

Perspectives from the Global Entertainment & Media Outlook 2020–2024

Pulling the future forward:
The entertainment and media industry reconfigures amid recovery



About this report

We're delighted to welcome you to our special report on this year's *Global Entertainment & Media Outlook*. Now in its 21st year, the *Outlook* has been charting the ongoing evolution of this dynamic and fast-changing sector for more than two decades. This past year was in many ways an extraordinary one—for the global economy, and for the global entertainment and media (E&M) ecosystem. But our approach remains the same. We collect and analyse a deep trove of proprietary data and forecasts. And we apply our collective expertise to generate new perspectives and insights that will help shape your strategies for the next 12 months and beyond.

The starting point for these insights is our five-year forecasts of consumer and advertising spending for 14 segments across 53 territories. Our experts have overlaid this raw research data with their own experiences and observations to tease out the overarching themes—thus generating actionable intelligence for companies at every level of the industry.

What are the highlights in the new *Outlook?* Not surprisingly, the defining event of the year for E&M companies—and indeed for most other sectors—was the COVID-19 outbreak. The pandemic brought the global industry's long-running track record of revenue growth to a shuddering halt, with 2020 set to see the sharpest contraction in the history of this research.

However, a deeper analysis shows that the pandemic has also had more profound impacts that vary among different E&M segments. In particular, it has accelerated and amplified ongoing shifts in consumers' behaviour, pulling forward digital disruption and forging industry tipping points that wouldn't otherwise have been reached for many years.

The result? We've discovered that consumer habits can take a lifetime to learn, but just a lockdown to lose. And, as in the economy at large, the resulting pain is not evenly shared across all sectors. It's most acute in segments that COVID-19 literally shut down, such as live events. But in a socially distanced world, other segments have thrived, including over-the-top (OTT) video and data consumption.

A further key point is that the industry's longer-term outlook remains robust—which speaks to the agility and dynamism of the ecosystem. Although the shock waves from 2020 will reverberate for the foreseeable future, our forecast shows the industry's fundamental growth

trajectory is still strong. Global E&M growth has typically outpaced GDP in recent years, as media experiences have become ever more central to consumers' lives. This trend has continued. So, after the challenges of 2020, we expect E&M to reassume its outperformance over GDP.

Every year, all of us on the PwC industry team look forward to writing this report. It provides us with a unique opportunity to cross-fertilise ideas and make connections across segments and territories. We hope it helps you do the same. To learn more about how our findings and thinking apply to your business, please contact your local PwC team (see page 22) or reach out to either of us. We look forward to hearing from you.

Best regards,



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Introduction: **Pulling the future forward**

In 2020, the entertainment and media industry absorbed the historic shock of COVID-19, which toppled long-standing business models, amplified existing trends and forged new opportunities. As the global economy shrinks for the first time since 2009, the US\$2.1tn industry is forecast to contract in 2020 by 5.6%.

On a macroeconomic level, analysts have been debating which letter most accurately describes the shape of the recovery: a V-shaped rapid bounce-back, a slower U-shaped recovery or an L-shaped trajectory. But a K-shaped bifurcated recovery, in which some sectors rise while others fall, might be the most appropriate alphabetic reference for the economy as a whole and for

entertainment and media (E&M) in particular. As the overall industry posts a 2.8% compound annual growth rate (CAGR) through 2024, some E&M segments will expand quickly-experiencing three years of anticipated growth in a single year—while others continue their downwards path.

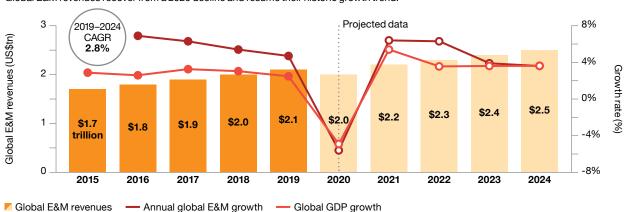
To a large degree, COVID-19 and its aftereffects have pulled the future forward, as consumers take more control of their own media consumption in a world of ever-expanding choice.

Consumer habits can take a lifetime to learn—but just a lockdown to lose

In only a few short months, COVID-19 accelerated ongoing changes in consumers' behaviour, pulling forward a series of digital disruptions that would have occurred in future years. Agile consumers, responding with alacrity to new conditions, are increasingly constructing their own bundles and media environments, paying directly for all-you-caneat access to music, video and games. By a combination of design and circumstance, people are consuming more content and experiences at home and online. Providers

Powering ahead

Global E&M revenues recover from a 2020 decline and resume their historic growth trend.

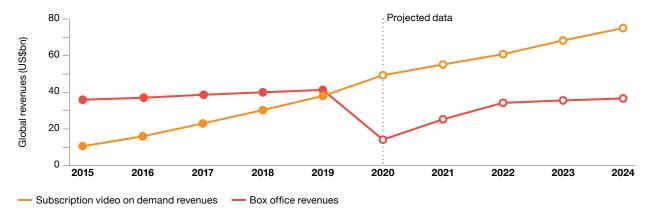


Note: 2019 is the latest available data. 2020-2024 values are forecasts.

Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia, World Bank, IMF

Surging demand for on-demand

Subscription video on demand revenues double box office revenues by 2024.



Note: 2019 is the latest available data. 2020-2024 values are forecasts.

Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia

that were already well positioned to meet customers where they are, such as over-the-top (OTT) video companies and multiplayer game providers, have thrived. Others facing strategic headwinds adjusted quickly. News Corp Australia accelerated its digitisation plans in May 2020; it abruptly stopped the printing of 112 community and regional

Historically, E&M spending by consumers has been discretionary and tied tightly to macroeconomic conditions. A negative economic shock has tended to push spending to drop off faster than economic activity. But increasingly, many people regard their digital E&M spending—a Netflix subscription or mobile data allowance—as a utility on a par with water or electricity and therefore a non-discretionary expense. In 2009, consumer spending on E&M (including internet access) rose 1.5% even as the global economy contracted by 1.7%. Overall consumer spending (including internet access) in 2020 was projected to fall just 2.3%, compared with the 4.9% contraction in the global economy at large, as projected by the International Monetary Fund in June.

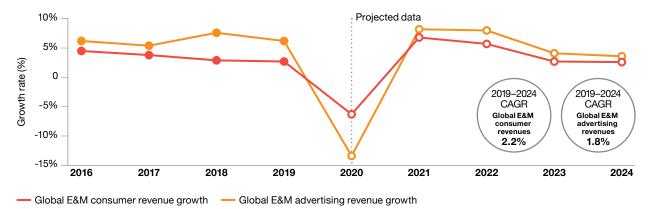
newspapers, turning 76 into digital-only mastheads and shuttering the other 36 altogether.

Hastening the arrival of industry tipping points

The acceleration of change has forged several compelling industry tipping points, as the lines on graphs cross and diverge, forming their own K shapes. As recently as 2015, box office revenues were three times those of the SVOD (subscription video on demand) sector. Having caught up with the box office sector in 2019, SVOD is now projected to surge away in the coming five years, reaching twice the size of the box office in 2024. In 2019, for the first time, more data was consumed on smartphones than through fixed broadband; by 2024, the amount of mobile data consumed will be 50% greater than the amount of broadband data.

Shifting mix

Advertising spending is projected to be more volatile than consumer spending.



 $\textbf{Note:}\ 2019\ is\ the\ latest\ available\ data.\ 2020-2024\ values\ are\ forecasts.$

Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia

Mashups present opportunities for new business models

As they strive to meet consumers where they are—predominantly at home and online—businesses are creating new arrangements and combinations aimed at opening up new revenue opportunities. Digital platforms have morphed into performance spaces, as when London's Wireless Festival streamed recorded virtual reality (VR) music performances to a homebound global audience in mid-2020. Gaming is integrating e-commerce into its experience to an ever greater extent, capitalising on the closure of many physical retail spaces. In India, empty stadiums for Indian Premier League cricket matches have spurred the development of digital visual effects to give TV viewers an immersive experience.

Consumer spending trumps advertising—perhaps for good

Historically, advertising spending has risen and fallen in tandem with consumption. Not this year. Global E&M revenues will fall 5.6% in 2020, compared with a dramatic 13.4% decline for global advertising. Even internet advertising is set to fall slightly as recessionary conditions impact advertiser confidence. And although both streams will recover, advertising is slated to grow more slowly than consumer spending over the 2020-2024 period. Several structural and pandemic-related dynamics are at play. Businesses are reducing their spending on advertising and marketing. But it is likely that the mass personalisation of content experiences at relatively low cost and the resulting explosive growth in choice have altered the balance, perhaps permanently, between consumer spending and advertising. Companies find they can deliver immense choice at a price point that makes sense for both supplier and customer, while building powerful direct relationships—all without relying excessively on fickle or intrusive ads. E&M companies are increasingly in the business of delivering experiences and content directly to consumers, not delivering audiences and eyeballs to advertisers.

Reconfiguration, powered by the forces of ADAPT, is under way

The combined impact of these shifts is a sweeping reconfiguration of the vast E&M system. Today's world is facing five urgent global issues—a set of forces that we've grouped into a framework called ADAPT (see sidebar, at right). Around the world, governments, organisations and societies are struggling with the near-term manifestations of these trends and urgently seeking effective ways to address them. In the wake of the pandemic, the ADAPT issues will continue to shape sectors across E&M and beyond, driving a reconfiguration that will involve much more than digitisation.

The unprecedented decline of 2020 will likely be followed by an impressive bounce-back in 2021 and beyond. Between 2019 and 2024, the E&M industry will grow at a 2.8% CAGR, roughly equivalent to the long-term trend. At the macro level, in other words, growth will regress to its mean. On a micro level, dramatic peaks and valleys will be evident. As consumers and businesses adapt in parallel, the industry is being reshaped before our eyes. Although there will still be challenges for E&M companies as we move beyond the pandemic, the digital migration that it has pulled forward will also generate opportunities in all segments.

The ADAPT forces

Asymmetry

Increasing wealth disparity and the erosion of the middle class

Disruption

The pervasive nature of technology and its impact on individuals, society and Earth's climate

Age

Demographic pressure on business, social institutions and economies

Polarisation

Breakdown in global consensus and a fracturing world, with growing nationalism and populism

Trust/Regulation

Declining confidence in the institutions that underpin society

Shifting patterns of consumer behaviour

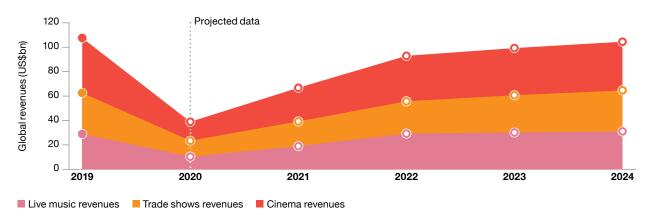
The pandemic has propelled consumers even faster towards digital behaviours in many areas of their lives, as lockdowns and social distancing have acted as a powerful spur to employ digital tools. People are using virtual collaboration tools such as Houseparty and Zoom to stay in touch with family and friends, consulting with physicians over video links, and making more use of mobile banking and contactless payment apps. Nowhere has this change been more evident than in media consumption.

COVID-19 has rendered some popular activities off-limits. By April 2020, more than 750 festivals globally had been cancelled or postponed, including stalwarts such as the Glastonbury Festival in the UK and Coachella in the US. Not surprisingly, events—live music, cinema and trade shows—suffered the most dramatic revenue declines in their history in 2020, falling 63.8%, and aren't expected to regain their pre-pandemic levels until at least 2024.

But the more interesting and impactful changes are seen in those activities that people were able to do before the pandemic but have now embraced with new ardour. Companies that were already well situated to capitalise on the move towards home-based entertainment and activity received a major boost. In effect, people cocooned in their residences set about constructing their own bundles of content by purchasing or subscribing to all-you-caneat packages of video, music, content, exercise and experiences. Online fitness company Peloton Interactive, which provides hardware, software and exercise content, reported a massive surge in sales of its fitness equipment and subscriptions. Subscribers more than

The show must go on

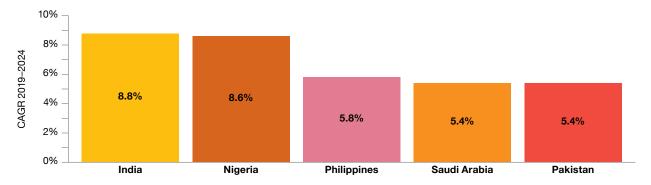
Hit hard by COVID-19, live events struggle to regain their footing.



Note: 2019 is the latest available data. 2020–2024 values are forecasts. **Source:** *PwC Global Entertainment & Media Outlook* 2020–2024 (www.pwc.com/outlook), Omdia

Pockets of growth

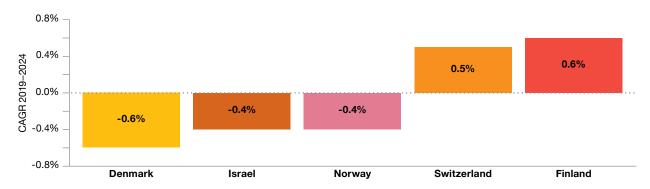
Most of the world's best-performing E&M consumer markets are in developing countries.



Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia

Muted demand

E&M consumer spending is expected to be weakest in wealthy markets.



Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia

doubled between August 2019 and August 2020, to nearly 1.1mn, and the number of workouts initiated more than quadrupled. The launch of the Disney+ streaming service in late 2019 could hardly have been better timed. Having projected between 60mn and 90mn paying subscribers by 2024, Disney+ reached 60.5mn in early August 2020, helped by a surge in subscriptions triggered by a filmed performance of the Broadway smash hit Hamilton.

Similar dynamics are playing out in markets worldwide. In Indonesia, remote working and home entertainment have propelled a strong increase in the take-up of subscription video services such as Netflix, Iflix and Viu, with locallanguage Bahasa content spurring growth. Netflix offers a growing amount of Bahasa content, which may have

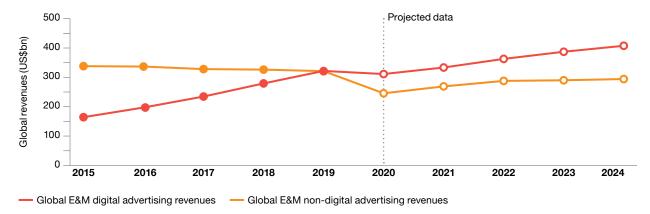
influenced the decision by state-owned Telkom in July 2020 to start including Netflix in its home internet service Indihome and mobile internet service Telkomsel. In Australia, local OTT player Stan, launched in 2015, surpassed 2.2mn subscriptions, offering a mix of content from local sources and such global providers as NBCUniversal.

Emerging markets compensate for slower developed-market growth

The K-shaped recovery is evident when we examine performance by country. Overall, global consumer revenues (excluding internet access) are forecast to rise at a 2.2% CAGR, as customers are able to choose from highly competitive bundles of reasonably priced content. But emerging markets will continue to have the highest

Virtual progress

An increasing share of advertising spending is devoted to digital.



Note: 2019 is the latest available data. 2020–2024 values are forecasts.

Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia

percentage growth rates, albeit from smaller bases. In overall spending through 2024, Egypt leads the way with growth at 17.3% compounded annually; Nigeria, India and Pakistan also boast double-digit CAGRs. Looking solely at consumer revenues, India, the fifth-largest economy in the world, is in clear first place with an 8.8% CAGR, helped by the fact that print revenues are still rising in many regions of the country. By contrast, in Western Europe and North America, which between them account for about half of global GDP, consumer growth above a 2% CAGR through to 2024 is rare; in Denmark, consumer revenues are actually expected to fall slightly.

Advertising spending remains sluggish

Cleavages can also be seen in advertising—at several levels. Although advertising typically tracks consumer spending activity, as noted, it is likely to be a laggard in this recovery; the global total will not regain its 2019 peak until 2022. Advertising in emerging markets will thrive while developed markets will struggle. Belgium, for example, will see advertising revenues decline between 2019 and 2024 while Indonesia will see a 7.4% advertising CAGR through 2024. Growth will be sluggish in established markets in part because of their historic reliance on print, television and radio advertising. As shown in the chart, above, in 2019, digital advertising revenues first caught up with non-digital advertising is expected to grow at a 4.8% CAGR through 2024 while non-digital advertising flatlines.

Securing growth in defensive times

The K-shaped recovery means market players can't sit still or expect to reap the same results by taking the same approaches. As a result, innovative E&M companies are identifying and adopting new ways to seek out growth and adapt to consumers' evolving preferences.

In the 2019 strategy+business article "Making connections with the new digital consumer," we documented how digital spaces—e-commerce platforms, gaming channels, podcasts-are evolving into powerful new platforms for marketing. As the future is pulled forward, and physical gatherings remain difficult, they've become the new platforms for performance and the sale of content or goods. In China, for example, rising usage of e-commerce via live streaming has emerged as a trend in the lockdown period. Tencent-backed Kuaishou blends social influencing and e-commerce, with celebrities appearing in videos in which users can click through to buy featured goods. Kuaishou users can also sell goods to other users, and demonstrate products via a channel called Kuaishou Small Store.

Because cinemas are closed, big new films have bypassed theatrical release windows and pushed content straight to OTT platforms. In July, Trolls World Tour—produced by DreamWorks Animation and distributed by Universal Pictures—was made available in theatres and for digital rental (for US\$20) on the same day. In China, many content owners have renegotiated their arrangements with cinemas to switch their movies to OTT streaming platforms. (A breakthrough came in late August 2020 with the cinemaonly release of the widely anticipated film The Eight Hundred, which attracted huge audiences back to cinemas over its first weekend, pulling in US\$112mn. By September, the global box office gross rose to U\$441mn.)

New content formats are also emerging from the maelstrom of the pandemic. The jury is still out on the success of Quibi, a much-heralded and richly capitalised (US\$1.7bn in funding) mobile-based SVOD service that launched in April 2020 and offers short-form episodes, or "quick bites," released daily or weekly. The model has been to take long-standing Hollywood practices—highly produced series and shows with established talent-and compress them into much shorter formats, most under 10 minutes. By contrast, rapidly growing TikTok (800mn users) relies on enabling creators to upload short, unpolished videos. In India, explosive growth in OTT subscriptions has spurred production of short low-budget films made specifically for OTT platforms, sometimes repurposed from long-form movies whose production was halted. India's vibrant market of 40 OTT providers includes regional players targeting the country's large local-language populations. Some OTT players aimed at local village audiences charge one rupee (1.4 US cents) a day for access to content. Disney+, offered in India via Disney's local subsidiary Hotstar, offers a range of pricing levels from basic to premium.

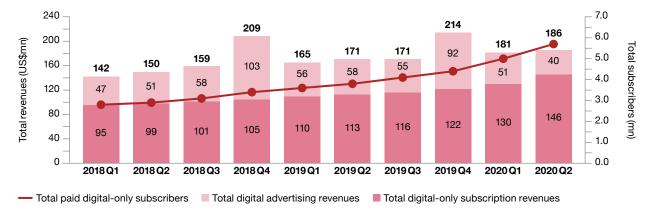
Companies shift from advertisers to subscriptions

Once the pandemic struck and lockdowns began, advertisers selling products that rely on consumers leaving their homes stopped putting commercials on air, online or in print. Others cut spending as part of wider cost-cutting measures. And the younger generation of consumers has been brought up to view ads as an avoidable annoyance. Meanwhile, programmatic advertising has shifted away from broadcasting to mass audiences on the internet (and later, in television) and towards narrowly targeting users on their phones or on social media. Personalisation across a massive consumer base has become sufficiently efficient and cost-effective to give rise to the creation of highly accurate recommendation engines such as those offered by Netflix and Spotify. A world of almost infinite consumer choice is no longer a futuristic notion.

With advertising facing multiple headwinds, the ongoing drive towards subscriptions reflects a wider attribute of the accelerated digital future: the power of direct-toconsumer connections as a driving force in a range of E&M

All the news

At the New York Times, subscriptions account for an increasingly large share of digital revenues.



Note: Totals may not equal sums due to rounding.

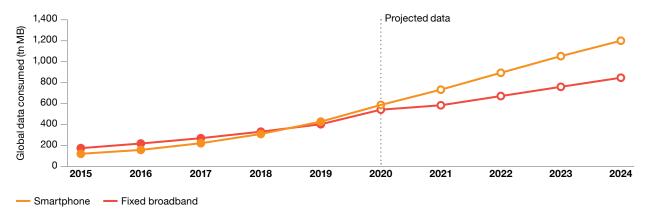
Source: New York Times

sub-sectors. And in a pandemic, they are more powerful than ever. Increasingly, digital businesses are subscription businesses. Netflix, which had 167mn subscribers at the end of 2019, saw global subscriptions surge to almost 183mn in April 2020 and reach nearly 193mn by July 2020. A decade ago, ambitious journalists started ad-supported blogs. Today, they flock to Substack, the platform that provides publishing services for tens of thousands of subscription-based newsletters. The New York Times now has more than 5.5mn digital subscriptions, and in its most recent quarter reported US\$146mn in digital subscription revenues compared with US\$40mn in digital advertising revenues. In July 2020, the Hong Kong-based South China Morning Post (which is backed by Alibaba) announced it was dropping its free online model and would start asking readers to pay for content online, echoing moves made by a growing number of high-end newspapers worldwide. Also in July, News24, a South African online news operation owned by Naspers, launched a subscription for R75 (US\$4.63) per month, which includes access to all content plus magazines such as City Press, You and True Love.

A company charging for subscriptions can provide either very focused content (as the *Economist* does) or sector-specific newsletters, or it can focus on volume, à la Netflix. The quest for higher volume is one of the reasons music subscription services are buying podcasts. Bundling a subscription into another subscription is a further route to value. In late 2019, Sky announced the full integration of Netflix into its advanced Sky Q set-top box, bundling the service into some customer packages, an added-value move to reduce churn. In South Africa, satellite television company MultiChoice has partnered with Amazon and Netflix to offer those OTT services through its hardware.

Mobile vs home

Smartphones overtake fixed broadband as the primary source of data consumption.



Note: 2019 is the latest available data. 2020-2024 values are forecasts.

Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia

Digital event spaces present new opportunities

Another opportunity made more compelling by the pandemic is bringing live experiences into the home in more personalised and more engaging ways. Although the live streaming of performances has proved popular with consumers, more digital innovation is needed to get closer to what music fans expect from live events—enhancing these substitute experiences into something more fulfilling. In the UK, London's Wireless Festival teamed up with tech outfit MelodyVR in mid-2020 to deliver recorded VR performances from artists such as Cardi B, Travis Scott and Migos via multiple camera angles. More than 130,000 people from 34 countries attended virtually. Meanwhile, in the B2B space, travel business media company Skift, whose annual forum attracts global leaders in the hospitality and leisure industry, staged its 2020 forum in September as a virtual event. When Mobile World Congress (MWC) Barcelona was cancelled in February 2020, exhibitor Gigabyte recreated its MWC booth online by developing a clickable digital tour, complete with videos of marketing and product specialists.

Gaming platforms are also transforming into concert venues and event spaces. Epic Games' Fortnite, which has 350mn users, has the scale and reach to host major attractions that cut across different genres of entertainment. In April 2020, rapper Travis Scott performed a gig inside the game world. More than 12mn players watched his debut set, and 27mn watched at least a portion of his five sets. A performance by DJ Diplo followed in May 2020. The same month, players were treated to a trailer for Christopher Nolan's film Tenet. The Fortnite game world can now be credibly described as the world's largest event space, capable of hosting major live music, cinematic and other spectacles in a socially distanced setting.

Data takes off

Fixed broadband remains on course to see its 1 billionth household in 2020, and unique mobile internet subscribers will grow to 3.4bn by the end of the year. After leaping by 31.4% in 2019, data consumption is projected to jump again by 33.8% in 2020. But amid this rapid growth, there will be different trajectories for different modes of data consumption. Usage via smartphone, which first surpassed fixed broadband in 2019, is poised to triple between 2019 and 2024, and fixed broadband consumption is set to double.

Deals and M&A transactions: Targeting scale and growth

During 2020, the pervasive uncertainty generated by COVID-19 and volatility in equity markets have led to a dearth of investment capital and a decline in M&A activity. For the first time in recent memory, we've lived through a 12-month period with no mega-deals. But there's been plenty of smaller-scale activity. Just as consumers are constructing their own bundles of content, companies are developing their own bundles of capabilities and assets so they can reduce their exposure to slowgrowing sectors, meet consumers

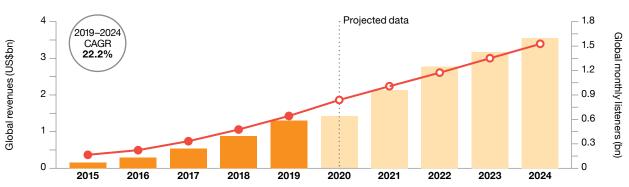
where they are today and create new opportunities for engagement.

The lack of M&A doesn't mean scale doesn't matter. In fact, in 2020, across the board, we saw a return to scale, especially in the digital advertising sector. Disney, Time Warner, Apple and Comcast NBCUniversal are all gigantic companies with massive amounts of content. Yet analysts often fret that they are just not big enough. Scale brings the ability to approach millions of consumers with a massive portfolio and deliver millions of individualised experiences. Consumers are willing to pay, but only if the content resonates with them and—in many cases—only if they can consume as much as they want. In September 2020, Microsoft announced plans to acquire video game publisher ZeniMax Media, for US\$7.5bn, as part of an effort to expand the array of content it can supply to Xbox users.

Some companies are using deals to build scale. Even before COVID-19, the podcast industry was seeing rapid growth, with monthly listeners reaching 645mn globally in 2019 and

Listening up

As the audience for podcasts soars, ads follow.



Global podcast advertising revenues Global monthly podcast listeners

Note: 2019 is the latest available data. 2020–2024 values are forecasts. Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia

Tuning into deals

The podcast industry has been consolidating and growing through acquisitions and new partnerships.

Buyer	Acquired	When	sss
Spotify	Gimlet Media Anchor Parcast The Ringer The Joe Rogan Experience Warner Bros and DC Kim Kardashian West	February 2019 February 2019 April 2019 February 2020 May 2020 June 2020 June 2020	US\$230mn US\$154mn US\$56mn Up to US\$195mn (plus more in incentives) US\$100mn Terms not yet disclosed Terms not yet disclosed
Entercom	Cadence13 Pineapple Street	August 2019 August 2019	US\$50mn US\$18mn
New York Times	Serial Productions	July 2020	US\$25mn
Sirius XM	Simplecast Stitcher podcast unit from Scripps	June 2020 July 2020	Terms not yet disclosed US\$325mn

Source: Mobile Marketer

advertising revenues growing at a double-digit rate; industry revenues are poised to more than double by 2024. In the past year, large media companies have begun to acquire players in what had been a cottage industry to serve customers and protect margins. Spotify, which charges individual customers a fixed US\$10 per month for its premium version, this year acquired the Ringer, a sports-centric media company founded by Bill Simmons, for nearly US\$200mn, and struck a \$100mn deal with comedian Joe Rogan.

Reconfiguring for digital

As digitisation accelerates and advertising revenues come under pressure from COVID-19, advertising holding companies and media conglomerates are looking to simplify their models. To raise cash and reduce debt, AT&T, which completed its mega-acquisition of Time Warner in 2018, is reportedly seeking to sell its anime streaming service Crunchyroll, its Xandr digital ad unit and the DirectTV satellite business. In September, Viacom/CBS agreed to sell its CNET tech news unit for US\$500mn to digital marketing firm Red Ventures. For Viacom, the deal provided muchneeded cash to invest in its streaming operations; Red Ventures saw an opportunity to bulk up its content offerings.

When M&A is on the table for agencies, it's often targeted in a relatively defensive rather than exuberant way. At the end of 2019, WPP completed its sale of 60% of its Kantar market research unit to a private equity firm. Landmark acquisitions are out; buying growth and cash flows are in. S4 Capital, the vehicle created by former WPP head Sir Martin Sorrell, has been snapping up niche operations like

the influencer agency IMA and Circus Marketing, a Latin American digital marketing agency. In addition, established agencies are using deals to boost their capabilities in data analytics and artificial intelligence (AI).

Strategic stakes rise in value

The largest global players are using strategic investments to support their search for organic growth in rapidly growing consumer markets. India is the ninth-largest consumer market for E&M and is growing rapidly. In June 2020, in the midst of the pandemic, Indian regulators gave the go-ahead to Facebook's US\$5.7bn investment for a 9.99% stake in Reliance's Jio Platforms. Jio, India's largest telecoms network, operates an expanding suite of entertainment and media apps and digital services. Within a month, Google invested US\$4.5bn to pick up a 7.7% stake in the company.

Taking strategic stakes has also been on the industry agenda in China; there were widespread reports in June 2020 about the prospect of Tencent Holdings buying a stake in the video service iQiyi from Baidu. In Indonesia, M&A has played a role in leading TV broadcasters SCTV's and MNC Media's diverging approaches to original local content production. SCTV is growing its content production in-house, whereas MNC is looking to sell off its production arm and move further into content monetisation using global platforms such as Facebook and YouTube. In Europe, broadcasters are forging partnerships to gain scale. In France, the public and private broadcasters France TV, M6 and TF1 have partnered to develop and drive the streaming platform Salto, which aims to compete with Netflix.

Technology and infrastructure pave the way for growth

In accelerating consumers' readiness to adopt digital media experiences, the pandemic has also pulled forward the future of technology. As new technologies enable novel business models and consumer behaviour, they're opening the way to reconfiguration—and reinvention—by presenting opportunities for rationalisation, efficiency and faster growth.

A 5G vision for the future of media experiences

In the 5G era, on-the-go consumers using high-speed mobile data will access greater quantities of content, games and services. The revenue opportunities opened up by 5G reach far beyond wireless data and communications

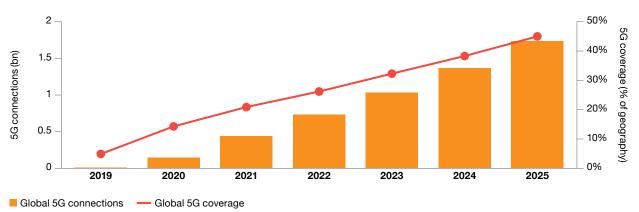
themselves, encompassing markets such as gaming, entertainment, music and OTT video. What's more, 5G's massive network capacity is likely to continue reducing the cost of mobile data, removing the principal constraint for consumer activities such as mobile video consumption over cellular networks. Other entertainment use cases that are substantially improved by distribution over 5G—or even enabled by 5G networks—are cloud gaming, mobile VR, mobile augmented reality (AR) and mobile mixed reality (MR).

In many countries, the impacts of COVID-19 have been double-edged for investments in 5G infrastructure. On the one hand, the pandemic has highlighted both the current limitations and future potential of connectivity, and accelerated likely demand for 5G. On the other, it has redirected operators' attention and investment towards more immediate priorities, such as maintaining the resilience of existing networks to ensure continuity of vital services.

In some parts of the world, the challenge is more a question of identifying the use cases that will justify 5G

5G proliferates

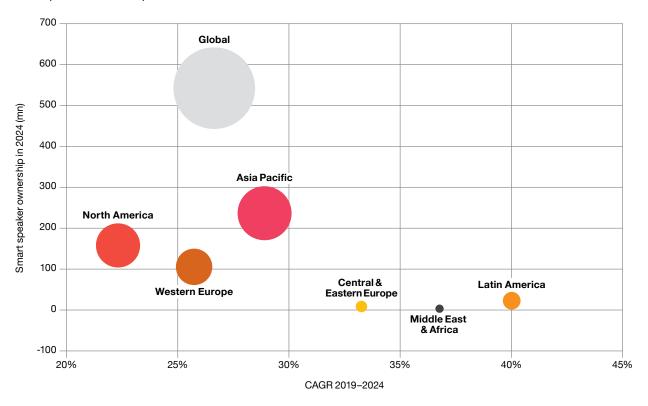
By 2025, 45% of the world will be covered by 5G, connecting more than 1.7bn devices.



Source: GSMA Intelligence

Al at home

Smart speakers will be most prevalent in Asia Pacific and North America in 2024.



Note: Smart speaker ownership is based on 20 territories covered in the Outlook forecast. Source: PwC Global Entertainment & Media Outlook 2020-2024 (www.pwc.com/outlook), Omdia

investments. Take Indonesia, where 5G rollouts have made little headway so far; only a handful of trials have been conducted and there is not much sign of appetite for 5G among operators or consumers. The current focus is more on improving the quality of existing broadband services in remote areas. In other markets the momentum behind 5G is building more quickly, and COVID-19 is acting as a spur to investment in 5G solutions. In China, as PwC reports (The rise of 5G to combat pandemic), the pandemic has catalysed collaborations between healthcare players, telecoms and tech companies to develop and roll out digital healthcare solutions based on 5G. Companies including China Mobile, Huawei, Hubei and ZTE have all been involved in using 5G-enabled tools such as Al robots, sensors, biometrics and genetic screening for remote diagnosis and treatment of COVID-19 patients. 5G is also progressing in India, where Jio Platforms has committed to launch an India-built 5G network in the next 12 to 18 months.

Innovation at the edge-and AI in the home

As 5G networks roll out globally, the technology's low latency and ultra-fast data transmission will open up opportunities for more mashup business models based on innovative and collaborative uses of data. Key pieces of the 5G and data puzzle enabling these benefits include cloud and edge computing, which will deliver the massive processing power and universal accessibility needed to support services such as cloud gaming and ever more granular Al-powered mass personalisation. As demand for data and bandwidth rises, the global migration towards 5G will enable more intelligent and adaptive networks. To create these, operators will implement AI within their networks to manage traffic, capacity and caching, and combine edge computing with concepts such as softwaredefined networking and network functions virtualisation.

Al is also increasingly prominent in the home and on the move, as growing numbers of consumers interact with digital assistants in their living rooms and on their mobile phones. Although consumers appreciate the benefits that Al confers in terms of convenience and personalisation, many are still concerned that it will have a negative impact on their overall privacy. Nevertheless, by 2024, there will be 543mn smart speakers owned in the 20 countries covered in the Outlook forecast, with growth during the five-year period driven primarily by the Asia Pacific region. Smart speakers will be found in nearly 40 percent of households in those 20 countries in 2024.

The pandemic boosts virtualisation

The pandemic had an immediate chilling effect on the production of entertainment and media. Around the world, companies reacted quickly, developing protocols for socially distanced film production. In the UK, the BBC TV comedy Staged was produced and set in a locked-down world where stage plays are cancelled and the characters have to interact via video link. More broadly, however, the pandemic has pulled forward the move towards virtualised production, staging and editing. Producers can hold budget meetings on FaceTime and have actors read their lines over Zoom-and a movie can be set against a backdrop in New Zealand while the actors are filmed playing their roles in Spain. The cast of the NBC sitcom Parks and Recreation reunited for a virtual scripted onehour show that doubled as a fundraiser for COVID-19 relief. In a world impacted by COVID-19, such techniques combine the benefits of reducing costs and maintaining social distancing. Technicolor's collaboration with partners including Microsoft addresses the impact of remote working on the post-production supply chain. Pulse, Technicolor's centralised, collaborative software platform, acts as a file manager, digital vault and file delivery system, helping Technicolor work with its clients to avoid delays in content delivery.

Advances in infrastructure—including 5G rollouts—may also combine with the effects of COVID-19 to help AR and VR start to realise their long-heralded potential in E&M. With venues including cinemas, sports stadiums and art galleries closed or restricted, the ability of these technologies to provide an immersive, 360-degree experience is coming into its own. Theatre and gaming are two segments increasingly experimenting with VR, and in July 2020 the two came together when VR theatre pioneer Punchdrunk created a collaboration with Nianticdevelopers of Pokémon GO-to "reinvent storytelling for a 21st-century audience." Esports is another segment that's capitalising on new technologies amid lockdowns, and in which usage of VR is growing apace. Rising confidence in the sector's outlook was underlined in September 2020 when UK-based Guild Esports, part-owned by former soccer player David Beckham, announced plans to raise £20mn (around US\$26mn) on the London Stock Exchange.



The E&M world faces persistent challenges related to regulation and trust. The ADAPT forces of asymmetry, polarisation and lack of trust find their purest and most powerful expressions through social media and other communications platforms. The pandemic intensified the existing pressures, increasing the level of polarisation—between countries, within countries, and even within industries. Concerns surrounding data protection, privacy and the veracity of public information remain top of mind.

At the same time, E&M has become one of the principal arenas in which the long-running trade disputes between China and the US are playing out. These include the US's ban on Chinese operator Huawei's involvement in 5G networks in the US, its lobbying of Western allies to enact similar bans and its related ban on US semiconductor sales to Huawei. To be sure, the volatile political situation has the potential to change quickly. But on the current direction of travel, the prospect of what is known as the "splinternet"—a situation in which the global technology, media and telecoms ecosystem is cleaved into two distinct camps grouped around the US and China-may become reality, threatening the ability of E&M businesses to scale on a truly global basis.

COVID-19 boosts big tech and concerns over privacy

As these geopolitical events continue to unfold, the spur that the pandemic has delivered to digital behaviours among consumers has served to boost the fortunes of the globe's tech giants. Highlighting the return to scale, in the three

months ending in late June 2020, Google's parent company, Alphabet; Amazon; Apple and Facebook all reported a surge in earnings. And in August, Apple became the first publicly traded US company to hit a market capitalisation of US\$2tn. In July 2020, a rally in the shares of Chinese social media giant Tencent saw it overtake Facebook as the seventh most valuable company in the world.

Size naturally draws scrutiny. So at the same time, the glare of public and regulatory attention intensified on the largest companies. The global health crisis reinforced the concerns over online information and 'fake news,' with a particular focus on how social media platforms could disseminate misinformation around COVID-19 and treatments for the disease. Interest in big tech was also heightened by the worldwide Black Lives Matter protests and concerns about content promoting violence and hatred. In June and July 2020, hundreds of advertisers joined a boycott of Facebook under the banner #StopHateForProfit, focused on pressuring the company to address the promotion of misinformation and inappropriate content. The US presidential election campaign was a further flashpoint in the debate about online information, as platforms such as Twitter were pushed to consider whether and how to label the comments of elected officials as misleading or threatening to public health.

In the wake of the pandemic's spread, there has been a move to embrace—varying in degree by country—more intrusive monitoring and digital surveillance for the sake of public health. Concerns over these developments have meshed with broader disquiet over the lack of viable means to sustain and fund journalism that is high-quality and trusted. The result has been a flurry of legal and regulatory initiatives around the world aimed at reining in the power of the largest tech and media companies. In early 2020, Google was subject to a lawsuit in the UK seeking to force it to disclose its search algorithms. In India, a new data protection law that echoes elements of the EU's General Data Protection Regulation (GDPR) is going through the legislative process. Indonesia is considering a digital services tax, requiring foreign providers of goods and services online to charge a local value-added tax from August 2020.

Although the success and rapid growth of the big techs during the pandemic was positive for the companies and their shareholders, it added to perceptions that they use their market dominance to quash competition. Four leaders of big tech companies— Alphabet's Sundar Pichai, Amazon's Jeff Bezos, Apple's Tim Cook and Facebook's Mark Zuckerberg-appeared before the US House of Representatives Judiciary Committee's antitrust panel in late July, in a hearing that made global headlines. The Financial Times's was: "Big Tech's leaders squirm as documents reveal their power."

In July 2020, the UK's Competition and Markets Authority called for a new regulatory regime for online platforms including Google and Facebook, citing concerns over their dominance in the digital advertising market. In Australia, the Competition and Consumer Commission has released the draft of a new code that will require Google and Facebook to compensate content providers for the articles that appear on their sites. The response of both digital players has been swift and direct, creating a situation in which Facebook may no longer allow news to be shared on its platform—likely creating more challenges than the code envisaged. The US Justice Department is ramping up antitrust investigations into Google over its dominance of the search business.

In China—where COVID-19 has also reinforced the dominance of giants such as Tencent and Alibaba-the regulatory focus across the digital services landscape remains on content rather than competition. For example, rules regulating content on cultural and moral grounds have been strengthened in the past year.

The biggest players are also being challenged by some of their partners and counterparts. Bristling at the 30% that Apple levied for selling in-game currency on Fortnite, Epic Games announced in August 2020 that it would bypass Apple's system and offer Fortnite players its own payments service at a 20% discount. Apple responded by threatening to block Epic's access to Mac and iOS development tools—after which Microsoft weighed in with a legal submission in support of Epic. This battle of heavyweights is being seen as a proxy war over the future of the App Store and its dominant market position.

Government support provides a lifeline

Although most regulatory action has been focused on digital media, COVID-19 lockdowns have also prompted some governments to take steps to enable much of the live entertainment sector to survive. The UK government committed £1.57bn (US\$2.1bn) to support the performing arts and help theatres, museums, heritage centres, galleries, independent cinemas and live music venues survive through the pandemic. Several other European countries have also set up programmes to subsidise cultural venues. In India, as many consumers cancelled print newspaper subscriptions owing to infection fears, print newspaper advertisingespecially regional press in the country's Tier Two, Three and Four cities-received an indirect boost as a result of government action. The cause was the government's Vocal for Local campaign aimed at supporting small and mediumsized local businesses, which prompted a surge in print advertising by smaller companies.

Conclusion: The future on fast-forward

As we look ahead to 2021, the outlook for E&M, although challenging, remains essentially positive. Consumers have incorporated many of the industry's products and services into their daily routines, providing powerful ballast even in turbulent seas. COVID-19 has had the effect of accelerating digitisation and changing habits. The underlying growth thesis for many core E&M industries remains intact. This remains, in many ways, a golden age for consumers and fans of E&M.

However, the business and commercial opportunity isn't equally distributed. And therein lies the challenge. Outsized opportunities are available in the segments that are growing more rapidly, but prospects are shrinking in segments that are lagging. When timetables are accelerated, companies have less time to get it right. In many sectors, vital tipping points have already been reached.

E&M companies have to meet consumers where they are—and in 2020 that means predominantly at home and predominantly online. Companies simultaneously have to prepare to meet them where they will be four years from now.

What will be required in 2024 to build and maintain direct-to-consumer relationships, to have enough differentiation or scale to compete, and to invest in the right technologies while building trust? Increasingly, companies will have to focus on mastering the intricacies of consumer experience. Providers have to continually figure out ways to delight consumers so they are willing to pay for the delivery of content and services, and must create differentiated experiences if they are to increase subscription charges over time.

In many ways, the post-COVID-19 world is already here for E&M. The future has been pulled forward. It's time to embrace it

Methodology and definitions

Historical data collection

All the forecasts have been built by starting with the collection of historical data from a variety of sources. A baseline of accurate and comprehensive historic data is collected in the first instance from publicly available information, including from trade associations and government agencies. When this data is used directly, these sources are cited accordingly. In addition to this, interviews with relevant associations, regulators and leading players have been conducted to gather insights and estimates not available in the public domain. When this information is collected, it is used as part of the calculations and the sources are proprietary.

Forecasting methods

All forecasts are prepared as part of a collaborative, integrated process involving both quantitative and qualitative analysis. The forecasts are the result of a rigorous process of scoping, market mapping, data collection, statistical modelling and validation.

Note: All data, charts and graphs (unless stated otherwise) in this publication are taken from the Global Entertainment & Media Outlook 2020-2024.

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- · Business-to-business
- · Cinema
- Data consumption
- · Internet access
- Internet advertising
- · Music, radio and podcasts
- · Newspapers and consumer magazines
- · OTT video
- · Out-of-home advertising
- · Traditional TV and home video
- TV advertising
- · Video games and esports
- · Virtual reality

To access the full segment definitions for the *Outlook*, please visit www.pwc.com/outlook

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Many other professionals from the PwC entertainment and media practice, across the network, reviewed and added local expertise to this publication.

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