

# WMXCES

## KEY THEMES & TAKEAWAYS 2019

January 7-11 2019

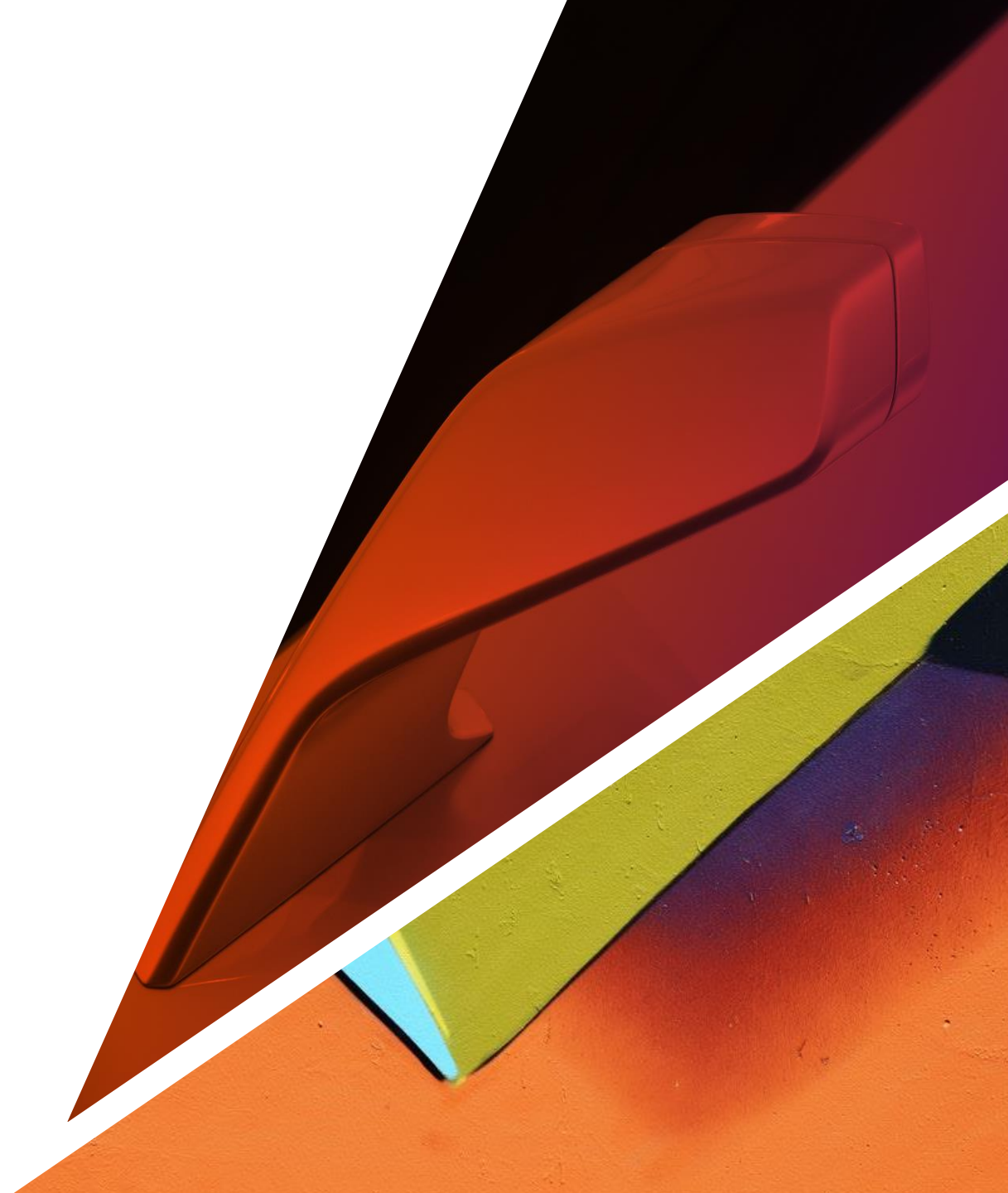


**WAVEMAKER**  
MEDIA. CONTENT. TECHNOLOGY.

## WHAT IS CES?

The International Consumer Electronics Show (CES) is the Consumer Technology Association's (CTA) most iconic future-focused event-showcasing today's newest and far-reaching technology, gadgets and experiences.

Hosted annually in Las Vegas, CES 2019 attracted future makers from far and wide with 180,000+ attendees representing 155 countries to explore the over 4,500 diverse exhibitor offerings.





## BUILDING THE FUTURE TODAY

While the C Space is where the media and marketing companies are most widely represented, it is the Tech East and Tech West Convention spaces that garner the most foot traffic, with attendees on the lookout for how today's offerings from LG, Samsung, Mercedes and Nest, will forever change consumer behavior and path to purchase.

From robotics to autonomous vehicles to connected plugs to smart appliances, nearly everything we touched appeared to be 'voice-enabled' and/or "AI-powered" (though some claims held up better than others).

But the critical aspect of all these technological advancements was the deeper conversations they are driving around security and trust. Interestingly, due to the US government shutdown, many of the major political names set to discuss these topics were absent, canceling appearances and leaving a major disconnect between technology and government at a critical time when legislation and regulation remains a priority.

## CES2019 KEY THEMES

#WMxCES

- 01 **Connectivity** is critical but context is everything
- 02 **AI** unlocks human creativity and intuition
- 03 **Digital Health** is a driving force for more data
- 04 **Smart Living** is all about integration of Voice, Visual & IOT
- 05 **The Future of Mobility** isn't just about self-driving cars
- 06 **Partnerships for Good** inspire future-proofing tech
- 07 **Mobile goes 5G** to drive 'content anywhere'
- 08 **TV goes 8K** and the lag for content to stay pace
- 09 **Folding Displays** will make TV's mobile
- 10 **AR + VR** continue to evolve and entertain

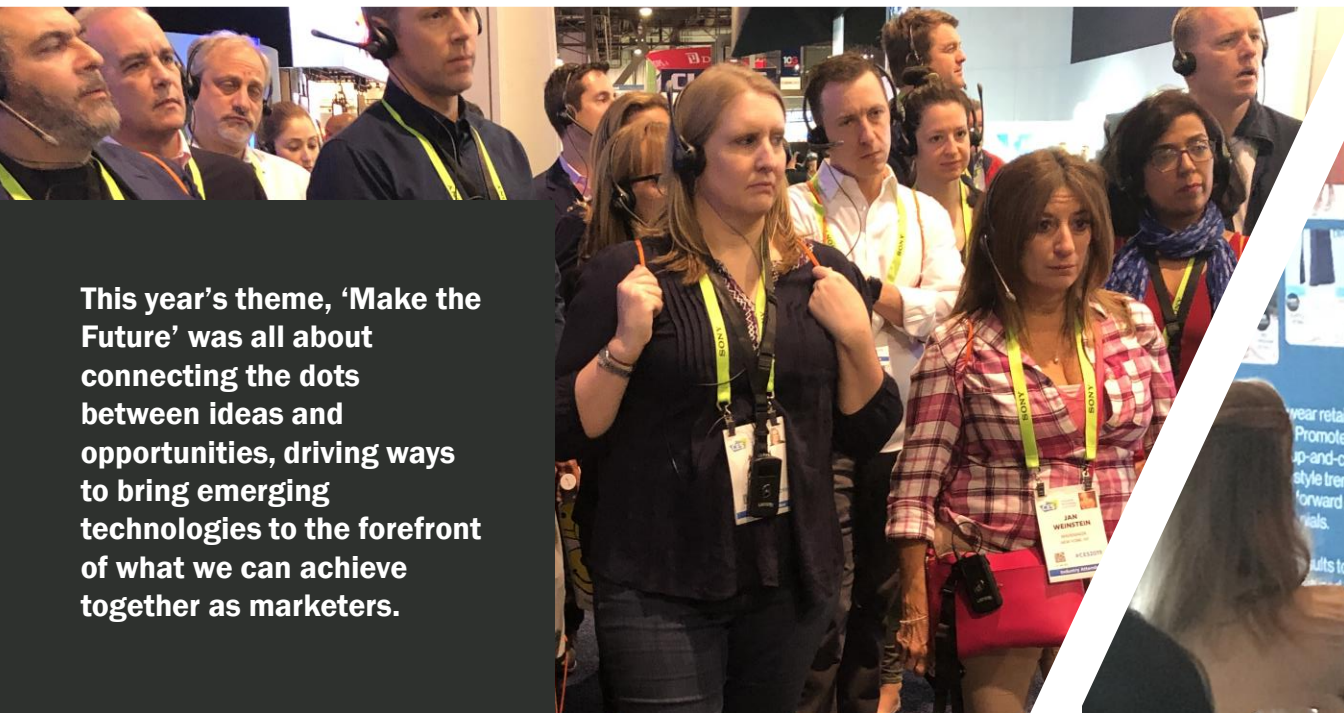


# #WMxCES

Curated Content at the Core



Our #WMxCES Thought Leadership experience serves as a catalyst for sourcing ideas, partnerships and opportunities that deliver on our quest for innovation, modernization and growth.



This year's theme, 'Make the Future' was all about connecting the dots between ideas and opportunities, driving ways to bring emerging technologies to the forefront of what we can achieve together as marketers.



Keynote speakers from Google, Amazon, WGSN, Quartz, Pinterest, and more focused on how brands can bridge the gap between consumer technology and how to leverage that technology to make the future, today.

“  
Technology allows us to meet  
our consumers in a lot of new  
places we hadn't been able to  
before.  
”



**Pam Drucker Mann**  
Chief Revenue & Marketing officer  
Condé Nast



**Karl Bunch**  
AI Technology Leader  
Amazon Worldwide Services

“  
Don't tweet this...but Big Data  
is over.  
”



“  
Understand your consumer by  
uncovering their obsessions.  
”

**Zachary Seward**  
Chief Product Officer/Exec. Director  
Quartz



**Whitney Fishman Zember**  
MP, Innovation & Technology  
Wavemaker



“  
Human creativity and EQ is  
core to every strategy.  
”

“  
Intersect the moments that  
matter and the stuff of life.  
”

**Vikram Bhaskaran**  
Head of Market Development  
Pinterest

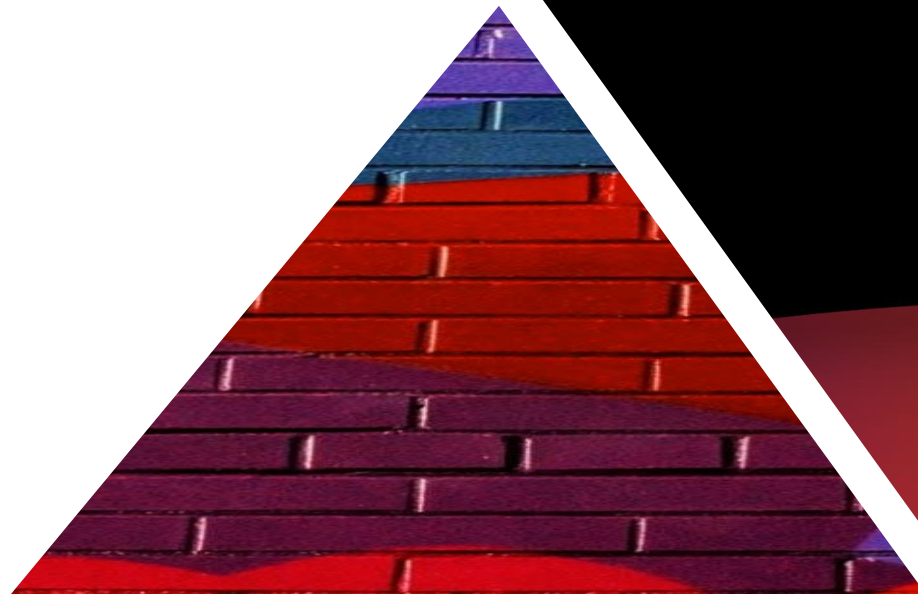


“  
Human inspiration is  
fundamental. How you build  
yourself is for human  
inspiration.  
”





# **A DEEPER DIVE INTO OUR KEY THEMES**



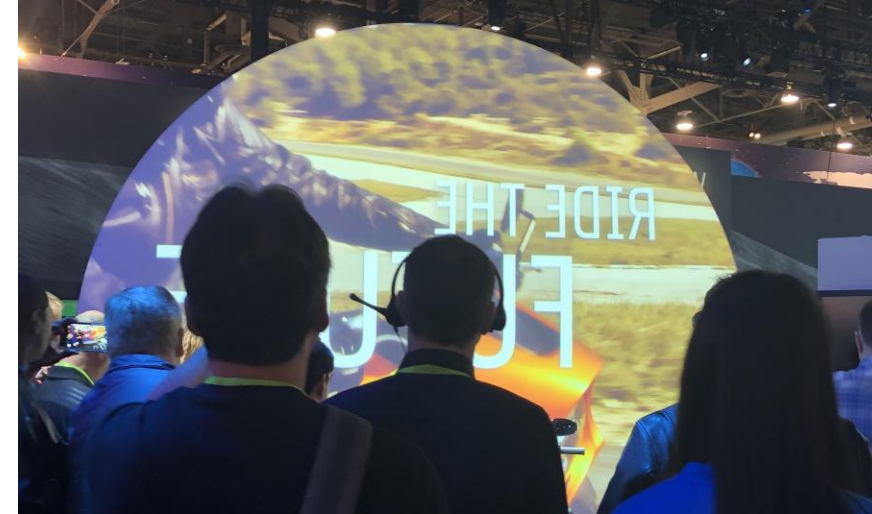
# Nº1

## CONNECTIVITY IS KEY BUT CONTEXT IS EVERYTHING

Far more important than all the bright and shiny gizmos we played with is the notion of the technology creating a more connected future (regardless of whether they make it past prototype).

Properly leveraging technology requires understanding less about how it works and more about what it stands for. If we can't look past the devices to understand the larger shifts at the intersection of humanity, technology, communications, and engagement, we're not seeing the entire picture, nor are we able to take advantage (and get ahead of) what are bound to be massive shifts on how consumers engage in the world (and screens) around them.

At the end of the day, the major theme to keep in mind is Connectivity -- unlocked not only by the technologies emerging and available, but by pure human creativity.



# WHY THIS MATTERS TO BRANDS



**Power of device & platform connectivity:** The interconnectivity and accessibility of products via the same devices (e.g. voice assistants, AR, touch screens) is enabling the creation of stronger, more integrated and intuitive experiences.

**A full view of the consumer.** The data points technology (and its ever-evolving iterations) uncover, collect and address are creating more intricate views of the individual consumer and their needs. By understanding the true meaning behind the data extracted, we can lead with creativity to create a direct connection with our audience.

**Creating frictionless experiences.** Connectivity between people, places & brands is only as valuable as the experience they create. It's critical to ensure you're removing any friction, both major and minor, that may result in frustrations, delays or an overall negative experience or brand association. Consumers aren't tied to brands as much as they are driven by what holds and delivers value to them. Finding ways to bridge connections (and emotional connectivity) is critical to driving your future.

# OUR FAVORITES EXAMPLES FROM THE EXHIBIT FLOOR

**Google:** Among the slew of announcements made was Assistant Connect, an initiative that enables smart home manufacturers to make it easier to integrate Google Assistant technology into any product.

**Bixby:** Samsung announced a massive third-party partner for its voice assistant Google. The company will be bringing select apps to Bixby, as will Uber, iHeartRadio and Ticketmaster. They also announced Bixby will be integrated into more Samsung smart appliances, Samsung's new Digital Cockpit.

**LG Connected Kitchen:** LG focused on the future of its connected smart kitchen strategy, highlighting its partnerships (e.g. with Drop, the developer behind the Drop KitchenOS platform) to grow its focus on connected appliances (e.g. InstaView ThinQ refrigerator, LG QuadWash dishwasher) that enable automated elements and streamline decision making around what to cook, clean and everything in between.



## AI: MOVING TECH AND DEVICES FROM SMART & SENTIENT TO PREDICTIVE & PROACTIVE.

While everyone loves seeing a good gadget, the unsung hero of CES was Artificial Intelligence (AI) and its involvement 'under the hood' of some of the most impressive and impression-leaving technologies. Utilized for a slew of product benefits including image enhancement (via smartphones), speech recognition (via home assistants and smart cars), predictive modeling (via beauty tech), and health benefits (via diagnostics & monitoring), AI was a major power player in terms of helping tomorrow's technologies provide maximum human impact.

While the ethics and morality of AI is still hotly debated, its ability to enhance the accuracy of existing smart products (with limited human interaction), offers both risks and opportunities. A massive step forward will be bringing together AI, machine learning (ML) and deep learning (DL) to ensure the creation of our best future.



# WHY THIS MATTERS TO BRANDS



**AI is primed to help drive an intensified focus on analytics & data efficiency.** The ability to save time and money collecting and analyzing data, as well as making it applicable, can move at a speed no human can keep up with when AI is properly applied. Marketers should take note of the way it can be leveraged to analyze everything from consumer metrics to pattern recognition, finding ways to apply it beyond basic targeting (i.e. fraud, campaign efficiency)

**AI is not “set it and forget it” (for now).** AI isn’t a turnkey solution that can be left unmanned; machine learning requires ongoing human touch and attention as well as levels of accountability and transparency as it learns to ensure the proper guardrails are in place and the right data/rules are being taught. Understanding AI’s application in your company isn’t enough; there needs to be a plan for how it is implemented, the process for teaching and the parameters it needs to work within.

**AI will help unlock human creativity.** When properly implemented, AI can do the heavy lifting for data sourcing, analyzing and implementation, uncovering insights and freeing up brain space for creative thinking and emotionally-driven decision making – something computers cannot replicate.

# OUR FAVORITES EXAMPLES FROM THE EXHIBIT FLOOR

## **Kia's Real-time Emotion Adaptive Driving (R.E.A.D.) System:**

The self-proclaimed 1st tech developed via collaboration with the MIT Media Lab's Affective Computing group features AI-based bio-signal recognition tech designed to monitor a driver's real-time emotional need state (i.e. facial expressions, heart rate, etc.) to adjust the car's inside environment accordingly for a better mobility experience. *Think: Music-response vibration seats, massages and haptic alerts connected to a car's driver-assist system.*

**Samsung's Creative Lab (C-Lab):** C-Lab showcased 8 new AI projects, including SnailSound (a smart earpiece for those with difficulty hearing that uses smart, nonlinear amplification and AI-based adaptive noise suppression algorithms), PRISMIT (an improvement on traditional search engines that uses AI to analyze issue-based content, providing users with the top 5 most representative articles about a searched Topic) and more.

**Sensory 'TrulySecure Sound ID':** Promising to be "Shazam for sounds in the home" this device uses AI to listen, recognize and track everyday sounds in and around your home (e.g. your dog, smoke alarms, doorbells, etc.) and sends warnings when unusual sounds occur.

**The Xfinity xFi Advance Security System:** Comcast's AI-based home security system is designed to keep connected home devices safe via monitoring and alerting users of suspicious activity.



## DIGITAL HEALTH: MORE CONNECTED, CONVENIENT & CONVERSATIONAL

As seen in previous years, health and fitness trackers (i.e. fitness bands, running watches, sleep monitors), dominated the CES wearable space as more and more people make proactive attempts at living healthier, more digitally-informed lives. We even saw the addition of some major CPG companies, such as L'Oréal, P&G & Pantene, show off their wares designed to tap into a consumer's quantified self for improved customized experiences.

Even more interesting is the CES addition of the Advanced Health space, focused on health components such as digital therapeutics and remote patient monitoring. Whether cosmetic and medically-focused health, the common thread are the sensors driving this technology. A game changer for predictive analytics, their ability to layer internal data points against external inputs such as time and weather is driving deeper investment in health education and training. Couple this with AI, machine learning and deep learning and we'll only continue to see hardware and software providers invest in personalized health solutions and communications for better, overall consumer living.





# WHY THIS MATTERS TO BRANDS



**More sensors, more data.** As the popularity of health-based connected devices, monitors and wearables continue to grow, so to does the digital ‘breadcrumbs’ that can be used to enable stronger connectivity between patients and their medical providers and healthcare solutions.

**Driving emotional connection via utility.** Those tapping into digital health’s power are looking to live better, healthier lives (whether that means managing a chronic illness or focusing on preventative care). They’re looking for accessible, everyday ways to improve their overall health and health IQ. This is a powerful opportunity for the right brands to provide the compelling support consumers are actively seeking.

# OUR FAVORITES

## EXAMPLES FROM

### THE EXHIBIT FLOOR

**Diabeloop:** The company, focused on solving for issues surrounding Type 1 diabetes, is leveraging its machine learning (ML) diabetes management system for adults to create one for children. The goal is to improve pediatric care and quality of life (short and longer term) while helping their families find ways to make it easier to manage the disease daily. The system is designed to be fully customized for every child.

**L'Oréal's My Skin Track pH:** The company's latest wearable prototype detects skin pH levels to help keep inflammatory skin conditions under control via a wearable and connected app. The goal is to both empower consumers to better understand their skin as well as encourage dermatologists to leverage the data for better treatment.

**SISU Sense:** Akervall Technologies Inc. newest athletic smart mouthguard measures and tracks the impact of collisions on an athlete's head over a season via a six-month battery and impact sensor that works with a Bluetooth chip and mobile app.

**JAXJOX:** The company's \$349 smart kettlebell not only tracks reps & workouts and changes its weight based on your demand, it also is tapping into the subscription model Peloton uses to offer access to live and on-demand fitness classes.

## SMART LIVING: BRINGING TOGETHER THE BEST OF VOICE, VISUAL & IOT.

Voice isn't a new trend; in fact, voice assistants were the hottest trend of CES 2018. As a result, we have 20,000+ Alexa-compatible smart devices and 10,000+ Google Assistant-compatible ones, all waiting for your voice to trigger them. What is different this year, however, is the amount of smart devices with voice assistants built into them vs. simply compatible with them.

Amazon's Echo Show, Google's Home Hub and Facebook's Portal screen-based devices kicked off this trend before CES but, this year, we saw more technology manufacturers (e.g. LG) take advantage of the integrated voice & smart screen system to truly drive the connected home via smarter screens. These screen-based 'mission controls', integrating voice and visual (as well as 3rd party app offerings) could prove to be what convinces many consumers that now is the time to move towards connected living.

As the battle for visual and voice continue to heat up, we'll have our eyes on who will be winning consumers' (and manufacturers') hearts (and investments).





# WHY THIS MATTERS TO BRANDS



**Better together.** In the past, we've focused on singular tech (e.g. only AR, only Voice Assistants). As these standalone technologies merge into stronger, reinforced platforms, the opportunity is to determine which components lend themselves to communications and how to work with various technologies simultaneously to tell your story.

**It's not a one size fits all.** Consumers engage with platforms differently based on habits, preferences and needs. Some want to use voice to learn the ingredients for a new recipe while others need visual to understand the steps for cooking. Recognizing how consumers engage with your content can determine how to drive utility via the right medium.

**The secret is being seamless.** Far too many skills and integrations that exist are clunky for the consumer to access. It's critical to consider natural consumer behaviors to offer a seamless complement to the general experience that enhances its application vs. slows it down; otherwise you're at risk of being ignored.



# OUR FAVORITES EXAMPLES FROM THE EXHIBIT FLOOR

**Kohler Konnect:** Kohler's line of hands-free motion & voice-controlled home products added a connected bathroom suite, the Veil Lighted Bathroom Collection. Users can use either Amazon's Alexa or Google Assistant, create automated synchronized lighting options based on mood or time of day, and have access to API integration thanks to Signify.

**Whirlpool Wear OS:** Whirlpool's app enables Whirlpool connected appliance owners to see real-time status updates and control appliances like washers, dryers and ovens via a smartwatch (e.g. Apple Watch), as well as get real-time data on the appliances. This complements the simplified commands Whirlpool Smart Laundry appliances will also be available for Alexa and Google Assistant devices.

**LG HomeBrew:** LG's capsule-based craft beer making machine is the Keurig/Nespresso of brewing. Simply use a single-use capsule filled with malt, yeast, hop oil & flavoring to start your brewing and check your fermentation process via an algorithm on the companion app.

**FoldiMate:** Designed to give you back time, this laundry folding machine can fold ~25 pieces of laundry in less than 5 minutes. While it's not perfect (it can't yet do smaller items like socks or large items like sheets) this robotic appliance is a strong example of time-saving home tech.

## ON THE ROAD AGAIN: MOBILITY & AUTONOMOUS DRIVING.

For a number of years, we've heard the proclamations that self-driving cars are the future. This year that future felt both closer, with more manufacturers and suppliers showcasing production examples, and farther, as many acknowledged that fulltime autonomous passenger transport is likely a decade or more away.

More cars touted more advanced autonomous features, and we saw the reality: cars are quickly becoming internet-connected mobility-focused interfaces, serving as the bridge between consumer devices in and out of the home.

For passenger vehicles, this means interiors and controls that use screens and voice commands to resemble a connected home – if not for primary controls, for secondary functions like climate and entertainment. Whether it was a concept car with legs like Hyundai's Elevate concept or vehicles embedded with voice-enabled displays and AI-powered sensors, manufacturers are taking bets at what our best future could be.



# WHY THIS MATTERS TO BRANDS



**Connectivity beyond communications.** Having devices, or multiple systems within a device, being able to connect and talk to each other unlocks a larger combined power than the individual devices alone. As more devices and screens (including other cars) become connected, this interlinked system has benefits far beyond safety and communications.

**Storytelling opportunities abound.** With investments in voice and audio integrations, the impact on content creation is vast – particularly in a world of 5G speed. This new, connected touchpoint becomes ripe for more customized entertainment and ad formats with sequential messaging, enabling stories to be told that recognize location, mindset and even mood.

**New modes of revenue.** As more companies focus on a future where we are all passengers, there will be more opportunities for screen-driven content. This potentially means new revenue streams for content creators and new formats for brands.



# OUR FAVORITES EXAMPLES FROM THE EXHIBIT FLOOR

**Bell Helicopter:** Uber and Bell partnered to unveil the "Nexus" air taxi (aka human-toting drone) which can carry up to four passengers for a new commuting experience. Both companies are eager to make intra-city air travel a reality and will be testing the concept in select cities soon.

**SPECTRA X:** Walnut Technology introduced a shareable electric skateboard designed for P2P sharing. Owners have full ownership, but can rent the SPECTRA X out to people interested via an app (comparable to Airbnb) designed to foster a community. The board itself features the world's 1st 3D posture control, a water-proof body, replaceable tires, and more.

**Whill ADS (Autonomous Drive System):** This electric mobility vehicle features front- and rear-mounted cameras to navigate indoor and outdoor spaces autonomously and can be summoned by a user.

**Ford:** The company's V2X technology called C-V2X -- the C standing for "cellular" -- is being built on existing mobile networks to enable cars to talk to each other in the same language (e.g. think collision prevention). Ford states it will have V2X in all new vehicles starting in 2022.

## PARTNERSHIPS FOR GOOD: FUTURE-PROOFING THROUGH DATA & TECH-FUELED RESILIENCE

Before the show even started, Karen Chupka, (CTA EVP and organizer of CES) , spoke how a major theme of CES 2019 would be “resilience.” As she explained, “we define resilience as the place where technologies are going to help keep the world healthy, safe, warm, powered, fed and secure.” This makes sense, she noted, when you “look at all the disasters that have been taking place throughout the world, we need to make sure that we have redundancies and then quite frankly, also look at ways tech can really help improve lives for everybody.”

The newest exhibit area, Resilience, was designed to be a complement to Smart Cities and proved that, when it comes to our future, technology can be an enabler for good, even in the face of adversity. Technologies designed to improve the human condition from the basic (e.g., water filtration & broadband) to the complex (e.g., natural disaster prevention & response) leave a lot for those with the power to drive change to consider. This focus to better enhance core infrastructure to withstand nearly any foreseeable crisis gave way to some unlikely bedfellows this year, looking to contribute to the greater good. No matter one’s stance on topics like Global Warming, how you show you care will help drive a better future for the citizens and cities of the world.



# WHY THIS MATTERS TO BRANDS



**Every brand has an obligation.** Just as every human has a moral imperative to give back and make the world better, so too do brands to find ways to support when crisis strikes (or find ways to prevent them from happening). No matter the industry, consider ways you can both passively or proactively make an impact on communities on a small, local or national scale.

**Utilizing existing infrastructures to create a better future.** Future-proofing cities isn't solely about preventing doom and gloom from destroying them; it's about finding everyday ways to make life better. Whether that's reassessing transportation needs (e.g. scooter & bike-shares, ride-sharing) or evaluating public spaces (e.g. parks, gardens, playgrounds) there's plenty that can be done to enhance and improve life that enables brands to find ways to demonstrate their power and, importantly, human side.



# OUR FAVORITES EXAMPLES FROM THE EXHIBIT FLOOR

**ZOMEKit:** A multi-dwelling unit (MDU) conversion kit, from ZOME Energy Networks, is the size of a small box that enables users to transform older apartment buildings into smart, energy-efficient ones using blockchain support -- enabling buildings (and their residents) to save both energy and money.

**Sprint's Smart City:** The Greenville, South Carolina pilot will run on Sprint's Curiosity Internet of Things (IoT) platform and Sprint's mobile 5G network and will include the use of Massive MIMO (Massive Multiple-Input Multiple-Output) and a IoT network to enable technology like connected vehicles and smart machines to work real time for better living. The test will also include a local smart vehicle test track to test Curiosity IoT, 5G, and micro-positioning.

**Las Vegas/AT&T/ Ubicquia:** This powerhouse partnership is launching a smart lighting solution pilot in Las Vegas' Innovation District, with AT&T replacing photocells with Ubicell streetlight routers integrated with its LTE network to test a smart lighting system that can monitor energy use and outages. The goal is to increase safety and efficiency via real-time information to locals and its expected to improve safety and efficiency in one of Las Vegas' signature areas.

# Nº7

**Mobile Goes 5G.** When launched, 5G promises faster data (20X greater than 4G), a response times of 1 millisecond or less and major improvements that will enable consumers to stream content anytime, anywhere, faster than ever before.

A massive opportunity for content creators, providers and brands, as it will greatly impact industries like AR, connected homes, and other IoT technologies that rely on Internet connectivity. However, while Verizon, AT&T and others fight to own 5G's marketplace launch, we're still a ways away from the technology hitting the marketplace, let alone blanketing the country. Although 5G-compatible devices start shipping this year, we most likely won't see consistency or massive penetration until after 2020, as it's not a technology that can be launched overnight. We also won't be seeing massive market penetration of 5G-enabled smartphones (although we will see some ideally launched in 2019).

# Nº8

**4K gives way to 8K.** There was a time when 4K TVs were the hot topic of CES, and it seemed as though they may never reach the masses. Now, as Ultra HD 4K has become the norm, this year was all about 8K (for those unfamiliar, 8K quadruples the total number of pixels, making it to date – the highest ultra-high definition TV resolution). These next-gen 8K screens comes at a time when we have more content to engage in across more platforms and devices than ever before, thanks to the massive growth instreaming platforms and on-demand content. But today content providers aren't ready to produce 8K content (as was the case when 4K was first unveiled, which is still true today for some content creators). So why are manufacturers even pushing these next gen screens? Well, they're hoping this will soon follow. But for now, as Sony's chief executive Kenichiro Yoshida clearly stated, prioritizing the content (e.g. movies, music, video games, TV shows) that draw consumers to screens in the first place is critical.

## Nº9

**Did you say folding mobile devices?** While mostly hype as not many physical devices were available this year, foldable displays started a conversation as they tout a slew of potential benefits including portability to offer new opportunities to engage in content how a specific consumer wants it. But it wasn't just about phones - we saw prototypes of tablets, laptops and other devices that could enable users to turn a slew of screens into different sizes depending the need (e.g. book-size, TV-size, etc.). This could have major impact on how people engage in content streaming, gaming, education and other forms of entertainment. Whether consumers prefer smartphone/tablet-sized folding screens or traditional TV-sized screens is to be seen. As is the question of whether or not any of the devices we saw on the floor will actually ship this year.

## Nº10

**AR & VR evolves.** This year we saw AR & VR post-hype cycle, as companies (major and minor) work through issues and questions that have plagued the marketplace (especially VR) since its inception, such as form factor, content experiences, pricing, etc. We saw new VR headsets and AR games but, as both technologies work to find their way, it's clear there isn't alignment across companies as to what the end result should be (nor should there be only one form factor). AR seems to have the ability to be more embedded into third party technologies (e.g. smartphones, wearables, connected cars) as it projects onto the real world (vs. VR).



#WMxCES  
**THANK YOU!**

**MORE INFORMATION:**

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