International
Federation of
Library
Associations and Institutions

SIGL

IFLA
TREND REPORT

LITERATURE REVIEW
(INITIAL EDITION)

Professor Michael Dezuanni
Dr Kim Osman
Digital Media Research Centre
Queensland University of Technology

2024

Foreword

What does the future of information and knowledge look like? What will it mean for the way we live, interact, work and more? And what is the place of libraries in this future?

These are complex questions, and we will only know what the answers are when they happen.

However, this is anything but a reason to sit still and just wait for tomorrow to come.

We should not feel like spectators in the ongoing development of our sector, or indeed of the wider knowledge and information field that we are at the heart of. With the right tools, and the right attitude, we can not only be ready, but also shape the future.

What is more, we need to. We are committed to meaningful access to and use of information and knowledge, not just as a right, but also a pre-condition for sustainable development for all. As a profession, we therefore need to be active and advocate for the role of libraries in achieving the future to which our communities aspire.

The goal of the 2024 Trend Report – and indeed of so much of IFLA's work – is to provide the tools, structures, inspiration and energy necessary for libraries and library and information workers to face the future with optimism. I am confident the Trend Report achieves this ambition.

The 2024 Trend Report is the first major update of the report in a decade, following a series of shorter pieces in recent years. With this update, we have deliberately chosen not to focus specifically on libraries or on technology – there are already many excellent publications in each of these spaces. We have also not tried to produce a general mega-trends report – there are plenty of good examples of these also.

Rather, with the support of our Trend Report advisory committee, we have chosen to look specifically at trends in the information and knowledge space, including how these are affected by, and affect, wider society. This allows us to address the key mission of libraries as already set out above – to guarantee meaningful access to and use of information and knowledge for all, as a right in itself and as a condition for sustainable development for all.

Our intention is that the 2024 Trend Report will provide a basis not just for conversations amongst ourselves, but also with key stakeholders and partners, from UN agencies and government ministries to the members of the communities we serve. Through these purposeful conversations, we can work

TREND REPORT 2024

towards a strong and shared understanding of the positive contribution that libraries can make in a changing world.

This Literature Review is the first phase of the 2024 Trend Report, and goes back to basics – reviewing a wide range of materials from different sectors, different geographies and different perspectives. It identifies a set of seven broad Trends, and a range of sub-trends related to them. There are a mix of positive and negative developments, and there is no certainty as to how far each of the Trends will impact our world. This reflects the complexity of the challenge we are looking to address.

I am therefore very grateful to Professor Michael Dezuanni and Dr Kim Osman from the Digital Media Research Centre at the Queensland University of Technology for taking this challenge on.

In this work, they give us not just a very useful standalone overview of Trends, but also open the way to the next phase. In this, we will look at how these Trends interact, and what scenarios emerge when they do. The goal is to share with the library field a set of possible futures that we could face, as a basis for a conversation about how we can prepare.

I also want to thank all those who contributed to this review on our Trend Report advisory committee, and the team at IFLA Headquarters who oversaw the process.

I am also grateful to Stichting IFLA Global Libraries (SIGL) for the financial support that made this work possible.

I am looking forward to sharing more!

Vicki McDonald, IFLA President 2023-2025

TREND REPORT 2024

Contents

TREND REPORT 2O24

TREND 1: KNOWLEDGE PRACTICES ARE CHANGING

The future holds both opportunities and challenges for improving equity in knowledge systems

Around the world, countries and communities are recognising the need to prioritise diverse and marginalised voices in areas ranging from entertainment and storytelling to policy- and decision-making. Additionally, as much knowledge around the world is not held in written texts, new ways to incorporate traditional and non-Western knowledge and knowledge systems into mainstream and dominant cultures are being developed (see Trend 5). Concurrently technology is changing how information is created and shared (see Trend 2).

Providing platforms for diverse voices enriches our knowledge and understanding of society and the world around us, however as we discuss below (see also Trend 3), having open platforms for creating and sharing knowledge does not always privilege marginalised voices and can have, and has had, the unintended consequence of privileging existing knowledge and information power structures. We present this trend in the context of the COVID-19 infodemic, misinformation, disinformation and maliformation (collectively referred to as misinformation) that have changed the information and knowledge practices we use to determine what is true.

In this section, we also consider the impact of dominant digital platforms, regulation, censorship, and new ways to engage with information in increasingly personalised information environments.

Opportunities
- More equitable and inclusive knowledge systems
- Increased access to more information enabled by technology
- New forms of communication like short-form video and data storytelling

Challenges
- The spread of misinformation
- Information becoming siloed on digital media platforms
- Over-regulation of information environments

TREND REPORT 2O24

1.1 The demand for diverse voices

Whose Knowledge notes that "the knowledge of marginalised communities (the majority of the world) on the internet" needs to be centred, and that currently most publicly available information on the internet is written by "white men from Europe and North America". There is a growing demand for local content in local languages, from websites to stories and screen content and the inclusion of diverse voices in content and information is increasing. People are seeking out non-Western stories and looking to improve representation not only in knowledge and information content but among those who create it. Representation in media content is a cross-cutting issue that reflects existing sociocultural and geopolitical trends and inequalities from politics to data (see Trend 5) that has implications for the ways knowledge and information are created, shared and used.

1.2 Misinformation continues to impact society

A persistent challenge for the information landscape is misinformation and its impacts. Social media sites and digital media platforms are designed to capture our attention and time, and allow us to easily share content. Responding to misinformation on these platforms will require both technical and sociocultural approaches. The OECD recognises that, "The fast and massive spread of mis- and disinformation poses a fundamental threat to the free and fact-based exchange of information underpinning democracy and trust in public institutions" (also see Trend 5).

The pandemic highlighted the public health risks associated with misinformation, and the enduring effects it has on people's health and wellbeing. Science communication has historically been challenged by communicating changing evidence and updated health advice, however health misinformation is, and will continue to be, particularly hard to address in the future as declining trust in governments and the media (and to some extent science) is coupled with the sharing of increasing amounts of misinformation among people using digital media platforms.

> Social media platforms have become go-to sources for health information, especially among adolescents and young adults. However, many people are not equipped to manoeuvre the maze of health misinformation. (Wang 2023)

Attacks on scientific consensus threaten public confidence in evidence-based information, advice and policy. We will need to develop critical literacies (Trend 4) to navigate and negate post-truth politics and the effects of decreasing trust in media and governments (Trend 3).

Misinformation and disinformation like deepfakes (see Trend 2) coupled with a declining news ecosystem means that democratic governments will need to work harder than ever to maintain the trust necessary for a democracy to function. State actors with antidemocratic leanings are making use of technology and susceptible systems to further their own interests.

The threat of deepfakes and misinformation, prompts the Buffet Institute for Global Affairs to predict that: "Western democracies in particular will become ever more concerned about the potential erosion of trust needed for democracy to function. In response, expect an increase in the number of organisations, thinktanks and research organisations like Northwestern Security & AI Lab devoting time and resources to studying the evolving capabilities and threats of cyber deception, developing technical countermeasures to detect them and providing risk mitigation guidance and solutions."

1.3 Digital silos: Platformisation impacts equitable access to information

Platformisation: "the penetration of the infrastructures, economic processes, and governmental frameworks of platforms in different economic sectors and spheres of life. And in the tradition of cultural studies, we conceive of this process as the reorganisation of cultural practices and imaginations around platforms." Poell et al. 2019

Digital media platforms, including social media, have significantly changed the information landscape. These platforms are now a one-stop shop for entertainment, news, community updates, connecting with friends and family, creating content, and buying and selling. People seeking information rely on digital channels with the Edelman Trust Barometer reporting that online search and social media are the top two ways people get most of their information about new technologies for example. The Pew Research Center also finds, "Adults under 30 express a clear preference for using social media over news outlets to get opinions on an issue and up-to-date information as an event is happening." As news media industries continue to change and respond to technological developments, how news and information are produced and shared across different platforms will change. In addition to news being siloed on single platforms, other essential information may often be communicated to communities via a social media platforms raising questions of access and equity.

TREND REPORT 2024

1.4 Balancing information regulation for human development & wellbeing

As governments around the world grapple with regulating established digital and social media platforms, overreach is a potential threat as governments seek to regulate existing and emerging technologies. Attempts at regulating media organisations and digital platforms can also be used by governments to enact censorship and restrict access to information. This is a long-standing problem in many countries that have "used libel and defamation laws, and internet shut downs to limit the freedom of expression of citizens and the media," as noted by Ashwanee Budoo-Scholtz. Under claims of asserting digital sovereignty, The World Economic Forum warns, "Freedoms relating to the internet, press and access to wider sources of information that are already in decline risk descending into broader repression of information flows across a wider set of countries."

Digital Sovereignty: "Far from a monolithic ideal, what we found was a broad and ill-defined notion that different groups interpret and apply diversely across the world. These include governments that wish to control how Internet operations and resources are run; local businesses that decry the dominance of foreign tech platforms; Indigenous communities that want to safeguard local knowledge and resources; and individuals who want to assert their autonomy over their interactions with devices, platforms, and how they manage their data." Internet Society

Managing information flows and technological development alongside national sovereignty and human development will be a challenge for both governments and civil society. Informed regulation can respond to the challenges of misinformation. Research from Chatham House states that:

> After decades of reluctance, governments around the world are moving to regulate, and more actively direct, digital platforms in an effort to tackle perceived harms and to strengthen state oversight and control. Digital sovereignty is emerging as a critical goal of government policy, but the agenda is complicated by national security considerations, the influence of tech companies and domestic politics. […] In the absence of new approaches to global governance, a jurisdictional, fragmented 'Venn diagram' of national internets could emerge, undermining the promise and benefits of openness.

Without a collaborative approach to regulation as outlined in UNESCO for the Governance of Digital Platforms, there is a risk of restricting information flows and limiting the transparency of information systems needed for healthy democracies and development.

TREND REPORT 2024

1.5 Personalised and tailored information delivery

The data that is collected about us is often used to tailor both our online and offline experiences. This has a long history in targeted online advertising and search, and can be for a social good purpose, like advising people that they may be eligible for government assistance if they live in a disaster-affected area or alerting them to the disaster in the first place. It can be used to reduce barriers to accessing and using government and social services by personalising a "customer journey."

But as people are expecting more tailored services and experiences, organisations risk crossing personal boundaries and starting to appear creepy. Moreover, targeting information can potentially limit our serendipitous engagement with other information and content. The American Library Association note that, "as data is used to control or shape search results and information access, users may need to be reminded of the full diversity of information available to them" (See Trend 4).

1.6 New ways to create, share and use information

Short-form videos have changed the social media landscape. TikTok is now one of the leading social media platforms and short-form video is now a regular part of people's social media feeds, as well as being a feature of messaging apps like Snapchat, WhatsApp and WeChat. The Washington Post suggests that the trend towards engaging with information through short-form videos like those on TikTok will change the structure of dominant platforms like Facebook and YouTube: "America's biggest technology innovators are reinventing themselves in TikTok's image, not only in developing short-video copycats — Meta's Reels, YouTube's Shorts — but in swapping out networks of friends and families for feeds of strangers chasing viral glory. TikTok's model could soon shape the entire internet."

Short-form video has a range of genres, from the creative to the informative and Pew Research found, "A small but growing share of U.S. adults say they regularly get news on TikTok. This is in contrast with many other social media sites, where news consumption has either declined or stayed about the same in recent years." TikTok and other platforms that host short-form videos are driving different forms of engagement with information. As Dentsu Creative points out in its trend forecast, "Like parables or cartoons before them, memes and reels have emerged as a way of distilling complex ideas into bite-sized, shareable, and endlessly repeatable formats. As TikTok demonstrates there is no topic, from finance to Excel hacks to social justice, too complex to be condensed into pithy video content."

Similarly, there is a trend toward engaging with information in small increments via microlearning apps for things like learning languages, while deeper engagement with news, data and information is prompted by a trend toward to storytelling. The Reuters

Institute survey found that, "Strategies that publishers consider very important to counter [news fatigue and avoidance] include better explanation of complex stories (67%), more solutions-oriented or constructive approaches to storytelling (44%), and more inspirational human stories (43%)."

Things to think about

The push for increased representation in systems and institutions has gained prominence through movements like Black Lives Matter, Me Too, and marriage equality. The OECD notes an "increasing recognition of the need to strengthen democratic representation of historically underrepresented groups (e.g. youth, women and minorities) in elected bodies, and to ensure that the civil service itself is diverse, representative and responsive.

Questions

- How diverse is your library service?
- How do you personalise your library services? What are the implications of this?
- How can you build skills in your community to counter misinformation?
- How do you use short form video to engage people with library information?

TREND REPORT 2024

TREND 2: AI AND OTHER TECHNOLOGIES ARE TRANSFORMING SOCIETY

Generative AI and new technologies are changing how we create, share and use information

Given the proliferation of applications using generative AI, along with the media coverage of generative applications like ChatGPT, it should be no surprise that one of the most dominant trends over the coming years will be the influence of artificial intelligence on our lives. From education and healthcare to commerce and creativity, AI's influence will extend across all life domains.

Developments in generative AI are moving quickly and as a society we are still catching up with what this means for us all ethically, politically, socially, culturally and economically: we need to "Strengthen international governance of emerging technologies, including Artificial Intelligence, for the benefit of humanity" (UN Global Digital Compact).

The next ten years includes technological developments that are not AI (even if they do use it), as information technology trends continue to frame how information and knowledge are, and will be, constructed, shaped, shared, engaged with and used.

In this section we consider the role of technology in spreading misinformation via deepfakes, the use of reality technologies to create immersive learning environments, the increase of network speeds, the rise of digital twins and the potential of technology for large-scale preservation of information in response to threats of information loss.

Opportunities
- Automation of everyday tasks
- New ways to engage with information
- Lower cost internet connectivity
- New forms of creativity

Challenges
- Information integrity
- Balancing the rights of creators and enabling new forms of creativity
- Detecting deepfake content
- Information loss from cyberattacks

TREND REPORT 2024

2.1 Generative AI has great potential, but also potential harms

Generative AI takes its name from its capacity to generate novel content, as varied as text, image, music and computing code, in response to a user prompt. For example, conventional AI can be used to analyse features of a legal contract, such as to identify whether the contract deals with intellectual property or privacy. By contrast, generative AI can be used to generate (i.e. draft) a new legal contract to cover those issues. Bell et al (2, 2023)

In a Rapid Response Report on Generative AI (or GenAI) produced for the Australian Government, Bell et al (1, 2023) say that "it is almost impossible to accurately forecast opportunities over the next decade. Known risks are clearer, but there are categories of emerging risks that are difficult to forecast." GenAI will have a significant impact on the information landscape from content creation, to education, to redefining jobs, task automation and language translation.

Bell et al also note, "Early adopters of existing AI, including information-based industries, research and healthcare, may benefit, through, for example, textual analysis and image processing, before a wider uptake of the technology occurs across the economy" (9, 2023). They also found significant investment in generative AI around the word including "the UK's AI Strategy and investment of £900 million in an AI supercomputer … Germany's €3 billion investment by 2025, the US Government funding analysis in AI, China's plan to be a global leader in AI by 2030, and investment globally in AI start-ups" (14, 2023). The IDC Asia/Pacific proposes that, "by 2028, 80% of Chief Information Officers will leverage organisational changes to harness AI, automation, and analytics."

Along with being used at scale in businesses and institutions, GenAI will be more present in our homes, and in our everyday lives as we use search, automate and create. Generative AI will be present in virtual assistants, in the devices we use (see IoT Trend 3), assisting with things like personalised learning, language translation and creating content like graphics and music. While AI already exists in much of the technology we engage with in our everyday lives, the potential spread of unregulated generative AI raises questions about how it is being used in education settings, along with the integrity of the data being used by the technology. If we rely more and more on models that only include certain types of knowledge in their training data, what does this mean for non-dominant languages, accessibility to excluded information and marginalised groups more widely?

The use of generative AI for creating and sharing information also raises questions about copyright, both for the data AI uses and the content it generates: "Finding a new

TREND REPORT 2024

GenAI-induced balance in copyright law should not only take into account the welfare of media industry producers and consumers, but of the entire economy… Both over-protection and under-protection reduce the societal benefits from copyright" ([Martens, 2024](#)). Regulation seeks to balance the rights of creators with the potential of new forms of creativity and knowledge generation.

Currently in 2024, governments and regulators around the world are moving quickly to address the potential risks of large-scale use of unregulated AI (see Trend 1). The UN General Assembly adopted an [AI resolution](#) in March 2024 on the promotion of "safe, secure and trustworthy" artificial intelligence (AI) systems that will also benefit sustainable development for all."

2.2 The circulation of deepfakes increases the existing challenges of misinformation

Deepfakes—media content created by AI technologies that are generally meant to be deceptive—are a particularly significant and growing tool for misinformation and digital impersonation. Deepfakes are generated by machine-learning algorithms combined with facial-mapping software that can insert that data into digital content without permission. When execution is excellent, the result can be an extremely believable—but totally fabricated—a text, video or audio clip of a person doing or saying something that they did not. [Buffet Brief, Northwestern University, July 2023](#)

The application of AI to generating deepfakes has profound implications for misinformation (see Trend 1). As [Bell et al](#) (2023) pointed out in their rapid response report, AI has "the potential for misuse by generating high-quality, cheap and personalised content, including for harmful purposes. Tools built on these models are already in use to generate deep fakes (high-quality artificial images, video and speech for disinformation, including by state actors) indistinguishable, at least without special training or access to technical tools, from human generated content. Existing challenges related to the spread of misinformation may be amplified as AI-generated content circulates alongside other information."

Detecting deepfake content remains a challenge, both at a technical and social level. While deepfakes can be spread by bad actors in a network, many also spread via people's ordinary, everyday social media sharing practices. Media literacy (see Trend 4) is important for countering this kind of content as deepfakes may align closely with what is 'believable,' and people's beliefs are difficult to counter as noted in *The Conversation*: "People don't like the feeling of inconsistency and seek to resolve it. People will also ignore the structure and quality of an argument, and focus on the believability of its conclusion."

TREND REPORT 2024

Michael Wade, Professor of Innovation and Strategy at IMD and Director of IMD's Global Center for Digital Business Transformation says that deepfakes are increasing and will have far-reaching consequences, "The ubiquity of deepfake technology is poised to reach new heights in 2024, permeating various facets of society and challenging the very notion of truth. As the saying goes, "seeing is no longer believing", and this phenomenon will have far-reaching ramifications in politics, corporate governance, and information security."

2.3 Mixed reality technologies offer new ways to engage with information

The metaverse has been touted in the media as a defining trend/feature of the next decade. However we found that while the individual technologies that enable access to the metaverse via augmented- (AR), mixed- (MR), or virtual-reality (VR) are included in trend forecasts for the next few years, there has been a mixed response as to whether a truly immersive environment (the metaverse as a total concept) will become influential in our lives.

In surveying digital society experts about the metaverse, Pew Research Centre found that, "two broad themes emerged …First, a notable share of these experts argued that the embrace of extended reality in people's daily lives by 2040 will be centred around augmented-reality and mixed-reality tools, not in the more-fully-immersive virtual reality worlds many people define today as being "the metaverse." "

The metaverse concept nonetheless presents a number of opportunities for improving inclusion in digital life (Trend 5), including for people to connect across borders, for immersive education, and for people living with a disability to access services and experiences. For example, "the metaverse may be used to expand learning options and provide students greater access than might otherwise be possible in a physical environment. […] Within these 3D simulations, it is possible to participate in historical events, visualise geometrical elements, explore planets and much more."

However, as the metaverse and its 'worlds' are built, it risks replicating the existing problems of digital society. This may be because the problems that exist in mainstream technologies regarding access, affordability and security also exist in the metaverse. Challenges include infrastructure and devices, fraud and scams, and privacy and data protection. Like privacy concerns about existing digital platforms (see Trend 3), data generated in the metaverse "could also track users, identify them, and analyse data – including hand, eye, and body tracking. Developing strong privacy and security measures to protect user data in the Metaverse is essential."

TREND REPORT 2024

2.4 Data usage and network speeds increase

The technology that underpins access to information via the internet and digital technologies is also advancing rapidly. Wireless network connectivity like mobile broadband, Wi-fi, and satellite technologies that enable people to access the internet, apps and online services are becoming increasingly more important than fixed-line broadband for society and the economy (Oughton et al. 2023). While some parts of the world currently rely on 3G, the next decade will see wireless technology move to 6G, F6G and Wi-Fi 8. This has implications for the digital divide (Trend 5) as those countries and people with less connectivity have less opportunity to participate in digital society and the digital economy. The International Telecommunications Union (ITU) finds that "89 per cent of the population in high-income countries is [currently] covered by 5G. In low-income countries, only one per cent of the population is covered. In fact, 3G – not even 4G – remains by far the most prevalent mobile broadband technology in the poorest countries, where more than 20 percent of the population remains off the connectivity grid."

Mobile data traffic is expected to grow, and mobile phone subscriptions now exceed the world's population. The numbers are lower for fixed-line connections as these are normally shared among household members and people working in businesses, although these connections have higher traffic and data usage. However, the share of traffic between wireless and fixed-line connections will change over the next decade as wireless technologies improve their capabilities. Technology company Huawei predictthat mobile data usage per person will increase 40-fold by 2030. The Sandvine Global Internet Phenomena Report finds that network growth is driven largely by an increase in video-streaming and that "Netflix is King in [the] Americas and Asia-Pacific, but YouTube retains the crown in Europe, the Middle East and Africa. While video dominates traffic in all regions, don't discount the impact gaming, marketplace, social networking, and cloud storage services are having on total traffic."

2.5 Digital twins are scaling up

A **digital twin** is a virtual representation of an object or system that spans its lifecycle, is updated from real-time data, and uses simulation, machine learning and reasoning to help decision-making. IBM

The idea of a "digital twin" is not particularly new. One of the first digital twins is famously the Apollo 13 twin, used to successfully bring a group of NASA astronauts home to Earth in 1970. However, advances in technology mean that digital twins now exist for everything from cars, to cities, to an entire nation.

TREND REPORT 2024

UK innovation agency Nesta highlights the scale of digital twin technology over the next decade as, "Now we are starting to see the development of digital twins at the previously unprecedented scale of nations. Just like Apollo 13, it's often being driven by the threat of disaster." The Pacific nation of Tuvalu is expected to be uninhabitable due to the effects of the climate crisis within our lifetime. In response to its impending loss of land, language and culture, the Tuvalu government is building a digital twin of the island nation. Tuvalu.tv states that "This digital transformation will allow Tuvalu to retain its identity and continue to function as a state, even after its physical land is gone. It will also facilitate the governance of a Tuvaluan diaspora by creating a virtual space where Tuvaluans can connect with each other, explore ancestry and culture, and access new opportunities for business and commerce in various industries."

Nesta also notes the risks and potential harms that come with these advancements: "Given digital twins are built using data, citizens may be concerned about their privacy. Governments or corporations might misuse them for unwarranted surveillance. And could backup nations create a potential moral hazard as we might become more willing to sacrifice real nations?" If Tuvalu is a pilot in solutions for the impending geographical, political and environmental upheaval wrought by climate change then consideration needs to be given to these same effects brought on by the turn to digital (see Trend 3).

2.6 Security is a pressing issue for organisations

Advancements in technology also raise the risk of security threats to governments, businesses and institutions around the world. Along with the spread of misinformation, bad actors are increasingly targeting large institutions, like the British Library in cyberattacks. In a recent survey of over 2,300 organisations consulting firm PwC found, "that although rates of fraud and economic crime remain reasonably consistent globally, some fraud types are becoming increasingly disruptive. Attacks by more sophisticated external actors, particularly organised crime, are more prevalent and increasingly targeting customers directly."

Collaboration will be required between industry and government to address escalating cybersecurity threats. Blockchain could be a potential solution to rising security threats, and advocates for consumer safety say that technical solutions need to be included from the outset: "Ultimately, creating better tech for people is a deliberate design choice that demands integrating these essential elements into the very fabric of the development and deployment processes, rather than treating them as mere afterthoughts." As the British Library cyberattack has demonstrated, getting large scale information systems back online and accessible to the public takes time and extensive resources. It will therefore be vital in coming years to prioritise security

to minimise the risks to the technical infrastructure that contains vital knowledge and personal information.

Things to think about

Gaps in technological connectivity exist in countries where people mostly live in urban centres, and those living in rural and remote areas rely on older 3G and 4G networks or newer satellite technologies like low earth orbiting satellites (LEOs). This has implications for accessing education, healthcare and economic opportunities when services are unavailable.

Questions

- How will AI change things like learning, language translation and creating content and information?
- How will libraries prioritise security? What implications will additional security measures have?

TREND REPORT
2O24

TREND 3: TRUST IS BEING RENEGOTIATED

Re-establishing trust in government and media is central for our societies to flourish

Trust in governments and public institutions around the world is declining. The public now trust scientists, peers and company technical experts to provide information about important information like new scientific developments, medical information and innovation over government and media (see Edelman Trust Barometer below). With more people questioning mainstream media and government information, transparency and openness are key to re-establishing trust.

In this section, we consider how trust and accountability interact to impact information systems, from the loss of local news services, to tensions in open information movements and the challenges organisations, governments and individuals face in negotiating privacy.

Opportunities
- Open and transparent information systems
- Open models that inform AI governance
- Collaboration among business, NGOs and government to create equitable information systems
- Improved privacy rights and protections

Challenges
- Declining trust in government
- Declining trust in media
- Depletion of local news

3.1 Trust in governments and institutions is declining

With the number of elections to be held this year (see Trend 4), the trend of declining trust in governments and institutions like the media needs to be viewed in the context that, "Over four billion people are expected to vote in 2024. There is now a howling gap between the minority of the world population living under democratic governance, and the vast majority living under one form or another of autocratic rule" (Azhar 2023).

Consulting firm Deloitte also notes that, "Public trust in government is at near historic lows." They suggest that people are seeking collaborative solutions to complex problems and have less trust in, and expectations of, government. The OECD suggests that, "to meet citizens' evolving expectations, governments must do better, both in giving all people a voice and in responding to those voices. They must also improve integrity and fight undue influence, credibly address long-term challenges such as climate change, evaluate and communicate the effects of reforms on different socioeconomic groups, and develop better governance models for information ecosystems."

Globally, businesses are still far more trusted than governments. The Edelman Trust Barometer reports that businesses are viewed as more competent and ethical than governments. Trust is an issue among many sectors, as despite some small increases in trust over the last year, the media and social media are still highly distrusted around the world. The World Economic Forum notes the differences in media trust levels among different communities: "Research from Reuters shows that marginalised groups are more likely not to trust mainstream media, and these groups are also at risk from the highly ranked areas of concern identified in the report like economic downturn and unemployment."

3.2 The loss of local news production is affecting those communities already disadvantaged in other ways

As public services are withdrawing from physical locations in favour of digital points of access, so too are local news services. Around the world, communities are finding themselves in "news deserts". People in towns and regions that do not have local journalism and a regular source of local news content are often relying on social media for local information and updates, or larger outlets for news. News leaders around the world predict, "We will see even more newspapers stopping daily print production this year as print costs rise and distribution networks weaken or in some cases reach breaking point." The Guardian reports that these increasing news deserts are a result of large corporations dominating news ownership, sidelining those publishers with a stake in their local community. It also reports, "the social costs of losing coverage genuinely rooted in communities is profound, and "news deserts" – without a reliable source of local news – tend to be places deprived in other ways."

This exodus of publishers from smaller local news markets is not due to a lack of demand- people still want local news, about them, and for them. The Public Interest News Foundation in the UK found that people want, "Journalism that gives voice to ordinary people's experiences; that respects the diversity of their areas; that combines hard-hitting watchdog journalism with stories about solutions; and that responds directly to local people's priorities. Most of all, they want local news that is truly local, and not 'cookie-cutter' media that pastes local colour onto generic stories that are the

TREND REPORT 2024

same from Belfast to Basildon." The erosion of local news services in combination with a declining trust in media has implications for the trust that people have in other institutions normally held to account by (local) media.

3.3 The open movements face challenges

The early internet promised open and free access to information and the ability to share knowledge without the constraints of traditional institutions. This promise was embodied by open source software and the wider open movement. However, over time open source became a part of a larger digital economy dominated by commercial platforms (see Trend 1) that collect and trade user data. The Open Future Foundation recognises the urgent need for more work to be done to reconcile the ideals of an open access and the realities of today's digital society.

An increasing amount of funded research is expected to have its findings publicly available. The open access movement is closely aligned with libraries' mission of making information like this freely available to the public. This has been complicated in the past due to the paywalling of information by expensive academic journals, or by news and media organisations struggling to redefine their business model. Additionally, while open access is an option for academic authors, the fees imposed by publishers to enable open licensing of content are often prohibitive to scholars, particularly those from the Global South.

Open culture advocates campaign for open information infrastructures to collect, preserve and make available the digital information and ephemera that may otherwise be lost when commercial platforms fail. This is challenged by moves to exert greater control over how content is accessed and used considering commercial priorities and possibilities to monetise access. Equity is a concern as with academic publishing above, as often who can provide free access to content is dependent on their financial resources.

3.4 Privacy is being traded for accessibility

As technology has advanced, many of us rely on integrated technologies to "talk" to each other (see the Internet of Things below), and we are demanding more accountability from the platforms that collect, hold and use our data. We are also expecting to have greater control over the data we choose to share and how it is used, especially in light of numerous high profile data breaches over the past decade.

Internet of things: [IoT uses a variety of technologies](#) to connect the digital and physical worlds. Physical objects are embedded with sensors—which can monitor things like temperature or motion, or really any change in environment—and actuators—which receive signals from sensors and then do something in response to those changes. The sensors and actuators communicate via wired (for example, Ethernet) or wireless (for example, WiFi, cellular) networks with computing systems that can monitor or manage the health and actions of connected objects and machines. [McKinsey & Company](#)

The amount of data that can be and is collected about us is increasing, and there are tensions around the quantity of data needed to enable access to digital services and an individual's right to privacy or to withhold their data completely. Accessibility here refers primarily to [interoperability](#), that is, our ability to access the information we want and need (see Trend 1) across a diverse range of technologies that access shared personal data. Sometimes this access is restricted because of commercial value, other times accessibility is limited due to infrastructure and technical capabilities. And as people are requested to share more data to access services, across more systems, privacy is afforded to those with the education and skills (see Trend 4) to negotiate the privacy settings of the devices and services they use.

Just as participating in the open ecosystem requires resources, so too can privacy be considered a privilege. Not only does keeping personal and other information private require competencies, often those who are socioeconomically disadvantaged rely on systems and services, both digital and in-person, that require sharing personal data. They cannot "opt out" of these systems. While there is a small trend of [internet rejectionism](#), the ubiquity and necessity of digital connections for so many people around the world means, "rejectionists depend on people who are not rejectionist [and that] is simply a fact."

Allowing access to our digital data also enables surveillance. Many of the everyday technologies we use rely on geolocation, the ability to locate a physical point in space via digital means, often using internet-enabled devices that are part of the IoT. This raises particular privacy concerns (often referred to as geoprivacy) and [Megarry et al.](#) note the complexities of this for everyday smartphone users, "On any major mobile operating system, location-sharing requires user consent; however, the scale and complexity of data being used and shared among differing parties means that is more challenging than ever for end-users to fully understand the privacy risks, benefits, and implications involved in sharing their location with and through their device."

[Pew Research](#) survey of experts finds that they fear in the future, "new threats to rights will arise as privacy becomes harder, if not impossible, to maintain. […] surveillance advances, sophisticated bots embedded in civic spaces, the spread of deepfakes and disinformation, advanced facial recognition systems, and widening

TREND REPORT 2024

social and digital divides [are] looming threats." We urgently need to develop skills to navigate accessibility, rights and privacy.

Things to think about

Paywalled journalism is mainly accessible to those with the means to spend money on news. Points of open and free access to this kind of content (like libraries) can encourage critical engagement with news and information, and can provide a valuable source of [news and media literacy](#) outside of educational settings like school and university.

Questions
- What role can local libraries play in news deserts?
- How can libraries help build trust in public institutions?

TREND REPORT 2024

TREND 4: SKILLS AND ABILITIES ARE BECOMING MORE COMPLEX

People will need practical, critical and digital skills to thrive

As societies become ever more complex due to the impact of digital technologies, people need to develop practical skills to use devices, software and systems. They also need critical and creative skills to successfully navigate and benefit from media and information environments.

There is general agreement from experts that digital skills will be necessary in an increasing number of future roles as AI is predicted to have an impact on jobs. Bell et al. (2023) suggest, "There could be an increase in demand for digital skills, with the entry of generative AI expected to require 161,000 AI specialisations globally by 2030."

Similarly the OECD 2023 Skills Outlook states, "Two areas in which investments in skills and skills policies can help societies anticipate rather than react to future adverse events are promoting environmental sustainability and ensuring human-centred digital technologies that effectively support communication and information exchange… Projections suggest that between 2019 and 2030, the demand for skills related to interacting with computers, thinking creatively, analysing data and information, and communicating with persons outside an organisation will grow the most."

These skills are necessary beyond the workplace, and the need to develop practical and critical new skills is essential for people to thrive in the future.

In this section, we consider the urgent need to address skills gaps along with the benefits brought about by improved media and information literacy for safety and wellbeing.

Opportunities
- Digital skill and competency development to thrive in the digital economy
- Increased media literacy leading to informed, creative and resilient communities
- Improved online safety

Challenges
- Global talent shortage
- Scams place additional burden on those without skills

TREND REPORT 2024

4.1 There is a global talent shortage and a growing demand for digital skills and competencies

There is a growing demand for digital skills across a range of professions and jobs - not just those classed as "technology" roles. The World Economic Forum (WEF)'s Future of Jobs 2023 report states that, "In the next five years, 83 million jobs are projected to be lost and 69 million are projected to be created, constituting a structural labour-market churn of 152 million jobs, or 23% of the 673 million employees in the data set being studied. This constitutes a reduction in employment of 14 million jobs, or 2%."

The WEF notes in relation to the current talent shortage, the need for people to increase their skills and literacies as, "There is a particular shortfall in digital skills and other skills of the new economy as technology disrupts labour markets." This means developing the skills of people who are at risk of being left behind in the digital economy along with developing the competencies of the existing workforce and preparing young people for future jobs. The Economist Intelligence Unit notes that "Digital literacy among employees is critical, and this will not only happen through the education system. Companies will also have a role to play in ensuring that they provide the right training to their employees based on what is and will be required by the business over time."

The American Library Association forecasts the effects of AI (see Trend 1) for libraries: "If AI becomes a serious threat to jobs, libraries' roles in workforce development may become even more important, but also more complicated. A compounded challenge may arise where workforce development will need to encompass not only the preparation for entry level individuals (into a market that is increasingly limited and competitive), but also solutions for a new vacuum in middle level management caused by the elimination of once plentiful entry level workers who matriculated into middle management. The new workforce development demands will likely require higher-order critical, creative, and innovative thinking as well as emotional engagement, placing a greater value on the quality of thinking, listening, relating, collaborating, and learning."

The combination of critical and digital skills is essential for information and knowledge specialists, especially those who are supporting and guiding others to access information and resources.

4.2 Media and information literacy benefits individuals and communities

The ability to critically engage with different types of content across a variety of media is a vital literacy. Without local news, coupled with declining trust in government (see Trend 3) and the rise of deepfakes (Trend 2), building the skills needed to navigate the

TREND REPORT 2024

increasing complex global media and information landscape is essential to develop informed, creative, and resilient communities.

Media and Information Literacy consists of the knowledge, the attitudes, and the sum of the skills needed to know when and what information is needed; where and how to obtain that information; how to evaluate it critically and organise it once it is found; and how to use it in an ethical way. The concept extends beyond communication and information technologies to encompass learning, critical thinking, and interpretative skills across and beyond professional and educational boundaries. Media and Information Literacy includes all types of information resources: oral, print, and digital. IFLA

Governments and institutions are recognising the need for multi-stakeholder approaches to misinformation (see Trend 1) that encompass both media and information literacy in combination with building digital skills and capabilities. The OECD states that, "A resilient information ecosystem includes a role for civil society and traditional news media in pre- and de-bunking misinformation; a better, more citizen-centred government communications function; and long-term efforts to improve media and information literacy."

Academics concerned with the rising trend of deepfakes note that there is, "no simple solution to unmasking deepfakes. Rather than passive consumers of media, we must actively challenge our own beliefs. The only way to combat harmful forms of artificial intelligence is to cultivate human intelligence." Pew Research surveyed digital society experts to predict potential trends in digital life in light of the rise of AI and found that, "They wish for improved digital literacy that will revive and elevate trusted news and information sources in ways that attract attention and gain the public's interest. And they hope that new digital tools and human and technological systems will be designed to assure that factual information will be appropriately verified, highly findable, well-updated and archived."

This points to the need for not only a media and information literate citizenry, but also a skilled professional workforce that enables easy and open access to accurate information and content.

4.3 Information and digital skills improve safety

As more data are being shared in more ways, safety is a pressing issue for society. Scams will be increasingly sophisticated, targeted and easy deploy at scale. Speakers at the Global Anti Scam Summit noted the surge in scams, including types of fraud like banking scams that particularly affect individuals. Experts also noted the global nature

of scams and that disadvantaged groups are often a target. Many crimes also go unreported, especially when people are embarrassed that they fell victim to a scam. As AI develops, the need for organisations and individuals to develop digital capabilities and literacies to identify security threats and fraud is critical.

Additionally, online harms and threats are being reported, in some cases by a majority of internet users in certain age groups and countries. Along with advocating for better technical and regulatory approaches to reducing harm, developing digital, media and information literacies can help those most at risk of harm improve their safety and ability to participate online as is their right.

Things to think about

The Australian Media Literacy Alliance notes that, "museums, archives, libraries, public broadcasters, schools and universities already play a significant role in supporting media literacy and have done so for decades." UNESCO states that, "Information literacy and lifelong learning have been described as the beacons of the information society, illuminating the courses to development, prosperity and freedom."

Questions:

- What is the role of libraries in identifying and addressing emerging skills gaps in communities?
- What professional development do libraries need to offer staff?
- Does media and information literacy offer a solution to online harms and threats?

TREND REPORT 2024

TREND 5: DIGITAL TECHNOLOGIES ARE UNEVENLY DISTRIBUTED

Digital inclusion will increase equity

Around the world more people are accessing and using technology in their everyday lives, however there are still significant numbers of people across the globe who do not have access to the connections and devices required to fully participate in society. Aside from the access requirements prompted by the global move to a digital economy and digital-first services, quality devices and connections provide an opportunity for people to connect and communicate, create and play, and learn and share.

People who are digitally excluded typically experience challenges across the three domains of digital inclusion: access to appropriate connections and devices, the affordability of connections and devices, and the digital ability to be able use technology in the ways they want and need. At a global level, less developed countries have less and lower quality network coverage (see Trend 2), while at an individual level, people who are disadvantaged in other life spheres (for example, living on a low-income, having lower levels of education) are also more likely to be digitally excluded.

In response to deep inequity, the [UN Global Digital Compact](#) is being created, with the latest draft setting out five objectives to fulfil the goal of "an inclusive, open, sustainable, safe and secure digital future for all" recognising the deep digital divides that exist among and within countries:

> "(1) Close all digital divides and accelerate progress across the Sustainable Development Goals;
>
> (2) Expand inclusion in and benefits from the digital economy for all;
>
> (3) Foster an inclusive, open, safe and secure digital space that respects, protects and promote human rights;
>
> (4) Advance responsible and equitable international data governance;
>
> (5) Strengthen international governance of emerging technologies, including Artificial Intelligence, for the benefit of humanity."

In this section we take a closer look at the trend of a persistent and deepening digital divide, where those people without access to technologies and the skills to use them in the ways they want and need, are at risk of being further left behind by the digital economy. We also examine the trend of digital-first and digital-only service provision,

including the use of digital IDs, and the need to establish inclusive information frameworks that inform diverse and appropriate service design.

Opportunities	Challenges
• Cheaper, more affordable internet access	• Deepening social inequality
• Easier access to services through digital identities	• Poor physical network infrastructure
• Designing and implementing inclusive data and information practices to inform appropriate service design	• Lack of social infrastructure to address lack of skills
	• Lack of data

5.1 The digital divide is deepening

Digital inclusion is the capability of individuals or groups to enjoy the benefits of being online and use technology confidently to improve their day-to-day lives. [Be Connected](#)

Despite advances in connectivity, approximately one third of the world's population remains offline and is at risk of being left behind by the digital economy. These 2.6 billion people are unevenly distributed among less developed and developed economies with the [ITU](#) finding that "Internet use remains tightly linked to the level of a country's development. In 2020, nine out of ten people in high-income countries used the Internet. In 2023, the share edged up to 93 per cent, getting closer to universality."

The COVID-19 pandemic boosted connections as people with the means to [opted for faster broadband and more data](#), especially those people who switched to remote working arrangements (Trend 7). The uptake of technologies and devices during the pandemic improved the digital inclusion of many people who previously experienced some level of exclusion (for example, seniors), but has left certain groups even more digitally excluded. The ITU [finds](#), "that children and young people from the poorest households, rural and lower income states are falling even further behind their peers in terms of digital inclusion and are left with fewer opportunities to catch up, facing disproportionate exposure to poverty and unemployment."

TREND REPORT 2024

Regional, rural and remote communities are more likely to be digitally excluded and the ITU notes that, "Worldwide, 81 percent of urban dwellers use the Internet in 2023, compared with only 50 per cent of the population in rural areas. The urban-rural gap, measured as the ratio of the two percentages, has barely improved in recent years, from 1.7 in 2020 to 1.6 in 2023." The European Commission reports that, "limited internet access and a lack of digital devices can impede remote learning and preparation for future education and careers for pupils." However the Commission also notes that in the future, "Digital technologies can also support teachers, especially in [rural] schools experiencing teacher shortages. Digital technology has the potential to bridge distances and establish school networks that combat isolation due to remoteness by providing technology-mediated learning opportunities for pupils and teachers."

While overall, more of the world is becoming connected, those without the ability to access and afford technology are getting left further behind their peers in terms of other outcomes across life spheres. People who are digitally excluded often experience other forms of intersecting disadvantage such as gender, being unemployed, having lower levels of education, or living in public housing. This means addressing digital inclusion issues in the future requires more than just providing access to devices and connections (although this no doubt helps) (see Trend 4).

Affordability is a major barrier to connections for low-income households who pay a disproportionate amount of their household income to pay for connections (Dezuanni et al. 2023), and many digitally excluded people rely on public places of connection and free wifi to access the internet. A study in Belgium revealed that the biggest users of public wifi were people on low-incomes, and that those who most used wifi in public libraries were under 24 years of age. Many people who are digitally excluded also rely on mobile devices and data, meaning they are paying more for data than fixed-line connections, and are limited in what they can do on a mobile device.

It is also worth noting here that the rapid development of AI technologies (see Trend 2) risks people and nations who are disadvantaged and digitally excluded being left further behind as, "Generative AI will also raise regulation and deployment considerations to ensure existing and new inequalities are not exacerbated or initiated. AI tools require considerable internet bandwidth, power and suitable devices, which are not available or affordable to everyone" (Bell et al. 2023). Therefore, countries that can afford to invest in AI infrastructure are better placed to take advantage of its benefits than poorer countries, just as those who have access to AI tools can make more use of the possibilities that AI brings than others.

5.2 Essential services are migrating to digital-first and digital-only service provision that requires a digital identity

Digital-first is the default model of service provision for many companies, social services, and governments around the world as they seek to streamline service delivery. This move has implications for the populations around the world who are in most need of services but may not have access to the technologies (and the skills to use these technologies) to access them.

The OECD's 2023 Digital Government Index found, "Most countries are strongly committed to reducing the digital divide. Over 90% have implemented an action plan aimed at tackling digital divides, 80% of which have also put in place enablers including a legal and regulatory framework, funding mechanisms, and public communications to support the implementation of the action plan."

Additionally, in an effort to streamline digital service delivery, governments around the world are implementing single digital identities for citizens that will enable them to access a variety of services. In its top government technology trends Gartner predicts, "over a third of national governments will offer citizens mobile-based identity wallets by 2024. … governments must make high-assurance digital identity easy to obtain and relevant for diverse target groups of end users and service providers." The European Union has mandated digital identity through eIDAS 2.0 that ensures "Member States offer a digital identity wallet (DIW) to citizens and businesses. According to the European Commission, "At least 80% of citizens should be able to use a digital ID solution to access key public services by 2030.""

Denmark is a leader in the use of digital IDs and government digital transformation. In June 2023 the government recognised the link between public service provision and digital exclusion and "entered into a political agreement on digital inclusion, which will contribute to a more inclusive digital welfare society that embraces everyone and provides the necessary help, the right tools and good alternatives available to digitally challenged citizens." Similarly, other countries like India and Estonia have been progressing a digital government agenda for some years, with vastly different civic populations. As digital services become more established and connected it is harder to opt out and in-person services are harder to access. This leaves organisations who support digitally excluded people to fill gaps in digital service provision.

5.3 Inclusive cultural information frameworks create equitable futures

Many current ways of organising data and information are rooted in Western, colonial, oppressive systems. New approaches to the collection, sharing, translation and ownership of data are being taken to create structures that encourage and prioritise diverse voices (see Trend 1). Digital society experts surveyed by Pew Research predict

30

TREND REPORT 2024

that, "digital tools [will] be shaped in ways that allow people to freely speak up for their rights and join others to mobilise for the change they seek. [The experts] hope ongoing advances in digital tools and systems will improve people's access to resources, help them communicate and learn more effectively, and give them access to data in ways that will help them live better, safer lives. They urged that human rights must be supported and upheld as the internet spreads to the farthest corners of the world."

Cultural institutions like libraries are at the forefront of reassessing knowledge and decolonising collections, and also debates about what decolonisation looks like in practice. Janssen (2023) found that decolonisation is a contested term, with some people considering it impossible to remove colonial influences from collections and pointing out, "that the word may suggest that colonialism belongs to the past when this is manifestly not the case."

Global Indigenous Data Alliance. In combination with the FAIR foundation principles, the CARE Principles (collective benefit, authority to control, responsibility & ethics) provide a framework for data sovereignty that is increasingly being used across the world as it "includes the right to create value from Indigenous data in ways that are grounded in Indigenous worldviews and realise opportunities within the knowledge economy" for First Nations Peoples.

Developing inclusive cultural frameworks is important for addressing the preservation of endangered languages. UNESCO states that, "Optimistic estimates suggest that at least 50 percent of today's spoken languages will be extinct or seriously endangered by 2100. More pessimistic, but also realistic estimates claim that 90-95 percent will become extinct or seriously endangered by the end of this century. Most of these languages are Indigenous languages."

Things to think about:

Inclusive Data Practices: More data are being collected and generated, and "Collecting more disaggregated data and identifying barriers to inclusion can help enhance representation" OECD 2023. Additionally, "in order to reflect the lived experiences of minority and vulnerable groups within society, civil society and international organizations should advocate for the adoption of intersectional research approaches and the collection and analysis of data disaggregated by intersectional factors, including by gender/sex (where applicable)." United Nations

TREND REPORT 2024

Questions
- What data do you currently have? What data do you need? What data should you be collecting (or not)?
- What access to devices and connections do people in your community have outside the library?

TREND REPORT
2024

TREND 6: INFORMATION SYSTEMS ARE USING MORE RESOURCES

Our information needs are impacting the planet

A green digital economy is necessary to manage the climate impacts of rapidly advancing information technologies, including environmental sustainability and societal wellbeing. New technologies are using large amounts of energy and materials to run and be maintained. As this tech grows, so too do the implications for the environment, especially in places where e-waste is a problem, and for countries already experiencing the effects of the climate crisis. AI and technologies like it rely on a great deal of computing power and energy to run. As AI scales up, so too do its resource requirements and the potential for material environmental effects.

In this section we consider the benefits of a green economy and the challenges of managing growing e-waste.

Opportunities
- New practices that consider the environment
- Reduction in resource use and cost savings

Challenges
- Climate change
- Increased need for technology and data
- Loss of memory and content

6.1 Joining the green economy is essential to address climate change

A **green economy** is defined as low carbon, resource efficient and socially inclusive. In a green economy, growth in employment and income are driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services. UN Environment Programme

Increased connectivity has environmental implications that are most pronounced for those who are the least connected. The Alliance for Affordable Internet states that

TREND REPORT 2024

future policy must consider this as, "Those who are currently not connected are also most vulnerable to the effects of climate change. We need broadband policy that can connect the next generation of internet users while limiting the carbon footprint and climate impact that internet infrastructure and use carries" (Woodhouse 2021, 2). It suggests investing in digital skills and e-government services that can potentially reduce ecological burdens, bringing remote communities online to support better use of land and environmental protection while also supporting the right to repair devices to reduce e-waste in landfill (Woodhouse 2021).

The United Nations University Institute for Environment and Human Security finds that the trend to a greener economy and "prioritising well-being over relentless economic growth" can address some of the most deep-seated root causes behind risk tipping points and allow us to work effectively towards a future with fewer risks for all" (Eberle et al. 2023).

6.2 E-waste is a growing problem

E-waste: Electronic waste, or e-waste, refers to all items of electrical and electronic equipment (EEE) and its parts that have been discarded by its owner as waste without the intent of re-use. E-waste is also referred to as WEEE (Waste Electrical and Electronic Equipment), electronic waste or e-scrap in different regions and under different circumstances in the world. It includes a wide range of products – almost any household or business item with circuitry or electrical components with power or battery supply. The Global E-waste Statistics Partnership

The Global E-waste Monitor 2020 (Forti et al 2020) found that in 2019, "the world generated a striking 53.6 Mt of e-waste, an average of 7.3 kg per capita. The global generation of e-waste grew by 9.2 Mt since 2014 and is projected to grow to 74.7 Mt by 2030 – almost doubling in only 16 years. The growing amount of e-waste is mainly fueled by higher consumption rates of EEE, short life cycles, and few repair options."

One approach to lessening the impact of our use of technology on the environment is a circular economy. A circular economy is "a systemic approach to economic development designed to benefit businesses, society, and the environment. In contrast to the 'take-make-waste' linear model, a circular economy is regenerative by design and aims to gradually decouple growth from the consumption of finite resources." Re-using resources such as those available through Libraries of Things is one way for people to participate in a greener economy. The Victorian Government in Australia looked at circular economy trends across the globe and found that, "a circular economy needs collaboration. A major lesson we can learn from the most successful circular economies worldwide is that their circular initiatives are embedded across a

TREND REPORT 2024

range of government departments and agencies, with everyone seeing it as part of their work."

The OECD also notes the trend toward greener digital economies as, "Governments are ramping up public governance tools such as regulation, public procurement, budgeting, and infrastructure planning and decisions to achieve environmental goals. Some countries are applying more novel approaches such as anticipatory governance and behavioural insights to design, implement and promote green policies. Greater efforts are needed in all these areas, as well as in leading by example in "greening" the public sector and accounting for results in government operations."

This has specific implications for those involved in the information economy who are large uses of hardware and data, and therefore a primary focus of any efforts to address the environmental impacts of information generation and management. Reducing the turnover of digital systems and hardware in response to the trend of accelerating redundancy of technology could address issues related to the loss of memory and content, along with wider issues like increasing electricity prices and more expensive devices.

Things to think about

The turnover of physical and electronic resources, the storage and archiving of materials and records, and balancing the needs of future generations with current practices. What happens to the resources that are taken out of circulation? Does everything need preserving and storing?

Questions
- Does your organisation have a plan or policy for minimising the generation of e-waste?
- How can libraries reduce or offset their environmental impacts?
- What strategies do libraries have for promoting the circular economy?

TREND REPORT 2024

TREND 7: PEOPLE ARE SEEKING COMMUNITY CONNECTIONS

Creating places to share space and resources is key to building an equitable society

Community connections are an essential aspect of health and wellbeing.,The World Health Organisation (WHO) has recognised social isolation and loneliness as a global health priority. As we are increasingly prompted to engage with digital services (see Trend 5) and many people's day-to-day interactions are online, they are prioritising and seeking out valuable in-person connections in their local community.

This trend is also compounded by the increase in people who are working from home and seeking out authentic, fun and creative opportunities for engagement with others. Local communities provide a sense of belonging, shared identity and social cohesion that can be missing in larger communities due to greater political and social divisions (see Trend 5). In-place activities can build social cohesion, connections across generations and create shared histories that include a greater diversity of local voices.

In this section we outline the trend toward creating shared knowledges through community, digital and place-based activities that seek to connect generations and improve social cohesion.

Opportunities
- Build community belonging
- Decrease social isolation and loneliness
- Improved health outcomes through access to information and community connections
- Intergenerational connections and knowledge sharing

Challenges
- Weakening social fabric
- Cost of living
- Reduction of in-person services
- Resourcing for in-person services and programs
- Increasing loneliness

7.1 Social isolation is a growing problem

Social isolation is a significant problem around the world with the WHO noting that, "Social isolation and loneliness are widespread, with an estimated 1 in 4 older people experiencing social isolation and between 5 and 15 per cent of adolescents experiencing loneliness. A large body of research shows that social isolation and loneliness have a serious impact on physical and mental health, quality of life, and longevity. The effect of social isolation and loneliness on mortality is comparable to that of other well-established risk factors such as smoking, obesity, and physical inactivity."

In the wake of the COVID pandemic and in the context of increased partisanship online, social cohesion is under pressure. A report from the Scanlon Institute in Australia found although there "were some signs to suggest that cohesion was returning to a pre-pandemic normal, declines in our sense of national pride and belonging, increasing financial strain and a weakening sense of social inclusion and justice were warning signs of further weakening in our social fabric."

Local communities are important, with social isolation and loneliness becoming bigger problems as our population ages. Nearly half of the population over 60 are expected to experience some form of social isolation or loneliness in their old age. Fakoys et al. (2020) state, "There is no one-size-fits-all approach to addressing loneliness or social isolation, and hence the need to tailor interventions to suit the needs of individuals, specific groups or the degree of loneliness experienced".

7.2 Local, place-based events and collaborations builds community resilience and capabilities

Global non-profit consulting firm FSG considers the role of tailored place-based solutions to issues noting that stakeholders, "can't apply a generic national approach to communities shaped by a long history of place, more funders are taking a place-based approach in their philanthropy, making deliberate and direct investments into specific places and regions, working across issue areas, and convening local stakeholders." This is important to note as the competition for funds in a slow economy is strong and organisations are expected to do more with less resourcing.

Local stakeholders involved in place-based approaches need to include businesses, governments, community services and social infrastructure like libraries. In discussing the future possibilities of collaboration and collective impact, The American Library Association notes that, "Libraries and librarians are frequently considered key collaborators for projects that address big social issues – literacy, educational attainment, economic resurgence, health – and may increasingly be approached to participate in projects that utilize a collective impact model."

Seeking out place-based events in local communities is important for people who are seeking connection and offers the opportunity to engage diverse cohorts in building community capabilities. In their 2024 Trend Report, Dentsu Creative noted that a "Horizon Media survey revealed that 62% of young US adults said they would be "motivated to buy a product or service if it helps them achieve a sense of community belonging."

7.3 Storytelling connects people and generations

One way to connect communities is through intergenerational storytelling. This practice involves people at different stages in their life coming together to share their experiences and histories. The trend of intergenerational storytelling emerges from people's desire to connect to place and an awareness of the benefits that bringing people from different generations together brings. It recently emerged as an "arts- and humanities-focused approach to aging research" (Charise et al. 2022) and Dentsu Creative finds that along with, "our new storytellers trend, we see a desire to hear the authentic story of places from the people who know and love them best."

7.4 Growth in online communities

Along with seeking connections in local communities, online communities continue to grow as people seek connections based on their interests and hobbies. In research between Facebook and NYU's The Governance Lab, "a growing number of people around the world are finding meaning and a sense of belonging in online groups. According to the YouGov survey, in 11 out of 15 countries studied, the largest proportion of respondents reported the most important group to which they belong is a primarily online one." The report found that online communities enable more diverse people to be engaged as "These groups, some of which have huge memberships, remain emergent and largely unrecognised: they are outside traditional power structures, institutions and forms of governance." Of note, is the closed nature of many of these online communities (see Trend 1) that prevents any content and culture created being shared with others outside the community.

Gaming flourished during the pandemic and online gaming communities have proved important for reducing social isolation and loneliness (see above) (Ballard & Spencer, 2023). Gaming communities are expected grow as the gaming industry is maintaining its pandemic-level highs.

7.5 Flexible working in flexible spaces

Since the pandemic in 2020, when many people in office-based jobs had the option to switch to working remotely from home, there has been a reluctance from remote workers to return to the workplace. In 2020, people around the world quickly became familiar with Zoom, Microsoft Teams and a variety of other collaborative technologies that emerged in response to the isolation requirements of the pandemic. These technologies are now integral to workplaces and have enabled new forms of collaboration and ways of working that have improved productivity. However, globally CEOs see the workforce fully returning to the office within three years, and hybrid working arrangements will be rare. KPMG's Global CEO Outlook also found that "as organisations continue to roll out their return-to-office plans, it is crucial that leaders take a long-term view that embraces the employee value proposition and encompasses the considerations and needs of employees to ensure that talent is nurtured and supported."

In light of the global talent shortage (see Trend 4) employers need to recognise the value that hybrid working arrangements can have for people who are able to work remotely. Global recruitment firm Hays says, "Many people are now used to greater flexibility in where they work and don't want to return to their previous routine. In fact, Gartner reports that over half of workers would look for a new job if their flexible working was impacted." Forrester predicts that Europe will outpace the US in flexible working options, with 40% of Europeans working remotely at least some of the time.

Remote working also enables people to live locally, and maintain important social and family connections. With the potential of better planned towns and cities in response to climate change, social infrastructure is key to meeting the changing needs of society.

> **Things to think about**
>
> The trend toward collaborative solutions to complex social problems is reflected in Deloitte's predicted trends in the public sector that there will be a, "Decline of "the theory of the firm" and rise of "the theory of the ecosystem." Most individual organisations increasingly see themselves as part of the larger community. Why labour in isolation when you can achieve win-win results through collaboration? Datafication, digitisation, and connectivity are dissolving traditional boundaries."
>
> **Questions**
>
> - What is the role of the library in addressing larger social problems like digital exclusion, poverty and education gaps?
> - What more do libraries need to become catalysts for community life?

TREND REPORT 2024

References

ACM. (n.d.). Resolved: The internet is no place for critical infrastructure.
Communications of the ACM. Retrieved May 20, 2024, from
https://cacm.acm.org/practice/resolved-the-internet-is-no-place-for-critical-
infrastructure/

Africa Center for Strategic Studies. (2024, April 5). Mapping a surge of disinformation
in Africa. Africa Center for Strategic Studies.
https://africacenter.org/spotlight/mapping-a-surge-of-disinformation-in-africa/

Al Jazeera. (2023, May 23). Will the Korean drama wave rise higher? Al Jazeera.
https://www.aljazeera.com/features/2023/5/23/will-the-korean-drama-wave-rise-
higher

Al Jazeera. (2024, March 14). Why has the US passed a bill to ban TikTok and what's
next? Al Jazeera. https://www.aljazeera.com/news/2024/3/14/why-has-the-us-
passed-a-bill-to-ban-tiktok-and-whats-next

Albahar, M & Almalki, J. (2022). The impact of artificial intelligence on society, Journal
of Theoretical and Applied Information Technology.97(22), 1712-1724.
http://www.jatit.org/volumes/Vol97No22/7Vol97No22.pdf

Alliance for Affordable Internet. (n.d.). Sustainable universal access to the internet.
https://a4ai.org/report/sustainable-universal-access-to-the-internet/

American Library Association. (n.d.). Artificial intelligence.
https://www.ala.org/tools/future/trends/artificialintelligence

American Library Association. (n.d.). Collective impact. American Library Association.
(n.d.). Collective impact. https://www.ala.org/tools/future/trends/collectiveimpact

American Library Association. (n.d.). Data. American Library Association. Retrieved
May 20, 2024, from https://www.ala.org/tools/future/trends/data

Anderson, J., Rainie, L., & Vogels, E. A. (2023, June 21). As AI spreads, experts predict
the best and worst changes in digital life by 2035. Pew Research Center.
https://www.pewresearch.org/internet/2023/06/21/as-ai-spreads-experts-predict-
the-best-and-worst-changes-in-digital-life-by-2035/

Australian Competition & Consumer Commission. (2021). News media bargaining
code. Australian Competition & Consumer Commission.
https://www.accc.gov.au/by-industry/digital-platforms-and-services/news-media-
bargaining-code/news-media-bargaining-code

TREND REPORT 2024

Australian Government. (n.d.). Digital inclusion. Be Connected Network. https://www.beconnectednetwork.org.au/news-events/what-digital-inclusion

Australian Media Literacy Alliance. (n.d.). Insights on artificial intelligence and media literacy. https://medialiteracy.org.au/

Bennett, D. (2024, April 16). 2024 elections: Democracy, Trump, and Putin. Time. https://time.com/6551743/2024-elections-democracy-trump-putin/

BMC Public Health. (2020). Impact of social isolation on mental health. BioMed Central. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-8251-6

British Library. (2024, March 8). British Library cyber incident review. British Library. https://www.bl.uk/home/british-library-cyber-incident-review-8-march-2024.pdf

Brookings Institution. (n.d.). A whole new world: Education meets the metaverse. Brookings. Retrieved May 20, 2024, from https://www.brookings.edu/research/a-whole-new-world-education-meets-the-metaverse/

Bruegel. (2024, April). Copyright and generative AI: Implications for creativity and industry. Bruegel. https://www.bruegel.org/sites/default/files/2024-04/WP%2009%20040424%20Copyright%20final.pdf

Buffett Institute for Global Studies. (2024). The rise of AI and deepfake technology. Northwestern University. https://buffett.northwestern.edu/documents/buffett-brief_the-rise-of-ai-and-deepfake-technology.pdf

C. P. Snow, D. M. (2022). Overcoming the digital divide in rural areas. School Education Gateway. https://school-education.ec.europa.eu/en/insights/news/overcoming-digital-divide-rural-areas

Chatham House. (2024, January). Towards a global approach to digital platform regulation: Global regulatory trends. Chatham House. https://www.chathamhouse.org/2024/01/towards-global-approach-digital-platform-regulation/02-global-regulatory-trends

Chen, B. X. (2023, April 19). How to tame the social media giants: TikTok, Twitter, and Facebook. The New York Times. https://www.nytimes.com/2023/04/19/technology/personaltech/tiktok-twitter-facebook-social.html

Chief Scientist of Australia. (2023, May). Rapid response information report: Generative AI. Chief Scientist of Australia. https://www.chiefscientist.gov.au/sites/default/files/2023-05/Rapid%20Response%20Information%20Report%20-%20Generative%20AI.pdf

TREND REPORT 2024

Creative Commons. (2023, October). Towards a recommendation on open culture. Creative Commons. https://creativecommons.org/wp-content/uploads/2023/10/Towards-a-Recommendation-on-Open-Culture-2-Pager-16_10.pdf

CX Today. (2024, April 1). Gartner predicts mass consumer social media exodus by 2025. CX Today. https://www.cxtoday.com/voice-of-the-customer/gartner-predicts-mass-consumer-social-media-exodus-by-2025/

Deloitte. (2023). Cross-agency collaboration: Government trends 2023. https://www2.deloitte.com/xe/en/insights/industry/public-sector/government-trends/2023/cross-agency-collaboration.html

Deloitte. (2023). Government trends 2023: Cross-agency collaboration. Deloitte Insights. https://www2.deloitte.com/xe/en/insights/industry/public-sector/government-trends/2023/cross-agency-collaboration.html

Dentsu Creative. (2023, December 6). Dentsu creative trends 2024. Dentsu. https://info.dentsu.com/l/579173/2023-12-06/fgkgxc/579173/1701889627qy7TPZy7/DENTSU_CREATIVE_TRENDS_2024.pdf

Dentsu. (2023). Creative trends 2024. https://info.dentsu.com/l/579173/2023-12-06/fgkgxc/579173/1701889627qy7TPZy7/DENTSU_CREATIVE_TRENDS_2024.pdf

Digital India. (n.d.). About digital India. https://www.digitalindia.gov.in/

Digmin.dk. (2023). SVM regeringen: Danmarks digitaliseringsstrategi 2023. https://digmin.dk/Media/638357207253210400/SVM%20regeringen_Danmarks%20digitaliseringsstrategi_2023_V9_Online_Final%20(1)-a.pdf

Dwoskin, E., & Tiku, N. (2022, July 21). Facebook's news feed overhaul means more videos and photos from strangers. Washington Post. https://www.washingtonpost.com/technology/2022/07/21/facebook-news-feed-overhaul/?itid=lk_inline_enhanced-template

E-estonia. (n.d.). Welcome to e-Estonia. https://e-estonia.com/

Economist Intelligence Unit. (2021, April 15). The macroeconomic outlook: Key trends and challenges. https://viewpoint.eiu.com/analysis/article/1493743132

Edelman. (2024, February). 2024 Edelman Trust Barometer global report. Edelman. https://www.edelman.com/sites/g/files/aatuss191/files/2024-02/2024%20Edelman%20Trust%20Barometer%20Global%20Report_FINAL.pdf

Ellen MacArthur Foundation. (n.d.). The circular economy in detail: Deep dive. https://www.ellenmacarthurfoundation.org/the-circular-economy-in-detail-deep-dive

TREND REPORT 2024

European Commission. (2023). Trusted and secure European e-ID regulation.
https://digital-strategy.ec.europa.eu/en/library/trusted-and-secure-european-e-id-regulation

Exponential View. (2024). The horizon for 2024: Part 3. Exponential View.
https://www.exponentialview.co/p/the-horizon-for-2024-part-3

Forbes Communications Council. (2022, November 2). Marketing personalization:
Walking the line between creepy and relevant campaigns. Forbes.
https://www.forbes.com/sites/forbescommunicationscouncil/2022/11/02/marketing-personalization-walking-the-line-between-creepy-and-relevant-campaigns/?sh=4f9ad3b7615f

Forbes Tech Council. (2023, March 24). 2023: The year digital identities go mainstream.
Forbes. https://www.forbes.com/sites/forbestechcouncil/2023/03/24/2023-the-year-digital-identities-go-mainstream/

Forbes. (2022, June 20). The best examples of digital twins everyone should know
about. Forbes. https://www.forbes.com/sites/bernardmarr/2022/06/20/the-best-examples-of-digital-twins-everyone-should-know-about

Forrester. (2023). Forrester predictions 2024. https://go.forrester.com/wp-content/uploads/2023/10/Forrester-Predictions-2024.pdf?_gl=1*1kp41qy*_ga*OTQyMTU5NjE3LjE3MDg5MTUzMTE.*_ga_PMXYWTHPVN*MTcwODkxNTMxMS4xLjEuMTcwODkxNTM1MC4yMS4wLjA.

FSG. (2023). Future of social impact 2024. https://www.fsg.org/blog/future-of-social-impact-2024/

Gartner. (2021, January 12). Macro factors reshaping business in this decade.
https://www.gartner.com/en/articles/6-macro-factors-reshaping-business-this-decade

Gartner. (2023, April 17). Gartner announces the top 10 government technology trends
for 2023. https://www.gartner.com/en/newsroom/press-releases/2023-04-17-gartner-announces-the-top-10-government-technology-trends-for-2023

Gartner. (2023). Make the future of work a win-win for people and organizations.
https://www.gartner.com/smarterwithgartner/make-the-future-of-work-a-win-win-for-people-and-organizations

Gaur, M. (2022, February 25). New study proves financial barriers restricting global
south authors from OA publishing. Editage Insights.
https://www.editage.com/insights/new-study-proves-financial-barriers-restricting-global-south-authors-from-oa-publishing

GIDA-Global. (n.d.). Global Indigenous Data Alliance. https://www.gida-global.org/care

TREND REPORT 2024

Gillespie, T. (2023). Platformisation. Internet Policy Review.
https://policyreview.info/concepts/platformisation

Guardian. (2023, June 27). Tuvalu to create digital clone as rising sea levels threaten its existence. The Guardian. https://www.theguardian.com/world/2023/jun/27/tuvalu-climate-crisis-rising-sea-levels-pacific-island-nation-country-digital-clone

Have I Been Pwned. (n.d.). Pwned websites. Have I Been Pwned. Retrieved May 20, 2024, from https://haveibeenpwned.com/PwnedWebsites

Hays. (2024, January 2). The top workforce trends of 2024: The end of remote work, evolution of AI, and more. https://social.hays.com/2024/01/02/the-top-workforce-trends-of-2024-the-end-of-remote-work-evolution-of-ai-and-more/

Heald, S., Rinehart, A., & Johnston, P. (2020). Partnering preservation with sustainability: Case studies from the Pacific Northwest. The American Archivist, 83(1), 144-172. https://meridian.allenpress.com/american-archivist/article/83/1/144/441161/Partnering-Preservation-with-Sustainability

Huawei. (2024). Intelligent world 2030. Huawei.
https://forum.huawei.com/enterprise/en/Intelligent-World-2030/thread/667257733944066048-667213874295877632

IBM. (n.d.). What is a digital twin?. IBM. Retrieved May 20, 2024, from https://ibm.com/topics/what-is-a-digital-twin

IDC. (2023, April 5). IDC predicts surge in digital transformation initiatives. IDC.
https://www.idc.com/getdoc.jsp?containerId=prAP51372223

Institute of Australian Geographers. (2022). Indigenous data sovereignty: Towards an agenda. The Australian National University.
https://press.anu.edu.au/publications/series/caepr/indigenous-data-sovereignty

International Federation of Library Associations and Institutions. (n.d.). IFLA media and information literacy recommendations. https://www.ifla.org/publications/ifla-media-and-information-literacy-recommendations/

International Federation of Library Associations and Institutions. (n.d.). Information and media literacy: Guidelines and recommendations.
https://www.ifla.org/publications/ifla-media-and-information-literacy-recommendations/

International Telecommunication Union. (2020). Global e-waste monitor 2020.
https://ewastemonitor.info/wp-content/uploads/2020/11/GEM_2020_def_july1_low.pdf

TREND REPORT 2024

International Telecommunication Union. (n.d.). Digital inclusion of all.
https://www.itu.int/en/mediacentre/backgrounders/Pages/digital-inclusion-of-
all.aspx

Internet Society. (2022). Digital sovereignty: Internet fragmentation or a better path?
Internet Society. https://www.internetsociety.org/wp-
content/uploads/2022/11/Digital-Sovereignty.pdf

Ipsos. (2022, May). Global advisor: Metaverse and extended reality. Ipsos.
https://www.ipsos.com/en/global-advisor-metaverse-extended-reality-may-2022

ITU. (n.d.). ICT facts and figures. ITU. Retrieved May 20, 2024, from
https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx

KPMG. (2023, September). KPMG global CEO outlook survey: Economic outlook.
https://kpmg.com/xx/en/home/insights/2023/09/kpmg-global-ceo-outlook-
survey.html#economicoutlook

Leong, K., Sung, A., Au, D., & Blanchard, C. (2020). A review of the trend of
microlearning. *Journal of Work-Applied Management, (ahead-of-print)*.
https://doi.org/10.1108/JWAM-10-2020-0044

Library of Things. (n.d.). Borrow useful things for your home, projects and adventures.
Library of Things. https://www.libraryofthings.co.uk/

LinkSpringer. (2022). The impact of social determinants on health outcomes.
https://link.springer.com/article/10.1007/s10912-022-09735-4

Mare, A. (2020, May 6). Controls to manage fake news in Africa are affecting freedom
of expression. The Conversation. https://theconversation.com/controls-to-
manage-fake-news-in-africa-are-affecting-freedom-of-expression-137808

McClure, K. (2021, February 9). There's no such thing as alternative facts: 5 ways to spot
misinformation and stop sharing it online. The Conversation.
https://theconversation.com/theres-no-such-thing-as-alternative-facts-5-ways-to-
spot-misinformation-and-stop-sharing-it-online-152894

McKinsey & Company. (2022, December 1). The value of getting personalization right—
or wrong—is multiplying. McKinsey & Company.
https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-
insights/the-value-of-getting-personalization-right-or-wrong-is-multiplying

McKinsey & Company. (2023). IoT value set to accelerate through 2030: Where and
how to capture it. McKinsey & Company.
https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/iot-value-
set-to-accelerate-through-2030-where-and-how-to-capture-it

TREND REPORT 2024

McKinsey & Company. (n.d.). What is the internet of things? McKinsey Explainers. Retrieved May 20, 2024, from https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-the-internet-of-things

Moorhead, P. (2024, January 26). Is 2024 the year of low-Earth orbit satellite services? Forbes. https://www.forbes.com/sites/moorinsights/2024/01/26/is-2024-the-year-of-low-earth-orbit-satellite-services

NASA. (2021). ASME digital twin summit keynote. NASA. https://ntrs.nasa.gov/api/citations/20210023699/downloads/ASME%20Digital%20Twin%20Summit%20Keynote_final.pdf

National Institutes of Health. (2023). Impact of social isolation on physical health. PubMed. https://pubmed.ncbi.nlm.nih.gov/37337617/

National Institutes of Health. (2023). Social media use and adolescent mental health. PMC. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9047596/

Nesta. (2024). Countries making digital twins. Nesta. https://www.nesta.org.uk/feature/future-signals-2024/countries-making-digital-twins/

Northwestern University. (n.d.). Northwestern Security and AI Lab. Northwestern University. Retrieved May 20, 2024, from https://sites.northwestern.edu/nsail/

Notley, T., Chambers, S., Park, S., Dezuanni, M. (202). Adult Media Literacy in Australia: Attitudes, Experiences and Needs. Western Sydney University, Queensland University of Technology and University of Canberra. https://www.westernsydney.edu.au/__data/assets/pdf_file/0007/1824640/Australian_adult_media_literacy_report_2021.pdf

OECD. (2023). 2023 OECD digital government index. https://www.oecd.org/publications/2023-oecd-digital-government-index-1a89ed5e-en.htm

OECD. (2023). The intersection of a climate-neutral and circular economy. OECD iLibrary. https://www.oecd-ilibrary.org/sites/76972a4a-en/index.html?itemId=/content/publication/76972a4a-en

Open Future. (n.d.). Open future. Open Future. Retrieved May 20, 2024, from https://openfuture.eu/

Organisation for Economic Co-operation and Development (OECD). (2023). The intersection of a climate-neutral and circular economy. OECD iLibrary. https://www.oecd-ilibrary.org/sites/76972a4a-en/index.html?itemId=/content/publication/76972a4a-en

TREND REPORT 2O24

Organisation for Economic Co-operation and Development. (2020). Building a resilient recovery: How we can emerge stronger from the COVID-19 pandemic. https://www.oecd-ilibrary.org/sites/d4d43816-en/index.html?itemId=/content/component/d4d43816-en

Organisation for Economic Co-operation and Development. (2023). The intersection of a climate-neutral and circular economy. OECD iLibrary. https://www.oecd-ilibrary.org/sites/76972a4a-en/index.html?itemId=/content/publication/76972a4a-en

Organisation for Economic Co-operation and Development. (n.d.). Global digital compact zero draft. United Nations. https://www.un.org/techenvoy/sites/www.un.org.techenvoy/files/Global_Digital_Compact_Zero_Draft.pdf

Organisation for Economic Co-operation and Development. (n.d.). Media literacy and information literacy. https://www.oecd-ilibrary.org/sites/76972a4a-en/index.html?itemId=/content/publication/76972a4a-en

Osman, K., Marshall, A., Dezuanni, M. (2024). Digital Inclusion and Learning at Home: Challenges for Low-Income Australian Families. In: Yates, S., Carmi, E. (eds) Digital Inclusion. Palgrave Studies in Digital Inequalities. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-28930-9_5

Ovide, S. (2022, October 24). Why is TikTok so popular? Washington Post. https://www.washingtonpost.com/technology/interactive/2022/tiktok-popularity/

Pew Research Center. (2022, June 30). The metaverse in 2040. Pew Research Center. https://www.pewresearch.org/internet/2022/06/30/the-metaverse-in-2040/

Pew Research Center. (2023, June 21). As AI spreads, experts predict the best and worst changes in digital life by 2035. Pew Research Center. https://www.pewresearch.org/internet/2023/06/21/as-ai-spreads-experts-predict-the-best-and-worst-changes-in-digital-life-by-2035/

Pew Research Center. (2023, November 15). More Americans are getting news on TikTok, bucking the trend seen on most other social media sites. Pew Research Center. https://www.pewresearch.org/short-reads/2023/11/15/more-americans-are-getting-news-on-tiktok-bucking-the-trend-seen-on-most-other-social-media-sites/

Pew Research Center. (2024, February 7). Many Americans find value in getting news on social media, but concerns about inaccuracy have risen. Pew Research Center. https://www.pewresearch.org/short-reads/2024/02/07/many-americans-find-value-in-getting-news-on-social-media-but-concerns-about-inaccuracy-have-risen/

TREND REPORT 2024

Proximus. (2023). Baromètre de maturité numérique des citoyens 2023. https://gcm.rmnet.be/clients/rmnet/content/medias/barome_tre-dw-maturite_-nume_rique-citoyens-2023-complet.pdf

Public Interest News Foundation. (2023). What do people want from local news? Public Interest News Foundation. https://www.publicinterestnews.org.uk/post/what-do-people-want-from-local-news

Rapid Response Information Report. (2023, May). Generative AI. Chief Scientist of Australia. https://www.chiefscientist.gov.au/sites/default/files/2023-05/Rapid%20Response%20Information%20Report%20-%20Generative%20AI.pdf

Reuters Institute for the Study of Journalism. (2024). Journalism, media, and technology trends and predictions 2024. Reuters Institute. https://reutersinstitute.politics.ox.ac.uk/journalism-media-and-technology-trends-and-predictions-2024

Reuters Institute for the Study of Journalism. (2024). Powerful and privileged: How misrepresentation and underrepresentation disadvantaged. Reuters Institute. https://reutersinstitute.politics.ox.ac.uk/news-powerful-and-privileged-how-misrepresentation-and-underrepresentation-disadvantaged

Reuters Institute. (2024). Journalism, media, and technology trends and predictions 2024. University of Oxford. https://reutersinstitute.politics.ox.ac.uk/journalism-media-and-technology-trends-and-predictions-2024

Sandvine. (2023). Global Internet phenomena report. Sandvine. https://www.sandvine.com/hubfs/Sandvine_Redesign_2019/Downloads/2023/reports/Sandvine%20GIPR%202023.pdf?hsCtaTracking=3cbc04da-fd44-481b-ad03-811d23b7b2c5%7C131df09f-dbdd-41a0-9dce-aac8879403ff

Scamadviser. (2022). Global anti-scam summit 2022: Watch & download presentations. https://www.scamadviser.com/articles/global-anti-scam-summit-2022-watch-download-presentations

Scanlon Institute. (2023). Mapping social cohesion report. https://scanloninstitute.org.au/sites/default/files/2023-11/2023%20Mapping%20Social%20Cohesion%20Report.pdf

ScienceDirect. (n.d.). Generative AI: Prospects and challenges. ScienceDirect. Retrieved May 20, 2024, from https://www.sciencedirect.com/science/article/pii/S0268401223000233

Sherwood, H. (2021, April 11). Making sense of conspiracy theorists as the world gets more bizarre. The Guardian. https://www.theguardian.com/society/2021/apr/11/making-sense-of-conspiracy-theorists-as-the-world-gets-more-bizarre

TREND REPORT 2024

Simões, J., Caldeira, M., & O'Riordan, C. (2023). The impact of digital literacy on social exclusion and economic development in Portugal. Journal of Economic Issues, 57(1), 25-37. https://www.tandfonline.com/action/showCitFormats?doi=10.1080%2F23257962.2022.2117688

Sustainability Victoria. (2022, June 14). Three circular economy trends shaping sustainability across the globe. https://www.sustainability.vic.gov.au/news/news-articles/three-circular-economy-trends-shaping-sustainability-across-the-globe

The Conversation. (2023, April 27). National Day for Truth and Reconciliation: Exhibit features stolen Kainai children's stories of resilience on Treaty 7 lands. https://theconversation.com/national-day-for-truth-and-reconciliation-exhibit-features-stolen-kainai-childrens-stories-of-resilience-on-treaty-7-lands-213137

The Conversation. (2023, May 12). Disturbing trend of state media use of deepfakes. https://theconversation.com/the-disturbing-trend-of-state-media-use-of-deepfakes-203368

The Conversation. (2023, May 3). Why is truth-telling so important? Our research shows meaningful reconciliation cannot occur without it. https://theconversation.com/why-is-truth-telling-so-important-our-research-shows-meaningful-reconciliation-cannot-occur-without-it-197685

The Conversation. (2024). The disturbing trend of state media use of deepfakes. The Conversation. https://theconversation.com/the-disturbing-trend-of-state-media-use-of-deepfakes-203368

The Economist Intelligence Unit. (2024). Analysis of global economic trends. The Economist Intelligence Unit. https://viewpoint.eiu.com/analysis/article/1493743132

The Guardian. (2023, March 5). The Guardian view on local journalism's decline: Bad news for democracy. The Guardian. https://www.theguardian.com/commentisfree/2023/mar/05/the-guardian-view-on-local-journalisms-decline-bad-news-for-democracy

Tuvalu. (n.d.). Digital twin of Tuvalu. Tuvalu. Retrieved May 20, 2024, from http://tuvalu.tv/

UN News. (2024, March). Global digital compact: Rev 1. United Nations. https://www.un.org/techenvoy/sites/www.un.org.techenvoy/files/Global_Digital_Compact_Rev_1.pdf

UNESCO. (2022). Global education monitoring report 2022. https://apo.org.au/node/324660

TREND REPORT 2024

UNESCO. (2023). *Internet for trust: Guidelines for regulating digital platforms*. https://www.unesco.org/en/internet-trust/guidelines

UNESCO. (2023). The future of education: A global perspective. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000380618?2=null&queryId=0a30ee11-7640-48c0-b1c3-8d7e1e5dc867

UNESCO. (n.d.). Tackling climate change through education. https://unesdoc.unesco.org/ark:/48223/pf0000380618?2=null&queryId=0a30ee11-7640-48c0-b1c3-8d7e1e5dc867

UNESCO. (n.d.). United Nations declaration on the rights of Indigenous peoples. United Nations. https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

UNICEF. (n.d.). Innovation and technology for gender equality. UNICEF. https://www.unicef.org/innovation-and-technology-gender-equality-0

United Nations Economic and Social Commission for Asia and the Pacific. (n.d.). Green economy in Asia and the Pacific. United Nations Environment Programme. https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy

United Nations Educational, Scientific and Cultural Organization. (n.d.). Information literacy. https://www.unesco.org/en/ifap/information-literacy

United Nations Environment Programme. (n.d.). Green economy in Asia and the Pacific. https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy

United Nations Human Rights Office. (2024, March). 2024 elections are testing democracy's health. United Nations Human Rights Office. https://www.ohchr.org/en/stories/2024/03/2024-elections-are-testing-democracys-health

United Nations University. (2020). 2020 UNU collections on sustainable development. https://collections.unu.edu/view/UNU:9288

United Nations University. (n.d.). Sustainable development goals: Research and impact. https://collections.unu.edu/view/UNU:9288

United Nations. (2019, April). Emerging trends in the generation, transmission, and protection of traditional knowledge. https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2019/04/TK-Emerging-trends-in-the-generation-transmission-and-protection-of-TK-final-paper.pdf

TREND REPORT 2024

United Nations. (2024, March). 2024 elections are testing democracy's health. United Nations. https://news.un.org/en/story/2024/03/1147831

United Nations. (n.d.). Indigenous languages. https://www.un.org/development/desa/indigenouspeoples/indigenous-languages.html

United Nations. (n.d.). United Nations declaration on the rights of Indigenous peoples. https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

United Nations. (n.d.). United Nations Educational, Scientific and Cultural Organization (UNESCO). United Nations Department of Economic and Social Affairs. https://sdgs.un.org/un-system-sdg-implementation/united-nations-educational-scientific-and-cultural-organization-1

University of Technology Sydney. (2024). Five tech trends for 2024. University of Technology Sydney. https://www.uts.edu.au/about/faculty-engineering-and-information-technology/postgraduate/articles/five-tech-trends-2024

Van Dyke, N., & Taylor, V. (2018). The cultural outcomes of social movements. In D. A. Snow, S. A. Soule, H. Kriesi, & H. J. McCammon (Eds.), The Wiley Blackwell companion to social movements. https://doi.org/10.1002/9781119168577.ch27

Virtual Communities. (n.d.). Executive summary. The GovLab. https://virtual-communities.thegovlab.org/executive-summary

WeForum. (2022, May). Countries' attitudes toward the metaverse. World Economic Forum. https://www.weforum.org/agenda/2022/05/countries-attitudes-metaverse-augmented-virtual-reality-davos22/

WeForum. (2024, February). Digital trust and humans: Technological innovation. World Economic Forum. https://www.weforum.org/agenda/2024/02/digital-trust-humans-technological-innovation/

Whose Knowledge?. (n.d.). About us. Whose Knowledge?. Retrieved May 20, 2024, from https://whoseknowledge.org/about-us/

Wilkinson, R., & Pickett, K. (2018). The inner level: How more equal societies reduce stress, restore sanity and improve everyone's well-being. Bloomsbury Press. https://apo.org.au/node/324660

Wired. (n.d.). The WIRED guide to personal data collection. Wired. Retrieved May 20, 2024, from https://www.wired.com/story/wired-guide-personal-data-collection/

World Bank Group. (n.d.). Learning from the extremes: Digital technologies for educational equity.

TREND REPORT 2024

https://www.learningfromtheextremes.eu/files/Dissemination_Files/LfE_Deliverable_D2.1.pdf

World Economic Forum. (2020). Global competitiveness report 2020. https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2020.pdf

World Economic Forum. (2023, August). A common language to describe online harm: Typology. Retrieved May 23, 2024, from https://www.weforum.org/agenda/2023/08/common-language-online-harm-typology/

World Economic Forum. (2023). The future of jobs report 2023. https://www3.weforum.org/docs/WEF_Future_of_Jobs_2023.pdf

World Economic Forum. (2024, February). Digital trust and humans: Technological innovation. World Economic Forum. https://www.weforum.org/agenda/2024/02/digital-trust-humans-technological-innovation/

World Economic Forum. (2024, February). Emerging global risks report 2024: Crime and censorship. World Economic Forum. https://www.weforum.org/agenda/2024/02/emerging-global-risks-report-2024-crime-censorship/

World Economic Forum. (2024). Global risks report 2024. World Economic Forum. https://www.weforum.org/publications/global-risks-report-2024/digest/

World Economic Forum. (2024). The global risks report 2024. World Economic Forum. https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2024.pdf

World Health Organization. (n.d.). Social isolation and loneliness. https://www.who.int/teams/social-determinants-of-health/demographic-change-and-healthy-ageing/social-isolation-and-loneliness

XR Today. (n.d.). What are the biggest issues facing the metaverse? XR Today. Retrieved May 20, 2024, from https://www.xrtoday.com/virtual-reality/what-are-the-biggest-issues-facing-the-metaverse/

Yeo, S. K. (2024, April 30). Health misinformation is rampant on social media: Here's what it does, why it spreads, and what people can do about it. The Conversation. https://theconversation.com/health-misinformation-is-rampant-on-social-media-heres-what-it-does-why-it-spreads-and-what-people-can-do-about-it-217059

Zenodo. (2022). Towards a sustainable AI: Strategies for responsible use. Zenodo. https://zenodo.org/records/6823431

TREND REPORT 2024

List of Reports Initially Consulted

	Source	Region	URL	Type
1	GWI	US	https://www.gwi.com/connecting-the-dots	Consumer
2	Densu Creative	Global	https://info.dentsu.com/l/579173/2023-12-06/fgkgxc/579173/1701889627qy7TPZy7/DENTSU_CREATIVE_TRENDS_2024.pdf	Consumer
3	Ipsos	US	https://www.ipsos.com/en/almanac-2024/four-critical-trends-will-drive-brand-growth-2024-and-beyond	Consumer
4	Deloitte	US	https://www2.deloitte.com/xe/en/insights/focus/tech-trends.html	Technology
5	Council on Foreign Relations	US	https://www.cfr.org/article/visualizing-2024-trends-watch	Geopolitical
6	Accenture	Global	https://www.accenture.com/content/dam/accenture/final/accenture-com/document-2/Accenture-Life-Trends-2024-Report.pdf	Consumer
7	S&P Global Research Council	Global	https://www.spglobal.com/en/research-insights/featured/research-council	Economic
8	Demos	UK	https://demos.co.uk/wp-content/uploads/2023/12/Drivers-of-Digital-Discord.pdf	Information
9	The Future Laboratory	Global	https://www.thefuturelaboratory.com/hubfs/Global%20Drivers%202030%20by%20The%20Future%20Laboratory%20Executive%20Summary.pdf	Socioeconomic
10	European Commission	Europe	https://commission.europa.eu/strategy-and-policy/strategic-planning/strategic-foresight/2023-strategic-foresight-report_en	Socioeconomic
11	OECD	Global	https://www.oecd-ilibrary.org/docserver/df7ebc33-en.pdf?expires=1704188457&id=id&accname=guest&checksum=F8CBED2640AC08B586E2E2F73E7ACD6F	Socioeconomic
12	CSIRO	Australia	https://www.csiro.au/en/work-with-us/services/consultancy-strategic-advice-services/CSIRO-futures/Innovation-Business-Growth/Australian-National-Outlook	Socioeconomic
13	Gartner	Global	https://www.gartner.com/en/articles/6-macro-factors-reshaping-business-this-decade	Business
14	UTS	Australia	https://www.uts.edu.au/about/faculty-engineering-and-information-technology/postgraduate/articles/five-tech-trends-2024	Technology
15	Technology Magazine	Global	https://technologymagazine.com/top10/top-10-technology-trends-for-2024	Technology
16	Forbes	US	https://www.forbes.com/sites/bernardmarr/2023/09/11/the-top-5-tech-trends-in-2024-everyone-must-be-ready-for/?sh=5c29a4399a6b	Technology
17	Gartner	Global	https://www.gartner.com/en/articles/gartner-top-10-strategic-technology-trends-for-2024	Technology
18	Forbes	Global	https://www.forbes.com/sites/marymeehan/2023/12/28/trends-for-2024-the-changes-shaping-the-year-ahead	Consumer
19	Mining Review Africa	Africa	https://www.miningreview.com/base-metals/africa-trends-to-watch-in-2024/	Geopolitical
20	UNU EHS	Global	https://s3.eu-central-1.amazonaws.com/interconnectedrisks/reports/2023/UNU_Tipping-Points_231017_no-watermark.pdf	Risk
21	Ministry of Digitalisation & Equality (Denmark)	Denmark	https://digmin.dk/Media/638357207253210400/SVM%20regeringen_Danmarks%20digitaliseringsstrategi_2023_V9_Online_Final%20(1)-a.pdf	Digital
22	Danish Government	Denmark	https://www.regeringen.dk/media/6537/ai-strategi_web.pdf	Technology
23	7 Generations	Denmark	https://www.fremforsk.dk/files/Boeger/7-generationer-intro.pdf	Demographic
24	Civil Society in Numbers	Germany	https://www.ziviz.de/sites/ziv/files/ziviz-survey_2023_trendbericht.pdf	Socioeconomic

25	Toerisme Vlaanderen	Belgium	https://toerismevlaanderen.be/en/node/924	Socioeconomic
26	The Centre for the Future of Libraries	US	https://www.ala.org/tools/future/advisorygroup	Information
27	Gallup	Global	https://www.gallup.com/workplace/547283/workplace-trends-leaders-watch-2024.aspx	Business
28	Economist Intelligence Unit	Global	https://viewpoint.eiu.com/analysis/geography/XA/reports/one-click-report	Economic
29	Economist Intelligence Unit	Global	https://viewpoint.eiu.com/analysis/geography/XA/reports/one-click-report	Risk
30	Global Risk Forecast 2024 Crisis24 (Garda)	Global	https://crisis24.garda.com/	Risk
31	The Conference Board	Global	https://www.conference-board.org/publications/pdf/index.cfm?brandingURL=global-economic-forecast-update	Economic
32	Sandvine Global Internet Phenomena Report	Global	https://www.sandvine.com/hubfs/Sandvine_Redesign_2019/Downloads/2023/reports/Sandvine%20GIPR%202023.pdf?hsCtaTracking=3cbc04da-fd44-481b-ad03-811d23b7b2c5%7C131df09f-dbdd-41a0-9dce-aac8879403ff	Communications
33	World Economic Forum	Global	https://www.weforum.org/publications/global-risks-report-2024/digest/	Risk
34	UN DESA	Global	https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP_2024_Web.pdf	Economic
35	World Economic Forum	Global	https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2020.pdf	Socioeconomic
36	Nielsen IQ	Global	https://nielseniq.com/wp-content/uploads/sites/4/2023/01/NIQ-2023-Consumer-Outlook-Summary-Presentation.pdf	Consumer
37	2024 Trend Check	Global	https://www.trendwatching.com/2024-trend-check	Consumer
38	Reuters Institute	Global	https://reutersinstitute.politics.ox.ac.uk/journalism-media-and-technology-trends-and-predictions-2024	Journalism
38	Reuters Institute	Global	https://reutersinstitute.politics.ox.ac.uk/journalism-media-and-technology-trends-and-predictions-2032	Journalism
39	KPMG	Global	https://kpmg.com/xx/en/home/insights/2023/09/kpmg-global-ceo-outlook-survey.html	Business
40	Edelman	Global	https://www.edelman.com/sites/g/files/aatuss191/files/2024-02/2024%20Edelman%20Trust%20Barometer%20Global%20Report_FINAL.pdf	Trust
41	Forrester	Global	https://go.forrester.com/wp-content/uploads/2023/10/Forrester-Predictions-2024.pdf?_gl=1*1kp41qy*_ga*OTQyMTU5NjE3LjE3MDg5MTUzMTE.*_ga_PMXYWTHPVN*MTcwODkxNTMxMS4xLjEuMTcwODkxNTM1MC4yMS4wLjA.	Business
42	Gartner	Global	https://emt.gartnerweb.com/ngw/globalassets/en/marketing/documents/marketing-predictions-for-2024.pdf?_gl=1*103r5gv*_ga*MTgyMTkwODgzNy4xNzA3OTY2ODEx*_ga_R1W5CE5FEV*MTcwODkxNTUzOC4yLjEuMTcwODkxNTY0OS40NC4wLjA.	Consumer
43	Pew Research	US	https://www.pewresearch.org/short-reads/2024/02/21/introducing-the-pew-knight-initiative/	Information
44	Cisco	Global	https://www.cisco.com/c/en/us/solutions/collateral/executive-perspectives/annual-internet-report/white-paper-c11-741490.pdf	Internet
45	McKinsey Global Institute	Asia	https://www.mckinsey.com/mgi/our-research/asia-on-the-cusp-of-a-new-era	Business
46	Accenture	Global	https://www.accenture.com/us-en/insights/technology/technology-trends-2024	Technology

TREND REPORT 2024

47	MIT Technology Review	Global	https://www.technologyreview.com/2024/01/08/1085094/10-breakthrough-technologies-2024/	Technology
48	Deloitte	Global	https://www2.deloitte.com/us/en/insights/focus/human-capital-trends.html	Human Capital
49	World Intellectual Property Organization (WIPO)	Global	https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf	Innovation
50	World Intellectual Property Organization (WIPO)	Global	https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1055_2021.pdf	Technology
51	PwC	Global	https://www.pwc.com/gx/en/issues/c-suite-insights/ceo-survey/methodology.html	Business
52	PwC	Global	https://www.pwc.com/gx/en/industries/tmt/media/outlook/insights-and-perspectives.html	Entertainment & Media
53	PwC	Global	https://www.pwc.com/gx/en/industries/tmt/telecom-outlook-perspectives.html	Telecoms
54	Bain & Company	Global	https://www.bain.com/globalassets/about/2023-global-pe-report---roadshow-deck.pdf	Socioeconomic

TREND REPORT 2O24

Author, Citation & Acknowledgment Information

Prepared by Professor Michael Dezuanni and Dr Kim Osman

Digital Media Research Centre
Queensland University of Technology
Creative Industries Precinct, Musk Avenue
Kelvin Grove, QLD 4059 Australia

dmrc@qut.edu.au
research.qut.edu.au/dmrc

QUT | Digital Media Research Centre

TREND REPORT 2024