



CES 2021:

Press & Panel Reports

January 2021



Better decisions, faster.



Agenda

1

Mobility

2

Health & Wellness

3

Entertainment

4

Commerce

5

Work & Learning

6

**Next-Gen Tech &
Solutions**

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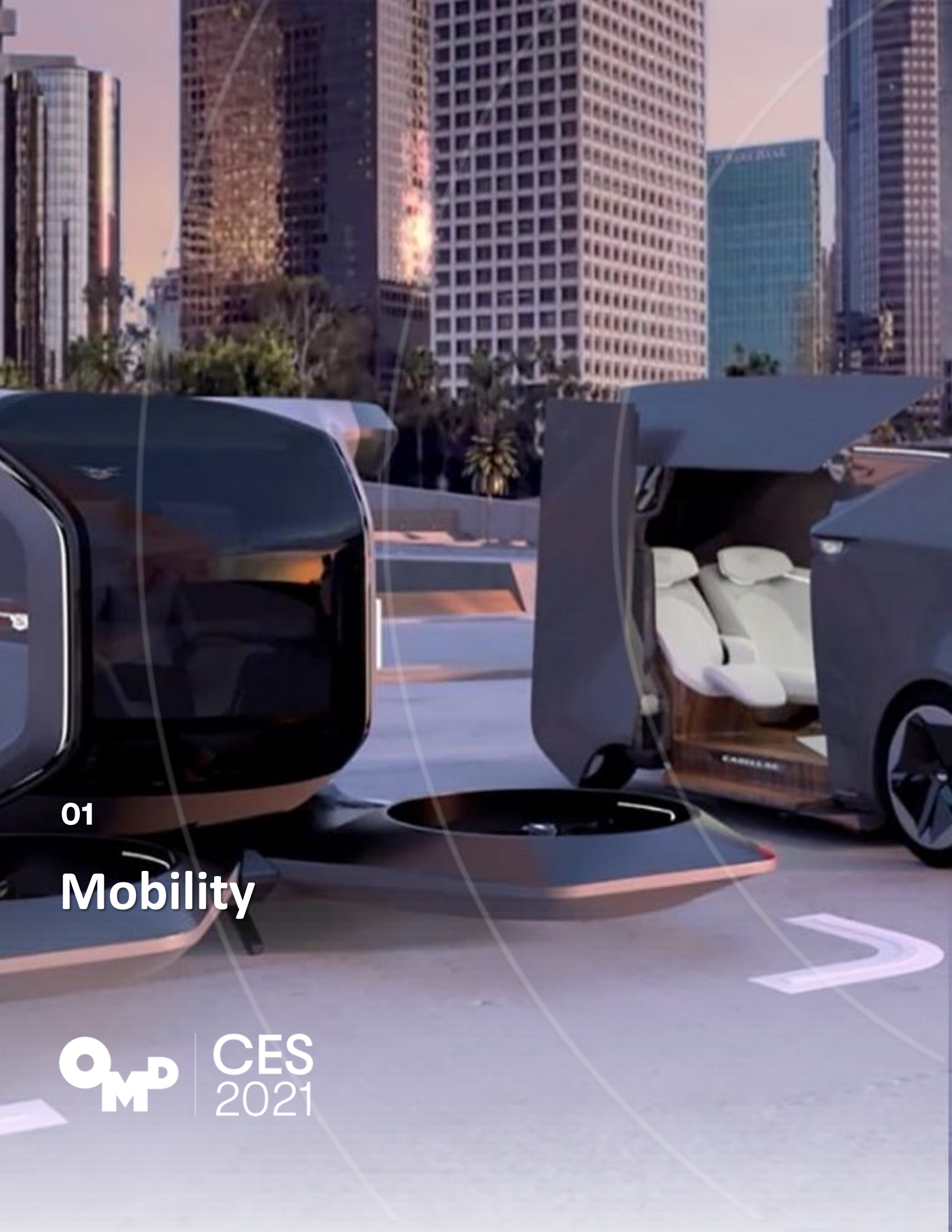
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01

Mobility



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01. Mobility



Vehicle Tech Innovations Consumers Want

By: Fabio Calamosca, Executive Director

With ride-hailing and mass transit declining in usage due to the pandemic, automakers are responding to the new consumer with modular offers for a personalized product built for their unique journey. Internet usage from car connectivity in US has massively increased during the pandemic, as more people opt for road-trips, using their cars for everything from a portable home office to a play area.

In the US 20% of city traffic is generated by people looking for a place to park. As people drive more vs. a year ago, technologies such as self-driving vehicles will allow cities to maximize space with smart parking, smart traffic lights and car-to-car communication. As people spend more time in their cars, the automobile is becoming more of a leisure environment.

People are rediscovering road trips and rethinking car utility in the pandemic era. They see cars as a safe escape from quarantine. Technologies such as personal sound bubbles, faster connectivity and audio/video content developed specifically for cars will further enhance the role of cars for leisure purposes.



Self-Driving Vehicles Moving Forward: Who Will Set the Rules?

By: Jennifer Reese, Associate Director

While self-driving vehicles sound more like “Back to the Future,” these vehicles are already on our roads.

The US and UK governmental bodies in this panel session discussed the intrinsic categories pertinent for self-driving vehicles: collaborations, transparency, stakeholder engagement, research, safety, and data.

Regulations for self-driving vehicles will be the largest shake-up of transportation law in more than a generation. Creating and adjusting laws is only half the battle to integrating self-driving vehicles on the roadways.

The biggest hurdle is obtaining consumer trust. The best way the industry can combat this is through ongoing tests and transparent results.

In 10 years, self-driving vehicles will be a conversation of the past as we look towards advanced connected mobility at scale. The future of movement is freedom of movement for all, including those who are disabled or isolated.

01. Mobility



Mobility Experiences for the Future and Today

By: Balazs Funk, Executive Director

COVID-19 is projected to have a sustained influence on mobility, with the use of private cars projected to outpace public transit. The accelerated pace of innovation in safety, entertainment and automotive business models have transformed our mobility ecosystem.

Reducing the risk of infections is the primary reason for the choice of a mode of transportation. Now, consumers expect more personalized vehicles to meet their unique needs. Demand technology enhanced innovations that transform the driving experience for safety and to better connect. Advanced technologies capitalizing on mobility data will provide a better and deeper understanding of the new consumer.

Technology transforms mobility experiences and their after-market product solutions. Vehicle software is now as important as hardware. Lifetime customer value is a key variable as new subscription services and add-ons are becoming available to car buyers. Technological innovations, the integration of data and digital technology radically change mobility experiences of people today and tomorrow.



Autonomous Transportation Moves Beyond the Vehicle

By: Katherine Ahumada, Associate Director

Beyond robo-taxis and self-driving cars, autonomous transportation technologies developing now will impact the movement of goods, agriculture and people worldwide.

Industry leaders in mining equipment solutions, autonomous trucks and hyperloop innovation, communicate the importance of autonomy in propelling efficiency, labor productivity, safety and mass transit infrastructure. Adoption will require careful and thoughtful considerations on the future workforce. Plus, the support of policy makers and federal funding and transit infrastructure.

According to a recent CTA poll, "26% of people had a more favorable view of autonomous technology than before the pandemic." Human trust and confidence in these technologies over the next 5-7 years will continue to be important components of innovation in the autonomy landscape.

As e-commerce continues to boom, the elimination of waste and increased productivity in the workforce comes to a head. Autonomous technologies will continue to lead the conversation in policy changes and infrastructure as well. Strategic partnerships are needed to enhance goods/passenger mobility.

01. Mobility



Connected Cities: As Good as Their Connectivity

By: Abbey Sherrard, Director

Through a diverse set of technology and partnerships, cities can improve anything from traffic congestion to increased bandwidth for growing populous to driving economic growth.

When developing a smart city there are three key perspectives: first, ensuring citizens are able to make the best use of the existing infrastructure in a more efficient way; second, creating efficiencies for the City management and services it offers; and third, creating means for businesses to work together seamlessly. To do this, tech partners must think about the future differently and work in partnership with cities to change policy and processes.

Each city is unique, coming with their own challenges and goals. It will take collaborative and cross-industry partnerships to successfully build out more connected cities. While consumers quickly adopt the newest tech and push for more innovation, cities often tail behind, being slow to adopt and update technology due to their pre-existing infrastructure.

By offering end-to-end solutions through partnerships across tech companies, cities can cross-collaborate and revisit infrastructure models to bring more equity to everybody. If able to successfully adopt and innovate, cities will need to keep an eye on access and affordability to ultimately drive economic growth.

A close-up photograph of a woman with dark hair, wearing a white face mask. She is looking upwards and to the right. In the background, other people are visible, some also wearing masks, suggesting a public or outdoor setting. The image has a soft, slightly blurred quality.

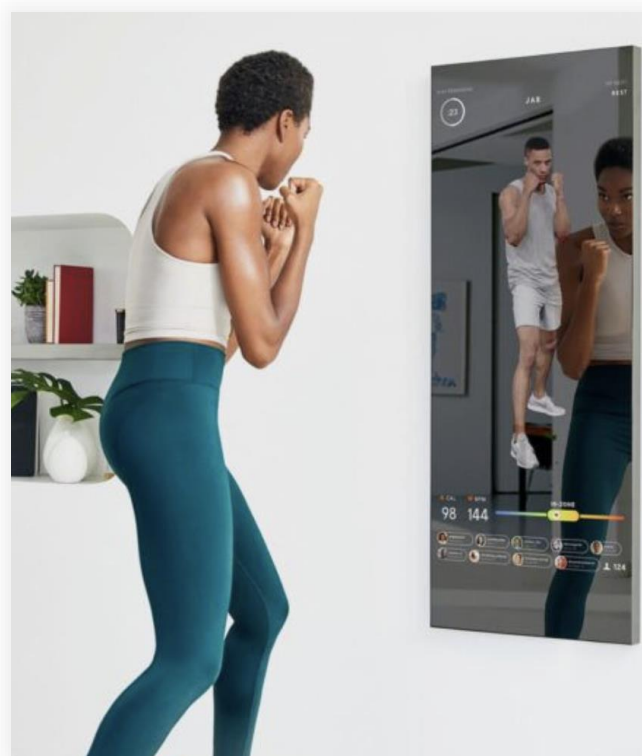
02

Health & Wellness



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2021

02. Health & Wellness



Digital Health: Biz Growth & Opportunities

By: Shawna Huang, Director

The pandemic unveiled the growing necessity for remote virtual care; specifically, around three key sectors: telehealth, mental/behavioural, and fitness/wellness. The consumer and physician adoption rate has enabled these digitized health services to become mainstream.

Beyond virtual at-home doctor appointments, telehealth also provides the opportunity for physicians to treat under-served populations in the current healthcare system.

Regulations and policies will need to be reviewed and recalibrated to adjust for the digital healthcare data pool. Thus, to ensure consumers protection and privacy.

Digital health investment soared this past year. In 2020 more than \$14 billion was raised (+50% increase vs. 2019). Continued growth is anticipated. Garnering larger funds, healthcare investments will change our new normal.

Starting with Sports: Health & Wellness Future

By: Francesca Rizzuto, Supervisor

Home fitness is in demand with AI-powered technology at its core. Fitness tech has become hyper-focused on the user experience to drive better performance outcomes. Real-time data from wearables and connected equipment allow users to personalize their fitness plans.

Popular athleisure brands like Lululemon are partnering with new tech (i.e. The Mirror acquisition in 2020) to expand market opportunities and have a presence in consumers' homes – the new gym.

A new, first-of-its-kind connected fitness platform for the home, Liteboxer, was developed. This engaging full-body boxing workout combines advanced technology, music and expert training in one platform.

The transformation of at-home fitness has synced mind, body and tech. By using AI and gamification, the wellness industry is going to continue to create endless opportunities for brands to integrate every step of the consumer's journey towards a holistically healthy lifestyle.

02. Health & Wellness



New Bathroom Design Goes Touchless

By Kelly Kresin, Associate Director

Kohler's 2021 focus is on products that enhance the experience of relaxing at home and minimizing touch surfaces to reduce the spread of germs.

Their Stillness Bath uses light, fog and aromatherapy to transport users to the spa from home. Taking a note from the Japanese practice of forest bathing, water fills from the bottom up creating an infinity pool effect. Pricing ranges from \$6,198 to \$15,998 USD.

More touchless bathroom faucets and toilets are being introduced in the name of hygiene.

As consumers spend more time at home, the rate of spa like products adapted for at-home use increases. Touchless products have been seen in public bathrooms for years and are now coming into homes as consumers focus more on health and cleanliness.



Panasonic Adapting, Giving Back and Continuously Moving Forward

By: Emma Stephens, Associate Manager

Panasonic's Live Stream walked the line between people and technology, delicately touching on what we lost in 2020 and how we adapted.

First up, Panasonic's Nanoe™ air purifier technology has verified the inhibitory effect of the hydroxyl radicals contained in water on the novel coronavirus, but no word yet on the new tech's application.

Panasonic found new use cases for smart lockers for keeping food fresh for pickup. Panasonic's showcased its HomeCHEF 4-in-1 inverter microwave/air fryer/convection oven/broiler combos, and more.

While Panasonic did not claim to have all the answers, the company were optimistic about the value its technology could bring to those whose lives have changed over the last year.

02. Health & Wellness



Trust and The Impact of AI on Health Care

By: Jennifer Reese, Associate Director

With all the focus on healthcare this year, it's no wonder that the intersection of medicine and technology is coming under additional scrutiny. Humans have had an innate trust in healthcare providers, but how do we translate that trust to AI – something we can't see and can't interact with?

Three core components of trust are required for widespread adoption of AI in healthcare: technical trust, human interaction trust, and standards trust. Without consumer and clinician belief in these three areas, AI will fall short of driving measurable change in the industry.

As one nurse put it "I spend more time taking care of a machine than of my patients." Many argue that technology has dehumanized healthcare, but AI promises to bring that humanity back and allow our healthcare providers to better provide 1:1 patient care. However, as with any new technology, the concerns of bias, context, data security and transparency are at the core of apprehensions from all involved. The shared concern from patient and healthcare providers must first be addressed before intended use cases can be driven forward.



Telemedicine Skyrockets to Mainstream

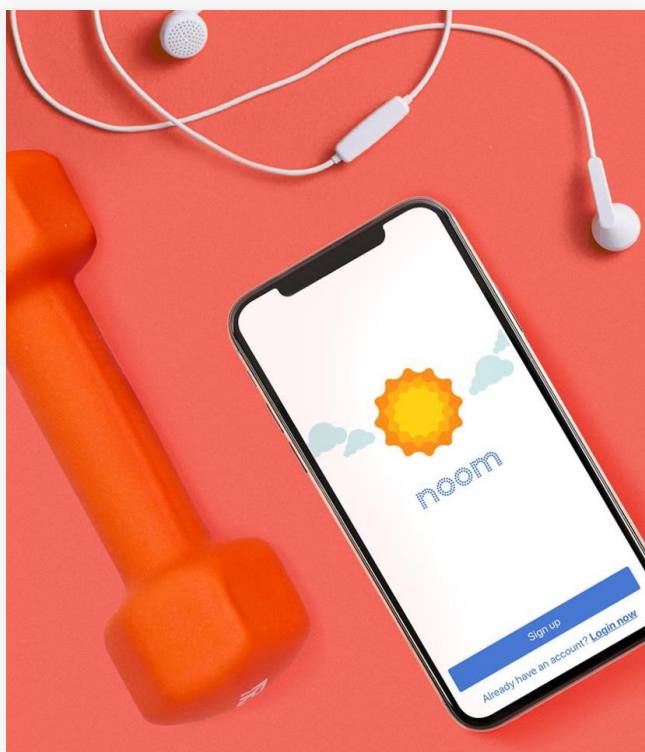
By: Abbey Sherrard, Director

The unprecedented year has skyrocketed the use and implementation of Telemedicine for physical and mental health. Teledoc alone will be completing over 10 million visits virtually. Teledoc has had to quickly pivot and scale its business globally, bringing high quality care as the great equalizer.

Consumers have moved quickly from awareness (50% to 75%) about telemedicine to the usage phase in a matter of weeks. With consumers able to rapidly adapt, consumers are now at the expectation phase with telemedicine, demanding more security, transparency and ease of access and usability. This is creating new challenges the industry must rise to meet. It is becoming commonplace for companies like Nurx to offer the final step of medication delivery to the home. Telemedicine is empowering the consumer and provider with better data, better insight and better care.

The opportunity to own the industry will come to those who are able to meet all of a consumers healthcare needs in one place. By breaking the healthcare model, leveraging data and augmenting tools companies can better meet total consumer health needs, offering more possibilities and consumer customization in a DTC model.

02. Health & Wellness



The Digital Transformation of Personal Wellness

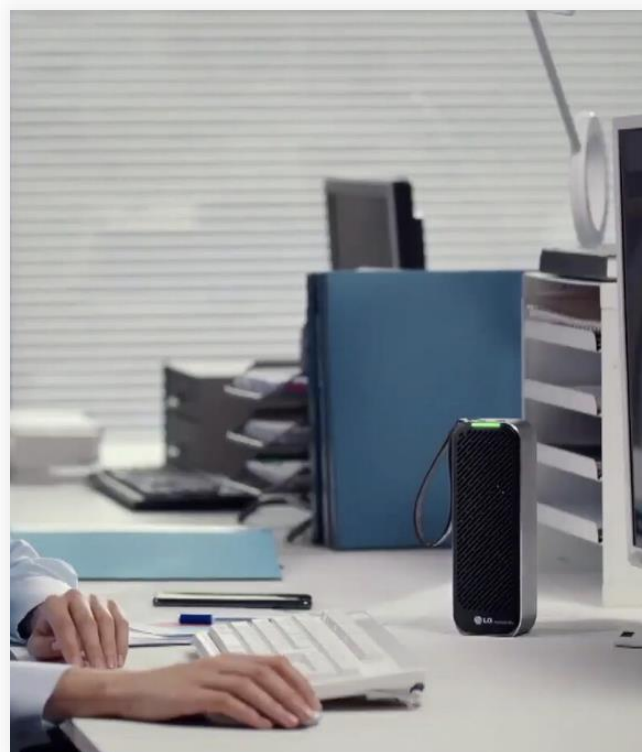
By: Katherine Ahumada, Associate Director

In 2020, the underlining theme for wellness companies was the acceleration of digital strategy and transformation. In the wake of the COVID-19, in-person wellness and coaching quickly had to pivot to digital-first offerings with personalization, community and libraries of on-demand content in order to meet their consumers shifting needs.

President and CEO of WW, Mindy Grossman, explored the transition of wellness companies becoming tech companies, and the service opportunities of human centric behaviors.

Wellness innovations will run a parallel path with telehealth. As consumers are becoming more comfortable with virtual interaction, this will allow personalization for nutrition plans, exercise, stress management, sleep and inspiration to transcend geography.

Digitized wellness will be gamified, and AI will personalize communities via virtual socialization (i.e., Peloton). The integration and aggregation of personal data across technologies/industries is a booming opportunity for companies to understand the needs and trends of consumers to deliver the best service to each individual.



New Line of Air Care Products with an AI Robot

By: Joseph McKenna, Associate Director

LG's new line of UV-C robots were introduced by a virtual "influencer" with 6k followers. Now one of many infiltrating the newfound competition of virtual influencers like Miquela Sousa.

With the heightened attention to health and wellness this year, LG launched a new product line dedicated to "air care" with its new robot that disinfects high traffic areas with just ultraviolet light.

Innovators like LG are taking notice of the pandemic and launching products that promote health and wellness. Unveiling a new product category dedicated to air care for a clean and safe home. With the emerging trend of working from home and a growing focus on hygienic solutions, consumers want the peace of mind of purified air and a clean environment.

02. Health & Wellness

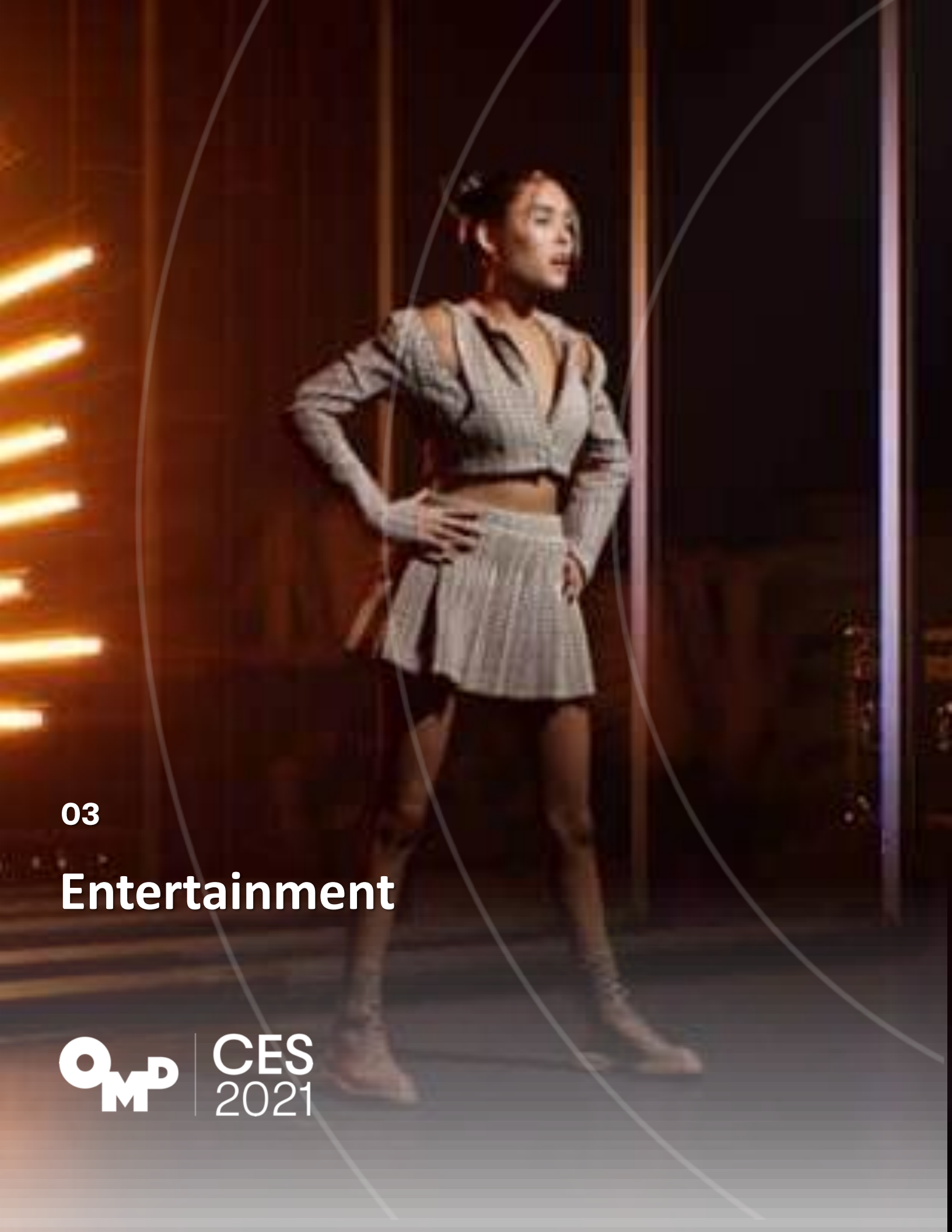


Analog Devices: Silicon Based DNA Synthesis

By: Jennifer Reese, Associate Director

If this year has taught us anything, it's that developments across a variety of industries are in demand and verticals must adapt to meet rising needs. For Evonetix and Analog, a partnership focused on solving the pharmaceutical crisis was well-timed. These two companies work to engineer biological components for medicine that will be individualized based on the consumer and rapidly deployable through advanced DNA writer platform. Through synthetic long-chain DNA development, cells can be reprogrammed to fight cancer, detect anomalies and serve as therapeutic agents in a variety of clinical settings. 60% of the world's needs can be created via bioengineering and medicine is just one setting that will benefit from this advancement.

The problems of the modern world abound, from natural resource utilization to the expanding costs of digital infrastructure and advancing needs in healthcare. If we can find ways to better utilize silicon-based tech and put DNA analysis in the hands of scientists everywhere, the possibilities abound. Any brand in consumer health should have their eye on this partnership.



03

Entertainment



CES
2021

03. Entertainment



Rollable Phones Close to Becoming Reality

By: Emma Stephens, Associate Manager

Part of LG's "Explorer Projects" experiments, the LG phone with the expanding screen made another CES appearance this year. Now branded as the LG Rollable, the phone has what the company calls a "unique resizable screen" that scales the phone up to the size of a small tablet.

More exciting than the technology is the official naming of this project, an indicator that LG intends to move it forward to the consumer marketplace in the near future. LG are not alone in this space, TCL and Oppo have also shared concept devices.

The decision to brand this device makes it real to consumers. A rollable screen would alter consumer content experiences and change the ratio aspect for display and video content.



If The Stream Works, The Dream Works: Streaming TV

By: Jennifer Reese, Associate Director

COVID-19 has been the catalyst for accelerated change in the industry. This past year was tumultuous in streaming as new platforms, new distribution formats, and new content approaches entered the market. Viewership was up from 117 billion minutes in 2019 to 132 billion minutes in 2020.

Streaming continues to grow, especially in newer areas like linear on-demand (MVPD) with programs through Xfinity, Spectrum, and more. With the loss of most sports content this past year, episodic and film picked up traction, and we saw the start of big theatrical releases like Wonder Woman 1984 take place in the home. The big players continue to win: 7 of the top 10 films (based on minutes viewed) were Disney and all 10 of the top acquired TV shows (based on minutes viewed) were on Netflix.

The top film for the year? Frozen II. The top TV show? The Office. Americans watched more than 100,000 YEARS worth of "The Office" in 2020. So really, we did go to the office after all.

The big players in streaming and video are still winning, especially with younger demographics. However, this year allowed TV providers the time to develop apps and user interfaces to capture consumers looking for something new.

03. Entertainment



Creating Esports League from the Ground Up

By: Afsar Ali, Senior Manager

In 2020, NBA and wider sports broadcasts declined due to COVID-19; however, Esports events such as LCS (League Championship Series) were able to go remote and grow. LCS saw 35 million total hours watched and 550,000 peak viewership for LCS, the 3rd most watched sports league in NA within the 18-25 age demographic.

As commercial partners saw a slow down across conventional sports broadcasts, brands such as Honda, Bud Light and Verizon, sought new opportunities to amplify, such as in-game branding within the in-game space.

Esports is a continually growing industry. 2020 saw the largest growth and commercial opportunities became more prevalent. Marketers should consider gaming in media strategies, especially given its scaled demographic and engagement opportunities.



2021 Gaming Trends and Tech

By: Katherine Ahumada

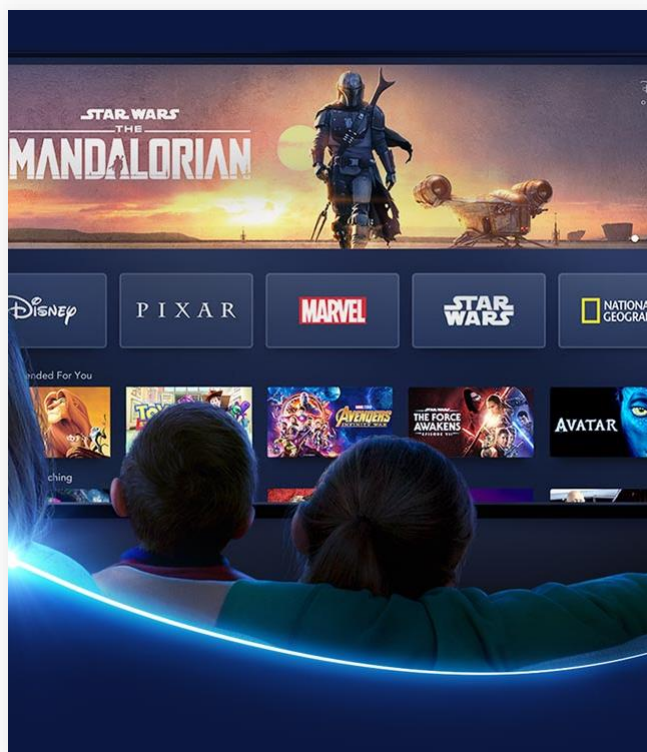
In an ever-evolving landscape, 2020 saw great momentum and adoption of gaming and E-sports due to COVID-19. As households looked to gaming consoles as a means for home entertainment and “virtual” socialization, dollar and unit sales were at a record high for devices like Nintendo Switch and Switch like consoles.

The CTA projects “substantial growth in the digital gaming software and subscription categories of about \$47 billion in revenue in the US (up 8% vs. 2020).”

Key players such as NVIDIA, LG, and Evil Geniuses will pioneer 2021 gaming innovation. Focused on spatial audio and enhanced HDR for higher performance levels in the competitive E-sports space. AI will aid content development and cognitive engagement for consumers.

As gamers needs and mechanical skills advance, technology in audio rate tracing, visual response rates and AI will continue to evolve in hardware development and content creation. The industry can expect to see desktop and monitor consoles adopt OLED and leveraging AI to develop more mature in-game competitors.

03. Entertainment



The Great Unbundling in Video

By: Julian Esposito, Creative Director

Consumers have pivoted from traditional TV to on-demand platforms. Traditional TV (U.S. and U.K.) is expensive. Consumers pay for premium services that provide a lot of channels they don't want or need. With increasingly more on-demand services available, consumers are finally, "cutting the cord" said Scott Reich, SVP Programming – Pluto TV.

Heading into 2021 traditional TV platforms (and studios) are offering on-demand services too. COVID-19 accelerated the trend away from traditional TV packages, especially when sports were put on hold. Migrating to on-demand services, consumers found they could get the content they wanted without paying for unnecessary content found in packages. Ensuring good content range and price points will be the challenge for on-demand platforms moving into 2021.



Entertainment Evolution Fuels Connectivity & Pop Culture

By: Francesca Rizzuto, Supervisor

Technology advancements and innovative entertainment platforms create new ways of communicating, creating, living, and evolving. How technology has adapted in meeting the demands of entertainment creators and how content-curators have stepped up to the forefront is shaping our everyday lives. As consumers behaviors are changing, so have what and where they search for in entertainment.

Instagram, TikTok and others are filling these voids, fuelling shifts in pop culture and becoming mainstream entertainment and outlet opportunities for people and brands. Becoming less social and more entertainment focused, platforms are seeing a worldwide emergence of new content creators who are creating trends that transcend into mainstream culture before our eyes.

Culture is being shaped right in the palm of our hands, creating a sense of universal connectivity. People are also embracing traditional and new content creators across nations in their real form, solidifying the value and impact that these platforms have on our everchanging society.

03. Entertainment



Streaming's New Era

By: Shawna Huang, Director

Content creators/distributors are focusing on user experience to further consumption and engagement. With so many options on what/how/where to watch, consistency in the user experiences and ease of finding content is key. Data and tech sit at the crux of these priorities with advances in content curation, voice interfacing, and cross-platform content integration.

Throughout the pandemic consumers have used streaming to connect virtually – with digital co-viewing, fitness, cooking classes, and meetings all on the rise and available from a TV. Streaming is no longer limited to traditional formats and will continue to evolve as interactive and shoppable content emerge.

Innovative formats have emerged—creators/distributors remain focused on two basic tenets: content discovery and engagement. As available content increases, companies are using tech integration to ease search accessibility as they continue to meet the consumer where they will be.



The Technological Evolution of Esports

By: Sean Smith, Director

Competitive gaming and esports have exploded over the past few years. Due to developments in ease of access, the rise of livestreaming and faster, cheaper internet feeds into the competitive scene as gamers rush to share tips, tricks and steal strategies from the best.

Gaming teams and clans have matured into sophisticated organisations much like professional sports teams. Developing their player's gaming skills and protecting their health with nutritionists and psychologists.

Other types of media are getting into the “game” of gaming. The gaming community is often at the forefront of youth culture. Gaming influencers are now pioneering online social content – producing content that is better, cheaper and to a larger audience than traditional outlets like TV.

The gaming industry has eclipsed the music and film industry combined. As a valuable platform for marketers, gaming offers new immersive consumer engagement opportunities.

03. Entertainment



Trends in Mobile Communications

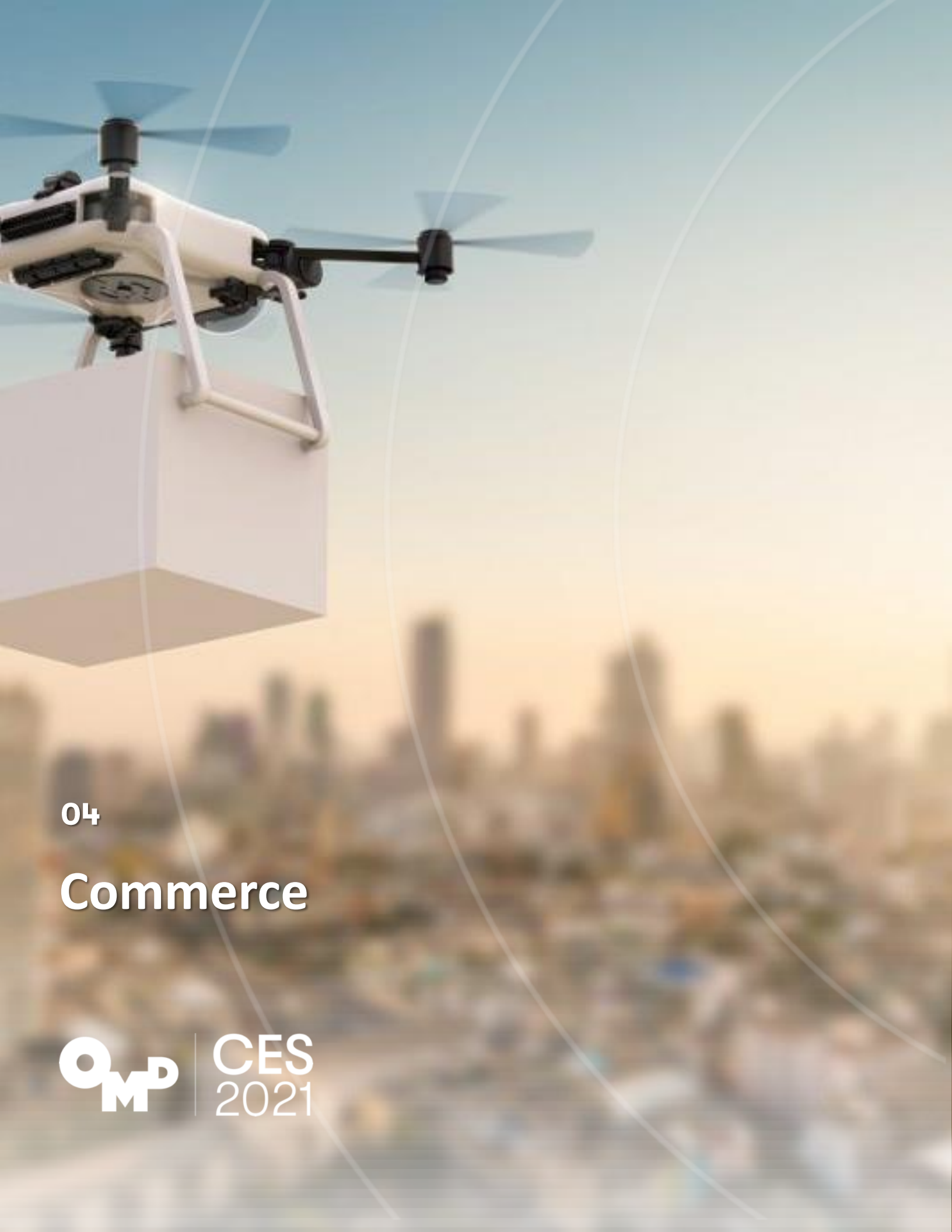
By: Julian Esposito, Creative Director

As the pandemic reached its peak in 2020, we saw a 25% increase in mobile data use. Working from home, family households relied on an overburdened internet connection due to multiple video conferences.

The three main advantages of 5G are speed, bandwidth and latency all of which portend better connectivity in 2021 and will allow us to bring the world of IoT together and share data in real time.

The speed and power will help streamline work streams in places like warehouses to end to end user journeys for consumers. Sharing data in real-time will play an important role in our fight against climate change.

As the network rolls out across the world, locations who did not have internet access will be connected to the wider world. Exciting times lay ahead for a more connected tomorrow.



04

Commerce

04. Commerce



Retail Trends: The New Shopper

By: Francesca Rizzuto, Supervisor

The pandemic's impact on business has challenged retail to pivot their strategy and change the way consumers and companies operate. Retail companies were forced to collaborate now more than ever and respond in ways that were transformational, while simultaneously fulfilling consumer, employee, and business needs.

In the wake of COVID-19, we saw an accelerated shift in consumer behavior with consumers moving away from brick and mortar while embracing more online shopping. Thus, altering the way consumers spend. As the idea of a "frictionless" retail experience continues to be the preferred way of transacting, an external consumer demand is driving the need for quicker technological advancements. From a business perspective, digital-first retail strategies and optimizations are the key to success as new technologies come in to support this evolution.

The past year has drastically impacted retail. E-commerce and social commerce have been the main revenue drivers in this new climate. We will continue to see new partnerships emerge (i.e. TikTok, Shopify, Snapchat's Native Stores, Facebook Shops, etc.).

The pandemic has accelerated the "frictionless" consumer experience through curb-side pick-up and UX design in e-commerce, opening the door for new opportunities.



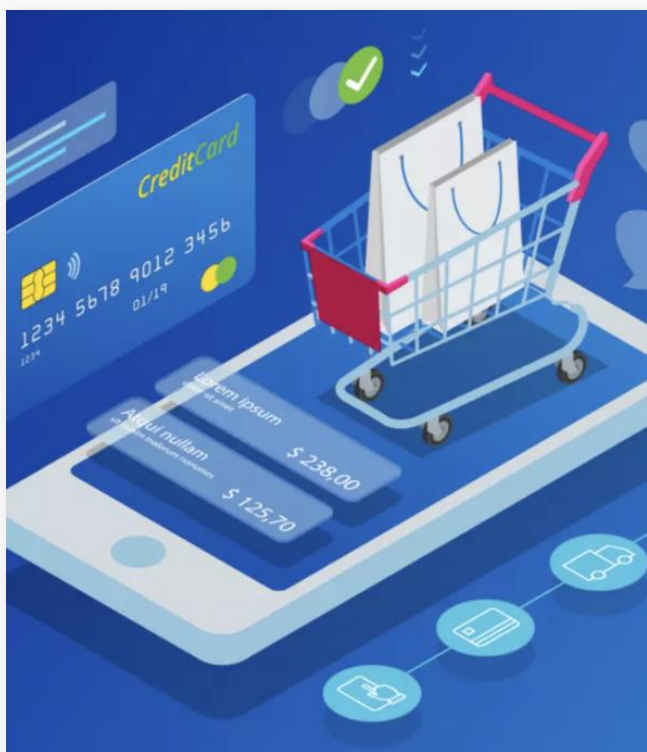
Retail's New look: Shopper's Little Helpers

By: Irina Puzakova, Director

New emerging technologies have reinvigorated our shopping experience and make it more convenient, safe, fast and personalized. Some of these retail technologies include connected commerce with frictionless engagement; virtual skincare diagnosis and trial via 3D face AR; co-bots that provide a pandemic-proof retail experience including mask detection among shoppers; scan-and-go contactless payment technology that offers a checkout-free experience – no queuing, no apps, no additional hardware.

New technologies will help accelerate safer and more convenient shopping experience, further merging physical and digital shopping and help brands to better connect with customers. In parallel, reducing friction and cost from a customer standpoint will see a rise in truly connected commerce solutions with improved security and more personalized digital experiences.

04. Commerce



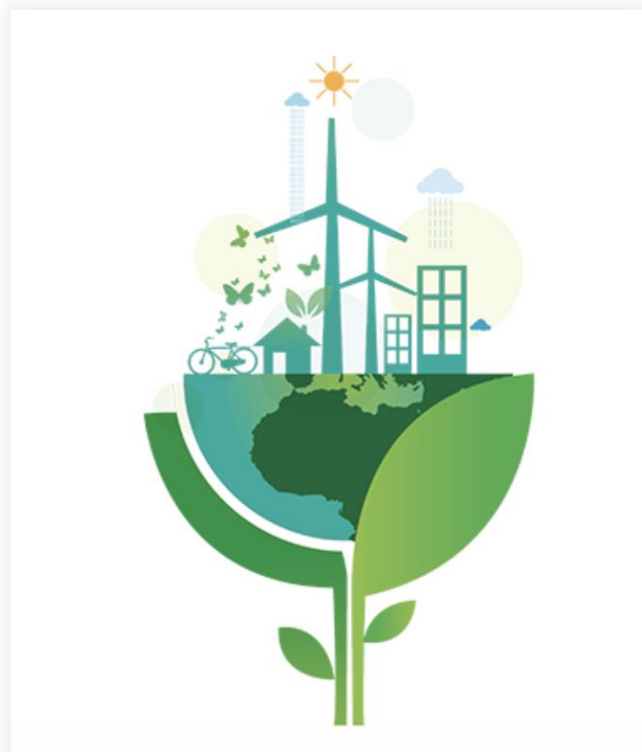
The Commerce Conundrum: A New Journey

By: Monica Dacres, Director

As audiences now see new products on social media, consumers research the products on multiple sites and complete the purchase online. This new commerce journey creates a lift in consumer engagement.

Businesses have reinvented their ecommerce proposition in 2020. While shoppable formats are not new within the media or creative landscape, their advancement and technology behind it has reached new highs.

While the world stood still, e-commerce has seen fast-paced growth; however, businesses must be mindful as consumers are becoming savvier and research company/products before purchasing. Companies with a solid social, ecological, sustainable agenda will lead when targeting cause-minded consumers (i.e. Gen Z, Millennials).



Building Sustainability & Battling Climate Change

By: Francesca Rizzuto, Supervisor

Sustainability is critical to the future. Businesses will implement evolving operational strategies internally and externally.

Companies like Procter & Gamble view sustainability as an integral part of doing business, where innovation is a key solution to creating goals and solving problems. We're also seeing innovations where businesses are using technology to help reuse materials to limit waste.

Societal expectations continue to effect business sustainability strategies. Adapting to new business models and keeping technology partnerships top of mind will ultimately be critical moving forward.

Doing good will be doing good for business. The more companies have a point-of-view on sustainably efforts and climate change, the more they'll have significant impact on brand loyalty and sales.



The Commerce Conundrum: A New Journey

Leveraging consumer insights is nothing new. Lockdown has changed the way consumers think, act and purchase. Brands want to connect with consumers and allow them to purchase the product with ease. Moving into 2021, learnings around community reviews will play a key role in the expanding e-commerce experience.

05

Work & Learning



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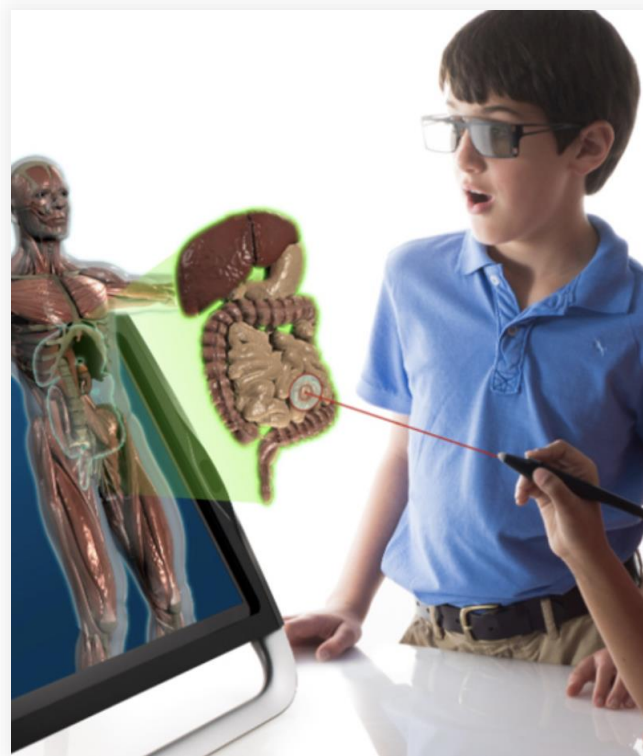
The Next Big Thing: Home as the New HQ

By: Abbey Sherrard, Director

Whole home devices are still not a reality and have a long way to go. Pain points of connectivity at home continue to stall adoption, especially as 5G is still rolling out worldwide. There's been a big proliferation of Smart Home devices (30% of homes in 2020,) but devices still are not meeting these pain points exacerbated by working and living at home.

Social unrest this year also brought huge growth to connected security devices. Thus, driving more efficient pricing, making smart homes more attainable. In terms of working from home, Paul Lee said it best, "the reality is — business is about more than just the boardroom."

Key areas of growth in health, TVs and security are driving the connected home. However, many high-tech Smart Home devices have a way to go. With new tech designed for early adopters, the pandemic has also brought to light having more simplified and economical solutions for people of all ages and means.



Reimagining the Future of Education

By Shawna Huang, Director

The past nine months were transformative as students worldwide moved to online learning.

Shifts in education have been a long time coming due to increased globalization and the digital revolution.

EdTech advancements have democratized access to online courses, used AI and robotics for personalized learning, and has created immersive educational experiences via gaming and AR/XR.

This past year has seen a record number of online learners (e.g. Coursera reported 250% YoY increase in registration). Investments for online learning are anticipated to grow from \$160 billion in 2020 to \$1 trillion by 2027.

To quote Jamie Dimon, "The future of work is skills, so stop worrying about degrees." Technology has enabled learners of all ages to maintain skills and relevancy in today's world.

05. Work & Learning



The Classroom: Is It the End of an Era?

By: Francesca Rizzuto, Supervisor

At the onset of the pandemic, educational institutions truly had no choice but to pivot in-person learning to online. There were initial concerns that online platforms weren't built for virtual education. Now, almost a year later, EdTech has become an instrumental necessity for learning – paving the path for re-imagined education techniques.

New EdTech includes learning hubs – one stop shops for all school-related needs. Some learning hubs provide users with multi-screen options within one environment. New tech can now also measure student engagement, allowing teachers to manage involvement and curate learning.

Post-pandemic, as schools return to in-person learning it's likely a hybrid (virtual and in-person) learning model will sustain. Hybrid learning will continue to evolve and play a part in modernized education. Moving forward we can anticipate technology allowing students to manage their learning with new tools and resources to optimize success.



Privacy and Trust with Amazon, Google & Twitter

By: Shawna Huang, Director

As the pandemic accelerated the adoption of technology, consumer concerns about privacy have grown. Although it's only been 2.5 years since GDPR, consumer awareness and sensitivity to data privacy has exponentially increased.

While companies have made more privacy settings available to consumers, they are mired in local regulations without uniformity. According to Google's Keith Enright, "virtually every state in the country had some state level legislation that had some significant privacy consequences... the reality is... data is driving everything, therefore, virtually any set of legal requirements are increasingly revised or reinterpreted to be... requirements affecting the movement and governance of data."

Global technology companies are balancing the need for user consistency across the world, while managing a patchwork of localized laws and regulations. Companies seek to educate and collaborate with federal regulators to ensure nuances on services and capabilities are understood. This will facilitate consistent guidance that can be used as a blueprint for new technology/services developed in coming years.



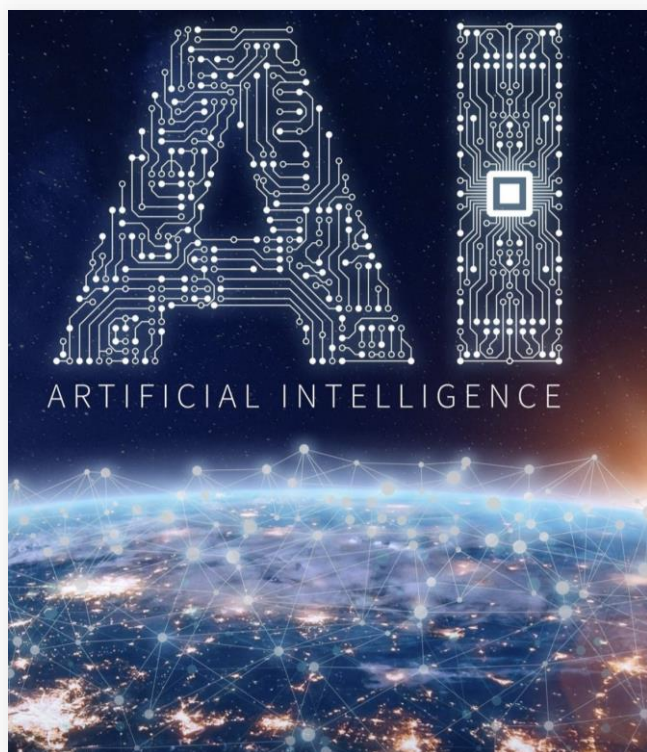
06

Next-Gen Tech & Solutions



CES
2021

06. Next-Gen Tech & Solutions



The 3P's of Demystifying AI for Marketers

By: Abbey Sherrard, Director

AI may appear daunting, but with its implementation such as sentiment analysis, facial recognition, machine and deep learning, marketers can better understand their consumers.

By understanding and harnessing AI data streams, marketers can determine three key factors: patterns, preferences and predictions. In the world of COVID-19, AI demonstrates real-time consumer patterns so marketers can see what's ahead. For example, the initial drop in car sales at the onset of the pandemic, which then quickly rebounded as consumers bought more car versus using public transit.

Utilizing AI against a data set allows marketers to unlock powerful insights to help meet business goals. Marketers need to invest in resources like data scientists and building an AI-powered data ecosystem. All data science starts with asking the right questions for your business.



Samsung Robot Pours Wine & Does the Dishes

By: Joseph McKenna, Associate Director

As at prior CES conferences, Samsung introduced a new robot appropriately named "Handy." It's one of Samsung's most human-like robots. Handy cleans up after you and can even pour you a glass of your favorite cabernet, using AI technology to understand an object's shape and weight.

With the new realities of working from home, Samsung is leading the forefront in smart homes. While the more useful bots like Handy and its line of smart vacuums are advanced, Samsung has yet to weave together all of their product lines into a unified rich experience.

Click [here](#) to see Robot Handy in action.

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Samsung Aims to Enhance at Home Experiences

By: Kelly Kresin, Associate Director

Samsung is innovating product lines to better consumers at-home technology experiences.

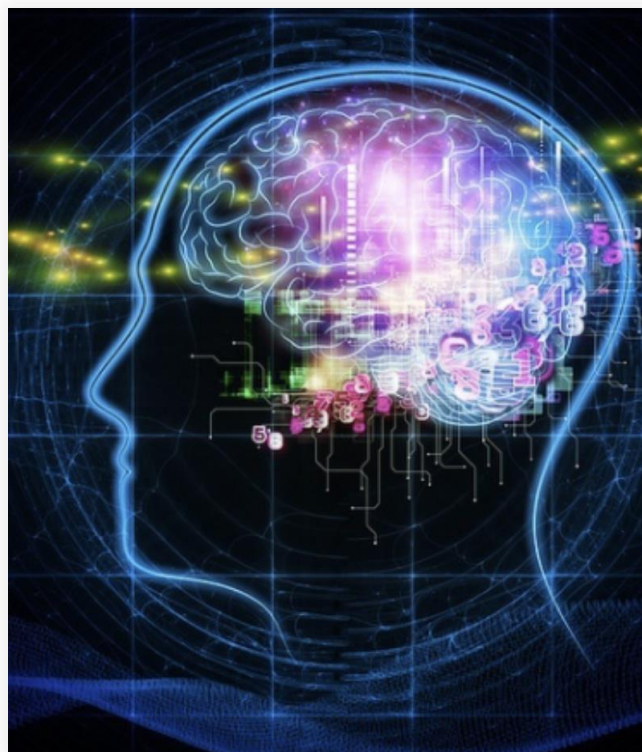
The Bespoke 4-Door Flex refrigerator is now more customizable in style and function, and includes a beverage center, ice options and an automatically filled water pitcher.

This year in screens, Samsung features a self-lit inorganic LED panel with a nearly bezel-less Infinity Screen to blend in and create an immersive experience. It touts a four-way viewing option and 160+ free channels.

Samsung is also showing its AI and robotics capabilities to help consumers make everything from cooking to cleaning more efficient.

Samsung is creating technology to make menial tasks more time efficient, and sustainable for the environment.

As its robotic technologies become accessible, consumers will have more time to focus on skilled labor and leisure.



The Impact of AI & Building Trust

By: Laura Black, Director

How can we trust something that we can't fully see or understand? This question is top of mind when discussing AI's effects on various ecosystems.

Developing trust in AI is tied to three key pillars. First, trust the technology to do what it should, that data collection methods and inputs are transparent, and bias is mitigated to ensure clean data. Secondly, regulatory trust. Third, human interaction in the context that the tech will be used to inform decisions.

The expanding use cases of AI translates to all industries. Moving forward, it's going to be crucial for companies to preserve the integrity of data. In doing so, transparency with consumers is key.

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The Data Dilemma

By Jennifer Reese, Associate Director

How can marketers prepare for the changes coming to the industry over the next few years? Marketers should look to secure tech and data partnerships in advance – the time is now!

With the decay of the cookie, brands and publishers will need to pivot to bunkers and clean rooms for data analysis in a privacy compliant way.

It has been said many times, 2021 really is the year the cookie starts to crumble. Given changes to iOS 14/LAD the future for marketers could look daunting. However, all is not lost. Half the industry has been operating without cookies and advanced ad tracking for years (e.g. linear TV, connected home, IoT, etc.); and the idea of “cleaning up data” is nothing new.

Note: This CES panel session focused more on future data options vs. current data issues.



Technological Mega Shifts Impacting Our World

By: Shawna Huang, Director

Following the printing press and the Industrial Revolution, we are living in the third largest enterprise advancement period in history. Driven by globalization, climate change, and technology, these advances lead to deep collaboration, which is more crucial than ever for success.

Today, skill sets are shrinking with traditional education not keeping up with progressive business needs. Resulting in government and business collaborations to improve education.

To be competitive, companies are becoming multifaceted. A company can be a customer, partner, competitor, and supplier simultaneously.

Now more than ever tech regulations are key. As AI becomes more prevalent across industries, we must consider shared values across companies, and between man and machine. How we program for human interest will be a fundamental challenge.

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Digital Transformation & Connected Consumer

By: Abbey Sherrard, Director

Reinventing the consumer experience through technology is only part of the equation. Brands are keeping the consumer at heart, with innovation that starts and ends with the consumer. It's a two-way relationship from acquiring behavioral signals to determining the consumers wants. Then educating and reaching them with a personalized solution.

Keeping in mind privacy regulations are evolving to give consumers more control of their data and how it is used.

Connected technology is augmenting the experience brands provide for changing consumer needs. Applying AI to garner data informed insights will bring new and more compelling consumer experiences. The way brands leverage their data is key to ensure personalized and timely consumer engagement. First-to-market innovation matters – having the right partnerships will drive who wins.



Stepping Up to Lead

By: Shawna Huang, Director & Lea Rayssac-Baures, Director

"The pandemic has led to greater consumer reliance on trusted well-known brands, and consumers expect brands and companies to step up and help solve the world's most pressing problems." – Marc Pritchard, P&G Chief Brand Officer

This was a year of disruption, and P&G is embracing this time to reinvent and lead. The company's roadmap defines reinvention in four areas: *Innovation* (superior consumer experiences), *Media* (control and accountability in a responsible media supply chain), *Advertising* (creative experiences consumers look forward to) and most ambitiously, *Brand Citizenship* (be a force for good by championing equality and inclusion).

As a leader in the global advertising market, P&G's commitment to be a business for good is a call to action for all brands apprehensive about engaging on social issues. New products, tech, and organizations will inevitably develop to help brands evolve and address their own priorities.

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2021 Rulebook: Making Transformation a Reality

By: Olya Dyachuk, Executive Director

The year 2020 can be defined by two factors – *uncertainty* and having to be *flexible*. During this time a new generation of content-curators and emerging entertainment outlets grew in popularity. The pandemic created an opportunity for more creators to test out new platforms that fuel culture and grow technological advances in the entertainment space. Celebrities and influencers (micro and macro) created a diverse pool of content that their audiences sought. With real-time feedback, they acquired audience insights that helped inform the content they produced.

In summary, empathy is integral to any brand/content-creator decisions, and it can be driven by data. Activism will also become a stronger focus for comms integrations and media strategies. Agility is also important for collaborations to succeed in this fast-paced world.



Getting Back Together Safely

By: Carly Whiteford, Director

COVID-19 has greatly impacted live events and travel; however, we will safely gather in person again – someday.

Health tech is crucial. Tech-enhanced products that provide users with real-time wellness insights will help minimize risk and increase public confidence.

Even with a vaccine, health and wellness will be part of our identity in a whole new way. Personal health and vaccination status will affect how we access work, school and travel. Western countries aim to achieve herd immunity before the end of 2021. Developing markets are unlikely to be as rapid meaning international travel may take some time to recover.

Our mindsets have fundamentally changed when it comes to health and accessing events. Post-pandemic we are likely to see physical and digital experiences come together in new, exciting ways, facilitating greater accessibility and broader audiences. Marketers will need to realize the affect this will have on reaching their consumers. It will be a more fragmented ecosystem, but one that can add immense value.

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Catastrophe to Opportunity: Following the Science

By: Paola Quaglietta, Account Director

COVID-19 has further highlighted the need to connect the dots between private and public sectors for pre-disaster risk mitigation. Disaster management is not only a public sector responsibility, and government can't solve these problems on its own. New synergies between government and the tech industry are so important.

In order to build communities that are healthy and resilient, public sectors should identify the right partner to build solutions that are adaptable over time.

This also means making the innovation ecosystem more inclusive. There will be new catastrophes in the future. The mission is to constantly innovate and follow the requirements of a prosperous economic society.

The priority for 2021 is to build these bridges between public and private as well as incentivize innovators and investors to move the next generation of global infrastructure. Government and industry collaborations for tech and data application will play an important role to improve consumers lives.



The 2021 Consumer Engagement Playbook

By: Monica Dacres, Director & Julian Esposito, Creative Director

In 2021, social media is anticipated to drive more e-commerce demand. Emphasis will be placed on e-commerce attribution, cross-media measurement and digital stores and shelf optimizations.

Data engineering will be a focus for 2021. The focus is to harvest consumer behavior and purchase data. Sequential messaging will be important for how marketers connect with their consumers. Data will help marketers understand where consumers see products, where they browse for additional information, and where they purchase. All these touchpoints can be understood with a data technology platform, and the advancement of 5G.

Now more than ever, first party data needs to be prioritized to ensure brands better connect with their audience.

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Eat, Drink, Play, Pay: Will We Ever be the Same?

By: Steve Eastwood, Director

Behaviors have shifted over the last year. For instance, the *Touchless Revolution* – consumers seek a touchless purchase journey with 48% of Americans not wanting to use cash. Consumers shop more online with 73% Americans saying “COVID-19 has changed the way they shop forever.” *The Betterment Boom* – the taboo of mental health and therapy is breaking down; 82% of American teens believe it’s important to discuss mental health. People are investing in courses and new skills. *Rise of Revenge Spending* – 51% of Americans have saved during the pandemic increasing purchase intent for some. The top consumer desire is to travel again.

In summary, consumer trust in digital shopping has reached a tipping point. People are showing greater empathy to themselves and to others; taking action via self-betterment through classes, lessons or changing careers. Post-pandemic, expect spending bounce-back, especially for the travel sector. Looking to China, we can forecast a bounce-back in clothing, tech, and cars. Lastly, don’t think in terms of conventional timelines and calendar years.



Appendix:

Keynote Summaries



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Keynote Summaries



Verizon Showcases 5Gs Impact Across Industries

As the premier CES 2021 keynote presenter, Verizon Chairman and CEO Hans Vestberg discussed the transformative impact 5G plays in entertainment, learning, and connected communities.

Vestberg focuses on how 5G is being used today. It's stated that 14.2 billion connected things are currently in use. This number is expected to reach 55 billion by 2025. Verizon's 5G Ultra Wideband technology is being marketed to support this growing demand for connectivity.

"The future of work, learning, telehealth, retail and streaming are very much our current realities. And we are just getting started. 5G isn't just another tech innovation, it's the platform that makes other innovations possible." -- Hans Vestberg, Chairman and CEO, Verizon.

Several Verizon 5G partnerships were announced that include the NFL, UPS, Live Nation, The Metropolitan Museum of Art and the Smithsonian. Click [here](#) to learn more.

Keynote Summaries



Computing Chips to Flying Cars and Diversifying Business

Keynote speakers weren't just talking tech. GM CEO Mary Barra, AMD President and CEO Dr. Lisa Su, Best Buy CEO Corie Barry, Mastercard CEO Michael Miebach and Accenture CEO Julie Sweet, all acknowledge the multitude of unforeseen challenges of the past year. Many of the CEO's also addressed why committing to diversity and inclusion is good business.

General Motors was a top keynote of the day proclaiming, "intention to be the most inclusive company in the world." In addition, GM envisions a world with zero congestion, zero accidents and zero emissions. Revealing an all-electric mobility portfolio, GM plans to launch 30 new electric vehicles globally over the next five years. Product reveals include: the GMC Hummer EV, Cadillac Lyriq EV SUV and Cadillac Celestiq; plus, GM's Halo Portfolio has a self-driving car and autonomous single-seat VTOL air taxi. GM's new endeavor BrightDrop will electrify product delivery. FedEx, in partnership, being the first delivery company to use BrightDrop's EV600 trucks.

Click [here](#) to learn more.

AMD keynote highlighted the demand for high-speed computing – especially for healthcare, remote work, gaming and other digital video content. AMD also announced their new mobile processor (Ryzen 5000).

Click [here](#) to learn more.



Keynote Summaries



Microsoft Goes to the Cloud and Walmart Regenerates

Microsoft President Brad Smith's keynote started the day. Illustrating technology as the fundamental tool powering communities and economies. Viewers were virtually transported to Microsoft's cloud data center in Quincy, WA for a tour. Following, Smith emphasized humanity staying in control of technology; asking government to create diplomatic "rules of the road" for cybersecurity.

"We've long lived in a world where there were norms and rules that created expectations about what was appropriate and what was not. And, what happened with SolarWinds was not." -- Brad Smith, President, Microsoft

Click [here](#) to learn more. Microsoft is the official technology partner of CES 2021.



Walmart's President and CEO Doug McMillon spoke to AI's ability to predict demand and personalization for Walmart+, having an omni-approach for Walmart Health, measuring the company's diversity and inclusion progress, and becoming a regenerative company.

"This year we've set a big goal for Walmart to become a regenerative company. Meaning we don't only offset some of the negatives that are in our supply chain, but we do other things to protect natural habitat... to reverse what is happening on our planet and heal." -- Doug McMillon, President and CEO, Walmart

Client [here](#) to learn more.



Better decisions, faster.