KEY FINDINGS

5G Economics of Entertainment Report

Why Study the Media and Entertainment Market?

The media and entertainment industry is often cited as facing the most threat of disruption by new entrants and developments in technology. The "Netflix Effect" changed the game of traditional media and entertainment. It has ushered in the golden age of television with a proliferation of new and exciting content, more ways to enjoy it, and alternative models to pay for it beyond traditional cable subscriptions.

While the industry is applauded for being one of the first sectors of business to navigate digital disruption, its transformation is far from over. As this wave of change plays out, the borders that once separated entertainment and media, technology, and telecommunications companies are blurring. Business models are being reinvented as companies tap into new revenue streams and attempt to create relevance with their audience at scale.

Having the best content in the world will cease to be enough, though, if it gets snarled up in an inevitable communications traffic jam. The next generation of media and entertainment growth is not just about what content companies create but how seamlessly customers can access it and the unique ways they can interact with it.

Customers will continue to generate more and more data about their preferences, habits, locations and more that will help inform a new set of experiences. This will drive a large market opportunity for companies to use this data to hyper-target their content and advertising and optimize the caustomer experience.

5G, the fifth-generation network, is the communications infrastructure that makes it all possible. Intel 5G modems and technology power a range of 5G-enabled devices – from connected PCs and phones to fixed wireless consumer premise equipment (CPE) and base stations, new antennas in cities, flexible networks, and data centers.

What experiences will 5G create for customers?

The "5G Economics of Entertainment Report," commissioned by Intel and conducted by Ovum, forecasts that 5G will disrupt the industry on many levels with shifts in business models and the emergence of immersive interactive experiences.

The report highlights several new experiences 5G will make possible:

- **5G will unlock the potential of augmented reality (AR) and virtual reality (VR),** creating more than $140 billion in cumulative revenues between 2021 and 2028. A new dawn of VR-driven experiences will emerge as early as 2025 with predicted revenues of more than $5 billion annually by 2028. AR will create a new way for people to connect with media through virtual items, virtual characters and augmented contextual information, as well as create a new channel for content creators to reach fans.
- **Gaming** will be at the forefront of 5G-led innovations. The possibility of fully interactive gaming can be made both technologically and economically possible with 5G. AR games will make up more than 90 percent of 5G AR revenues by 2028, nearly $36 billion globally. 5G will usher in mobile cloud gaming (interactive gaming that

utilizes mobile devices that access the cloud as an external resource for processing game scenarios) because it provides the fast responsiveness and high-resolution gamers demand with real-time streaming. 5G mobile games revenue, including AR and cloud gaming, is forecast to exceed $100 billion annually in 2028 alone.

- **5G will bring new senses to media** within the decade. Imagine responsive haptic clothing merged with advanced VR capabilities that will fully immerse a person in play. Feel the vibrations and torque of driving a Formula One* race car, the breeze of an African savannah, or the thrill of the bass at a U2 concert. New sensations such as heat and pressure could be bundled into a weapons upgrade in an action game, or movies could be rereleased with a new sensation layer, opening a new monetization cycle.
- **New, never-imagined applications and usages** will be brought to life by 5G, such as in-car entertainment and 3D holographic displays. Immersive and new media will reach unprecedented scale by 2028, generating more than $67 billion annually, the equivalent to the value of the entire global mobile media market – video, music and games – in 2017.
- **5G will help change the driving experience.** The connected car will free up driver and passengers to consume more media while traveling. A combination of network capacity, low latency and localized storage will improve car connectivity at high speeds, reducing network lag and stalling. It can also create new business models, such as the creation of 5G hotspots, where drivers can quickly download maps or movies, or upload car diagnostics while at places like highway rest stops or gas stations.

5G will change and potentially merge the traditional media, entertainment and service provider models:

- **5G will be a major competitive asset,** bringing economies of scale to network providers' TV offerings with a much wider footprint, competing against IPTV, cable and satellite. As 5G speeds ramp up, the existing differentiation in broadband speeds by cable over cellular will likely erode. 5G will help operators capitalize on mobile media growth by selling 5G network capabilities to over-the-top (OTT) video service providers (media content delivered over the internet without the involvement of an IPTV, cable or satellite provider).
- **5G will supercharge the digital advertising market.** Mobile display advertising has an expected market of $178 billion worldwide by 2028. 5G will have a fundamental role in transitioning traditional display advertising toward social and media immersive experiences. Scale, delivery and measurements are key challenges for mobile ad campaigns today, which 5G will help overcome.

Methodology

The "5G Economics of Entertainment Report" was commissioned by Intel and conducted by a team of Ovum analysts. It included in-depth analysis on 5G network and service deployment strategies and the impact on the media industry. 5G media experiences were identified and assessed in terms of revenue opportunity. 5G connections, 5G devices, media and traffic forecasts were used as key inputs. A rigorous methodology process involved several sources and inputs to the forecast model, and forecast assumptions were cross-validated with key members of the industry via a series of executive briefings.

More people, more devices, richer data … on the go

- 2023 smartphone subscriptions to nearly double from 4.3 billion today to 7.2 billion[1]
- Seven times surge in mobile traffic in the same period[1]
- By 2021, 78 percent of the world's mobile data traffic will be video[2]
- One minute of AR will consume 33x more traffic than 1 minute of 480p video[3]
- 2018 global media internet advertising revenue will exceed wired equivalents[4]
- 2020 global mobile data consumption via smartphones will overtake fixed-broadband data consumption[5]

[1]https://www.ericsson.com/assets/local/mobility-report/documents/2018/ericsson-mobility-report-june-2018.pdf
[2]https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/mobile-white-paper-c11-520862.html
[3]https://www.ericsson.com/en/mobility-report/mobility-calculator
[4]https://press.pwc.com/News-releases/trending-now-in-entertainment---media--convergence--connections-and-trust/s/ac26d3bf-a195-48aa-82e4-7c2d381807e5
[5]https://www.cisco.com/c/dam/m/en_us/solutions/service-provider/vni-forecast-highlights/pdf/Global_2020_Forecast_Highlights.pdf