for a couple of reasons. One is that geo-blocking isn't necessarily geo, so it's really URL blocking, things of that nature, so that it's about the location of the server - that may not be that well known.

"So, you've got a pretty good idea of where someone is. Yeah well, you've got a pretty good idea but that does sound a wee bit like China. So, geo-blocking to me is another infringement on free speech but that's a political statement. I can easily see a lot of people might take a different point of view.

"So, I find that in short, we've got a confusion between what we're blocking and whether or not that's geographically there or no. We're trying to do that because we believe that the rights to copyright are geographic. We're not really worried about people asserting rights to their authorship. What we're concerned about is the commercial arrangements and the commercial arrangements are trying to

be imposed via an old system without taking into account new technology."

Professor Mainelli is not alone. Paul Crick, a specialist on new media for IBM, shares his reservations. Like Mainelli, Crick sees geo-blocking as a clumsy mechanism and says that copyright is an outdated mechanism in the internet age and long overdue for streamlining.

"I think copyright laws actually hinder the artist and the creative community in, for example, the lengths that they have to go to, the way that there is a refusal to organise and catalogue meta data physically in a way that enables copyright to be asserted correctly and in a timely fashion, and for people to paid promptly for the rights that have been asserted. I've been around that enough to see certainly the problem in the music industry. It's a bit easier in the book industry, it's a bit easier in the film industry," said Crick.

Others contacted, such as Dominic Young, the former head of the Copyright Hub¹⁶ disagreed completely.

"Copyright is not outdated. The idea that people – everyone – should have some say in what happens to the things they create is obviously essential. Those who argue for its abolition are self-serving and have a narrow perspective.

"Copyright is in the Universal Declaration of Human Rights¹⁷. It belongs to all of us, whenever we create anything, and it should be cherished.

"We should also remember that in many

peoples' minds the word "copyright" is confused with patents and sometimes trademarks. People talk about "copyrighting" a word or an idea, neither of which is possible. Patents are a very restrictive right, which arguably do restrict exploitation of ideas even when independently arrived at. So, they're controversial, but also restricted, expensive to obtain and subject to examination and approval.

"Trademarks are also examined and subject to limits. You can't just trademark words willy-nilly."

"Copyright is different but often people don't understand this. It isn't a tool of corporate repression. We all have it. It doesn't restrict ideas, it allows inspiration but restricts appropriation. It's generally pretty well balanced in everyone's interests – at least until the internet was allowed to behave as if it didn't exist, which has unbalanced everything.

Indeed, for Young the internet, the Digital Single Market and the lack of rights given to content on the internet sit at the heart of a content debate which is central not only to the development of the DSM but also to the future development of the consumer, whether it be ordering online, or being properly informed and immune to fake news.

"The issue isn't copyright – it's the way copyright works. It needs to work for every creator, whether commercial or not, whether professional or not. All it says is they get to decide what happens to their work. As people have observed, it turns out that when you turn back to first principles and act as

^{16.} https://vimeo.com/111096150

^{17.} https://vimeo.com/133431532

if copyright doesn't exist, bad things happen and aspects of copyright start to emerge as the solutions. Sure, there are people who resent and even fear "big copyright" companies – perhaps because of a perception of copyright as fundamentally more restrictive and controlling than it is – but copyright is fundamentally an empowering and enabling right for everyone. Getting rid of it only plays into the hands of the mega platforms who are already largely – but not entirely – above copyright law thanks to initiatives such as Safe Harbour," said Young.

It is no surprise then that for the politicians seeking to establish the DSM, copyright is a significant issue according to Claude Moraes, Chair of the European Parliament's Civil Liberties, Justice and Home Affairs Committee.

"These are very tough, very emotive issues and came up in the copyright directive. It's a highly contentious issue as to how we proceed with these points. What we ended up with clarifies the measures to ensure a kind of enforcement of licensing arrangements which wouldn't include general monitoring obligations for internet companies but would ensure that users would have access to a court, or another competent authority to react to potential unlawful actions against their online content.

"This area of pluralism is one that when you start to make rules and legislate on it, it becomes a very, very, tough area in my view. I think what we've got to do is ensure that you don't stifle entrepreneurship, inventiveness, or investment in this area. But you do protect artists and innovators and people who are out there that rely on their innovation for their income. This is

why the copyright directive was the most controversial directive in the time that I've been a legislator here in the union."

For Michael Gubbins chair of Ffilm, the film agency for Wales, a regular speaker on audience-centred creative and business strategy in the creative industries the problem for the EU is;

"that the only way that the film industry can really work in the countries rather than regions is by the sale of rights, of national rights. So I make a film in the UK but I sell the rights for Germany, I sell the rights for Slovenia, I sell the rights for wherever. I get advances on those sales that allow me to fund my production.

"That is the business model for European film. So once you get rid of geo-blocking you simply don't have that model any more. You don't have that pre-sale territorial funding model.

"What happens is the argument in the film industry - and it's an argument that the European Parliament has been backing recently with a vote against stopping geoblocking - is your choices are simple: either consumers aren't going to get films because of geo-blocking or they're not going to get films because they were never made in the first place."

Gubbins extends this interesting argument by pointing out that the interests of the individual consumer in this instance work against the overall consumers' interest: the consumer wants cultural content but removing geo-blocking will simply mean that film and TV content will not get made because the industry's current business model is destroyed.

"The reality is that we are we are changing the way that we consume content. The way we think about content is complex.

"We are both more local and more global. That's one of the odd things and I think that tension is reflected in a whole lot of political changes all around us. I think that's what you're pointing to, which is very important. You can make an argument for not messing around with copyright too much right now. You can make that strong argument and still believe, as I do, that film has some pretty serious things to think about in terms of the nature of the art form itself.

"So maybe we need to be thinking about making that content more available on different kinds of platforms. Maybe the nature of the content changes. Maybe there is more work that is for the cinema but at the same time is spun off, so that it has a virtual reality element or it has other forms of intellectual property around it. There's lots of discussion and debate going on about how you can make a more secure economic base for film.

"But that doesn't necessarily mean that you have to go with every change to copyright as if everything that the consumer wants must be given to them right now, when we all know that as consumers we want everything without consequences. It's only when it's gone that we realise just what those consequences were," said Gubbins, whose points were recently backed by Charles Rivkin, the chairman and CEO of the US Motion Picture Association of America.

The MPAA chairman and CEO praised the German Producers Alliance for their leadership on important industry issues, including the Digital Single Market in Europe.

Speaking at the Berlinale, the 68th Berlin International Film Festival, Charles Rivkin praised the German Producers Alliance for its stance on, among other things, the Digital Single Market:

"As the European Commission considered the Digital Single Market, the leadership of European producers, creators, and artists is making the difference in our advocacy. Together, the sector continues to remind policy makers that weakening copyright and contractual freedom will have a devastating effect on our industry."

The former Independent editor Chris Blackhurst, who now works for the Australian political strategist Sir Lynton Crosby, went even further. He warned that film and media as a whole were not only essential to the member states of the EU but that each state cherished its national identity and championed not only their unique cultural institutions, such as media and film but also the food and customs that define them.

"Every country is different. You have to have media that's in the local language addressing local people in a way that they understand, talking to them about things that concern them.

If you move away from that then you're heading towards a rather corporatist uncaring approach. I think the danger of that for the EU governments is that that harbours a revolt. People will rebel against that. They want to feel involved and they want to feel engaged and in the digital age that sense of empowerment and entitlement to information to what's going on is more marked than ever," said Blackhurst.

The discussions over copyright and consumer data use now sit at the heart of the development of the DSM and indeed of the digital in Europe. As we will see from the following sections, the future development of Augmented Reality entertainment and information services will be dependent on the effective, protected and permitted use of personal data.

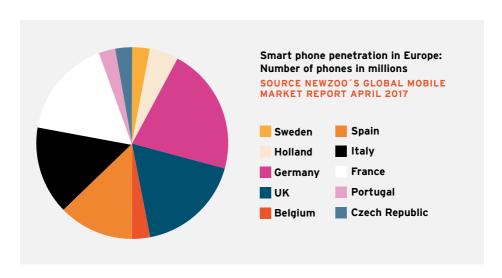
It is a development that will see the merging of what have hitherto been seen as a number of unrelated markets and sectors. Just as the alarm clock, the music player, the video camera, the television, the radio, the camera and the road atlas have all become amalgamated in the mobile phone, so too will many different industries and government services also become welded into the universal communicator. As a result, it will become essential for the consumer to be also provided with highly reliable sources of trusted information.

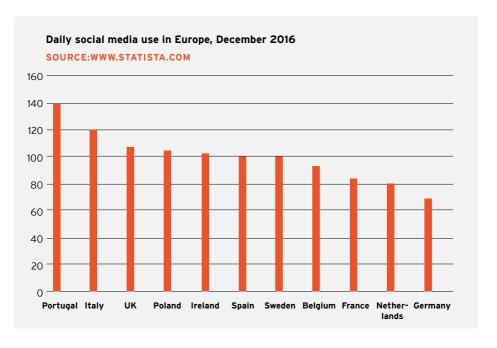
The advent of the smart phone, social media and the always on Only a year after Szanter and his co-founder sold their IwIw business in 2006 (see above),

Apple launched the iPhone. Three years earlier, Mark Zuckerberg had emulated IwIw and launched Facebook. Both events, according to our interviewees, were central to the development of the digital economy because it was this new-found ability to consult the internet anywhere that made the concept of the digital consumer obsolete because of our constant interactions with our social media.

The reason, according to Dr Jonathan Reynolds of Oxford University's Institute of Retail Management, is that the ubiquity of the smart phone and WiFi mean that we are on the internet virtually all of the time, which has led to a blurring of the lines between the consumer and the digital consumer. Due to our adoption of the internet, Reynolds says, we now use the internet in everything we do including buying decisions.

"I think that the digital consumer now is actually really the consumer. They haven't suddenly become less than corporeal and therefore what we're really saying is that this is a consumer that has access to





resources that were otherwise not available to them before. Particularly in relation to information gathering for comparisons of the quality of products and services, they have the opportunity to complete most of the buying process online without necessarily going to a physical store or a branch of a retailer. They have access to new kinds of services from their smartphones and I'm thinking particularly here about software platforms and so on which wouldn't otherwise have been available. But they haven't suddenly "become digital". They've simply been given access to new tools and techniques for acquiring goods and services."

The pervasiveness of the digital is underlined by Jeremy Silver of the London Digital Catapult:

"Well I think these days we're all digital consumers and of course digital means many

different things to different people.

"On one level a digital consumer may be anyone who uses a smartphone. It may be anyone who watches television programmes through streaming video-on-demand services. A digital consumer might be actually a business that takes advantage of digital technologies to run their business."

Essentially this means that the consumer is now always on, always in a relationship with the internet, while being physically in the High Street.

That point is echoed by Cameron Worth of Sharp End, an agency which claims to be the first organisation to project brands using Internet of Things technology and data.

"I guess the digital consumer has evolved slightly into what we call the connected consumer. If you look at guys like Keith Weed who's the CMO of Unilever, he talks more about the connected consumer than the digital consumer. And when we talk about the connected consumer at the Sharp End, we really think about consumers who are connected either to brands or their friends or different products, different places, in different services via a broad spectrum of connectivity.

"So, it could be via your smartphone and communicating with people and brands and social media, It could be on your jawbone device just registering a movement you've made, it could be your connected home hub, it could be your Amazon Echo ordering your products for you. It could even just be by being near connected appliances in your smart home. So, there's just a plethora of definitions around the connected consumer."

As a result, according to the Lovie Awards' Gianfranco Chicco, we now flick in out of the digital world all of the time.

"Well you know I think that we're at a moment where digital and physical are starting to blur. And by physical - you know, often you hear people talking about real life but I think our digital life is very real. I think that the concept of the digital consumer is starting to disappear. Until recently from a company perspective a digital consumer was whoever was buying stuff from the company online.

"People are jumping between physical and digital every other second. You might walk into the Nike store to check out some trainers because you want to touch them, and see them, and try them on, and then you buy the thing on your phone, because you know what you want and you can get a better deal somewhere else."

Quite how much we move between the physical and the digital can be gauged by a recent survey in the UK which found that on average people check their smart phone 28 times a day, some 10,000 times a year. The daily figures for social media use range from over two hours a day in Portugal to just over an hour a day in Germany.

Another factor that is driving data use is the 'selfie' on social media, and the new trend of 'experientialism,' sharing the fact that someone is actually at an event and so therefore having a good time.

The push towards this 'experientialist self-advertising' has seen I-Pads banned from Manchester United football stadium in the UK and demonstrations from PSV Eindhoven fans against the introduction of Wi-Fi at their ground. Placards with crosses running through the Wi-Fi signal were held up before one match, because many fans believe support has been lessened by distracted fans looking at their phones instead of the match.

The practice has also come under attack from musicians such as Guns N'Roses, Adele, Alicia Keys, and Kate Bush who have joined a long line of singers demanding that their fans discontinue the practice of taking or filming selfies. The reasons given range from infringement of copyright, to detachment from the event, or creating an artificial barrier between the performer and the audience.

This marriage of social media and the mobile phone has accelerated the digital consumption of the European consumer and served to inextricably weld them into the in-and-out connected world of the internet to such an extent that one type of data consumption fuels another.

So, for example, by being online in social

media, a consumer may be alerted to a fashion trend and decide to buy a product. This may lead to a search for that product, and a conversation with a friend. This may be followed by searches for reviews and further discussion. Both activities will be monitored and will lead to targeted advertising.

Thus, the consumer is in effect routinely consuming a blend of digital data as part of their daily life and as research and events such as Cyber Monday show, the main use of the internet in e-commerce for the consumer is to buy physical products.

According to research from Postnord¹⁸ because of the strong tradition of buying footwear and clothing by mail order, consumers have relatively seamlessly adapted to buying those products online and made it the most popular category. The second most popular category is home electronics and the next is books. The only exception to this trend is Italy, where home electronics top the list.

The new entertainment systems of the future

Already a number of technological developments are being explored by the home entertainment industry that range from attempts at home 3D technology, virtual reality, home stadia experiences and collaborative friend engagement systems.

Work on these technologies has been going on since the start of the century. Often it is actually supported by research grants from the EU.

In 2000, the UK telecommunications company BT announced it was working on a technology at its Martlesham Heath research laboratory which was intended to convey the sensation of actually being at a sporting event

or a theatre. While the technology may have been shelved, a number of other initiatives have been launched ranging from Livelike, Fanwide and Rabbit, that all seek to allow groups of friends to remotely attend events together, either in VR or in a chat room experience.

Experiments with similar technologies are now being actively run by major football clubs in the UK, Italy and Spain.

Manchester United in the UK, for example, boasts a world-wide following of 659m followers, and has engaged HCL, an Indian company to exploit that potential using technology.

It is a potential that has been recognised by Ffilm's chair Gubbins: "The argument now in a digital age is that you have a changed relationship between the audience and the content because the audience is now much more active, in the sense that the audience now uses the internet in all sorts of new and different ways. We the audience expect to have our entertainment served to us when and where we want.

"So, we need to re-evaluate that relationship to audiences. There's a whole lot of ways of doing that and there's a whole lot of extra data to allow us to know who those audiences are."

Already work has begun among the technology companies on Augmented Reality systems, Virtual Reality and 3D content and improved sound and screen systems that are intended to boost the viewing and playing experience for those using tablets and mobile phones as well as home entertainment systems.

These moves, when associated with the home

stadia experience that are mentioned above, will increase the pressure on the traditional cinema industry. Though at the moment there are some encouraging signs that traditional cinema is more than holding its own. Cinemas are starting to roll-out 'feelie' technology similar to that predicted in George Orwell's dystopian novel '1984', in which Orwell imagined that cinema-goers would be able to be given touch sensations to augment the film they were watching.

The technology has been dubbed 4D¹⁹ cinema and already in cinemas seats that move and pitch are being installed and some cinemas are experimenting with the use of moisture to convey sensations such as sea spray, fog and rain.

Other developments include the use of smell to add to the overall experience of cinema-going and as Gubbins points out above there are other techniques to actually use and capitalise on the presence of the audience to enhance the experience of viewing.

This could be done by better understanding who is in the audience and using that knowledge to group people in different ways and engaging individuals in the audience in the film experience to try to further draw people into what is going on in front of them. It is

not inconceivable for instance that in future people will go to see films about the sea in swimming pools enhanced for a viewing and feeling experience.

Further developments have seen a fusion between the traditional TV drama industry and the theatre industry - something that is now very highly developed in the UK where the National Theatre company is now filming its productions and broadcasting them to cinemas around the UK. It has become particularly successful as it allows both the National Theatre and the Royal Shakespeare Company to meet commitments to tour by deepening its reach, helps the theatres bolster the state schools' National Curriculum by putting on plays and drama that are on the syllabus and lets audiences see those productions without having to pay large travel and accommodation bills. Finally, it also provides extra income and develops new skills among those filming and directing the productions and calls for different techniques in set creation.

All these developments underline a trend towards generalised content actually being specifically developed for a localised setting. This content develops a specific geographical culture experience that will use a combination of personal information, on identity, personal preference, current health status and the IoT to produce deeper entertainment experiences.

The entertainment industry will also be seeking to roll out these experiences in a miniaturised form to those viewing films and playing games on mobile devices. When this is united with effective VR and AR technology and the very powerful headphone systems now available, very effective mobile and home experiences will also be possible. Experiments are already going on under Professor Adrian



Cheok at London's City University into the development of smell and taste technology for mobile devices.

This experience will be viewed by the technology industry as the most important area, as by developing convincing, personal and domestic entertainment experiences they can also develop the same technology for advertising. The technology industry will then be able to unite that experience with personal information and the developing IoT capacity to produce data flows be able to develop highly targeted consumer information.

It is this latter development which is the most problematic for the European Commission and its notion of the European Digital Single Market, because this converged, connected consumer future is dependent on a free flow of data that can be creatively interpreted both by the technology industry and the internet businesses seeking to sell to consumers in ways that exploit IoT data and entertainment data. This issue once again highlights the conflict between privacy and consumer experience and the challenge that European legislators have to overcome: improving the consumers' experience, protecting their privacy and the developing new digital businesses for the 21st century.

It is a challenge that one critic feels that the EU has not yet grasped, because of its widely-admired General Data Protection Regulation legislation.

"I think there are a lot of misconceptions among European politicians about what digital is, to be honest," said Professor Steven Van Bellegham, an award-winning Danish author and one of the world's leading experts in customer engagement in the digital world. "I think if you put it bluntly that China

missed the industrial revolution and Europe missed the digital evolution and because of that we're getting colonised by the Chinese and by the Americans at this moment and if you look at the decisions that Europe is making we're actually making it worse.

"I think implementing GDPR is probably the worst decision in the digital history of this part of the world because you're actually tying the hands of your companies behind their backs.

"There is no clear benefit for the user and it's rolling out the red carpet for the Amazons and the Alibabas of this world. And I think the role that European politicians have chosen to take is the one of creating laws and punishing companies from other continents but not helping our companies here to grow or to innovate and to capture that digital wave. So, I think the lack of understanding of what is going on is a deep issue for Europe to move forward."

As Professor Van Bellegham points out, the intelligent use of data will be the key in the information age. Understanding how the new world of AI, the IoT and the new connected consumer works and how the technology industry is seeking to develop those models will be crucial not only to the development of Europe but also to the development of its economy. To ensure that Europe capitalises on its proven track record in science, key technology areas must be identified and exploited. For example, seamless, secure micro-payment systems, secure identity, new resilient internet infrastructure routing systems to secure ID online and remove anonymity from criminals, and data exchange services that allow consumers to share in the value of their data are required.

Research over the last two years by Future Intelligence has seen a growing disenchantment with large US internet companies over data use. Currently a number of new social media start-ups are in development that aim to give their members a greater share of the revenue from their data.

At the same time a huge number of startups in Europe, the US and the UK are now concentrating on the development of micro-payment systems - most of which are using blockchain technology.

Many of the people interviewed by Future Intelligence for this report view micropayment technology as essential to the next evolution of the online economy. Søren Fog of the Swiss-based Crypto Valley Association, for example, and Professor David Birch, whose latest book, 'Before Babylon, Beyond Bitcoin: From Money that We Understand to Money that Understands Us' was published in June last year share this view.

Meanwhile both Claude Moraes MEP and Chris Blackhurst former newspaper editor see great promise in the technology.

For Blackhurst it could represent the salvation of the battered news industry by creating a system similar to Spotify, based on micropayment technology.

"I think micro-payments should be explored. We need to find a way of looking at that because I'm not sure if the newspaper subscription model actually works. The point about the internet which became very apparent to people as it progressed was that you are only one click away from something else. People resist the idea of paying for a subscription for something that they might only read a small part of, and I think that the

Spotify, Apple Music, that type of model where a small payment is made from an umbrella subscription, to me that seems better.

"The current model is to pay quite a substantial amount of money to one news organisation when you may find yourself wanting to use another to access information you want and you start to resent the amount that you are paying," said Blackhurst who now works as a director for Crosby, Textor, Fullbrook, the company run by Sir Lynton Crosby, the Conservative Party election strategist who advised UK Prime Minister Theresa May on her recent election success.

In December 2017, Dominic Young, the former head of CopyrightHub and a former marketing executive for News International launched Agate – a micropayment hub he claims will allow the sort of micropayments that may open up a whole raft of new business opportunities for companies.

The outdated notion of the digital consumer

As we have seen, several of those interviewed for this report have taken issue with the concept of the digital consumer, particularly given our modern relationship with data. For them being a modern consumer is to simply use the web.

Professor Van Bellegham again: "The consumer is using digital and offline channels like it's all the same. What I see is that, in general, expectations of consumers are increasing because of the fact that the tech giants are really good at fulfilling some of those crucial customer needs.

"If you look at what technology companies are really good at, then it's faster than real time customer service. They try to anticipate, they are very personalised and they have an effortless user interface and when there's an issue they always try to solve it seamlessly and basically everything that consumers have dreamt about for years is now available in those tech giants. If you look at what Amazon is doing, if you look at what WeChat is doing - those are typical examples that fulfil those customer needs and 80 percent of the time that we look at the screens of our mobile phone we are playing with these tech giants.

"So, it doesn't matter any more which industry you are in. The expectations are set by the tech giants. I think this is building expectations and this is one of the paradoxes for the business world today. It's becoming more and more complex to fulfil those needs for businesses. But on the other hand, for consumers it's getting easier and more proactive and better organised than ever before. And I think because it's such a paradox what you see is that you're starting to have a gap between what the technology giant delivers and what a company without a digital DNA delivers. And I think that is the biggest challenge to deal with, that increasing expectation level of consumers," said Professor Van Bellegham, whose latest book, 'Customers, the Day after Tomorrow', was published in January 2018, pointing out that instant consumer campaigns using technology such as Twitter had the power to quickly force policy changes from companies - a point also underlined by Bernard Dupre of AFUTT.

Professor Van Bellegham's view of the obsolescence of the digital consumer was supported by Daniel Castro, the vice president of the Washington-based Information Technology

and Innovation Foundation free-market think tank in the US.

"Well, I think the digital consumer is just increasingly the consumer. Basically, everyone has some kind of digital footprint and interacts with something digitally - whether it is their mobile phone to make purchases, or to consume content, or to use electronic services like WhatsApp for messaging or even to just use digital services at the airport or buying gas for the car.

There's almost no part of our average consumer life that doesn't involve a digital component and that's the magic of the internet, that's the magic of what's happened."

Oxford University's Dr Reynolds also stressed:

"I think the first thing to say is that the digital consumer is actually a consumer. What we're really saying is that this is a consumer who now has access to resources that were otherwise not available to them.

"Particularly in relation to information gathering, comparisons of the quality of products and services and the opportunity to complete most of the buying process online without necessarily going to a physical store or a branch of a retailer, the consumer, for example, has access to new kinds of services and I'm thinking particularly here about software platforms and so on which wouldn't otherwise have been available. But they (the consumers) haven't suddenly become digital. They've simply been given, if you like, access to new tools and techniques for acquiring goods and services."

However, it should be mentioned that this new reality also presents challenges of equali-

ty for those who cannot afford the technology and those who are not comfortable with it, such as poor and elderly people. If the connected consumer is the new reality, then it is something that has to be available to all.

Those we interviewed also pointed out the necessity of politicians staying abreast of technology and stressed that with the Internet of Things, for example, that the technology had already moved ahead and that a whole new world of information and privacy issues was opening up as companies sought to garner even more information from us, so that our online 'experience' can be enhanced.

According to Stephen Metcalfe, MP for South Basildon and East Thurrock, chairman of the All-Party Parliamentary Committee on Artificial Intelligence and one of the members of the UK Parliamentary Select Committee on Science and Technology, the lack of technological understanding among politicians it is an area of particular concern for UK parliamentarians.

"One of the recommendations from the Science and Technology Select Committee was that we should ask for scientists from the Alan Turing Centre to potentially fill that gap, so that we can start to think how we might regulate on these issues."

For Daniel Castro, the issue may be age based. He suggests that surrounding policy makers with younger people who are more familiar with technology for the time being may be the answer.

"I think there's a digital literacy problem that exists around policy makers. The good news is, most of them are surrounded by staff who are so-called digital natives, who grew up in the past twenty years." The hope that Daniel Castro expressed is not shared by Robert Belgrave, CEO of the cloud and IoT consultancy Wirehive, who is also a member of the British Interactive Media Association BIMA which champions the digital industry in the UK.

"I have friends who work in advisory capacities to Number 10 and for some peers and there's no-one in those buildings who seems to truly understand the problems of IoT and AI at the higher levels and I find that deeply concerning.

"We have a special interest group at BIMA, a sort of sub-council that is dedicated to AI with some of the leading minds in the AI field and you should hear the anger and bewilderment that they have expressed about the fact that the AI committee in Government doesn't have any AI experts on it. How can any of these people be drafting these rules without any kind of understanding of what they are trying to legislate about?"

It is a situation that currently plays into the hands of the technology industry as often many of the technology companies have tried to evade any attempts at regulation by attempting to scare politicians, with tales of job losses and of innovation being stifled to the detriment of the country that the politicians represent. The politicians are also deterred by the sheer size of multi-national data companies like Google and Facebook and what they see as the impossibility of imposing workable rules upon them.

The new consumer: part IoT, part Internet of Me

For those we interviewed many of them working with the IoT were adamant that this



was now the cutting edge of the new technologically-enabled consumer.

Data collected about the domestic products that people have in their homes ranging from toasters, to toys, to tampons will be sending information back to the manufacturers about individual patterns of consumption, usage and behaviour.

"So, I've just bought some washing powder from a supermarket because of the following process. I was initially drawn to that washing powder because I'd passed a piece of responsive advertising signage which responded to me in a personalised manner, knew that I had bought this product before and gave me a little reward as an inducement," said Cameron Worth of The Sharp End.

"I buy the product, I take it home I put it in my smart shelf, my shelf is starting to monitor the weight of that product, and the washing machine knows that I have this washing powder. The washing machine tells me how much soap it is using, and as I start to run low the shelf system takes a weight reading and sends me a notification saying: 'Would you like to add this to your next Amazon Pantry basket?'.

"It might even tell me about another offer, I click yes and it's ordered and delivered within the next hour using Amazon Prime. So that's the kind of ecosystem that we're trying to create now, which is about frictionless services that don't really require the consumer to do that much. All we need to do is buy the product that first time and it's being very useful and very utility-focused and developing new kinds of brand value."

It's a world that research shows that what people crave is the world of the high street but with the immediacy of the internet. They want to be able to pay for a transaction in a very similar way to the way that they pay for things in a shop, they want the object that they have bought as quickly as possible but they do not want to queue or endlessly trail around shops trying to find something cheaper elsewhere.

"If you look at the High Street - obviously aspects of that are going to be brought online because it's instinctive. And the online consumer is still wanting a similar experience to that of going into a shop," said Content Square's Keene.

Though the modern consumer using the internet also wants a personalised experience, and this is an irony, given that the only way that they can achieve this is to share their data in the ways that are making lawmakers in the EU uncomfortable.

"So, I think you have to balance what's happened in the corporate political perspective with the fact that actually a digital consumer really does want the kind of shop experience online and that's what they want because they have less time these days," notes Keene.

This consumer trend towards the immediacy of the 'High Street' and the new exploding world of IoT is one of the few areas of hope for the DSM because it offers possibilities for the development of new technologies that have not yet reached their full internet potential.

Blockchain, micropayments and Initial Coin Offerings

One ray of hope for the EU is the potential of blockchain, micropayments and other new tech that offers alternative ways to assert copyright in the digital age, such as systems like Bruce Pon's Ascribe and the Copytrack token system. Products like these could provide a way to defend producers and authors which would transcend geo-blocking, because wherever the consumer consumes the TV show, its country of origin and date and creator go with it and send the message back to the server that it has been consumed/played/ enjoyed, and therefore a micropayment is due. The technology could be developed with GPS in order to show that the film was playing in a small flat, or a large hall in a community centre - in which case one can deduce that a number of people were watching. So that information would also become relevant for pricing and licensing. If the content producers would just take this leap, then all the clunky transitional arrangements between the old world and the digital future may be ameliorated. "Don't mess with Mr In-Between", as the old song says! In Africa and Asia the mobile phone has seamlessly replaced the shop, the concert and the cinema with no intermediary halfway houses.

For Dominic Young, while blockchain offers some options it is still not a complete solution:

"Blockchain is, in relation to copyright, a form of distributed database. It can store and verify information about copyright and transactions. Which makes it useful. But it's not a panacea, it's just a useful technology which also has some serious limits. I have been reading stories about how each Bitcoin transaction uses enough energy to heat a house for a month (or something similar).

Obviously there are more energy-efficient ways of running a distributed ledger but the number of interactions involving content are orders of magnitude higher than Bitcoin transactions. If blockchains are useful they won't be universally useful and there are lots of other ways of storing and accessing this sort of data which can be made interoperable," said Young who stated that micropayments offer a realistic option for the issues of the content industry. An efficient and workable micropayment system would also answer some of the problems of instant payment for other products raised by Keene and Peart.

"User payments are obviously essential for creative media to have a future. The trick to payments - for anything - is to make the product desirable enough for that desire to exceed the cost of getting it. Cost is a function of both price and process - even if something is cheap, if it's too much hassle people won't buy it. Media consumption is a frequent, momentary and relatively small desire, so the cost has to be capable of being low enough not to be overwhelmed. So-called micropayments are necessary. But the process has to be simple as well. However cheap it is, even having to approve each payment will be enough to put lots of people off. Micropayments restore the incentive to invest in creative products because their popularity will lead directly to a known revenue stream. Creative products are the new Fast-Moving Consumer Goods products of the internet...

The instant and the lack of consumer awareness

In the new world of the consumer as we have mentioned earlier in the report everything is about convenience.

But it is a world where the consumer is not completely aware of what is happening, where the connected consumer will be communicating with websites from devices that could be worn on or even embedded inside their bodies.

As we have seen from the comments above from The Sharp End's Cameron Worth and Content Square's Keene, in the world of the IoT, the mobile phone and ubiquitous content the consumer will soon be swamped by devices that seek information on how they use IoT devices and their behaviour and aiming to influence that behaviour.

As Bernard Dupre of the Association Francaise des Utilisateurs de Telecommunications has pointed out ,the consumer is now at the centre of a battle for the control of their decision-making.

It is a situation that is profoundly alarming Sir Nigel Shadbolt, the Principal of Jesus College, Oxford, who along with Sir Tim Berners-Lee co-founded the Open Data Institute.

"We are now in a situation where there are various hubs connected into our broadband. There are various devices being connected to those hubs to get out to the external world of the internet and there are virtually no standards or controls over what information may be forwarded or on what protections and stipulations you might be able to place on it.

"We need to re-empower individuals about where their information is going, how it

might be forwarded on and raise awareness of just what is being collected for example from their domestic applicances, from their home context. So I think this just throws into very sharp relief a more general set of challenges around privacy and ethical guidelines. And that's why we're both trying to understand it and develop techniques and approaches to put people back in control."

Sir Nigel Shadbolt is not alone. The US Government has now warned against the risks from consumer data generated by the new connected world and from the range of connected devices now able to develop cyber security threats²⁰, backing up Sir Tim Berners-Lee's concerns about botnets.

Conclusion

As we have seen, the European consumers are rapidly evolving to embrace the 'always-on' electronic world and their behaviour is having profound consequences for the companies that seek to provide them with goods and services.

This evolution is leading to conflicts which those interviewed clearly point out. Some of them are well-known and others are new.

The chief conflict is between the need for privacy and the need to develop new, more responsive technology to serve the consumer better - as pointed out by Peart, Worth, Belgrave and Keene, who all work in the new world of the Internet of Things and the Cloud.

The technology industry is now avid for data on individuals because a technology arms race is developing that is being exploited by both sides. Consumers are using technology to make buying decisions based on price and value, combining real shopping streets with virtual experiences and making buying decisions at home, on the move, at work, and in the street.

This new world of the connected consumer is seeing an attempt by digital agencies to develop new methods of collecting data on consumers in an attempt to discover what they want and to supply that to them.

These services will also develop and spawn information services that will offer information to Small and Medium Sized Enterprises (SMEs) as well as large companies. The rapid 'trickle up' of data from the consumers – the new oil – will therefore see a 'trickle down' of data about the consumer to companies that will become ever more responsive to consumer demand as a result.

This will see a combination of Artificial Intelligence and Internet of Things technology using the Cloud in an attempt to understand consumer behaviour and to meet demand even before the consumer is aware that a demand exists.

For instance, according to Content Square's Keene, Uber is working on predictive AI technology that will mean that a taxi will be outside waiting for you without you having to order it. It will know what you want and seek to ensure that due to your experience you will substitute 'Uber' for the thought 'taxi' – based upon the service that the consumer is receiving.

This process is set out by Cameron Worth on page 30.

As Daniel Castro at the US-based free-market

think tank Information Technology and Innovation Forum points out, the development of such systems, which all commentators see as the future, demands a free flow of information.

However, any controls on this free flow of information is according to both Castro and Professor Van Bellegham a block to the development of these new businesses.

As Van Bellegham says:

"I think implementing GDPR is probably the worst decision in the digital history of this part of the world because you're actually tying the hands of your companies behind their backs."

It is a controversial opinion. For over two years Future Intelligence has carried out research into GDPR for its websites and for its monthly radio programme and the universal response from the experts that we have interviewed during that time is that GDPR is widely admired, both in the US and across Europe.

What is even more revealing is that a number of leading organisations such as the global accountancy firm PwC for example see GDPR as a huge opportunity to develop an entirely new professional sector – the information worker – who will be responsible for not only cleaning data but also for extracting value from it for the business that employs them. They can see that this will mean the direct and indirect creation of value either directly for the business, or through the sale of data to other organisations, so that it can be combined to release more value. Obviously due to the GDPR's purpose this will mean that consumers and those on whom data is held

will have to have granted their permission. Such permissions will be sought and granted because the customer will have been offered a share in the profits generated by their data.

It is the development of the control, use and the ownership of this data that will be the key issue over the next 10 years if confidence is to be maintained in the system. But for this to happen there has to be responsibility on both sides for the mutual respect of data – for example copyright infringement is simply data theft. In the same way that consumers become irate at the loss of their ID – their personal records, then they should also become aware that intellectual assets define businesses – as Professor Birch points out with his book title 'Identity is the New Money'.

As this process evolves, according to those interviewed, any distinction between a digital consumer and a consumer will vanish.

Any distinctions that do occur are on the basis of geography and product type.

Buying milk from Poland makes no sense for a consumer in France, though buying milk from a nearby supermarket is sensible and increasingly such decisions will be made by automated digital assistants engaged in interrogating devices in the home, such as the fabled internet-enabled fridge.

All demand is local, whether it is for cars or crayons: demand is local, whether online or offline.

What is evident is that the commercialisation of the internet is based on the ability to detect and determine demand – what is clear is that a battle is now going on to influence that demand by understanding behaviour.

As Bernard Dupre pointed out, a technology war is starting, and the technology companies are offering to arm both sides.

As we have heard over and over again the consumer's aim as seen on the internet particularly where content is concerned up until now was to pay as little as possible and to consume as much as possible.

This has led to particular issues for the media industry. The ability for digital media to replicate anything that is made digitally has had huge implications for job prospects and for the future of the film, TV, music, newspaper and book industry.

This process, ironically, does not have the consumer's interests at heart as undermining the viability of those industries not only impoverishes people's lives it also wipes out material that delivers important moral and ethical messages to society.

As Michael Gubbins of FFilm said:

"I think right at the heart of this is the fight between consumers and their rights to have things and industries and their right to actually make money."

This process of disruption will continue. The pain that has been felt by the media industry is already extending to the banking industry via blockchain and the High Street retail industry which is having to respond to connected consumer trends. This disruption will shortly be seen in the automotive sector as cars become both robotic and electric. The impact of this new world is also now being seen in the manufacturing sector which increasingly will respond more quickly to the changes in data that reflect consumer demand.

This rapidly changing world is creating an associated unease among consumers who do not understand the forces that their behaviour is unleashing. The result of this is fear for jobs and fear for the future. One of the factors identified in the UK was that many of those voting for Brexit mistakenly identified the free movement of labour rather than the introduction of AI and robotics as the chief threat to their employment. One of the final paradoxes of the report is that Brexit was driven by a belief in the UK that the UK's national identity was under threat, a threat to national identity based on immigration that is being seen across Europe at the same time that ongoing trends towards self-determination are evident - as underlined in Catalonia, Scotland and Wales to mention a few examples. All ethnic groupings that demonstrate at the same time a desire to be part of Europe, while at the same time expressing a strong cultural identity, a trend that the EU must reflect if it is to succeed.

Commenting on Brexit, Chris Blackhurst, the former UK national newspaper editor said:

"I think the prime reason for Brexit, which had been brewing for a long time in the UK, was the erosion of national identity, and the feeling of subjugation to Brussels that people felt."

A political value to national identity that was underlined by a number of those contributing to this report. Yet this is another of the conflicts generated by consumers and consumer demand, as Gubbins pointed out: consumers want local content to exist but they want to consume it anywhere in the world. EU policy-makers should embrace diversity and universality – is this a Mission: Impossible?

About the author

Peter Warren is an award-winning newspaper and TV journalist acknowledged as an expert on technology and computer and internet crime. He wrote the first articles highlighting the potential for the internet to be abused by paedophiles in 1989 and as a result was asked to brief the first UK police force to respond to the danger, the Greater Manchester Police Obscene Publications Squad, on the issues the technology has produced. He has also set up the Cyber Security Research Institute, an organisation pulling together the UK's top academic and business experts in the field of computer security with leading journalists in a bid to raise awareness of cyber crime. In 2014, Peter Warren co-authored the Netopia-report *Can We Make the Digital World Ethical*.

About Future Intelligence

Future Intelligence (Fi) is an internet-based news site and think tank, that produces high quality reports, videos, audio and podcasts that is also responsible for the technology radio programme PassW0rd, an hour-long monthly examination of the ramifications of technology broadcast in the South-East of England on Resonance FM on the second Wednesday of every month. Fi is staffed by award winning, journalists, TV and radio producers and has a particular specialism in technology.

Fi is also responsible for the annual AI conference hosted by the Institution of Engineering Technology at its central London Thames-side headquarters in Savoy Place.

We work by producing original, independent and insightful material into the issues thrown up by technology and bringing them to the attention of politicians, opinion-formers and decision makers to ensure that technology works in the interests of humanity and not to its detriment. This work is sponsored by some of the leading technology companies in Europe, the UK and the USA.

Reports and videos produced by Fi have achieved significant results and gained considerable media attention.

Our contributions to the UK's House of Lords Select Committee's report in April 2018: 'AI in the UK: ready, willing and able?'; merited 12 mentions in the eventual report. Fi's work with the cyber security company F-Secure on the safety of public wi-fi, dubbed 'the Herod clause' went viral on the internet and was mentioned in news organisations all around the globe. While pioneering work by Fi on the loss of data on computing devices has created an industry, and led to ongoing stories on the loss of information.

About Netopia

Manifesto

The internet deserves a better debate of ideas. Netopia believes in a free and open internet where people and companies may safely dwell, where society protects the freedom, privacy and rights of individuals and creates the preconditions for growth and diversity. Netopia's mission is to develop visions regarding the future of the internet based on these values.

Netopia does not claim to have all the answers; on the contrary, the questions are central. Who should decide the ground rules on the internet? What is required for diversity? How can society guarantee the privacy and freedom of individuals on the internet? Are new institutions required? Who are the current actors and what roles might they play in the future? Netopia aims to try and get good answers to these and many other questions.

The internet provides opportunities that may be seized by the EU in order to create the jobs, innovation and growth of the future. Netopia challenges the political and commercial powers that limit this potential. We are worried about a scenario where a small number of players control the development and where political ideas furthering these interests dominate without counterbalance.

Netopia's conviction is that the internet is an ever-increasingly important part of our society, which also places demands on society to guarantee the freedom, privacy and rights of individuals in the digital environment as well. So far, issues regarding infringement of privacy or intellectual property rights, financial crime, defamation, cyber crime and bullying have been considered as separate issues. It is more constructive to view these phenomena as an expression for the same thing: the functions of society are needed also on the internet. Not the same rules as in physical society, but rules with the same purpose.

Netopia would like to promote the debate of a better online society. We do this on the internet, through reports, in seminars and other forums. It is time for the internet to take the next step.

Netopia

Netopia is a web publication and idea forum based in Brussels. Netopia runs this site, publishes reports and arranges events with the purpose of stimulating the discussion on the future of the internet. Netopia takes its departure point in human rights and a broad perspective on society's digital evolution. Netopia has several supporters that contribute by subscribing to the manifesto. As of today, the following organizations are supporting Netopia:

- European Publishers Council
- Federation of European Publishers / Fédération des Éditeurs européens
- International Federation of the Phonographic Industry
- International Union of Cinemas
- International Video Federation
- ISFE Representing the European Videogame Industry
- Motion Picture Association
- Premier League
- UNI MEI

If you would like to contribute, make suggestions for topics to discuss, become a supporter, make a donation or have other questions, please contact Per Strömbäck.

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