

Industry Agenda

Digital Media and Society Implications in a Hyperconnected Era

World Economic Forum *Shaping the Future Implications of Digital Media for Society*
project report
Prepared in collaboration with Willis Towers Watson

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Preface



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We need only look to our own experience – at home, in public spaces and at work – to see that technological innovation and digitization are fundamentally reshaping our public, private and professional lives. The Fourth Industrial Revolution is upon us, and the Media, Entertainment and Information (MEI) Industries are at the core of this transformation; they provide the digital tools, services, applications and content we engage with, increasingly anytime and anywhere.

The emerging digital MEI offerings are the main driver to smartphone, tablet and other connected device adoption, as well as to our changing relationship with many other elements of daily life, such as health, consumer products and mobility. Around the world, people now spend more time using laptop computers and smartphones than they do in other daily activities, and our “connected time” is on the rise. This is referred to by the World Economic Forum as hyperconnectivity, and it will continue to affect how we interact with one other, how we learn and work, in ways that are both profound and impactful.

MEI businesses have greatly benefited from the digital transformation of their industry, but the challenges of content and service congestion and of rapidly evolving end-user needs and preferences cannot be ignored. No individual, enterprise or government can afford to be unaware of the implications that the growing use of digital media, entertainment and information content and services (“digital media”) will have on industry and society. MEI enterprises must continue to innovate to keep pace with the emerging media consumer who continually challenges industry business models and offerings. At the same time, we must begin planning for how our increased connection to digital media is and will continue to change the very fabric of our society.

With this *Digital Media and Society* report, the World Economic Forum strives to raise general awareness, catalyse further discussion and stimulate action from its readers. Much can be done by decision-makers in both the public and private sectors to foster the positive implications of increased digital media use and to recognize and address its potentially unfavourable impacts. However, as much as public-private cooperation can improve the lives of citizens, in the context of hyperconnectivity much of this responsibility lies in the hands of the individual. As such, the report has been designed to speak to all types of readers. Whether the reader is a parent, a senior company executive or a government policy-maker, this study provides facts, figures and supporting evidence to all its claims, and includes tangible recommendations to all stakeholders for action.

We hope this collective effort by an extensive group of organizations and individuals will stimulate further consideration of, and research into, the implications of ever-increasing digital media use in our lives. Through action, partnership or further research, the ultimate objectives of the World Economic Forum are to ensure that an increasingly connected lifestyle remains an asset to business, individuals and society rather than a liability, and that all stakeholders benefit from our work and insights.

Executive Summary

Innovations in technology, particularly in digital media, increasingly are changing the way people use Media, Entertainment & Information (MEI) services. More than this, the very fabric of daily life is being altered. People are interacting and connecting with each other in different ways. Their sensibilities and psychologies are changing. Blurring boundaries between private and professional lives, and the hunger for immediate information are driving online connection time. Trust in individuals' relationship with digital media has become an increasingly prominent issue. In some ways, new generations are leading the evolution in changing behaviour, but in others, older generations are "catching up" surprisingly quickly.

The World Economic Forum's *Shaping the Future Implications of Digital Media for Society* project was launched to provide insights on today's media, entertainment and information consumer, as well as on the broader impact of digital media use on individuals, organizations and the larger society.¹ As part of that project, the *Digital Media and Society* report aims to highlight opportunities in digital media that can be encouraged and nurtured. The report also signals potentially negative consequences that need to be tackled – individuals and families can address some; others require the attention of institutions, from schools to corporations, and states to national governments.

Digital Media and Society is based on evidence collected through desk research, project workshops, expert interviews and an online survey. Although the scope is large, it is not intended to be comprehensive. Rather, the report presents a broad picture of developments in digital media and their implications, in order to raise awareness, spark further discussion and stimulate the MEI industry and policy-makers to cooperate in two crucial ways: by cultivating the positive implications of digital media use and by addressing, and then re-dressing, its potentially negative impacts.

Definitions

For the purposes of the *Digital Media and Society* report, **digital media** is defined as products and services that come from the media, entertainment and information industry and its subsectors. It includes digital platforms (e.g. websites and applications), digitized content (e.g. text, audio, video and images) and services (e.g. information, entertainment and communication) that can be accessed and consumed through different digital devices.

People's online behaviours shape their **digital identities**. Individuals may show different behaviour patterns in different contexts (e.g. private versus professional), which may be described as different **digital personae**.

User behaviour, preferences and concerns

People are spending more and more time online. Consider these approximate figures for 2015:²

- 3 billion internet users
- 2 billion active social media users
- More than 1.6 billion mobile social accounts

While laptops and desktops are still most commonly used, mobile devices are gaining fast on them, causing a significant change in people's engagement with digital media. Growth in mobile encounters is particularly strong in emerging countries, where consumers are leapfrogging from "no digital use" straight to "mobile use".

Increased online connection time appears to be driven **mainly by work or information seeking, followed by social and entertainment needs**, based on findings from the five countries surveyed for this report. Digital media consumption for private and professional motives is more and more integrated, with individuals using digital media to move seamlessly back and forth between work and personal activities.



Sharing content has become a very important element of using digital media, with users most likely to share content that entertains, informs or inspires. Digital media also has made it possible for billions of online media consumers to participate in content creation. One-third of respondents to the *Implications of Digital Media Survey* conducted in October 2015 for this report, say they post written content, pictures or videos on social media sites either daily or a few times each week.

The main characteristics of today's consumption patterns can be summarized as follows:

- **Mobile:** People now spend an average of two hours daily on the mobile web, one-third of their total online time, with Millennials and digital media users in emerging countries leading the mobile revolution.³ The obvious advantages are that mobile usage is less dependent on place and time, and devices are more affordable than laptops/personal computers (PCs).
- **Social and interactive:** Social networking is by far the most popular online activity, clocking in at an average of 1.8 hours or 30% of daily online time.⁴
- **Flexible and personalized:** Users can have a more active role and more control over the digital media offerings they use and engage, compared with traditional media. User accounts and cookies allow for customization of content displayed based on user characteristics and usage patterns.
- **Fast, instant and convenient:** Fast internet and new technologies (hardware and software) allow for easier access and use, and enriched content.
- **More content:** As content creation and distribution become simpler, a greater amount of content and services are becoming available. Content is more diverse, but consumption is potentially focused more on breadth than depth, as capacity is limited. The importance of content filtering, curation and recommendation has grown.
- **Collective:** The possibility to connect, share, recommend and communicate creates a collective experience that shapes not only behaviours and preferences, but also a collective consciousness of shared beliefs, ideas and moral attitudes.
- **Fragmented and multi-channel:** The huge number of channels and creators makes content ever more fragmented. Users access multiple platforms from multiple devices. Adapting content to these multiple platforms becomes imperative.
- **The higher the usage of digital media, the higher the willingness to pay:** Increased connection and use of digital media should tip the revenue scale in industry's favour, but innovation in creating better user experiences is crucial, as it is clearly evident that traditional digital advertising is losing its appeal and efficacy.

But new consumption patterns, along with the presence of more players and creators in the market, bring challenges.

Consumer trust is at risk because of fundamental concerns about:

- **Truthfulness** of content, given its volume, the large number of creators and sources, and need for more clarity around filtering mechanisms.
- **Integrity** of the company/consumer value exchange.
- **Security** of personal data and digital identities from cybercrime, given the significance of this information to a consumer's professional, financial and social well-being.

User engagement

Engaging consumers through digital media requires much more than simply "pushing" marketing content or services at them. Consumers have become savvy at ignoring ubiquitous display advertisements and more and more are using ad-blocking software.

Instead, engagement requires providing valuable content that meets user needs for information, convenience and entertainment, stimulates content sharing and "pulls" in consumers. For any brand or service, critical elements of this engagement strategy include:

- Entering into a conversation with consumers through social media
- Engaging employees to advocate the company through their social media activities
- Exhibiting socially responsible behaviour, particularly regarding use and control of users' personal data.

The impact of digital media on individuals, organizations and society

The greater use of digital media today is changing people's everyday lives and the way they connect and collaborate in the broader societal context, at work and in civil society. This project's research into five countries from different regions concludes that this is a global phenomenon. Much of the impact of this heightened use is beneficial to both individuals and society. Digital media has empowered people so that they no longer are passive bystanders or recipients in the transformations wrought by the digital revolution, but are actively shaping digital media and its meaning for society.

The benefits to both individuals and society of increased digital media usage include the following:

- **Assists social interaction and empowers individuals,** connecting the like-minded across vast distances, as well as connecting those usually separated by social, economic, cultural, political, religious and ideological boundaries
- **Offers the means to increase civic participation and facilitates the creation of communities** with a common interest or cause
- **Enhances flexibility for workers and employers,** boosting productivity and enabling greater work-life integration
- **Facilitates education and life-long learning** to build and source skills



The main risks of higher digital media consumption include the following:

- **Can be used with harmful intentions** to spread propaganda and mobilize followers
- **Influences human decision making** as a result of content filtering mechanisms that can target specific information to certain people with potentially discriminatory effects. This can happen through information sharing or manipulation of information, for example, during an electoral process (“digital gerrymandering”)
- **Potential for near term inequality** due to the disruptions in labour markets and different skill requirements brought about by digital technology
- **Changes in social skills and sense of empathy** as children and adults spend more time online. **Facilitates bullying, harassment and social defamation**, reflecting threats and patterns seen in the offline world
- **May impact mental and physical health** if screen time is excessive. The harm includes stress, greater vulnerability to addictive behaviour, and less time spent in physical activity. **Can pose health and developmental risks for young children** if usage is not monitored

Outlook and call to action

The report’s research suggests that action from diverse social players will make it more likely for people to take advantage of more-frequent use of digital media even as they mitigate related risks:

- Public and private sectors should partner for **multistakeholder collaboration** to drive action on the effects noted in this report. The World Economic Forum can facilitate public-private collaboration. Both regulators and industry can engage with **academia** and **non-governmental organizations (NGOs)** to incorporate research findings and initiatives in creating and implementing new socially responsible MEI industry offerings or public policies.

- The **public sector** can help to update, promote and enforce evidence-based standards and regulations in order to facilitate the benefits of digital media and innovative solutions to mitigate the negative effects. It can also facilitate the **creation of social institutions and programmes** that assist individuals and the private sector in making digital culture healthier at home, in education, at work and in public life. For example, the European Commission’s DG Connect group has a directorate dedicated to digital society, trust and security – every governmental body should establish similar resources for their country or region. However, any model of guidance and support should be adaptable to changes in the marketplace and user behaviour.
- The **private sector, principally industry**, should **consider the implications for individuals when designing platforms and services or creating content**. The private sector can deepen efforts to build trust with consumers, for example, by becoming more transparent about how personal data are used and showing a corporate ethos of accountability and social responsibility. An effective tool is sponsoring **public and non-profit organizations** that help to promote beneficial use of digital media. From an employer’s perspective, organizations should forge a strategy to integrate digital media and technology into workflows, and should be proactive in addressing the opportunities and pitfalls that increased connectivity brings to the business and employees.
- Finally, **individuals** are encouraged to enhance their digital literacy and skills, and use digital media responsibly. Individuals thus can protect themselves and others, especially those who are vulnerable. Individuals can also get involved with **civic organizations** and **NGOs** on digital media issues that have an impact on their lives.

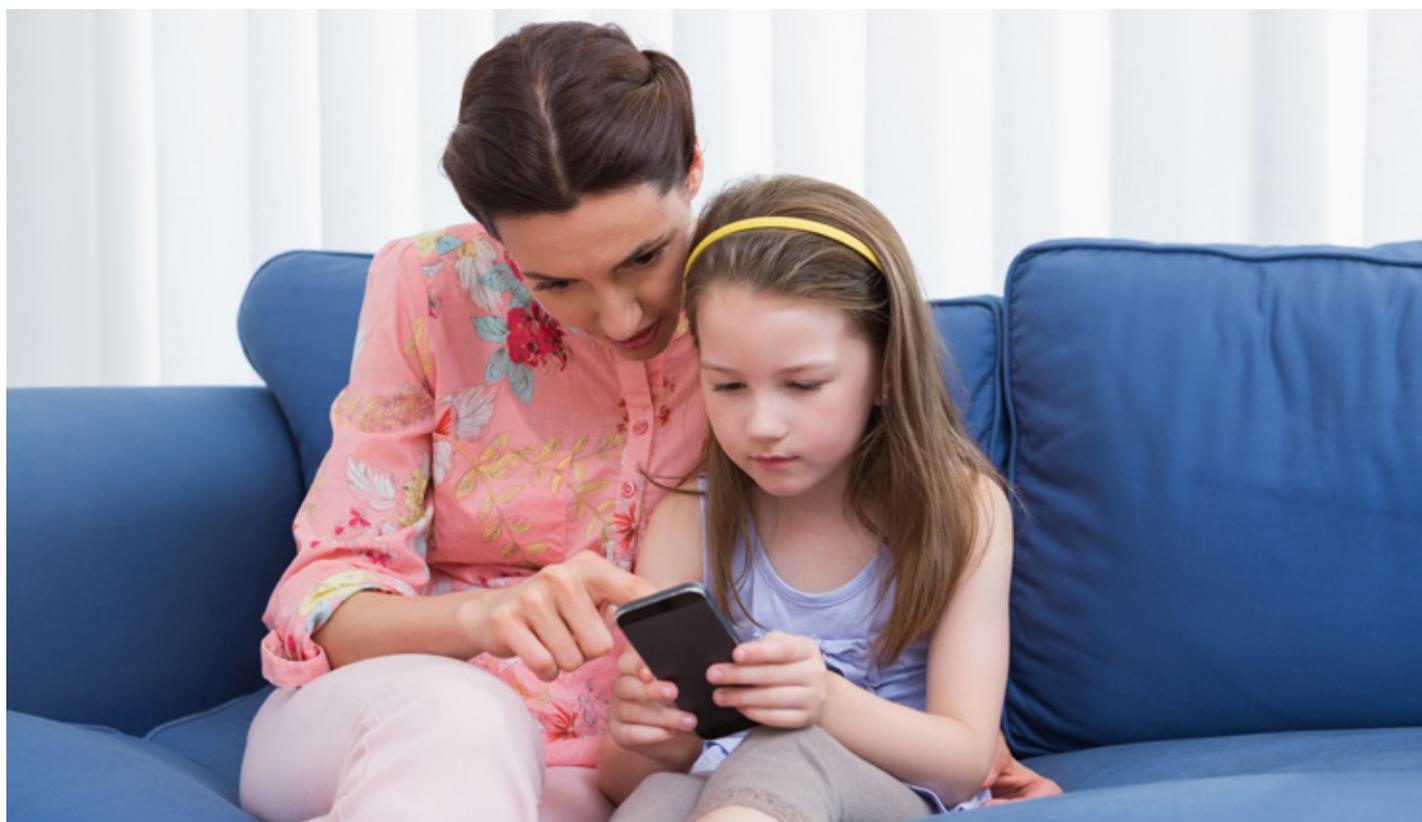
Introduction

The digitization of the Media, Entertainment & Information (MEI) industry has established new opportunities for consuming, sharing and creating media content through a growing number of devices and platforms – at any time and from any place. Today’s media content and advertising are distributed online and disseminated through social networks and digital platforms. As engaging with digital media grows easier, so does the time dedicated to content, platforms and services. New platforms and changing consumption patterns affect an individual’s everyday life and social interactions, alter how work is done, and impact learning and civic action.

Changing digital media consumption patterns and their impact on society are direct consequences of *the fourth industrial revolution*.⁵ The World Economic Forum is committed to helping organizations in both the private and public sectors to navigate through this transformational change. The *Shaping the Future Implications of Digital Media for Society* project is one of many initiatives from the Forum to stimulate multistakeholder collaboration in addressing some of the implications on society of this fourth industrial revolution. More specifically, the project looks at one of the MEI industry’s roles in this revolution.

The objective of *Digital Media and Society*, a report that is part of the Forum’s project, is to provide insights on today’s emerging MEI consumer, focusing on the factors that shape an individual’s behaviour and preferences for digital media usage. Additionally, the report links those developments to broader impacts on the individual, organizations and society, highlighting the opportunities and benefits, as well as the risks and potential downside.

After a “wild childhood”, it is now time for digital media’s “coming of age”. Industry, the public sector, and the individual must assume responsibility for fostering the opportunities offered by digital media, while helping to mitigate the negative effects on individuals, organizations and society.



Methodology

The evidence presented in this report was collected through desk research, expert interviews, sessions at World Economic Forum events and an online survey conducted in October 2015 across the USA, Germany, South Africa, Brazil and China, with a representative sample of about 1,000 digital media users in each country. Opinions and additional supporting evidence have been provided through a project blog series.

While it cannot be comprehensive, this report offers a broad picture of relevant developments in digital media and their wider implications. The aim is to raise awareness, spark further discussion and stimulate the Media, Entertainment & Information (MEI) industry as well as policy-makers to collaborate on cultivating the positive implications of digital media and discouraging the negative.

Project sessions

See Section 4: Outlook and Call to Action *and* Project Contributors *for details*

Jakarta, Indonesia 19 April 2015

World Economic Forum on East Asia

“Analogue Hearts and Digital Minds: The Impact of Digital Media on Human Behaviour”

New York, USA 13 May 2015

MEI Industry Spring Strategy Meeting

“Exploring the Drivers behind Changing Media Consumption Habits”

Geneva, Switzerland 12 August 2015

Young Global Leaders (YGL) and Alumni Annual Summit

“Digital Changes in Society”

Dalian, People’s Republic of China 10 September 2015

Annual Meeting of the New Champions 2015

“China’s Media Society: Impacts of Changing Media Consumption Patterns in China”

Project videos

Expert interviews conducted for the project were filmed and extracts of these interviews are featured in a series of videos focusing on the different topics covered in the report.

Blog series

A number of project-related articles were published on the World Economic Forum’s Agenda Blog. They can be accessed through the [Shaping the Future Implications of Digital Media for Society](#) project website on [weforum.org](#).

NB: All opinions expressed in the project videos and blog series are those of the interviewees and authors respectively. The World Economic Forum is an independent and neutral platform dedicated to generating debate on the key topics that shape global, regional and industry agendas.

Implications of Digital Media Survey

The Forum conducted an online survey in October 2015, in collaboration with comScore and Willis Towers Watson, with a representative sample of 5,070 digital media users aged 15-69 years drawn from:

- Brazil (1,033 participants)
- People’s Republic of China (1,019 participants)
- Germany (1,023 participants)
- South Africa (997 participants)
- USA (998 participants)

See [Table 1](#) for an overview of demographic characteristics

Segmentations used in Implications of Digital Media Survey

Generation

Millennials: reported age between 15 and 34 (born 1981-2000)

Generation X: reported age between 35 and 50 (born 1965-1980)

Baby Boomers: reported age between 51 and 69 (born 1947-1964)

Sporadic users versus frequent users

Sporadic users: the sample who reported spending less time than average per week consuming digital media

Frequent users: the sample who reported spending more time than average per week consuming digital media

Section 1

User Behaviour, Preferences and Concerns

User attention is focused on key devices, platforms and formats

What are the dimensions of digital media usage and how are consumption patterns changing?

Global internet penetration is deepening, with more than 3 billion internet users in 2015. *Global Social Media Trends 2015*, a report from the European Publishers Council, counts more than 2 billion active social media accounts and more than 1.6 billion mobile social accounts in 2015 (Figure 1).⁶ People spend more time online, extensively using social media and increasingly accessing digital media from mobile devices. This is especially so in emerging countries, which are leapfrogging fixed internet and personal computers (PCs) to go directly to smartphones.

Currently, access to digital media from laptops and desktops is still dominant globally, with roughly 60% of all web pages being viewed from laptops or desktops, and 30% from mobile devices (Figure 2). But mobile viewing is growing fast, especially in emerging countries.⁷ Tablets and other devices still represent a small share in comparison, but a trend is evolving of using multiple devices simultaneously, with content being consumed via numerous channels.⁸

Respondents to the *Implications of Digital Media Survey* are most frequently using PC/laptops (94%), televisions or TVs (93%) and smartphones (87%) for media consumption (Table 2a). Among heavy digital media users (14-plus hours/week), PC/laptop strongly dominates other types of devices, most likely because it is still the most important device used at home and for work, at least in developed countries (Table 2b).

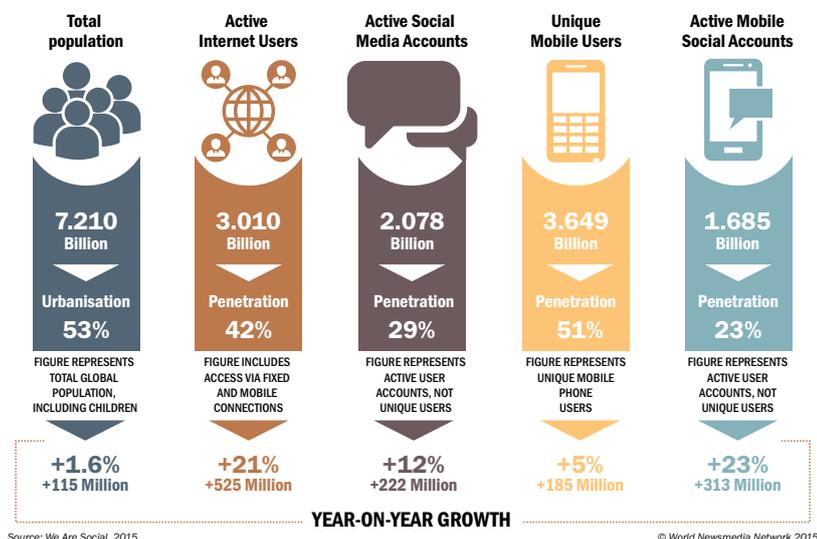
Traditional media (e.g. printed press and magazines, TV and radio) have a dwindling share of media consumption, already accounting for less than one-half of time spent, according to a 2014 statistic from GlobalWebIndex, a market research firm (Figure 3). On average, people spent more than three hours a day social networking and (micro-)blogging.

Online communication platforms, such as social networking platforms and messaging services, play an important role in media content and advertising distribution. Content is posted or shared via news feeds or discussion threads or increasingly within private groups in messaging applications.

Figure 1: Global Digital Landscape

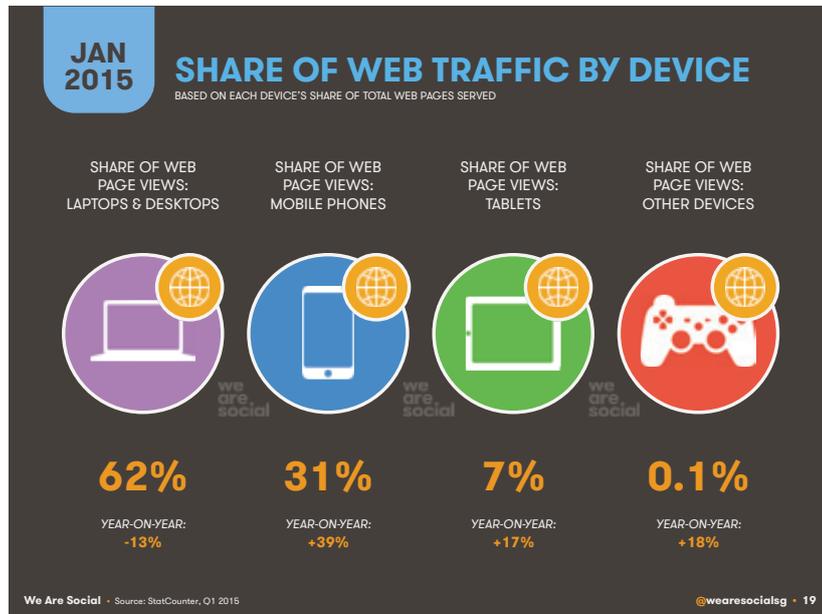
Global digital landscape and year-on-year growth

In total user numbers, percentage of penetration and growth, by category



Source: We Are Social, 2015; *Global Social Media Trends 2015*, European Publishers Council

Figure 2: Share of Web Traffic, by Device

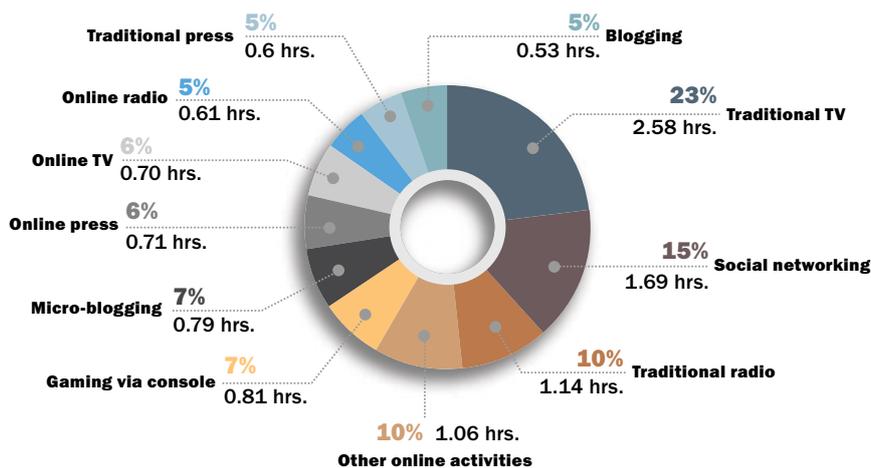


Source: We Are Social, 2015⁹

Figure 3: Global Time Spent on Media Per Day, 2014

Global time spent on media, by type

In amount and percentage of time spent



Source: GlobalWebIndex, 2014; *Global Social Media Trends 2015*, European Publishers Council

“ Things that started out as communication platforms have become real-time media consumption platforms; content that feels like a conversation is being consumed in video and text combined, and is accessible on smartphones. ”

Participant at project workshop in New York in May 2015

Why are online communication platforms so popular? The reasons: most users do not pay per message but through mobile plans; they are easy and convenient to use; and while feeds make it possible to always be up-to-date and discover content, messaging applications allow private, more targeted group conversations and content exchange.

The *Implications of Digital Media Survey* found that 21% of users report spending more than three hours per day chatting and messaging (Table 3). Most popular platforms used for social networking vary across the countries surveyed (Figure 4): WhatsApp is the most visited social networking site in South Africa and is No 2 in Germany and Brazil, just behind Facebook. In the USA, however, Facebook is by far the most used platform, with more than half of respondents visiting the site daily. In China, WeChat dominates the other social networking sites listed in terms of daily usage. Finally, Brazil respondents are heavier users of all the social networking sites included in the survey compared with those from other countries. Given the continued introduction of new apps, changes in preferred platforms are likely over time.

Figure 4: Preferred Social Networking Platforms Per Country



Source: *Implications of Digital Media Survey, 2015, World Economic Forum*

“People used to watch TV and then that’s it. But now, everything is consumed on different mediums. Three out of five people surf the internet, or WeChat in the case of China, while they watch TV. Divided attention is the trend.”

”
Yan Xuan, Nielsen Greater China

Millennials online

The so-called **Millennials, or Generation Y (born in the 1980s and 1990s)** and **Generation Z (born in the 2000s)** were the first generations to grow up with computers, the internet and smartphones as integral parts of their everyday lives. These “digital natives” spend on average more than seven hours a day online, on their smartphones or on multiple devices at the same time (PC, laptop, tablet and wearables).¹⁰ Those aged 16-24 years are three times as likely as those aged 55-64 years to “second-screen” on a mobile.¹¹ They consume far more digital than physical media (e.g. printed newspapers/books, DVDs and PC games).

The *Implications of Digital Media Surevy* showed that 30% of Millennials spent more than three hours a day chatting/messaging, compared with 20% of **Generation X (born in the late 1960s and 1970s)** and 15% of **Baby Boomers (born in the late 1940s to early 1960s)**. Similar generational differences were observed for consuming music, short videos and gaming. But Millennials also reported spending more time using digital media to search for information related to interests or personal development. Still, the numbers show that even generations not “born into” the digital age are adapting to it.

The frequent user is most likely to be young, male, well educated, and have one child:

Figure 5 shows that Millennials are more likely to be frequent users (making up 47% of frequent users, compared with 40% of the total sample), while Baby Boomers are more likely to be sporadic users (36% of sporadic users, compared with 29% of the total sample). Almost 60% of frequent users are male, but only 46% of sporadic users (compared with 52% of total sample). Frequent users are more likely to have an undergraduate or graduate degree (57% of frequent users, compared with 45% of the total sample). More than one-half of sporadic users do not have children (54%, compared with 43% of total sample), while frequent users are most likely to have one child (44%, compared with 35% of total sample).

Figure 5: User Characteristics, by Level

	Sporadic Users (%)	Frequent Users (%)	Total sample (%)
Millennials	34	47	40
Generation X	30	31	31
Baby Boomers	36	23	29
Male/female	46 / 54	58 / 42	52 / 48
(Under) graduate degree	45	57	45
No children/ 1 child/ > 1 child	54 / 26 / 21	34 / 44 / 22	43 / 35 / 22

Source: *Implications of Digital Media Survey, 2015, World Economic Forum*

Users consume, share and engage in content in order to fulfil a need for social interaction, entertainment and learning

The emerging digital media user is more active. While traditional media is consumed largely passively, consumers now have enhanced opportunities to share content, engage with content creators, participate in content or even facilitate or sponsor content creation.

“

Consumers have a lot more agency. They are no longer just passive receivers of goods, services and content.

”

Jeremy Heimans, purpose.com

So why do consumers use digital media the way they do? UM's Wave 8, a social media research study, suggests that people are drawn to digital media offerings that fulfil five fundamental needs underpinning all social behaviour:¹²

- **Social interaction** (e.g. chatting, messaging, sharing images and videos, building relationships)
- **Expression/recognition** (e.g. expressing oneself, earning respect, supporting a cause)
- **Entertainment/diversion** (e.g. having fun, relaxing, being creative, indulging in a passion/interest)
- **Information/learning** (e.g. learning something new, useful or surprising, getting practical advice, exploring or researching something)
- **Work/progression** (e.g. working, building a career, challenging oneself)

The *Implications of Digital Media Survey* found that users spend the most time connected online for **work** (32% spend more than 3 hours a day online for this purpose) and **information** or **learning**, followed by **social interaction** and **diversion** purposes ([Table 3](#)).

For each of these purposes, private and professional digital media consumption has become less separated. Younger generations in particular expect to be able to interrupt work to organize private matters while also replying to emails on their smartphones even after working hours.

Sharing content has become a very important element of using digital media. The Wave 8 study observes, “Sharing content has become a fundamental part of our self-expression and has become intrinsically linked with our online reputation. People use content, be it a YouTube clip or interesting article, as a way to keep in touch, make new friends or impress others”.¹³ Participants in the *Implications of Digital Media Survey* are most likely to share content that is entertaining (46%), contains useful facts (43%) or is inspiring (36%) ([Table 4](#)).

“

People want what they've always wanted: storytelling. What has changed is how you do that. HBO's television dramas with their short seasons are powerful examples of how this demand is being met. Likewise, long movies in cinemas targeting the over-35s are a growth market. Instagram is also storytelling. Twitter is essentially iterative storytelling.

”

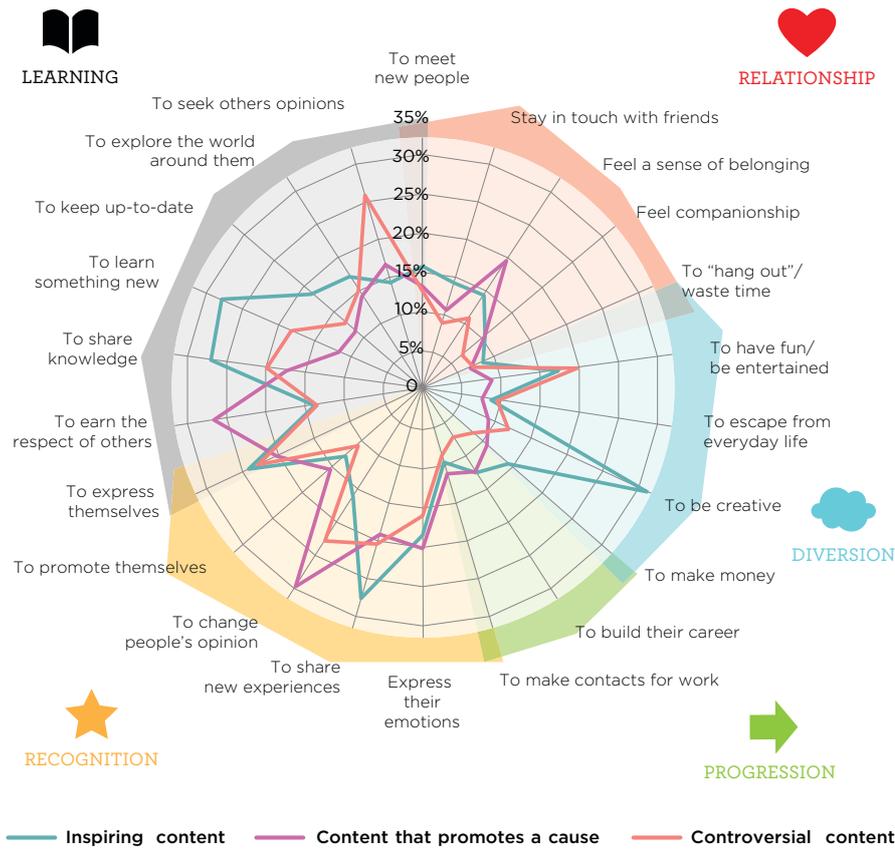
Participant at project workshop in New York in May 2015

What types of content are users most likely to share? Research has found that video content that is humorous or stimulates deep emotions (such as fear, sadness, surprise, and joy) generally does better than other types.¹⁴ A study about content by researchers at the University of Pennsylvania had a similar finding: a strong emotional response to content – whether positive or negative – tends to promote sharing. Content with a positive emotional impact is more likely to be shared than one that has a negative impact; content that produced anger and anxiety is more likely to be shared than one producing sadness.¹⁵

The Wave 8 study also investigated motivations for sharing content: when people share inspiring content they do so to express their creativity and to learn; when they share controversial content, they are trying to seek opinion. Promoting a cause helps people to belong, change opinions and earn respect (see [Figure 6](#)).

Figure 6: Different Motivations for Sharing Different Content

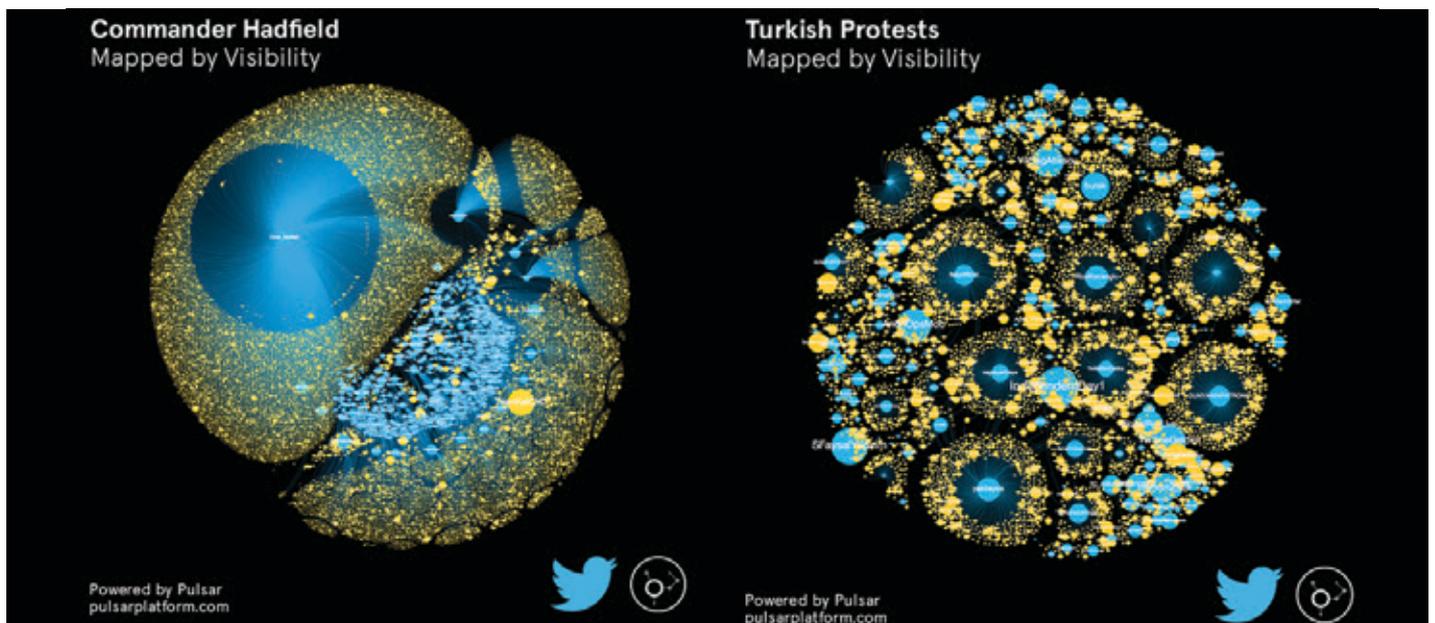
Question: Why do you think someone would share content that is inspiring/promotes a cause/is controversial?



Source: Wave 8 – *The Language of Content*, UM global study

How content goes viral is an interesting phenomenon. Pulsar found that different types of content spread differently across social media platforms, depending on audience structure.¹⁶ For example, a YouTube video titled “Commander Hadfield singing David Bowie’s Space Oddity”, from the International Space Station, spread mainly from one big hub, while a grass-roots video of protests in Turkey was shared by many smaller influencer groups (Figure 7).

Figure 7: Diffusion Maps Showing the Pattern of Tweets and Re-tweets for Different Videos



Blue nodes = tweeters. Yellow nodes = re-tweeters. Size = author visibility, i.e. estimated reach

Source: *How Stuff Spreads #2: How Videos Go Viral*, Pulsar

Sharing content also seems to depend on its efficacy in helping users to build their online reputations. As the Wave 8 study emphasizes, digital media has helped launch a new reputation economy in which “personal success and reputation have become indelibly linked”. Thus, content that reflects well on an individual or helps to promote a personal “brand” is most likely to be shared: useful facts or research; novel or unexpected ideas and execution; entertaining or inspiring content; expressions of the user’s point of view; and content that has been “liked” by relevant others. The importance of reputation building can be discerned in users’ reported reactions to how the content they share is received by others. More than one-half of respondents in the Wave 8 study said they feel happy “when something they share is commented on, liked or shared with others”, and they are likely to actually “delete posts and tweets that have received no recognition from peers”.¹⁷

Digital media also has made it possible for millions of media consumers to participate in content, mainly through the creation process. They do it for many reasons. Participants in the *Implications of Digital Media Survey* reported being most likely to create content, such as blog posts or videos, to express their points of view (47%), provide useful facts (37%) or entertain (35%) (Table 5). One-third of respondents stated that they post written content, pictures or videos on social media sites a few times per week; 10% of them do it every day. According to a report by Pew Research Center, an American think-tank, almost one-third of adults online in the USA posted a video to a website in 2013, up from 14% in 2009.¹⁸

Some of this content creation is fuelled by the desire to become actively engaged with an admired entity. Enabled by the internet, fans with an emotional attachment to the focus of their ardour – a sports team, celebrity or artist – now have the opportunity to consume content related to that admired subject and to share that content or create their own, thereby engaging with it and/or the larger community of fans. These motivated content participants – labelled an “active audience” by Jose van Dijck – are the main leaders in sharing, creating and producing new content on social media.¹⁹

Also interesting is the communal spirit in which much of today’s content is created. YouTube has a significant number “how-to” video posts, produced not necessarily by companies promoting their products or services, but by individuals eager to share their knowledge with the online community. Likewise, the tremendous amount of information available on Wikipedia and other open content publishing sites is the result of countless individuals contributing labour and knowledge, often without expecting payment.

The growth of content sharing through social media creates a “collective experience” and a state of virtual collective consciousness among digital media consumers, with shared beliefs, ideas and moral attitudes.^{20 21} For example, trust in brands is now being heavily influenced by shared user experiences.²² The more these experiences are shared through digital media, the more consumers are vulnerable to views, opinions and thinking that are not their own. This may result in group-thinking and could suppress individualism.

For example, users are more likely to consume content that has been previously accessed and recommended by others (e.g. YouTube videos that go viral). Many of today’s buying decisions are made on the collective knowledge/experience shared by others (e.g. Amazon book reviews).

Consumer trust at risk

The continuous innovation in digital media, and the rapid way it has changed business practices and user behaviour, creates unprecedented opportunities for the MEI industry. But as these opportunities mature, consumer trust becomes ever more critical. This report’s research reveals that fundamental concerns about truth, integrity and security are placing consumer trust at risk:

1. **Truth:** Given the sheer volume of digital content, trust hangs in the balance because of the difficulty in validating truthfulness and the increased ability of users to challenge the veracity of content.
2. **Integrity and the fair value proposition:** Trust in companies is at stake and digital media consumers are demanding protection for user rights.
3. **Security:** Consumers fear that their data are not adequately protected. They value and demand more transparency and control over their personal data and digital identities.

Addressing these challenges is essential for the continued health of the MEI industry.

1. **Truth: With more and more content available, consumers are searching for trusted sources of digital media content**



There are now more tools at people’s disposal to do professional filming. The barriers of entry are so much lower. It’s up to the voice of the user. What you couldn’t do at the top studios 10 years ago, you can now do for free.



Participant at project workshop in New York in May 2015

Innovations in digital media have lowered barriers to content creation. Today, anyone can create and publish content; it is no longer the sole purview of professional content producers such as journalists. This is allowing more voices to be heard and empowering users to not just express themselves but also to choose among diverse content.

This “democratization” of content creates increased quality control issues. In the digital age, almost any citizen can be a journalist, but maintaining journalistic standards is today a major challenge for the industry. Although content can now be more easily challenged and verified, in many cases, content creators and consumers do not adequately vet sources. Lack of professional editing, and the time pressure to publish content quickly, also create quality problems. The

ease of creation has increased the risk of unethical online behaviour, with the posting and sharing of content designed to deceive, defame or misinform. However, users are better equipped to use digital media platforms to draw attention to misinformation, challenge myths and educate others.

The large amount of content available has made curating and distributing a much bigger challenge. Users themselves have become an important mechanism for distribution. Rather than rely on the judgement of editors or decision-makers in the traditional media ecosystem, many users today are choosing to obtain more content from their social and professional networks, or to rely on others for reviews or recommendations. In particular, entry barriers to publishing become lower, while creators still rely on professional support for larger scale publishing.

According to the *2015 Edelman Trust Barometer*, search engines are now the most trusted source of content for users, especially Millennials, while journalists are trusted less than family and friends. The trend towards a “collective experience”, as described in the previous section, is also a result of the digital media user’s dependency on seeking truth from groups of other users.

“

I don’t need to believe in anything anymore because it has a user rating of 4.6. So the whole notion of trust is now earned largely by collective experience rather than the symbols of faith.

”

Sanjay Nazerali, Dentsu Aegis Network

The *Implications of Digital Media Survey* has similar findings. A user’s spouse and friends (each chosen by 18% of respondents) have the most influence on digital media consumption), while search engines are selected by 15% as being more influential than any other source (Table 6). Those close to the user could have more insight into the type of content the user might find interesting, certainly more than could an editor or executive in a traditional media company; however, individuals could also receive less diverse information, or others in the user’s network could distribute unverified, harmful or inaccurate content. Interestingly, the survey yielded substantial cross-country differences – especially among those choosing none as the most influential source. In the USA, almost one-half of the sample said so, in China only 5%. This underlines the relevance of culturally specific norms, in this case most likely regarding individualism versus collectivism.²³

Given today’s immense task of sifting through copious amounts of content in order to decide what to distribute, MEI distributors are turning to artificial intelligence and automation. But, consumer trust depends on the transparency and effectiveness of algorithms to do this job. This trust is at risk as evidence becomes available on how algorithms are structurally biased in the information they



present to different users or are ineffective in screening out inaccurate content. If the MEI industry does not innovate in products and services to help users to assess the validity of content sources or to access verified content, consumer trust in the entire MEI ecosystem may be eroded.

2. Integrity and the fair value proposition: Users are willing to pay for products and services that fulfil their needs; the higher the perceived value, the greater the willingness to pay

Because digital media offers more content than can be reasonably consumed, much of it for free, a consumer’s willingness to pay remains a key challenge for industry. Several studies on consumer readiness to pay for Facebook (in exchange for privacy or no advertising), for example, found little appetite for it.²⁴ Inherent to social media’s existence is the exchange of non-monetary value. For Facebook, this is access and use of behavioural information for advertising purposes in exchange for free utilization of a robust social networking tool for the end user. News has also proved difficult to monetize in the digital space; according to Reuters Institute’s *Digital News Report 2015*, few of those not already paying would be prepared to pay anything for online news.²⁵

But the idea of consumer reluctance to pay ignores the success of many digital media content providers. As in any marketplace, consumers of digital media are willing to pay for products that fulfil their needs and offer good perceived value.



Digital media users have shown that they see value in, and are willing to pay for:

- Unique and high-quality content, such as that offered by HBO or The New York Times (NYT). The NYT recently surpassed 1 million digital subscribers despite the relative ease of circumventing its paywall.²⁶
- Content that satisfies a burning need, such as Bloomberg’s sale of business information to the trades, or demand in a niche market (professional and hobbies, for example).²⁷
- A unique offering that fills a newly created need or gives consumers the flexibility to buy fragmented content, such as iTunes, which offers songs rather than albums, or Blendle, a Dutch start-up that gives consumers the ability to buy individual newspaper or magazine articles rather than full subscriptions.²⁸

The *Implications of Digital Media Survey* provided similar insights. In the past year, one-third of respondents had paid for premium entertainment, and one-fifth for specialized, exclusive or educational content that teaches skills or gives access to work (Table 7). Interestingly, those who use digital media the most are more willing to pay for content, with Millennials reporting the greatest appetite – heartening for content providers targeting this important demographic (Figure 8).

Figure 8: Willingness to Pay for Digital Content, by Use Level and Generation (%)

Content Sources	Paying for Content by Source, %					
	Frequent Users			Sporadic Users		
	Millennials	Generation X	Baby Boomers	Millennials	Generation X	Baby Boomers
Premium entertainment content (e.g. Netflix, Spotify or gaming content)	50	49	36	29	20	10
Exclusive content (e.g. HBO Online)	35	34	26	10	7	4
Content that teaches me skills or abilities (e.g. online university courses)	34	32	23	13	7	6
Specialized content or service (e.g. specific to a hobby)	32	27	20	9	7	6
Content that gives me access to work opportunities (e.g. paid job postings)	22	25	18	11	10	6
Curated news or editorial content (e.g. <i>Financial Times</i>)	22	19	16	6	4	4
Other	1	0	2	1	1	2
None of the above	16	19	34	52	62	76

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

At the same time, 41% of total survey respondents do not pay for any of the listed content, highlighting the continuing importance of advertising to finance digital media that is mainly free to the user. A major challenge for the MEI industry will be to counter the current trend in advertising blocking by users. (*This is discussed in greater detail later in this report.*)

Regardless of how digital media is funded, providing a fair value proposition is critical to maintain consumer trust. To do this could require the MEI industry to rely on advertising that respects user preferences for valued digital media, without the risk of misleading (a possibility with sponsored content) or exploiting the consumer. Exploitation can occur when advertising is based on behavioural data that the user did not consent to sharing. Or it can happen when transparency about the use of one's personal data is lacking, and the consumer is not offered appropriate benefits in exchange, such as free online services.²⁹

When the value exchange between user and business is perceived to be fair, consumers seem willing to "pay" for digital media content. For example, although it is still technically possible to pirate music, free music-streaming services like Spotify, for which consumers "pay" through their exposure to advertising, are easier for consumers to use, and have helped to cut the incidence of music piracy in the USA by half over the past decade.³⁰

Research by Boston Consulting Group and Liberty Global showed that consumers "are willing, even eager, to share information when they get an appropriate benefit in return". The research found that educating consumers on the benefits they receive by sharing their data, being transparent about how the data are used, and giving consumers easy-to-use privacy controls "will substantially increase data sharing by individuals".³¹

3. Security: As consumers' digital personae increasingly reflect their online habits and behaviours, digital identities are becoming as important and as worthy of protection as physical personae

The cumulative use of digital media – from online buying, viewing, posting and sharing, to digital profiles created for personal, social, professional or commercial reasons – reveals a tremendous amount about each individual. Yet many users remain unaware that their increased digital engagement results in the accumulation of data from many disparate sources. These traces of personal data can be tagged, tracked, combined and analysed, revealing more intimate information about users than previously imagined.

Digital personae not only determine the content that users are served online, but also influence the schools to which they are admitted, approvals they get for loans or apartments, and the jobs they are offered. They also may have an impact on an individual's romantic prospects and status within certain communities. In short, users' digital personae are increasingly important to their social and economic well-being.

For example, many users today see social networks not just as places to connect with others socially but also as engines to create financial benefits. Platform membership can improve professional networking and job prospects, and help people to amass a considerable, profitable following. But even as users want to share their personality online and gain recognition, they also want to safeguard their digital personae and control access. Google's *Transparency Report* recently revealed that the search engine has already received almost 350,000 requests from users who want to evoke their "right to be forgotten" after a 2014 ruling by the Court of Justice of the European Union, and has removed almost 60% (more than 600,000) of more than 1.2 million URLs evaluated.³²

Building and maintaining consumer trust will depend increasingly on how well MEI businesses address user concerns about security. Among *Implications of Digital Media Survey* respondents, 69% said that anonymity and privacy in digital media activities is important to them (Table 8) and 25% said that less than half of their social media activity is publicly visible (Table 9). Users fear data breaches which appear to be increasing in scale and frequency. As a result, they are looking to companies for security and transparency about the use and safeguarding of their data. Users also are concerned about how their data are being used to market to them. The majority of respondents to the *Implications of Digital Media Survey* said that the "right to be forgotten" is important to them (71%), as is having control over their personal data (75%). But only 46% globally are willing to pay for that control (Table 10), with large cross-country differences observed.

Consumers seem reluctant to pay for privacy or control of data, not necessarily because they do not value these attributes, but rather because they view them as already integral to the services they use. Emerging digital media users consider control over their data an inherent right for which they should not need to pay.



Section 2

User Engagement

Engaging and influencing the digital consumer requires a novel approach

With the initial digitization of the MEI industry, marketers applied the same approach to reach consumers as they did for traditional media channels like print and television. Digital advertising offered new forms of engagement, but the underlying model of “pushing” messages out to consumers in a recognized advertisement format did not significantly change. Publishers have historically designed webpages with more regard for the advertiser than the digital media user, something referred to as Advertising 1.0 by Johnny Ryan of PageFair, a tech start-up exploring the growing issue of advertisement blocking.³³ According to Ryan, industry – publishing in particular – must move to Advertising 2.0, which focuses on the end user experience and revisits the quality of digital advertising. Despite a slowdown in advertising growth over the past few years, Advertising 1.0 has historically been successful, generating billions of dollars for the advertising industry and satisfying brands.³⁴

But digital media consumption patterns are evolving: content sharing has become effortless and popular; consumers have become more invested in sharing and creating content that enhances their online reputations; and technology has enabled both the blocking of display advertising and the collection of more detailed information about user interests. Marketers who master the art of communicating to consumers through meaningful content, targeted in a non-invasive and personalized manner, stand a better chance of fruitfully engaging the end user.

The challenge facing the advertising sector

According to comScore, a global media measurement and analytics company that collaborated on the *Implications of Digital Media Survey*, the average user is bombarded by more than 1,700 digital banner advertisements each month, making it difficult for businesses to make a memorable impression.³⁵ While up to one-half of global respondents to the *Implications of Digital Media Survey* said that they are likely to click on different types of advertisement when actively searching a similar product, only one-quarter of users in the USA are likely to do so (Table 11a and Table 11b). More concerning is the fact that display advertisements cannot be shared – an important way for content to gain user attention. In fact, about two-thirds of respondents state they are likely to express support for a brand through social media within their peer groups (Table 12).

The higher the usage, the greater the willingness to pay

High-intensity digital media users are twice as likely as low-intensity users to click on online advertising. But, within the frequent-user group, Millennials are least likely to respond to online advertising (Figure 9).

Figure 9: Likelihood of Clicking on Selected Types of Advertising while Actively Looking for a Similar Product, by Use Level and Generation (%)

Type of online advertising	% Agreeing They Would Click when Actively Looking					
	Frequent Users			Sporadic Users		
	Millennials	Generation X	Baby Boomers	Millennials	Generation X	Baby Boomers
Pre-rolls (short video advertisements) to video content	56	66	61	27	28	26
Banner advertisements on web or mobile pages	53	65	62	26	29	28
Advertisements embedded in social media news feeds	58	67	58	29	28	26
Advertisements on search engine results pages	60	71	65	33	39	40

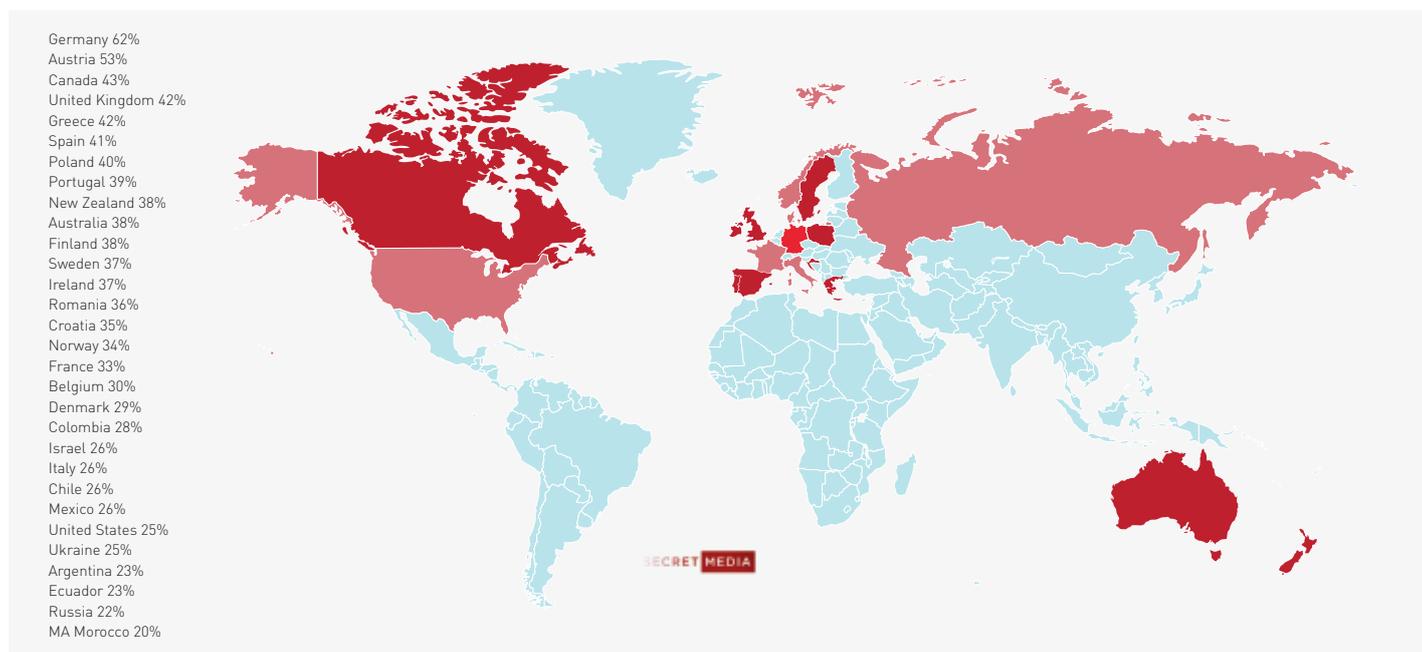
Source: *Implications of Digital Media Survey*, 2015, World Economic Forum



A development that may prove the most disruptive to display advertising, however, is the popularity of advertising blocking software, commonly known as ad blocking. Citing recent data, a report issued in August 2015 by Adobe and PageFair, an ad-blocking measurement service, notes that 6% of internet users worldwide actively block advertisements. The Adobe/PageFair study shows that ad blocking rose an impressive 41% in second-quarter 2015 from the corresponding quarter in 2014.³⁶ Ad blocking

is most popular with Millennials, 41% of whom said they use ad-blocking tools.³⁷ Ad blocking in video, the fastest-growing, most-important content format for the MEI industry, is even more prevalent, with rates as high as 62% for desktop video in Germany.³⁸ A report by Sourcepoint and comScore finds that consumers who block the most advertisements are those most attractive to publishers – people with higher incomes.³⁹

Figure 10: Top 28 Countries for Advertisement Blocked Video Time



Source: *Adblock and the Global Video Market*, September 2015, Secret Media⁴⁰

Note: Percentage of time spent in front of desktop video that is blocked from monetization. In each of the countries measured, 30% or more of the internet-usage population was reached.

But why are consumers blocking digital advertisements? Research conducted in 2015 by the Interactive Advertising Bureau, a global non-profit group for the online advertising industry, concluded that the rise in ad blocking by consumers is mainly due to a general antipathy towards advertising, as well as user concern about how their viewing behaviour is being tracked and used by third parties.⁴¹

Indeed, the *Implications of Digital Media Survey* found that 35% of respondents worldwide have installed third-party ad-blocking tools, and 34% have activated privacy control settings on digital browsers to block third-party trackers and cookies (Table 13). Users in the USA are least likely to block advertisements or activate privacy controls – 69% of USA respondents had no privacy or ad-blocking tools installed, but German and Chinese users are most likely to use advertising and privacy controls..

“

I think ad blockers themselves are not going to help the industry, they're not going to help the user, because the quality of content won't be there, but I do think the industry needs to make sure that it focuses on the creativity and quality of its advertising.

”

Mark Thompson, The New York Times

These findings highlight three emerging consumer psychological traits that seem to be fairly consistent across geography and demographics: a desire to be in control of the messaging to which individuals are exposed, where “pulling” this messaging to one’s screen is preferred to having it “pushed” by marketers; a rejection of having online behaviour tracked without fully understanding how that data are ultimately used; and a growing awareness of personal data’s business and commercial value to businesses.

Engaging digital media users through content marketing

In reaction to the decreasing effectiveness and reach of traditional display advertising “pushed” to consumers, more companies are turning towards content marketing to “pull” customers into brands. By developing valuable content (as opposed to “clickbaits”, sensationalist headlines or images to attract click-throughs), marketers hope to not only attract users but also encourage them to share that content.

Paid advertising certainly is not going away anytime soon, but the new marketing model emphasizes the creation of content that, because of the value it delivers, enables a brand to “earn” media (i.e. obtain publicity that is free and not gained through advertising). The goal is to encourage consumers *themselves* to become the conduit for the company’s marketing messages.

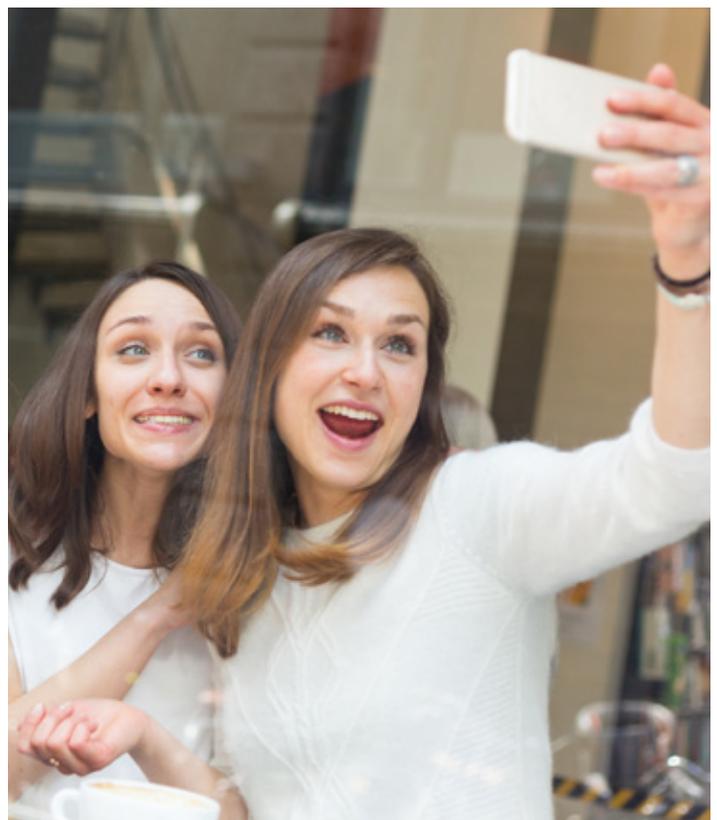
The 2015 *Edelman Trust Barometer* found that content produced by a company that a user patronizes is more trusted than content produced by a journalist or an NGO.⁴² This finding underlines the importance for brands to develop

customer engagement and loyalty, because loyal customers can be expected to share compelling content with others in their networks and act as multipliers.

It is essential, however, to create and publish content in ways that maintain consumer trust. Based on a survey conducted in the United Kingdom and the USA on consumer attitudes towards sponsored content and “native advertising” on news sites, Reuters Institute’s *Digital News Report 2015* found that one-third or more respondents feel disappointed or deceived after reading an article later found to have been sponsored; and more than one-quarter are less positive about the news brand due to the sponsored content or native advertising.⁴³

The promise and perils of using consumer data for targeted marketing

Several issues have the potential to undermine the trust that digital media users have in the industry, as discussed earlier in this report. One issue pertains to the way consumer data are used, analysed and sold. Data generated by individuals intentionally through their use of digital media can help businesses to develop products and services that are better aligned to consumer needs, giving users access to more desirable products and services at a lower cost.⁴⁴ But data also can be used to undermine the credibility of digital media players. Consider the case reported in early 2015 of a cancer patient, who, after using Google to research his disease, subsequently was fed advertisements from funeral directors via his Facebook account – blurring the boundary between personal data privacy and the creation of relevant, targeted advertisements.⁴⁵ More insightful and less intrusive approaches to collecting and using consumer viewership data are essential to build consumer trust.



A brand's visibility on social media is important for engaging consumers – especially those aged 16-24 years

Becoming part of the conversation through innovative messaging is quickly becoming the industry's norm for effective marketing. A brand's visibility and engagement strategy on social media platforms has proved important to draw in the emerging digital media consumer, especially in the age group of 16-24 years. The Internet Advertising Bureau's *Mediascope Europe* study in 2013 found that 32% of this age group is more likely to buy a product from a brand they follow on a social networking site than one they do not. Moreover, 83% of those in this age group have liked or become a friend of a brand online, while 76% have visited a brand's fan page.⁴⁶ The *Implications of Digital Media Survey* showed that 64% of Millennials, 69% of Generation X and 61% of Baby Boomer respondents are likely to express support for a brand through social media within their peer groups (the global average is 65%).

Engaging consumers through employee advocacy

Another marketing strategy that can help to curtail the impact of ad blocking is employee advocacy. Employee advocacy does not depend on the advertising sector because it grows corporate brand value through employee networks, mainly on social media platforms that can be influenced by creative employee enablement and evangelization. In other words, employee advocacy is word-of-mouth marketing through corporate assets.

This strategy has influenced a shift in the attitude of businesses towards their employees' social media use. A growing number of companies have realized the massive

potential of employee networks; they have started to move away from compliance management towards enabling their employees to create conversations on social media about the company and the brand.⁴⁷

The importance of corporate social responsibility (CSR) in engaging digital media consumers

Evidence of social responsibility by media and entertainment brands significantly influences consumer choice, shows the *Implications of Digital Media Survey*. A leading concern is corporate transparency, particularly related to a company's efforts to educate customers on storage and use of their personal data and to provide them full control to decide – 72% of respondents worldwide consider it most important, along with environmental sustainability, among possible CSR activities (Table 14). As digital media continues to become an integral aspect of people's lives, CSR's influence on consumer choice is likely to continue to grow.

However, contradicting a general belief that Millennials are enthusiastic supporters of corporate transparency and involvement in social and environmental issues ("Corporate Social Responsibility is Millennials' New Religion" says one headline), the *Implications of Digital Media Survey* found that Generation X and Baby Boomers respondents place greater weight on these factors than do Millennials (Figure 11).⁴⁸

Figure 11: Corporate Social Responsibility Efforts that Are Important for MEI Companies to Support, by Use Level and Generation (%)

Elements	% Agreeing Those Corporate Social Responsibility Efforts are Important for MEI Companies to Actively Support					
	Frequent Users			Sporadic Users		
	Millennials	Generation X	Baby Boomers	Millennials	Generation X	Baby Boomers
Environmental sustainability	76	83	83	54	60	70
Ethical labour practices	75	83	80	51	58	65
Philanthropy	65	72	72	44	48	47
Social impact accountability	74	80	81	49	53	54
Corporate transparency	75	84	82	55	62	69

Best practices: winning over the emerging media consumer

Much can be learned from successful examples of digital engagement within the MEI industry. Authenticity and user control, transparency, service accountability and emotional story-telling are all important attributes for digital media consumers in choosing services and platforms, as well as the content to consume, share and participate in. Consider the following illustrations of best practices.

The New York Times

Finding healthy revenue models while garnering consumer trust and fulfilling customer preferences is a challenge. The New York Times (NYT) was tested by the industry's digitization, but managed to stay relevant to its customer base, acquire new consumers and innovate. Several factors contributed to the NYT's digital success, but one in particular has strengthened its brand identity through effective segmentation – the NYT manages to serve the right content, in the right format, to each of its reader segments. This is such a strong value proposition in today's world of overloaded news content that the company has managed to charge a fee for the service. Of the NYT's 33 different newsletters, subscribers open 70%, which is a great example of how important relevancy is to heightened user engagement and ultimately trust.⁴⁹

Netflix

Effective segmentation brings more precise data on consumption patterns and preferences. Industry players that employ personal usage data to provide the right benefits to consumers, will be the best placed to charge for their services while simultaneously building loyalty. Netflix owes much of its success to its proprietary content algorithm, whose function is clearly visible to its users.⁵⁰ In fact, this algorithm generated the data and Intel required for Netflix to design and produce the perfect television series for its viewers, allowing Netflix to make the decision to invest \$100 million in 26 episodes (two full seasons) of *House of Cards* – a strong sign of service accountability.

LinkedIn

Digital businesses that manage to instil a sense of authenticity in their brand will ultimately attract the most users. This reflects user tendencies to value products and services that help them to build and protect online reputations. LinkedIn is a good example: 400 million people

are currently on LinkedIn, which equates to approximately one in three of the world's professionals.⁵¹ The service is fundamentally free, with only 39% of its user base paying for the premium service. A key selling feature of LinkedIn is its ability to build authentic online identities that can essentially be certified by public verification through peer and manager reviews, endorsements and news feed engagement.

MasterCard and WestJet

Authenticity in the way businesses tap into user emotions is paramount in customer engagement strategies that drive participation in content and ultimately the shareability of brand messaging. With its *A Mother's Day to Remember* campaign in 2014, MasterCard was able to generate brand visibility by establishing an emotional tie with a subject of global relevance, our mothers.⁵² In doing so, MasterCard had no need to actually advertise anything. Authenticity in the company's gesture was enough to imprint MasterCard as trustworthy and genuine organization.

WestJet, a Canadian domestic airline, used a similar strategy in 2013 with its *Christmas Miracle* campaign, pushing the brand to international stardom with more than 42 million YouTube views (and counting).⁵³ Such authenticity in the search for an emotional bond with the user is increasingly becoming the norm in digital content creation and marketing strategy. Interestingly, both the MasterCard and WestJet campaigns highlight the benefit of physical user participation in successfully engaging consumers digitally.

Facebook

With currently more than 1.5 billion monthly active users, Facebook is the most popular social network worldwide. The company has much influence on a significant part of the world's population and thus Facebook's responsibility for respecting user rights and preferences is of utmost importance. On its mission "to give people the power to share and make the world more open and connected", corporate transparency and social responsibility form an important cornerstone. Facebook has an extensive Data Policy and has done much in past years to make it more comprehensible and to give users more control of their privacy settings, e.g. the "privacy check-up" and "ad preferences" tools.^{54, 55, 56} Facebook also issues a Government Requests Report on how requests received from governments are handled.⁵⁷



Section 3

Impact of Digital Media on Individuals, Organizations and Society

The increased use of digital media is changing people's everyday lives and the way they connect and collaborate in the broader societal context, at work and in civil society. Much of the impact of this heightened use is beneficial to both individuals and society. It is enabling unprecedented levels of communication, social interaction and community building across boundaries of time, place and social context. It is enabling individuals and speeding up the democratization of knowledge. New learning methods are possible (as has been evidenced by the World Economic Forum's *New Vision for Education* project), as are ways of working, which are providing better opportunities to people in under-served communities and regions.⁵⁸

But not all the impacts of increased use of digital media are positive. Research indicates that when humans excessively use digital media it can negatively influence their cognitive and behavioural development and even their mental and physical health. Hyperconnectivity, the increasing digital interconnection of people and things, has the potential to change patterns of social interaction, as face-to-face time may be substituted by online interaction. In addition, greater technology enablement of work (and the resulting fragmentation of jobs) threatens the security of jobs traditionally considered as skilled in the developed world.

Whether individuals see the impact of increased digital media use as positive or negative depends greatly on where they live. The *Implications of Digital Media Survey* showed that only about one-quarter of respondents from Germany and the USA think that digital media has improved the quality of their social, professional and overall lives. By contrast, about two-thirds of respondents in Brazil and China believe this. Respondents in South Africa are roughly split on the question (Table 15).

However, despite believing that digital media has improved their lives, a higher percentage of respondents in Brazil and China also believes they should reduce usage (33-44%). Meanwhile, only one-fifth and one-quarter of users in Germany and the USA, respectively, think they should do so (Table 15). These country differences are enlightening, even after accounting for cultural differences in survey response patterns.

Clearly, it is important to understand the opportunities and the risks in increased digital media usage, so that both industry and users can learn how best to exploit the benefits while mitigating the negative effects.

Benefits and Opportunities

1. Digital media facilitates social interaction and empowers people

Digital media connects people in ways never before possible, enabling users to maintain friendships across time and distance. It enables those who are socially isolated or somehow set apart from their immediate physical community to connect with like-minded or like-situated people. Digital media also facilitates interaction across social, economic, cultural, political, religious and ideological boundaries, allowing for enhanced understanding.

Many people access social media platforms to express empathy and receive support from friends and family, including in times of emotional distress. This enriches people's relationships and their ability to stay in touch, and the ability of friends and family to identify and help loved ones in need. According to a 2015 survey by Pew Research Center, the use of social technology is linked to having a greater number of close confidants, as well as a larger, more diverse social circle. Another Pew survey showed that 57% of teens state they have made a new friend online, and 83% state that social media makes them feel more connected and informed about their friends' lives.⁵⁹

Social media can help to deepen relationships and facilitate the formation of support networks – 68% of teen social media users have received support on these platforms during tough times.

A study by Vaughan Bell and colleagues found that adolescents' use of social networking sites enhances existing friendships and the quality of relationships for those who use digital social networks to deal with social challenges. Those who use online social networks to avoid social difficulties, however, tend to exhibit reduced well-being.⁶⁰



By facilitating social interaction, digital media also appears to lower stress for at least some users. A separate Pew Research Center survey in 2015 of 1,801 American adults concluded that digital media users do not have higher levels of stress than others.⁶¹ This makes sense, especially for those who perform knowledge work and are aided by the greater access that digital media provides to colleagues and information. Moreover, Pew researchers found that digital media actually mitigated stress for women who use Twitter, email and cell phone picture sharing to build relationships.⁶² The same study did find, however, that digital media makes some people more aware of stressful events in others' lives, resulting in higher reported levels of tension. (*Other findings on the negative impact of digital media consumption on stress are discussed later in this report.*)

2. Digital media gives people a voice, increases civic participation and facilitates the creation of communities

While traditional media has long been central to informing the public and focusing public attention on particular subjects, digital media is helping to amplify the response to humanitarian crises and to support those afflicted by these crises. During the Arab Spring of 2011-2012, digital media served as a vehicle to mobilize resources, organize protests and draw global attention to the events.^{63, 64} Through digital media, users around the world collected \$2 million in just two days for victims of the Nepal earthquake of 2015.⁶⁵ Refugees fleeing the war in Syria have cited Google Maps and Facebook groups as sources of information that helped them to not only plan travel routes but to also avoid human traffickers.⁶⁶

Digital media has also enhanced information sharing across the world, giving people much greater access to facts, figures, statistics, and similar, allowing that information to circulate much faster. This not only enables people to respond in real time as events unfold, but also helps to expose political corruption and unfair business practices. For example, when a pharmaceutical company made plans to raise the price of a particular drug by more than 5,000%,

outrage spread quickly through digital media, forcing the company to reverse direction.⁶⁷

Digital media is also allowing people around the world to build communities, organize action and make their voices heard on a multitude of issues. Through online petitions and charities, people across the cybersphere can act on causes about which they care. Change.org, which helps individuals to start petitions and advance their causes, has enabled more than 123 million users to attain their own goals on almost 15,000 issues in 196 countries, according to its website.⁶⁸ Avaaz.org is another example of a platform with the goal of enabling people to take action on pressing global, regional and national issues, from corruption and poverty to conflict and climate change.⁶⁹ Through the site Witness.org, thousands of activists and citizens around the world have been trained and supported to use video safely, ethically and effectively to expose human-rights abuses and fight for change.⁷⁰ For refugees currently coming to Europe, websites and applications such as refugees-welcome.net, refugee-action.org.uk and workeer.de are helping coordination of action among people who are physically dispersed.

Similarly, digital media is helping people to support chosen causes financially. According to a report by Blackbaud, a non-profit software and services provider, online giving is growing, particularly in response to humanitarian disasters.⁷¹ Websites such as #GivingTuesday, YouCaring.com, JustGiving.com and DonorsChoose.com are funnelling donations from millions of donors to the causes of their choice. Of course, the ease with which individuals and organizations can build and disseminate communications on different issues and crises also creates the risk of weakening long-term support as users are bombarded with information or requests for help on more issues than they can handle. Additionally, an instrument for a good cause can also be used for a bad one (*see discussion on downsides and risks later in the report*).

Studies examining the impact of digital media on civic engagement have had mixed findings. Exploring the effects of social networking sites on offline behaviour, a 2015 meta-study by Shelley Boulianne of Grant MacEwan University in Canada found that while the correlation between the use of social networking sites and election-campaign participation is weak, the relationship with civic engagement is stronger.⁷² However, research indicates that messages on social media can significantly influence voting patterns. A study of the impact of certain messages posted on Facebook and promoted by friends on Election Day during the 2010 elections in the USA “increased turnout directly by about 60,000 voters and indirectly by another 280,000 voters through social contagion, for a total of 340,000 additional votes”.⁷³ This suggests that online political mobilization works, but it raises the issue of potential manipulation of digital media users and their political action, even when considering that digital media platforms give the opportunity to identify and challenge instances of manipulation.

This report’s research into the impact of digital media on civic participation also reveals mixed findings. While a majority of respondents to the *Implications of Digital Media Survey* in China and Brazil say that digital media has had an overall positive effect on their civic participation, a less-robust percentage of respondents in South Africa, and even smaller percentages in the USA and Germany say this is so (Table 16).

Similarly, respondents in Brazil (47%) and China (36%) are more likely to have taken action on a political or social issue because of something read on a social networking site, than are respondents from South Africa (22%), Germany (25%) or the USA (12%) (Table 17). Across the five countries, about one out of five respondents uses social networking sites to share political information or encourage action on political issues a few times per week (Table 18).

2. Digital media is changing how work gets done, boosting productivity and enhancing flexibility for workers and employers

Digitization of content and data, as well as new digital communication technologies, have opened up novel opportunities for where, when, how and by whom work gets done. This is changing the nature of the employment relationship. Many jobs now can be done anywhere, at any time, facilitated by the availability of digital data, high speed internet, and better messaging, audio and video technology.

“

We see job opportunities in the freelance and “gig” economies in roles that you wouldn’t have been able to previously see 15-20 years ago – anything from marketing to executive roles to medical.

”

Sara Sutton Fell, flexjobs.com

A Pew Research Center study of American adults in 2014 found that among full- and part-time workers, 21% work outside their workplace every day or almost every day, and 59% does that at least occasionally.⁷⁴

Digitization is a major enabler of this trend, with one-half reporting that the internet and mobile are “very important” to allowing them to do their job remotely, and another 24% saying that these tools are “somewhat important”.

This same study also found that 46% of employed internet users feel their productivity has increased because of their use of the internet, email and mobile or smartphones; only 7% feel less productive. Half of internet-using workers say these technologies have expanded the number of people outside their company with whom they communicate; 39% state it allows them more flexibility in the hours they work; and 35% say it has increased the number of hours they work.

These findings echo results from the *Implications of Digital Media Survey*, in which respondents rate digital media as having an even bigger positive effect on their work lives than on their private or public lives, with particular benefits to their ability to find work, do work, develop professionally and collaborate with colleagues (Table 19).

Although social networking sites like Twitter, Facebook and LinkedIn were not identified as important tools for online workers in the 2014 Pew Research Center study, professional communication and collaboration platforms have high future potential. For example, the Royal Bank



of Scotland recently introduced “Facebook at Work” to “encourage collaboration and allow employees to communicate faster and more efficiently” as it stimulates non-hierarchical communication and discussion.⁷⁵

Slack, one of the most highly valued start-ups in recent times, with currently 1.7 million daily active users, exemplifies how virtually all knowledge, information and data related to work can be managed within one platform. Its users claim to have cut email volume by almost half, improved transparency and offline culture significantly, and increased overall productivity by one-third.⁷⁶

Workers demand the same usability and features of their private communication tools for their professional ones.

The *Implications of Digital Media Survey* results mirror these findings: almost 70% of participants agree that the use of digital media for work-related purposes has already grown significantly and that it will continue to do so in the future (Table 20).

The changes in work that digitization and digital media have facilitated bring several advantages for workers, employers and society at large. Beyond enhanced productivity, the greater flexibility afforded by digital media allows for better work-life integration – a critical element in enabling workers to effectively juggle multiple roles as workers and caregivers. On a larger scale, higher work flexibility is helping to equalize and globalize work opportunities for people living in remote areas, those who are less mobile, or living in countries with less developed or struggling economies.

Organizations can and should use digital media to communicate and engage with employees. Social enterprise tools are well suited for developing community within a company. Yet only 56% of employers use digital media to communicate with employees on topics such as organizational culture, team building or innovation, a Willis Towers Watson study found.⁷⁷

Managers, still one of the most important drivers of sustainable employee engagement, should be enabled to use social business and collaboration tools to intensify employee productivity and engagement.

Talent platforms, like Upwork, Topcoder and Tongal, are facilitating the placement of free agents with companies, and giving them additional options for getting work done. In the emerging “gig economy”, workers might no longer hold full-time jobs with fixed job descriptions, but could be employed for particular tasks for a defined period of time.

Even as digitization enables the greater democratization of work, it also places a premium on certain types of work (particularly those involved in the development, manipulation and leverage of technology and data). A McKinsey & Company study suggests that employers worldwide face a potential shortage of 38-40 million skilled workers and a potential surplus of 90-95 million low-skill workers by 2020.⁷⁸

These “friction points” give rise to new ways of accessing talent and getting work done. In 2011, more than 22% of the global workforce could be classified as contingent (i.e. not employees in the traditional sense).⁷⁹ In 2014, one in three Americans in the workforce was freelance, according to a recent survey by Freelancers Union.⁸⁰ Moreover, according to *Workforce 2020*, a global study by Oxford Economics and SAP, one finding (which allows multiple choices) shows that an impressive 83% of company-respondents use: contingent workers (41%, i.e. independent contractors, part-timers, or temporary or leased employees), consultants (34%), intermittent employees (35%) or interns (40%).⁸¹



41 % of companies have **contingent** employees

This represents real change for employers as well as workers, permitting work and talent to flow in and out of organizations, boosting agility, productivity and competitiveness. As more work moves outside the traditional employment relationship, organizations inevitably will need to become more flexible, collaborative, interlinked and permeable to allow tasks to be accomplished by the most capable talent – whether this be a full- or part-time employee, a freelancer or an employee of an outsourcer.



“

Work has gone from being largely aggregated into jobs to increasingly being dispersed outside the organization. Talent is moving in and out of organizations much more freely.

”

Ravin Jesuthasan, Willis Towers Watson



Figure 12: Potential of Talent Platforms for Global GDP Growth

By 2025, online talent platforms could boost global GDP by \$2.7 trillion.

Share of GDP increase
by source, \$ trillion

\$2.7 trillion¹

Improved productivity	0.34	Better matches
	0.29	Reduced informality
Greater employment, 25 million additional FTEs ²	0.70	Faster matches
	0.11	New matches
Higher labor-force participation, 47 million additional FTEs	1.27	Work for currently inactive people and increased hours for current part-timers

¹Figures do not sum to total, because of rounding.

²Full-time equivalent.

McKinsey&Company

Source: *Connecting Talent with Opportunity in the Digital Age*, McKinsey & Company, June 2015⁸³

Such a shift has implications for the broader society. A recent analysis by McKinsey & Company suggests that talent platforms like those mentioned above could boost global gross domestic product (GDP) by \$2.7 trillion by 2025 (Figure 12). The highest share of the gain would come from greater labour-force participation of currently inactive people and more hours for part-timers. The rest of the gain would result from higher employment due to more and faster job matches and higher productivity as a result of better matches, all achieved through online talent platforms.⁸²

4. Digital media can facilitate education and life-long learning to build and source the skills of the future

The World Economic Forum's *New Vision for Education project* identifies critical skills for the 21st century, and explores ways to address any gaps through digital platforms.⁸⁴

The labour market increasingly demands higher-order skills, i.e. non-routine analytical and interpersonal skills. Literacy in information and communications technology, and competencies such as creative problem-solving and collaboration are among the most important. In addition, character qualities such as adaptability, and social and cultural awareness need to be developed. Building digital skills from an early age provides opportunities to successfully navigate life, improve employability and participate in society – which can help make the world a better, more equal place. Increased use of digital media is helping this process.



“

I'm a big believer that we absolutely need technical literacy across all ages. And that starts with our education system. We don't need everybody to become a computer scientist, but we need everybody to understand the computational systems that are shaping their lives.

”

danah boyd, Data & Society Research Institute/Microsoft Research

Employees need to be more flexible to adapt to changing requirements and continuously learn and develop new skills. *Global Talent 2021*, a study by Oxford Economics in collaboration with Willis Towers Watson, among others, identified digital skills, agile thinking skills, interpersonal and communication skills, and global operating skills as the most important competencies for the future.⁸⁵

Digital leadership (enabling execution of the digital strategy) based on digital acumen is essential. Managers and leaders need the right knowledge and skills to recognize and anticipate digital trends, understand implications for business and leverage technology to stay abreast. However, only 19% of leaders are viewed as strong in digital leadership and management, a Harvard Business Review study published in 2015 found, so a need exists to develop such skills.⁸⁶

Digital media and technology can help to close skill gaps by supporting teaching and self-education. Learning resources can be made available to a broader audience at lower cost and higher quality. Digital media can be used to facilitate life-long learning, e.g. through embedding learning technology in widely used platforms or using digital media for communication (e.g. teaching, mentoring and coaching) between students and educators. Digital media also is increasingly used for attracting and sourcing talent, especially young, digitally savvy workers. Diverse cross-industry talent pools might be another way to meet the need for new skills while offering growth opportunities to employees.⁸⁷

Downsides and Risks

1. Digital media can be used by communities with harmful intentions to spread propaganda and to mobilize followers

Digital media offers opportunities to spread information and organize action for good causes, but can also be used to disseminate maleficent content and propaganda, and be used, for example, by extremist groups to recruit and mobilize followers. Young adults and children are vulnerable, especially if they lack a stable social support network.

Many platforms such as Google, YouTube, Facebook and Twitter constantly update their terms of service and community standards to disapprove or forbid “threats of violence”, “violent or gory content”, “terrorist activity” or “organized criminal activity”.⁸⁸ Numerous social media training sessions have been held on counter speech and the number of NGOs and community and student groups that promote positive speech against extremism have increased.⁸⁹ However, strong and consistent global internet governance is yet to be implemented in a common effort by all digital media stakeholders.

As citizens use social media for political discussions, questions arise about which statements are appropriate within a framework of global norms and values, and which should be prohibited. Progressive discourse in one context could be considered offensive in another. International standards can provide guidance (e.g., the United Nations’ compilation of international standards for freedom of opinion and expression).⁹⁰

Online freedom of expression has broad global support, shows a World Economic Forum survey in 2014 on values, beliefs and attitudes of internet users worldwide.⁹¹ Of the survey’s more than 11,000 respondents, 70% said they can express themselves freely online and almost 60% said it is okay for people to state their ideas on the internet, even if extreme. At the same time, however, more than 70% of respondents said they are very careful about what they do or say on the internet; almost 40% think that their government tries to prevent people from accessing some information on the internet.

Challenging questions remain: How free is the internet, and how free should it be to safeguard human rights? Where should the line be drawn between free speech and preventing harm, given that communication in global social networks traverses national and cultural borders with different norms and values? What roles does government, industry and civil society play in this context?

2. By selecting what information reaches which users, digital media can alter human decisions and pose risks to civil society

Far more content is available through digital media than any user could possibly sift through. Algorithms deployed by search engines, social media platforms and other industry participants filter this vast amount of information to make it manageable for consumers. People now have more tools to curate content. However, given the growing importance of digital media as a source of information about everything from social issues and politics to job opportunities, there needs to be transparency regarding how content is filtered and which content and advertisements are shown to which users. In some cases, filtering mechanisms have been shown to contain biases that can have a discriminatory effect.

For example, researchers from Carnegie Mellon University and the International Computer Science Institute recently conducted a series of experiments to examine how digital profiles influence the advertisements Google displays on third-party websites. They found that Google's transparency tool, called "ads settings", allows consumers to view and edit the interests Google has inferred about them, but does not always reflect potentially sensitive information being used to target the consumers. "Ads settings" gives information about some user profile features and provide some choice on ads, but these choices could lead to seemingly discriminatory ads. For example, they showed that Google is more likely to recommend high-level executive job postings to male rather than female job-seekers.^{92,93}

The researchers noted that browsing sites aimed at people with substance abuse problems, for example, triggered a rash of advertisements for rehabilitation programmes, but Google's transparency page did not change.⁹⁴ They concluded that the lack of transparency about how systems like Google use consumer data to influence the information to which consumers are exposed – and potentially the decisions they make – is a major concern from a societal standpoint. In a similar example, a White House report in 2014 on the impact of Big Data on human decisions and outcomes concludes, "Data analytics have the potential to eclipse longstanding civil rights protections in how personal information is used in housing, credit, employment, health, education and the marketplace."⁹⁵

Sources of news and information in the digital age are another issue. Another Pew survey in 2015, which examines where Americans get their news, found that a majority of Millennials (61%) and half of Generation X-ers (51%) get their political news on Facebook.⁹⁶ This has become a concern because separate research indicates that the majority of these users do not understand that Facebook selectively screens content.⁹⁷

“

'I share therefore I am'. So over time, people actually narrow the stream of information that they share on social media. They call it the 'spiral of silence'.

”

Sherry Turkle, Massachusetts Institute of Technology.

As social networking platforms increasingly become online intermediaries content published outside those platforms are at risk of marginalization since some platforms and content can be sponsored while others not. Critics worry that "filter bubbles" make it more likely for individuals to be exposed to content with which they already agree and less likely to be exposed to dissenting points of view. However, argues a 2014 paper by a New York University researcher, because social media creates connections across people who are outside each other's intimate social circles, it actually helps to expose users to more heterogeneous views.⁹⁸

Researchers from Stanford University observe that individuals are more likely to engage with content that contradicts their own views when it is socially endorsed.⁹⁹

Indeed, the 20,000 global online news consumers surveyed by Reuters Institute for its *Digital News Report 2015* said that search services and social media "help them find more diverse news and lead them to click on brands they do not normally use".¹⁰⁰

Of course, consumers of news have always been subject to the judgement of others via curation. In traditional media, editors and others historically have made those decisions, without much transparency or public oversight. Nikki Usher, an assistant professor at George Washington University's School of Media and Public Affairs, argues that algorithms can be useful antidotes to these black-box decisions. Humans build them, after all, and the good ones, according to Usher, continually refine their suggestions to provide consumers with new content beyond their main interests.¹⁰¹

Other concerns pertain to digital media's impact on civic participation and inclusion. Digital media enables speedy coordination of action, but social mass movements are complex and it is difficult to create sustainable structures for action.¹⁰² A risk also exists that somewhat loose and transitory virtual communities replace more robust and enduring physical ones, and that "clicktivism" might not have as much impact as real-world action. Moreover, with information and discussion moving online, the views and needs of those without access to digital media are less represented.

3. The transformation of work brought about by digital media may increase inequality and lower productivity

Despite the productivity gains and opportunities of digital media to actually bridge economic gaps and reduce inequality, potential downsides still exist to the newly emerging work paradigm. As digital media transforms work by increasing fragmentation, and demand for various skill-sets rises and falls, the likelihood is very real of rising inequality in the near term as the global economy adjusts to these new realities.¹⁰³

First, digital media and related technology may drive near-term inequality as innovations like talent platforms increase the productivity and rewards of highly skilled workers while simultaneously cutting the cost of low-skilled work. Talent could turn increasingly to platforms like Topcoder to access opportunities that offer compensation and development potential that are much greater than those offered through traditional employment. At the same time, companies might turn to platforms like Taskrabbit to access workers to perform discrete activities at the lowest possible cost. Highly skilled workers benefit from these more flexible work structures, but lower-skilled employees could be hurt in the short-term.

Case study: Uber

Uber’s car-sharing service is an example of how digital platforms can transform who does the work and how, creating both winners and losers. The creation of apps that allow more efficient connection between drivers and passengers has made it easier and cheaper for consumers to get rides where and when they need. But the new apps have also disrupted the market for skilled cab drivers. Digital tools like mapping apps put knowledge into the hands of novice drivers that previously had to be accumulated through years of experience. The ability of lower-skilled entrants to compete with highly skilled and experienced drivers effectively transfers that knowledge premium from one group of workers to the other.

Source: Adapted from *Lead The Work: Navigating a World Beyond Employment*, Lead The Work: Navigating a World Beyond Employment. Boudreau, Jesuthasan and Creelman. Wiley, 2015

Second, digital media has the potential to diminish work effectiveness and productivity. The multiple platforms and vast quantities of information and content at their fingertips may distract workers and disrupt work. In addition, as more people work remotely, valuable face-to-face time is reduced, which can weaken understanding and collaboration, and potentially hinder innovation. Finally, because digital media facilitates greater information-sharing, it has the potential to compromise intellectual property.

It remains to be seen whether the positive effects will outweigh the negative. Considering the wealth of contributing factors, it is likely that different demographics and different social levels will be influenced differently.

About two-thirds of respondents in China and Brazil to the *Implications of Digital Media Survey* stated that using social media enhances their work-effectiveness, but only 11% of those surveyed in the USA believe this (Table 21). In Germany and South Africa, opinions are roughly evenly split on whether social media usage reduces or improves work-effectiveness.

5. Digital media use can change social skills – online does not replace offline

For interacting with other people, online is not the same as offline. Face-to-face interaction and communication require – and hone – a finely tuned ability to read and understand others. It promotes a sense of social connection, which is essential to the give-and-take functioning of families, communities and workplaces.

Yet a growing number of people spend more time engaged with digital media than in actual conversation. Most teenagers send hundreds of texts a day and 44% never “unplug”, even while playing a sport, notes Sherry Turkle, a psychologist and director of the Initiative on Technology and Self programme at the Massachusetts Institute of Technology. With relatively little time available for actual conversation, this generation of young people struggles to listen or make eye contact or read body language.¹⁰⁴

Figure 13: The Pros and Cons of “New Work”

Cons	Pros
<ul style="list-style-type: none"> – Risk shifted to workers – Employers stop training – Death of the career – Commoditization of jobs – Rush to lowest cost – Worker exploitation 	<ul style="list-style-type: none"> – Transportability of skills – On-demand training through multiple channels – Boundary-less careers – Precise work-worker matching – Rewards segmented to match the needs of individual workers – Worker empowerment

Of concern is whether the recent trend of taking “selfies” and posting status updates about one’s life nurtures narcissism. Studies have produced mixed findings. One study associates higher narcissism with students’ motives for using Twitter; more narcissistic students are likely to say they posted updates to attract followers and gain admiration on the site.¹⁰⁵

One possible impact of excessive digital media consumption is changing levels of empathy in society – perhaps a result of the fewer hours that such consumption leaves for face-to-face communication. A 2010 study by researcher Sara Konrath found a 40% decline in empathy among college students over the past 30 years, with most of the decline occurring after 2000. The study specifically looked at four different types of empathy and found that the biggest drops are in empathic concern or concern for the misfortunes of others, and in perspective taking, which requires an ability to imagine other people’s points of view.¹⁰⁶ Support for this finding comes from a range of experiments that explore commonplace everyday situations for college students – for example, sitting together over a meal but having their phones out. In such a situation, research shows that not only does the conversation become about topics that are less personal and more generic, but the level of empathic connection among the participants also declines.

Interestingly, this finding is at odds with results of the *Implications of Digital Media Survey*, in which only 7% of respondents feel that digital media has had a negative impact on their empathy levels (here defined as “understanding another’s situation or feelings, and experiencing a sense of their emotional state”), while 54% think it actually has had a positive impact (Table 22). The discrepancy in findings might reflect the difference between asking people about their empathic capacity and studying their measured performance on tests. But the discrepancy might also indicate that the definition of empathy is actually being transformed, and the capacity that respondents labelled “empathy” is distinct from either empathic concern or perspective taking.

Indeed, a recent study from California State University shows a difference between real-world and virtual empathy, although they correlate.¹⁰⁷ Whether empathy is negatively affected depends on what is being done online, for example, when (non-verbal) communication is lacking, as in video gaming. But online activities can also improve time spent in face-to-face communication. However, the study did find that real-world empathy has a stronger relationship with social support. In other words, “a hug feels six times more supportive than an emoji”, as *The Wall Street Journal* put it in an article on the topic.¹⁰⁸

Regarding the impact of digital media on our most important social connections, 61% of respondents to the *Implications of Digital Media Survey* view digital media as helpful to maintaining already existing relationships with friends, and 45% believe it is helpful in forming new ones (Table 22).

5. Digital media consumption may facilitate bullying, harassment and social defamation

Linked to the question of empathy is that of hurtful behaviours online. Digital media has reduced the potential costs, and increased the ease of engaging in behaviours that harm either others or ourselves. Hate speech, “internet trolling” and cyberbullying are serious issues.

In a global YouGov survey sponsored by Vodafone, of more than 4,700 teenagers worldwide, one-half of the respondents stated that cyberbullying was worse than face-to-face bullying and 43% thought cyberbullying is now a worse problem among teenagers than drug abuse. About one-fifth of the total sample reported having been cyberbullied. Of those, 41% stated cyberbullying made them feel depressed and 18% said it had made them consider suicide. The survey also found that 40% of students who were bullied online did not tell their parents because of feelings of shame or fear.¹⁰⁹

Recent research by the *Net Children Go Mobile* project found that cyberbullying is now more common than bullying in person – 12% have been bullied online versus 10% offline, according to a survey in 2013-2014 of children aged 9-16 years drawn from seven European countries.¹¹⁰ Of the surveyed children, 17% said they had been bothered or upset by something on the internet. Beyond cyberbullying, online risks include seeing negative content or receiving negative messages, such as hate messages, sexual content and self-harm sites.

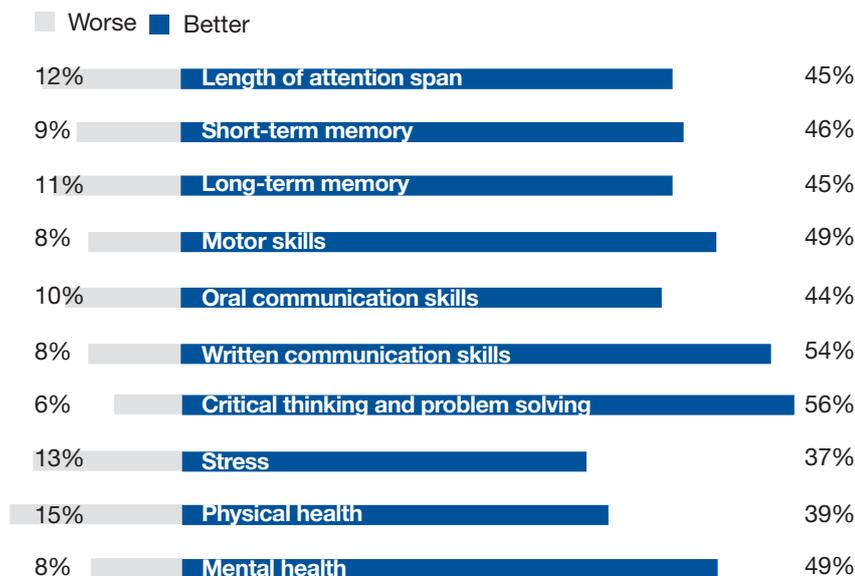
However, it should be noted that digital media is not the “root” of cyberbullying, but more of an “instrument”. Cyberbullying is mostly related to real-world issues and personal emotional or psychological problems. Often, offline and online bullying are connected. Used in a beneficial way, digital media can enable people to express rejection of malicious behaviour and victims can find support online, e.g., with organisations like the International Bullying Prevention Association, and the European Network Against Bullying in Learning and Leisure Environments.

6. Excessive digital media consumption may increase vulnerability to addiction and harm mental and physical health

Excessive digital media consumption poses a number of risks to user health and well-being. While a higher percentage of respondents in the *Implications of Digital Media Survey* feel that digital media is positively, rather than negatively, affecting various aspects of their lives, they are the least positive about impacts on their physical health, stress and attention span. (Figure 14, Table 22)

Before describing all potentially negative effects on mental and physical health, it should be noted that their occurrence is largely dependent on the way digital media is being used. The internet can be an asset for individuals and healthcare practitioners, as many content services have been provided to prevent or cure health problems (for example, the UK Mental Health Foundation or the US National Institute for Health).^{111 112}

Figure 14: Effects of Digital Media Usage



Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Stress has been identified as one potential health risk stemming from excessive digital media consumption. Researchers at the University of St Gallen in Switzerland studied “technostress”, which results from having more content than can be attended to without anxiety.¹¹³ They found three major phenomena most directly associated with stress:

- **Overload** – increased work because of the volume and variety of social media contact
- **Invasion** – intrusion of work into personal life, caused by personal media connections
- **Uncertainty** – continuous and unpredictable change in social media applications and requirements

The pressures associated with managing the sheer volume of electronic stimuli are important enough, but they are compounded by the leakage of digital media-borne content across the boundary that once separated a user’s work and personal lives. Many can no longer easily differentiate between business and personal, between time on and time off. New innovations in digital media often add to the stress from overload and invasion, as individuals struggle to master new modes and norms of connection.

Even the network-building advantages of social media can have associated risks. Being constantly updated on friends’ latest professional successes, fantastic vacations and personal triumphs may cause envy-related stress. Users may also feel pressure to carefully curate the presentation of their own lives to highlight the great birthday party but hide the impending divorce.

Ubiquitous connectivity also brings other sources of tension, including a decline in civility. Chrissy Teigen, a model, recently lashed out at online critics who posted nasty comments about her weight in response to a photo she had uploaded to Instagram: “In what other real-life situation would you walk up to someone and tell them they’re fat or gained weight?”. Electronically mediated interactions are

more anonymous and often more bluntly negative than face-to-face encounters.

Another health risk from increased digital media consumption is its potential for addictive behaviour. In 2013, the American Psychiatric Association (APA) added “internet use disorder” to the *Diagnostic and Statistical Manual of Mental Health Disorders* as a condition warranting more clinical research and experience. The APA took this step in response to growing evidence that some video gamers experience symptoms similar to those felt by people with substance abuse or gambling addiction – and may be experiencing similar changes in brain chemistry related to the release of dopamine.¹¹⁴ The governments of China and South Korea have already deemed internet addiction a public health threat and have taken steps to combat it, including opening up treatment centres and preventing children from accessing gaming websites during certain hours.¹¹⁵

Research by Hyoungkoo Khang and colleagues at the University of Alabama found that the likelihood of addiction is closely related to the user’s motivation for using digital media. Their study, published in 2013, found that those who used digital media to kill time and have fun, or as tools to make a good impression on others, are more likely to develop addictions to the media used.¹¹⁶

The researchers noted that because of the impact of digital media on social norms “in which an individual’s social activities appear to rely primarily upon his/her knowledge and capacity to use information, communication and entertainment technology”, it has become increasingly difficult for individuals to avoid spending considerable amounts of time using digital media.¹¹⁷ “Although individuals in society are aware of the detrimental effects of excessive reliance on digital media, a dilemma exists because one might suffer from social exclusion if she/he refuses to partake in the new social norms associated with new media devices” they concluded.¹¹⁸

Digital media also appears to have some association with depression, although causality is unclear. One large longitudinal study of Americans aged 14-24 years found that heavy use of the internet and video games is associated with an increase in depression. But the study from the University of Pennsylvania concluded that intensive digital media use might be a symptom of depression rather than its cause.¹¹⁹ The researchers found that moderate internet use, especially for acquiring information, is most strongly associated with healthy development. Two other studies that examine the relationship between social networking and depression in youth also found that the quality of social networking interactions, but not the quantity of use, is associated with depression.¹²⁰

Increased digital media use also has an impact on cognition. It has been shown to lower recall rates for information people believe they can access easily online, although it also effectively extends human cognition through external resources.¹²¹ A study conducted by the Statistic Brain Research Institute in 2015 found that the average human attention span has decreased by 31% since 2000, from 12 seconds to 8.25.¹²² A study published in 2004 found that early television exposure is associated with attention problems at age seven.¹²³ However, it is unclear whether this is due specifically to increased use of digital media.

The use of digital media has implications for physical health as well. According to Vaughan Bell and others, as well as Kathlyn Mills, from University College London, no evidence currently exists from neuroscience studies to indicate that typical internet use harms the adolescent brain.^{124 125 126} Of concern, however, is that time spent on digital technology displaces time that could be spent on physical activity. As Bell notes, “Low levels of physical activity associated with the passive use of digital technology have been linked to obesity and diabetes”.¹²⁷

Finally, increased digital media use is cutting into user downtime, which is critical to allow the brain to synthesize information, make connections between ideas and develop a sense of self. When downtime and solitude are possible,

many digital media users turn to their devices rather than risk boredom, cutting off an opportunity for restorative and creative thought.¹²⁸ Children, especially, lose out cognitively and emotionally, if they are always given a screen to stimulate them. A capacity for boredom and solitude is a signal development of childhood, and central to a later capacity for relationship, as Sherry Turkle attests.¹²⁹

7. Benefits of digital media for young children are limited, when used extensively and without guidelines

So far, baby bouncers and potty training devices with tablet holders still face protest by concerned parents.¹³⁰ But children are being exposed to digital media at younger and younger ages. A 2015 study by a research firm, Childwise, found that 73% of British children under the age of five are using a tablet or computer compared with just 23% in 2012. By the time they are six years old, more than 40% are using a device every day.¹³¹

This can be problematic because children are the most vulnerable to the negative impacts of digital media overuse. First, according to the American Academy of Pediatrics, numerous studies have indicated that excessive new media use can lead to attention problems, school difficulties, sleep and eating disorders and obesity.¹³² For example, a 2011 study by Michelle Garrison and colleagues found that violent content and evening media use were associated with increased sleep problems for children aged three to five years.¹³³

Second, it is harmful to children if interaction with parents and others is replaced by interaction with digital media. Research has shown that brain development depends on social interaction with others during a critical period in early life. Going without that early social interaction has irreversible effects that create social and cognitive impairments throughout life.¹³⁴ In addition, healthy neurological development requires the engagement of all sensory systems, but heavy digital media consumption favours the visual and auditory systems over the vestibular, proprioceptive, tactile and attachment systems, creating possibly permanent imbalances.¹³⁵



Third, the overuse of digital media can delay language development. Research has shown that very young children (aged 9-18 months) do not learn language by watching educational videos without active interaction with another person.^{136 137} Interpersonal interaction seems to be a fundamental component of language development. Interestingly, while a 2013 study similarly found that canned content delivered through digital devices was ineffective in teaching language to young children (aged 24-30 months), it also found that live interactions between a child and an adult conducted over a digital device such as a tablet or smartphone did enable the child to learn new words.¹³⁸

Fourth, uncontrolled time spent on digital media often displaces time spent on academics, lowering academic achievement. Studies show that most teenagers multitask between entertainment and academic work, both inside and outside the classroom. A 2010 survey published by the Kaiser Family Foundation found that almost one-third of the 8-18 years age group surveyed reported watching TV, texting, listening to music or using some other medium “most of the time” that they do homework.¹³⁹ Such multitasking has been found to diminish students’ understanding and memory of content and to make it harder for them to transfer their learning to new contexts.¹⁴⁰

Finally, while digital media offers children access to a huge wealth of information, not all information can be trusted. Digital media makes it easier to disseminate inaccurate as well as accurate information, and much that is online is potentially harmful to younger demographics.

This study’s research confirms a sense of unease about children’s growing exposure to, and consumption of, digital media. Among respondents to the *Implications of Digital Media Survey*, 71% believe that digital media can create problems for youth (Table 23). Interestingly, respondents are more concerned about the negative impacts of digital media on the 4-15 years age group – particularly the 8-11 years group – than on the under-4 years group. To the extent that this reflects respondents’ beliefs that children aged below four years do not have access to digital media, their concern about children’s exposure to digital media could be lower than warranted.

Social Media’s impact on individuals, organizations and society

Social media platforms – ranging from WeChat to Twitter – offer both opportunities and challenges in the ways people communicate and interact in various types of relationships. *The Impact of Digital Content: Opportunities and Risks of Creating and Sharing Information Online*, a white paper by the World Economic Forum’s [Global Agenda Council on Social Media](#), examines how social media is transforming the way that humans build communities, act collectively and individually, and transform social networks into integral communication institutions.¹⁴¹ The report explores the use and transformation of social media by building a discussion around the current impact of different platforms, the “business” of social media, and the ethical and legal implications for stakeholders when sharing and using information online. The paper ends with a review of future trajectories for social media tools and networks, and how they have the potential to influence individuals, organizations and society.

Section 4

Outlook and Call to Action

Multistakeholder dialogue identifies need for future action

Since the inception of the *Shaping the Future Implications of Digital Media for Society* project at the World Economic Forum's Annual Meeting in 2015, the MEI industry team has brought together experts from the private and public sectors in a series of sessions to explore the ways in which digital media has disrupted online consumer patterns and is affecting human behaviour and society. The sessions helped to highlight the intended and unintended consequences of increased digital media use. They also helped to identify several actions for stakeholders to mitigate the negative, and further exploit the positive, impacts of digital media use:

"The Analogue Hearts and Digital Minds: The Impact of Digital Media on Human Behaviour" project workshop at the World Economic Forum on East Asia in April 2015 focused on identifying the consumption patterns of the contemporary Asian digital media consumer and the social implications of excessive digital media use, including change of behaviour, habits and human psychology. Early education of children by parents was identified as a main driver of responsible digital media use. Participants also discussed the many benefits of greater connectivity across the region, including better access to information, economic opportunity and financial inclusion.

“

Technology is needed that not only serves individual users but also addresses the rise of societal issues such as social isolation, cyberbullying, addiction and other recent developments.

”

World Economic Forum on East Asia, Jakarta, Indonesia April 2015

To better analyse the implications of increasing digital media use, the MEI industry Strategy Officers met with special guests as well as the Global Agenda Councils on the Future of Media, Entertainment & Information and on Social Media, in a project workshop during the MEI Industry Spring Strategy Meeting in May 2015. They explored the drivers behind and impact of changing media consumption habits. Among the main points of discussion were: a growing need for engaging digital content to enable participation from users, the link between higher digital connection and lower empathy levels, and the potential loss of human connection in spending excessive time online.



01: Participants in the project workshop at the World Economic Forum on East Asia in April 2015

“

Regarding the human implications of increased use of digital media and increased personalization, the challenge for both industry and the public sector will be to make sure that such trends do not ultimately disrupt healthy societal dynamics.

”

MEI Industry Spring Strategy Meeting, New York, USA May 2015



At the Digital Changes in Society session during the Forum's Young Global Leaders' Summit in August 2015, participants discussed how the changing digital technology landscape is having an impact on the workplace, as well as other aspects of society. Participants discussed the opportunities provided by digital technology and platforms to better match labour supply and demand and increase productivity, as well as the opportunities for individuals to increase work flexibility and work-life balance.

“

Improving work-life balance is the No 1 reason for people to work remotely. While only 20% of work in the USA is done remotely today, this number could be increased to 50%.

”

Young Global Leaders' Summit, Geneva, Switzerland August 2015

01: Panellists in the project workshop at the MEI Industry Spring Strategy Meeting in May 2015

02: Participants in the project workshop at the World Economic Forum's Young Global Leaders' Summit, August 2015

03: Panellists during the project workshop at the Annual Meeting of the New Champions in Dalian, China September 2015

02



At the session on China's New Media Society at the Annual Meeting of the New Champions in Dalian, China, in September 2015, the need for multistakeholder collaboration on issues such as data privacy was deemed imperative to ensure the safety of the digital media consumer. Discussions also focused on the promise of digital media for cross-cultural communication, cultural diversity and transparency.

03



“

The explosion of content, its accessibility and the multifaceted views that the internet exposes individuals to, has made the typical content consumer cautious about the source of information, the validity of the information and the authoritative power of the source. This reality has put a strain on trust in the content ecosystem.

”

Annual Meeting of the New Champions, Dalian, China September 2015



Children need mentors to navigate through digital media use and to use digital media for developing the right skills.



Annual Meeting of the New Champions, Dalian, China September 2015

Through this ongoing dialogue between the MEI industry partners and engaged stakeholders such as NGOs, academia and civil society, ideas have been collected to address some concerns and to promote the benefits of increased digital media use. In addition, this dialogue has pointed the way towards future research and discussion needed to create maximum value for the MEI industry, digital media users, and society overall.

The power of multistakeholder collaboration – a call to action

The research presented suggests that action from all sectors of society can help to ensure that humans make the most of increasing use of digital media while mitigating the related risks:

Multistakeholder collaboration

The public and private sectors should partner together to drive action on the impacts of digital media hyperconnectivity noted in this report. The Forum can facilitate this public-private collaboration. Both regulators and industry can engage with **academia** and **NGOs** to incorporate research findings and initiatives in designing and creating new socially responsible MEI industry offerings and updating current public policies.

Multistakeholder collaboration will be critical to moving forward in several key areas:

- Creating and building on standards that improve and redefine the digital user experience.
- Building on existing standards and regulations for personal data privacy and security by supporting initiatives that help companies, the public sector and consumers to better understand how data can be collected and used to create social, economic and personal outcomes in ways that protect privacy, e.g., Facebook's Data Drive Economy Roundtable series.¹⁴²
- Establishing and reinforcing governance on making digital media an instrument for freedom of speech and expression, while simultaneously preventing hateful, harmful speech or propaganda.
- Establishing and reinforcing governance around content to prevent cybercrime and safeguard citizens, especially minors.
- Educating children about digital citizenship, including internet safety and ethical codes of conduct for using digital media and technology.
- Recognizing the implications of work fragmentation for social safety nets, and creating more flexible regulatory frameworks that accommodate a diversity of company-worker relationships.
- Providing equal and facilitated access to digital media for all citizens.

The public sector

Public institutions can help to update standards and regulations, as well as promote and enforce them, based on scientific evidence in order to enable the beneficial use of digital media and prevent the negative effects. This should be done maintaining a flexible and innovation-friendly framework.

The public sector can also facilitate the creation of more social institutions and programmes, such as education and awareness campaigns, designed to support both citizens and the private sector to address or foster the influences mentioned in this report. The European Commission's DG Connect group has a directorate dedicated to digital society, trust and security, for example. Governmental bodies should set up similar resources for their countries or regions. However, any model of guidance and support should be flexible, and be able to develop quickly in step with changes in the marketplace and user behaviour.

The private sector/MEI industry

The **private sector, principally industry**, should **consider the implications on individuals when designing platforms and services or creating content**. Industry best practices and self-regulation are the optimal way to create innovative solutions in a fast-evolving environment. Examples of possible actions: restricting minors' access to harmful content, enabling free expression and participation, accepting feedback and starting discourse with users.

In addition, the private sector can step up efforts to build trust with consumers by, among other ways, being more transparent about how personal data are used and showing a corporate ethos of accountability and social responsibility. One effective measure is to sponsor **public and non-profit organizations** that help to promote beneficial use of digital media. The CEO Coalition is an example of an initiative where private action is facilitated by a public body.¹⁴³ Company signatories to the Coalition, a cooperative voluntary intervention designed to respond to challenges of young Europeans going online, has committed to actions, including age-appropriate privacy settings, wider use of content classification and better availability and use of parental controls. Industry could also support NGOs and social enterprises, such as iZ HERO Lab, a social enterprise based in South Korea and Singapore, dedicated to educating children and parents on responsible digital media usage.

From an employer's perspective, organizations should develop strategies to integrate digital media into workflows and should act proactively on the opportunities and pitfalls their businesses and employees encounter because of increased connectivity.

The forward-thinking employer

Digital media now touches almost every aspect of a typical organization, from how talent is sourced and deployed, to how, where and when work gets done, and how the business connects with employees and customers. Given these fundamental changes, employers are recommended to:

- Use digital media (including talent platforms) to more accurately and flexibly match an individual's skills to a specific business need, rather than think solely in terms of traditional jobs. This will create a more flexible, collaborative and productive environment for better business results.
- Take a more nuanced approach to how work should be conducted. Recognize when collaboration and personal interaction are needed, versus when it may be optimal for work to be performed independently and remotely.
- Use social media tools to build communication and engagement within the organization.
- Source and build digital skills and develop digital leadership.
- Encourage employees not only to turn on, but also to turn off. Employers that expect employees to be accessible through digital media 24/7 run the risk of decreased productivity and burnout.

Individuals and civil society

- Finally, **individuals** are encouraged to build digital literacy and skills and to use digital media responsibly. That means making use of digital media's many benefits and avoiding the harmful aspects – protecting both oneself and others, especially those unable to protect themselves.
- In addition, individuals can get involved with **civic organizations** and **NGOs** to help make a difference on digital media issues. Thousands of NGOs and associations promote the helpful use of digital media and the prevention of its negative effects. Their objectives range from developing digital skills and caring for people who have had negative online experiences, to enabling flexible work arrangements and supporting civic participation and community building.

The responsible individual and parent

Much can, and should, be done collaboratively across stakeholders to increase the positive impacts of digital media use. It is also imperative that individuals use digital media responsibly. Based on this report's research, individuals are recommended to:

- Protect their digital identities by being careful about what they share online and by being aware of the terms and conditions of platforms and applications.
- Ensure sufficient time offline for human connection, healthy physical activity and the necessary "downtime", in order to prevent information overload and stress.
- Prepare for the coming "gig economy", taking greater care in managing professional lives, reputations and professional development.
- Make use of the abundant opportunities to learn and develop, maintain beneficial relationships, make life entertaining and meaningful, care for others, and contribute to societal welfare.

Because digital media use poses special risks to children, parents must not only educate their children but also manage their digital media use. Research findings suggest the following guidelines for parents:

- Monitor children's digital media engagement and ensure they get: adequate physical activity, lots of face-to-face communication, uninterrupted time for academic work, downtime for free thinking, and even some alone time for self-reflection. This is crucial for cognitive, emotional and social development.
- Install content filters, parental controls and usage restriction software on devices used by children in order to mitigate overuse and protect them from harmful online content. Avoid digital media in children's sleep environments.
- Consider fewer top-down restrictions on use (which children will evade) and focus more on education, guidance and communication about managing online risks and building digital literacy.

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Tables

Table 1: Overview of Respondents (% of Respondents)

	South Africa (n=997)	Germany (n=1023)	USA (n=998)	Brazil (n=1033)	China (n=1019)	Total (n=5070)
Gender						
Male	50	61	29	64	55	52
Female	50	39	71	36	45	48
Age						
age=15-17	2	3	0	0	0	1
age=18-24	16	16	6	13	11	12
age=25-34	22	22	33	29	28	27
age=35-44	20	21	18	25	24	21
age=45-50	11	10	13	6	7	9
age=51-54	9	10	6	13	11	10
age=55-64	16	15	16	14	19	16
age=65+	5	4	8	2	1	4
Generation						
Millennials (age=15-34)	40	40	39	42	39	40
Gen X (age=35-50)	31	30	31	30	30	31
Baby Boomers (age=51-69)	29	29	30	28	30	29
Current employment status						
Employed full-time	51	53	43	61	88	59
Employed part-time	10	14	12	11	2	10
Self-employed	16	6	8	13	2	9
Not currently employed & looking for work	9	8	9	6	2	7
Not currently employed & not looking for work	8	8	15	3	1	7
Retired	6	10	13	6	4	8
Current student status						
Full-time student	11	18	9	9	6	10
Part-time student	17	6	3	25	8	12

	South Africa (n=997)	Germany (n=1023)	USA (n=998)	Brazil (n=1033)	China (n=1019)	Total (n=5070)
Not currently a student, but planning to return to school	20	10	13	44	22	22
Not currently a student, not planning to return to school	52	67	75	23	64	56
Marital status						
Single, never married	32	39	34	26	16	29
Married or domestic partnership	55	49	52	66	83	61
Separated or divorced	10	10	11	7	1	8
Widowed	2	2	3	2	0	2
Number of people in household						
1	8	26	22	5	3	13
2	23	33	33	17	11	23
3	21	22	18	34	62	31
4	26	14	15	28	12	19
5 or more	21	5	12	16	12	13
Number of people aged under 18 in household						
None	46	55	52	33	34	44
1	24	26	21	39	60	34
2	21	15	16	22	5	16
3	6	3	7	5	0	4
4 or more	2	1	4	1	0	2
Highest level of education completed						
Did not complete high school	4	5	2	3	1	3
Completed high school	27	39	17	20	6	22
Some college/technical school or university	21	12	24	3	5	13
Completed college/technical school	20	22	16	12	9	16
Completed university/undergraduate degree	15	9	24	11	69	26
Completed graduate school/graduate degree	12	8	16	50	9	19
Prefer not to answer	2	6	1	1	1	2

	South Africa (n=998)	Germany (n=1023)	USA (n=998)	Brazil (n=1033)	China (n=1019)	Total (n=5070)
Household Income						
Less than \$25,000	13	24	23	4	4	13
\$25,000 to \$39,999	9	31	19	8	4	14
\$40,000 to \$59,999	17	13	16	11	11	14
\$60,000 to \$74,999	13	9	10	16	12	12
\$75,000 to \$99,999	11	5	13	13	20	12
\$100,000 to \$149,999	7	1	9	17	19	10
\$150,000 or more	5	1	5	10	11	6
Don't know	5	4	1	1	1	2
Prefer not to answer	10	13	5	2	2	6

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 2a: Digital Media Usage, by Device, Access and Country (% Responding Yes To Using Each Device)

	% Yes					
	South Africa	Germany	USA	Brazil	China	% of total
PC/laptop	96	94	93	97	93	94
Television	93	90	91	98	92	93
Smartphone	85	84	76	88	95	87
Radio	82	80	75	87	43	68
Tablet	56	57	55	68	75	65

Question: Which of the following devices do you have access to?

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 2b: Digital Media Usage, by Device, User Frequency and Country (% Responding Yes to Using Each Device 14 Hours or More per Week)

14+ hours/week	South Africa	Germany	USA	Brazil	China	% of total
PC/laptop	52	48	50	49	42	47
Television	24	32	47	18	12	24
Smartphone	40	30	23	42	42	37
Radio	15	14	12	8	5	9
Tablet	14	13	12	14	17	15

Question: On average, approximately how many hours per week do you spend using each device?

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 3: How Respondents Spend Their Time Specifically, by Country (% Claiming to Use Digital Media 3 Hours or More per Day for the Following Reasons)

+3 hours/day	South Africa	Germany	USA	Brazil	China	% of total
Doing work/job	46	22	18	49	30	32
Entertainment and amusement (music, TV/film, short videos and gaming)	24	24	14	36	19	23
Social interaction: chatting and messaging	30	16	8	37	18	21
Professional development (get job/ advance career)	15	7	6	24	11	12
Searching information for personal interest	23	12	8	33	15	18
Building/maintaining professional relationships	13	6	6	24	11	12
Searching information for professional interest	22	8	6	32	10	15
Personal development (learn/be creative)	20	9	7	27	14	15
Consuming news	9	8	6	24	12	12
Shopping	6	7	7	11	12	9

Question: On average, approximately how much time per day do you spend using digital media for each of the following reasons?

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 4: Content Attributes that Encourage Users to Share Online Content, by Country (% Selecting that Attribute as Top 3 Choice)

	Share content					% of total
	South Africa	Germany	USA	Brazil	China	
It is entertaining	53	40	38	48	49	46
It contains useful facts	54	38	34	48	40	43
It is inspiring	46	28	29	33	41	36
It comes from a brand in which I believe	33	29	19	41	35	32
It is novel/unexpected	26	29	14	33	45	32
It would be popular with my peer group	28	25	19	33	40	31
It allows me to express my point of view	28	24	27	36	34	30
Other (please specify):	2	2	1	4	1	2
None of the above	10	28	40	9	5	16

Question: Which of the following content attributes would encourage you to share your own content more often? (Please select your top 3 choices in each column.)

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 5: Content Attributes that Encourage Users to Create Online Content, by Country (% Selecting that Attribute as Top 3 Choice)

	Create content					% of total
	South Africa	Germany	USA	Brazil	China	
It allows me to express my point of view	54	34	31	54	54	47
It contains useful facts	40	33	26	39	41	37
It is entertaining	42	29	25	37	40	35
It is inspiring	43	25	23	39	34	33
It would be popular with my peer group	28	25	17	33	38	30
It is novel/unexpected	26	24	14	39	36	29
It comes from a brand in which I believe	23	20	0	14	0	28
Other (please specify):	2	2	1	4	1	2
None of the above	14	36	50	9	8	21

Question: Which of the following content attributes would encourage you to create your own content more often? (Please select your top 3 choices in each column.)

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 6: Influence Over Respondents' Digital Media Usage, by Country (% Who Selected It as Most Influential Source)

	South Africa	Germany	USA	Brazil	China	% of total
Spouse/partner	13	15	15	22	22	18
Friends	20	23	14	21	14	18
Search engine	20	14	8	13	16	15
Brands	5	3	2	5	16	8
Public opinion	5	6	2	5	11	7
Experts	6	4	2	7	5	5
Other family member	5	5	4	5	5	5
Journalists	1	2	1	3	1	2
Other (please specify)	3	2	2	2	0	2
None of the above	14	22	49	10	5	17

Question: Which of the following has the most influence on the type of digital media you consume? Select the one most influential source.

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 7: Willingness to Pay for Various Types of Content, by Country (% Who Claim to Have Paid for the Respective Content in the Last 12 Months)

	South Africa	Germany	USA	Brazil	China	% of total
Premium entertainment content (e.g. Netflix, Spotify or gaming content)	21	28	27	54	37	34
Exclusive content (e.g. HBO Online)	6	7	9	32	35	21
Content that teaches me skills or abilities (e.g. online university courses)	19	8	7	25	33	21
Specialized content or service (e.g. specific to a hobby)	14	13	7	18	30	19
Content that gives me access to work opportunities (e.g. paid job postings)	21	8	5	23	19	16
Curated news or editorial content (e.g. <i>Financial Times</i>)	6	10	4	15	21	13
Other (please specify)	2	1	1	2	0	1
None of the above	53	54	63	25	26	41

Question: In the past 12 months, have you paid for any of the following types of digital media?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 8: Respondents Saying that Privacy and Anonymity Are Important, Neutral or Unimportant, and Percentage Agreeing on Other Aspects of Privacy, by Country (%)

	South Africa	Germany	USA	Brazil	China	% of total
Important	61	76	55	66	79	69
Neutral	22	16	35	24	16	21
Unimportant	17	8	11	10	5	9

Question: How important is anonymity and privacy in your digital media consumption activities?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 9: Social Media Activity Publicly Visible, by Country (%)

	South Africa	Germany	USA	Brazil	China	% of total
All	25	14	26	34	26	25
More than half, but not all	36	36	27	44	57	43
Some, but less than half	31	38	29	19	17	25
None	8	13	18	3	1	7

Question: What percentage of your social media activity would you consider publicly visible (i.e. not restricted to a closed group of individuals, such as friends)?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 10: Opinions about Privacy and “Right to be Forgotten”, by Country (%)

	% Agree					% of total
	South Africa	Germany	USA	Brazil	China	
The “right to be forgotten”, which means I may cancel or delete any part of my digital presence, is important to me	77	66	62	73	73	71
Having complete control over what personal data of mine are stored and used by brands, products and services, is important to me	79	69	64	84	77	75
I would be willing to pay money for complete control over how my personal data are used by product and service providers who collect user data in exchange for free offerings (e.g. Gmail)	39	24	27	55	64	46

Question: How much do you agree or disagree with the following statements about your digital presence?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 11a: Likelihood of Clicking on Advertising while Actively Looking for a Similar Product, by Country (%)

	% Likely					% of total
	South Africa	Germany	USA	Brazil	China	
Footer banners on video content that you are viewing	35	20	18	56	58	41
Pre-rolls (short video advertisements) to video content that you are viewing	40	27	18	58	63	45
Banner advertisements on web or mobile pages	42	31	19	59	58	45
Advertisements embedded in your social media news feeds	48	25	20	58	61	46
Advertisements on search engine results pages	56	37	26	68	63	52
Promotional text links embedded within sponsored stories	43	23	19	56	54	42

Question: If you were actively looking for a similar product/service, how likely would you be to click on each of these types of online advertisements?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 11b: Likelihood of Clicking on Advertising while Not Actively Looking for a Similar Product, by Country (%)

	% Likely					% of total
	South Africa	Germany	USA	Brazil	China	
Footer banners on video content that you are viewing	18	14	14	41	53	32
Pre-rolls (short video advertisements) to video content that you are viewing	23	18	14	44	59	36
Banner advertisements on web or mobile pages	22	18	14	42	53	34
Advertisements embedded in your social media news feeds	29	15	15	47	56	37
Advertisements on search engine results pages	31	22	17	51	59	40
Promotional text links embedded within sponsored stories	24	14	13	44	52	33

Question: If you were not actively looking for a similar product/service, how likely would you be to click on each of these types of online advertisements?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 12: Respondents Saying They Express Opinions Publicly and within Peer Group, by Country (%)

	% Yes					% of total
	South Africa	Germany	USA	Brazil	China	
I am likely to publicly express my interest in, or support for, a brand via social media	57	33	42	70	77	60
I am likely to express my interest in, or support for, a brand via social media within my peer group	64	41	45	75	79	65

Question: How much do you agree or disagree with the following statements about social media sites?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 13: Respondents Who Have Set Up Ad-Blocking Tools, by Country (%)

	% Yes					% of total
	South Africa	Germany	USA	Brazil	China	
Third-party advertising blocker tools (e.g. for web browser)	31	41	19	31	43	35
Privacy control tools that block third-party trackers and cookies	39	37	20	42	32	34
Advertisement blocking settings for social media accounts	23	25	13	20	28	23
None of the above	47	37	69	43	39	46

Question: Have you installed or set up any of the following tools on your device(s)?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 14: Corporate Social Responsibility Efforts Deemed Most Important for Media and Entertainment Brands to Support, by Country (%)

	% Important					% of total
	South Africa	Germany	USA	Brazil	China	
Corporate transparency (e.g. educate customers on how their personal data are stored and used, providing them full control to decide)	73	59	54	85	79	72
Environmental sustainability (e.g. use of sustainable energy)	74	58	50	84	81	72
Ethical labour practices (e.g. gender parity and equal pay)	66	56	54	80	80	69
Social impact accountability (e.g. establish anti-addictive support group for own products and services)	63	50	41	80	80	66
Philanthropy (e.g. financial or in-kind support of charities)	60	32	45	77	69	59

Question: Which of the following corporate social responsibility efforts would you say are most important for media and entertainment brands and companies to actively support?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 15: Opinions on How Digital Media Has Influenced Quality of life and Desires to Reduce Digital Media Usage, by Country (%)

	% Agree					% of total
	South Africa	Germany	USA	Brazil	China	
My digital media use in the last 12 months has generally improved my overall quality of life	48	30	27	61	66	50
My digital media use in the last 12 months has generally improved the overall quality of my social life	46	24	27	63	68	50
My digital media use in the last 12 months has generally improved the quality of my professional life	53	24	23	67	66	50
Digital media has transformed how I work	61	36	30	66	71	56
I believe I should reduce my use of digital media for entertainment and social networking	28	23	26	35	44	33
I believe I should reduce my use of digital media for information-gathering	19	19	21	33	41	29

Question: How much do you agree or disagree with the following statements about digital media?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 16: Reported Influence of Digital Media on Civic Participation, by Country (%)

	% Better					
	South Africa	Germany	USA	Brazil	China	% of total
Amount of civic participation	39	29	23	62	70	49
Quality of civic participation	40	29	23	64	65	48
Amount of community involvement	48	29	27	69	63	50
Quality of community involvement	50	32	26	69	62	50
Feeling of personal empowerment	57	20	28	67	62	49

	% Worse					
	South Africa	Germany	USA	Brazil	China	% of Total
Amount of civic participation	4	14	4	5	4	6
Quality of civic participation	5	15	4	6	5	7
Amount of community involvement	6	14	5	5	5	7
Quality of community involvement	5	14	5	5	5	7
Feeling of personal empowerment	4	14	5	4	6	6

Question: In each category, please select the choice that best reflects the effect digital media use has had on your public life?

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 17: How Social Media Sites Have Influenced Civic Participation Action Taken (%)

	South Africa	Germany	USA	Brazil	China	% of total
Yes	22	25	12	47	36	30
No	69	61	77	42	54	59
Not sure/Don't know	9	14	11	11	10	11

Question: In the last 12 months, has there been a time when you decided to TAKE ACTION (e.g. start a petition or create content) involving a political or social issue because of something you read on a social networking site?

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 18: Respondents Using Social Networking Sites for Social or Political Action a Few Times per Week, by Country (%)

	% A few times per week					% of total
	South Africa	Germany	USA	Brazil	China	
Post links to political stories or articles for others to read	13	10	8	28	21	17
Post your own thoughts or comments on political or social issues	15	12	10	29	20	18
Encourage others to take action on a political or social issue that is important to you	11	9	8	28	21	17
Re-post content related to political or social issues that was originally posted by someone else	14	11	9	31	24	19
“Like” or promote material related to political or social issues that others have posted	17	14	12	30	31	23

Question: How often do you use social networking sites to...?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 19: Respondents Saying Digital Media Reduces, Improves or Has No Effect on Their Effectiveness at Work, by Country (%)

	% Better					% of total
	South Africa	Germany	USA	Brazil	China	
Ability to find work	65	40	35	73	71	61
Ability to do your work	71	40	37	79	78	66
Ability to learn and develop professionally	77	46	38	80	77	68
Ability to maintain balance between work and personal life	58	28	33	73	74	59
Building relationships with professional contacts	69	40	39	80	71	63
Ability to collaborate with colleagues	70	39	38	79	76	65
Ability to collaborate with stakeholders outside your work organization	60	39	26	61	74	58

	% Worse					% of total
	South Africa	Germany	USA	Brazil	China	
Ability to find work	3	12	4	2	2	4
Ability to do your work	4	14	5	3	2	5
Ability to learn and develop professionally	2	13	4	3	2	4
Ability to maintain balance between work and personal life	8	19	6	5	3	7
Building relationships with professional contacts	2	12	4	2	4	5
Ability to collaborate with colleagues	3	13	4	2	3	4
Ability to collaborate with stakeholders outside your work organization	3	12	5	3	2	4

Question: In each category, please select the choice that best reflects the effect digital media use has had on your professional life?

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 20: How Digital Media Use for Work-Related Purposes Has Changed in the Past Three Years, and How It Is Predicted to Change in the Next Three Years, by Country (%)

	Change in past three years					
	South Africa	Germany	USA	Brazil	China	% of total
Greater	79	58	43	82	69	69
Same	15	32	45	11	27	25
Less	4	8	5	5	3	4
Don't know	2	3	7	1	1	2
	Predicted change in next three years					
	South Africa	Germany	USA	Brazil	China	% of total
Greater	78	53	42	80	71	68
Same	17	37	45	16	26	26
Less	3	6	4	2	3	3
Don't know	2	4	10	2	2	3

Question: Compared with three years ago, is your use of digital media for work-related purposes....Thinking ahead three years, do you think your use of digital media for work-related purposes will be...?

Source: *Implications of Digital Media Survey, 2015*, World Economic Forum

Table 21: Social Media's Effect on Work-Effectiveness, by Country (%)

	South Africa	Germany	USA	Brazil	China	% of total
Improves	29	14	11	64	61	42
No effect	45	56	68	19	27	39
Reduces	24	19	13	14	9	14
Don't know	3	10	9	3	3	5

Question: What effect does use of social media (e.g. YouTube or Facebook) have on your work effectiveness?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 22: Respondents Reporting Impact of Digital Media, by Country and Attribute (%)

	% Better					% of total
	South Africa	Germany	USA	Brazil	China	
Empathy	63	28	32	63	70	54
Ability to make physical friends	38	24	21	60	64	45
Ability to find a physical significant other	30	20	16	51	64	41
Ability to maintain relationships with friends	65	38	41	73	72	61
Ability to maintain relationship with significant other	45	23	20	58	70	48
Oral communication skills	45	25	21	58	59	45
Written communication skills	59	42	30	67	65	55
Critical thinking and problem solving	62	39	28	71	69	56
Length of attention span	45	25	20	58	61	45
Short-term memory	42	29	22	54	66	47
Long-term memory	47	26	23	59	56	45
Motor skills	50	34	28	63	59	49
Stress	37	20	20	45	51	37
Physical health	34	17	20	46	59	39
Mental health	48	28	24	60	66	49

	% Worse					
	South Africa	Germany	USA	Brazil	China	% of total
Empathy	5	16	6	5	4	7
Ability to make physical friends	11	19	8	8	8	10
Ability to find a physical significant other	8	20	8	7	6	9
Ability to maintain relationships with friends	5	14	5	5	4	6
Ability to maintain relationship with significant other	7	17	7	6	4	8
Oral communication skills	10	18	9	9	9	11
Written communication skills	7	15	7	6	7	8
Critical thinking and problem solving	4	14	6	5	4	6
Length of attention span	11	21	14	10	9	12
Short-term memory	8	18	9	9	5	9
Long-term memory	7	18	8	8	11	11
Motor skills	6	13	5	5	9	8
Stress	14	24	11	12	9	13
Physical health	14	26	12	15	10	15
Mental health	5	17	8	6	5	8

Question: In each category, please select the choice that best reflects the effect digital media use has had on your own private life?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

Table 23: Respondents Believing that Digital Media Usage Could Create Problems for Youth of Various Ages, by Country (%)

Age	% Probably/Certainly					
	South Africa	Germany	USA	Brazil	China	% of total
Younger than 2 years	49	67	43	67	47	54
2-3 years	55	70	45	69	53	58
4-7 years	63	70	53	71	68	66
8-11 years	71	64	60	71	80	71
12-15 years	69	49	60	57	83	67
16-18 years	57	33	57	45	80	59

Question: To what extent do you think too much use of digital media can create problems for youth?

Source: *Implications of Digital Media Survey*, 2015, World Economic Forum

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