



CES 2020: Engineering Trust

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EVP – Creative Technologies + Innovation

A's

Engineering trust

Although many come to the annual Consumer Electronics Show (CES) in Las Vegas to look for the next big thing in gadgets, or hear the first news of an exciting new technology like quantum computing, 5G, or AI, the incremental improvements—the “[invisible revolutions](#),” as GroupM’s Brian Wieser put it—are the order of the day.

But a dominant theme often emerges in the messaging and design decisions at the yearly show of consumer and enterprise technology. This year, that theme is *trust*.

“[Without trust, a brand is just a product, and its advertising is just noise](#),” former Unilever CMO Keith Weed has said. And in the last year, trust has had its share of scary stories, like [the hacking of a Ring home camera in an 8-year-old’s bedroom](#).

We still lavish attention and cash on the expectation of better experiences, convenience, and delight that the seasonal upgrade cycles bring. But the public, the press, and the government now take a more critical approach to the power these companies have—and the risks these technologies pose.

It’s an election year in a divided country. The stock market is up, but confidence in large institutions and companies is down. It feels very much as if we’re entering a year of recalibration, as far as innovation and the tech-driven future are concerned. The news about attitudes towards the commercial use of personal data, the manipulation of information, and the real dangers of network and data breaches has been heard loud and clear.

And so the predominant message from CES this year in many of the presentations and conference sessions and in the product designs for gadgets, smart homes, IoT, and autonomous driving advances was “**We will earn your trust**”—with better design and attention to human needs at every level.

CES alone provides a comprehensive view of the technologies we will encounter and use at work, at home, in transit, and at play. Digital life and culture and our attitudes concerning privacy, data use, and artificial intelligence is formed by our experiences in every facet of life.

As we’ve seen with the social debate on privacy, these attitudes will determine how we as marketers will need to design our communications and connections strategies.

Insights and takeaways

- The strongest message from all corners: It's critical to win consumer trust through product design and advanced technology that ensures safety and privacy while allowing connected convenience.
- 5G's message is muddled by conflicting predictions of the timing of its arrival and confusing definitions of its implementation.
- Enterprise and industrial use cases were the most prominent for the development and appearance of the most dramatic advanced technology, such as 5G, virtual reality (VR), and augmented reality (AR).
- Health and safety monitoring and service delivery for all life stages will create the greatest opportunities for human and economic benefit of advanced technology for individuals, homes, transportation, and cities.
- Family tech, such as location and connection, will drive the success of integrated smart home technology, as Apple and Google try to push out the independent leaders.
- Social values—safety, wellness, transparency, and fairness—will dominate the public debate and negotiations around privacy, data use, security, and other regulatory efforts.



Insights and takeaways



- Though concerns are heightened, families are turning to tech for solutions rather than away from it.
- Manufacturers have embraced messaging that brand experience and purpose represent value in the still-evolving digital economy.
- AI—machine learning, sensing, and interpretation and prediction—will enable better decision-making in the workplace and communities while inciting fears and debate about job loss and bias.
- AI will drive more applications on personal and home devices to provide expert awareness and guidance on physical and mental health.
- Telecom and cable providers see promise in smart home and life-assistance tech to realize the value of their connectivity infrastructure.
- The new generation represents a rising tide of creator consumers in an expanded social media universe, as players like Twitch and TikTok continue to grab media market share.



The conference

A great opportunity to hear from business leaders from many industries

CES: The conference

The annual Consumer Electronics Show (CES) is a great deal more than the show floor, as massive and important as that is. CES is also an important conference. Since consumer technology from the VCR to the mobile phone has disrupted media habits, marketers have found value in anticipating new behaviors and opportunities in the products and technologies on display here.

But CES, with more than 300 sessions, also lets agencies hear about the major tech-driven enterprise initiatives and tech-related POVs guiding their businesses.

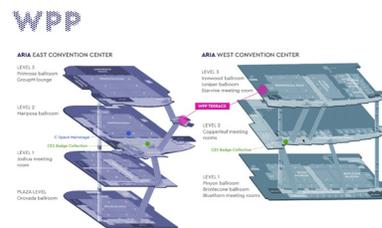
Important industry leaders in government, manufacturing, transportation, and media present their corporate vision and values to the world in keynotes and talks.

More than 40 conference tracks cover important sectors in depth, including AI in business operations and policy; advanced home technology security and the future of smart home applications, in the Connection Summit; and the role of technology in promoting

wellness and revolutionizing the effectiveness and economics of medicine, in the Digital Health Summit.

The largest enterprises, including agencies, also present important thought leadership in their own spaces and the C space dedicated to brands, entertainment, and technology, including MediaLink's "Marketing Reinvented."

These sessions get marketers and agencies closer to many market verticals, with clients competing with their visions and innovations at one conference. It's a great opportunity to hear from leaders about their most pressing concerns and aspirations.



CTA Research Trends Preview

From connectivity to intelligence

The Consumer Technology Association (CTA), the parent organization of CES, presents a comprehensive trend report summing up its research from the past year and an overview of the products on the show floor. Its projections of the next decade's trends are about the addition of intelligence to the connectivity revolution, the internet of people and things.

In its review, CTA emphasizes that enterprise, not consumer use cases, will lead in application and investment for the most advanced tech.

- Intelligence—that is, computation-based decisions—and interactivity are being built into more and more devices in homes, enterprises, stores, cities, and farms. AI is here, and human-machine collaboration is growing.
- For consumers, 5G with a bridge to 4G on personal devices will co-exist while we await the rollout of enough endpoints to make for a consistent experience.

- New enterprise and public technology for cybersecurity, public alert systems, and disaster recovery will focus on resilience.
- Social general-purpose robots like Kuri and Jibo haven't found a place in the home yet, but task-focused robots for vacuuming, pill dispensing, and early education have.
- The self-driving vehicle is seeing strong interest first in commercial deployments in specialized environments.
- Digital health monitoring and assistance is becoming a mainstream lifestyle choice.



Shelly Palmer Pre-Show Breakfast

Insights and values

Shelly Palmer has had a deep relationship with CES for many years, with his tours, briefings, and more. Palmer follows and reports on technology all year long and has the best connections, and he gets an in-depth preview of CES before the show opens.

Palmer's pre-show breakfast is a hot ticket. Here, he presented his personal and very passionate view of what's in store for us at the show—and how we should evaluate what we see. His insights:

- "This is the year" for 8K TV. Onboard AI can upscale 4K content, manage blacks and contrast, and generally produce astonishing resolution for reasonable cost. Caveat: screens under 75 inches need not apply. You'll never see the difference.
- For content creators, and that's now most people, phone cameras now can make you a cinematographer. Palmer recommends the app Filmic, which can shoot with all iPhone lenses simultaneously.



- 5G is a very complex set of technologies that will not be mainstream for some time, and for which compelling consumer use cases have not been well thought-out. Use common sense when looking at 5G and determine whether and how you and your business will deploy it.
- AI that can predict probabilistic outcomes to complex problems from more variables than humans can handle will challenge our free will.
- With the increasing use of neural networks and other advanced technology on the horizon, let's make sure we design our technologies to be collaborators, not the final decision-makers. This is *our* responsibility.

Transforming Contextual Advertising and Media

Hulu: better viewer experience correlates to ROI

A great panel of experts in advertising sales, innovation, and technology, with Nielsen, IBM, Hulu, Twitch, Accenture, and XANDR, discussed the opportunities and challenges of the growing but fragmented and regulated digital advertising future.

- XANDR: There is a need to re-aggregate audiences for scale in a world of so much individual choice and consumption behavior.
- Accenture: The challenge will be to bring advertising related to the individual AND the context.
- Nielsen: We have the tech but need a holistic view of delivery to design better experiences around frequency capping, etc.
- Twitch presented a compelling vision of the advertising potential of multiplayer real-time entertainment with concurrent chat. Eventually, 5G will present a multiverse of live locations—the future of live. Brands can create events.
- IBM: We can't underestimate the value of humans in the experience design in getting personalization right in future immersive media.
- Nielsen: there is a need for transparency and user choice in advanced targeting and personalized messaging. Consumer awareness is the key.
- Hulu: Machine learning can help uncover new behaviors like binge-watching, we need to design new ad experiences for this.
- Nielsen: We have the technology for digital insertion. But layering the new data into currency and measurement is still a challenge.
- Hulu: We will see more direct-to-consumer (DTC) social commerce functionality on over over-the-top TV (OTT).
- Nielsen: Smart TVs don't have iPhone profit margins to fund continual capability development.
- Hulu: The ability to place brands in video stream is there, but we'll need the agreements with the owners of valuable back libraries.



Innovation and Privacy

Most presentations of any technology at CES cited privacy as a design ideal. Privacy was also the main topic of many conference sessions, most newsworthy being a session featuring Apple, which had not participated in CES for 28 years, along with Facebook and P&G.

But a debate on privacy and innovation was arguably more informative and comprehensive. All participants are directly involved with policy and regulatory efforts, including a former commissioner and chairman of the U.S. Federal Trade Commission (FTC), a representative of the National Telecommunications and Information Administration, senior counsel to U.S. Sen. Brian Schatz, and the privacy and public policy manager at Facebook.

Highlights:

- We should aim to meet citizens' expectations without burdening companies or individuals.
- The FTC will need authority, resources, and civil penalties to enforce any forthcoming regulation. And we'll need to know incentives are in the right place.
- Privacy and data security go hand in hand. We need flexible tools to combat botnets and secure IoT.
- We need to recognize that regions are different, and the General Data Protection Regulation (GDPR) would violate the First Amendment. We need a U.S.-specific solution.
- The time is right for a federal law and uniform set of protections. The outstanding issues are private right of action and federal law pre-emption.
- Fragmentation is still a risk, as states are still pushing their laws forward, but there is a lot of common ground and few if any partisan issues. Public hearings were encouraging.



Right: Apple's Chief Privacy Officer Jane Horvath – photo: Bloomberg



For an overview of the 4A's efforts on privacy regulation, visit the [Privacy for America](#) website.

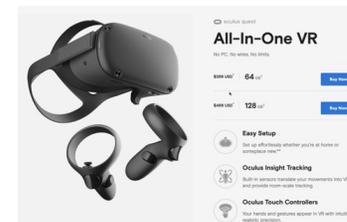
Immersive Media Leadership Think Tank

Closer—but no winner yet

Everyone is interested to see when augmented reality (AR) and virtual reality (VR) will finally go mainstream and become brand-connection media. While Snap has done very well with branded filters, and Facebook's Oculus Quest headset seems to be selling well, we have not reached a tipping point for AR and VR as mass media.

This CES panel brought together some of the best mixed-reality business minds from Accenture, Unity 3D, Intel Sports, Google, Qualcomm, and Paramount Pictures to assess the state of the business.

- AR is seeing success and better content in beauty and auto demonstrations.
- VR business is up 100% due to use in the enterprise for training and simulations.
- If Apple holds back on AR/VR, the market will stall. Apple won't release a product until it can do AR/VR right.
- Microsoft HoloLens is getting a lot right with version 2. The balance is great, so it feels much lighter and can be worn longer.
- Simulation games like Beat Saber and Pistol Whip, which incorporate a lot of kinetic movement, are selling well and making money for the Oculus Quest.
- Content is still expensive to create, and the supply chain favors Asia.
- No one form factor for AR or VR is yet selling in a quantity to declare victory.



The Augmented/Mixed Reality Experience

Where VR, AR, and XR are heading

This discussion brought expert mixed-reality creators together from Verizon's RYOT, Microsoft, MediaMonks, Magic Leap, and IBM to talk about the exciting developments of the last year for those working with AR and VR.

- Microsoft released the Azure Kinect developer kit mixed-reality camera with AI sensors for capturing 3D data in real time.
- RYOT created an AR broadcast that figures into a room for a Star Wars after-party.
- Mediamonks: Plan your mixed-reality creative ideas to leverage the assets over other forms of media.
- Everyone applauded the Snap age and gender filters.
- We can see a future where the camera will act as a browser and activate AR 3D images as you scan the world.
- Shopify has integrated a kit for adding AR assets to product listings.
- 5G will probably land in stadiums and other performance venues, allowing more mixed-reality fan experiences.
- These pros believe that people want virtual entertainment to be more like stories, featuring characters they interact with.



Shopify AR powered by 3D Warehouse

Shopify AR lets customers using the Safari browser on iOS 12 devices view realistic and interactive versions of your products in augmented reality (AR). With AR you can provide your customers with a better sense of the size, scale, and detail of your products. The 3D Warehouse app enables AR experiences by allowing you to upload 3D models and link them to products on your store.



To let customers view your products in AR, install the 3D Warehouse app, get 3D models of your products, add the 3D models to the app, edit your theme to enable AR Quick Look, and then add the AR badge to your 3D products.

Jobs to Super-Jobs: The Impact of AI

The future of work in the augmented enterprise

CES this year also focused on the enterprise as the site of widespread use of advanced technology. And for the first time, the conference dedicated a track to global human capital. Technology in the workplace has created challenges in upskilling and developing future talent while minimizing social disruption. Deloitte, Autodesk, Ford, Upwork, and Bosch brought great insight to the issue. Agencies are facing the same forces and will also shape their offerings around new enterprise organizations and roles.

Five trends were identified:

- Technology will free up human cognitive capacity for a wider range of tasks and responsibilities. Jobs will become super-jobs.
- Organizations are moving from hierarchical to multidisciplinary teams.
- Alternative workforces—remote, independent—will take a prominent role in the future.
- Millions of dollars are now dedicated to re-skilling in the face of tech-driven job redefinition and an expectation of lifelong learning.
- Companies will focus as much on the employee experience as the customer experience, as excellence in the latter is dependent on the former.

Deloitte CES

Jobs to Super-Jobs: The Impact of AI

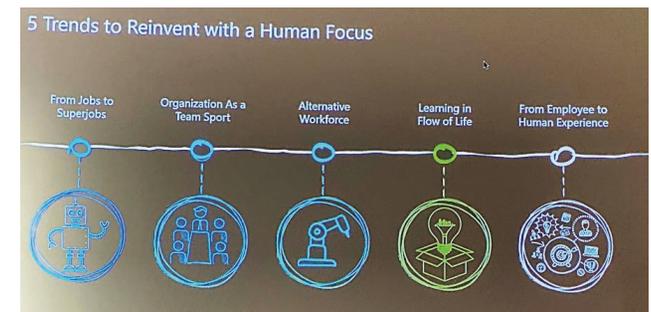
January 7, 2020 | 3:30 – 4:30 PM

The Future of Work... The use of artificial intelligence, cognitive technologies, and robotics to automate and augment work is prompting the redesign of jobs into "super-jobs". This newest category changes the landscape of how organizations need to think about work.

 Erica Volini Global Human Capital Leader Deloitte	 Joe Speicher Executive Director Autodesk Foundation	 Eric Gilpin Senior Vice President of Enterprise Sales Upwork	 Charlie Ackerman Senior Vice President, Human Resources, North America Bosch	 Cheryl Carrier Executive Director Ford Next Generation Learning
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AI Requires Human-Centered Design

AI is already here

The image is a promotional poster for a Deloitte CES 2020 event. At the top left is the Deloitte logo, and at the top right is the CES logo. The title 'AI Requires Human-centered Design' is centered below the logos. Underneath the title, the date and time 'January 7, 2020 | 2:15 – 3:15 PM' are listed. A short paragraph describes the session: 'Successful applications of AI require more than big data and advanced algorithms. AI technology must be developed and deployed with humans in mind. This session will explore what we truly mean by "human-centered" design and how the approach is effective.' Below this text are five circular headshots of the panelists, each with their name and title. From left to right: Paul Sallomi (Global Tech, Media, & Telecom Industry Leader at Deloitte), Saleema Amershi (Principal Researcher at Microsoft Research AI), Rahul Gupta (Chief Technology Officer at Conduent), Jaime DeLanghe (Director of Product Management, Search & Discovery at Slack), and Jim Guszcza (US Chief Data Scientist at Deloitte). At the bottom left is a Twitter icon followed by social media handles: @DeloitteCB, @DeloitteOnTech, @DeloitteTMT, @DeloitteSA, and #CES2020. At the bottom right, there is a small copyright notice: 'Copyright © 2020 Deloitte Development LLC. All rights reserved.'

A very knowledgeable panel of enterprise AI specialists working in decision support and risk systems (Deloitte), research (Microsoft), recommendation engines (Slack), and mission-critical systems (Conduent) presented AI use cases in large enterprises, where designing for humans-in-the-loop is necessary for reliable productivity and outcomes. Agencies with strong experience design practices will find opportunities here.

teams is necessary to build systems for high-stakes decisions like health care and emergencies.

- AI can help with human decision fatigue without replacing human judgment.
- Humans will offload responsibility to systems designed only to give answers without explanations, leading to accountability problems.
- AI systems that enable personalized conversations still need human input to understand relationships and relevancy.
- Technical systems in the workplace are social systems where the AI is a participant that doesn't have a universal perspective.
- Humans are both the beneficiary of AI assistance and the measure of success. AI success does not equal the most efficient solution to a problematic model.
- When you assume that AI can fail and allow human feedback and intervention, both humans and machines can improve.
- Responsible AI designs must make their decision processes openly to be trustworthy and allow for human values to intervene.

Smart homes: Connected to the world

Safety, independent living and wellness

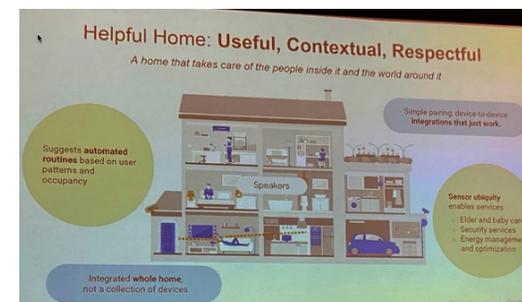
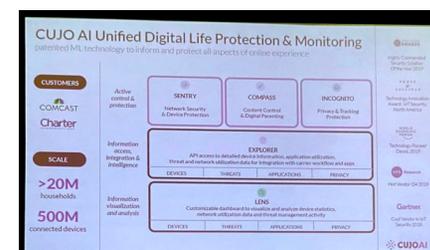
More sophisticated use cases and expectations in home network and devices security and family technology management have created enterprise-grade problems for consumers. A variety of providers and companies are working to integrate solutions to meet the need. The convergence (or collision) of the home security, digital device security and independent living industries is almost complete. Even some cable companies like Comcast are offering these services to complement the connection side.

The Connectivity Summit conference track had illuminating discussions from market leaders Ring, ADT, Google, AARP, Uber Health, CujoAI, and BitDefender.

Most large technology providers realize the importance of this market. It will only grow with technology improvements and demographic trends, and brands that perform the best will gain a huge trust dividend.

The stakes for managing health monitoring, and alarms that call fire and police services and provide the peace of mind families are seeking today are very high.

Raya Sevilla, VP of product for ADT, with many years in the telecom business, concluded her future trends prediction with a sense of the responsibility they feel: "In telecommunications, we always aimed for the '5 nines': 99.999% uptime. We have to better than that to earn people's trust." (99.999% uptime amounts to less than 5.26 minutes of downtime per year.)



Sandwich generation, parenting, and technology

Parent technology for family member location tracking, family messaging, content filtering, and app-time-spent reporting was represented by two companies with at the Family Tech Summit, Life 360 and Avast. Google and Apple have also have products for some or all of these features.

A quick look on the iPhone App Store shows more than 20 apps in this space. Some, like Avast and ADT Go, are also are integrated into home security and other smart home systems.

For the the generation with children now also facing the challenge of aging relatives, one can pair parenting tech with developments in smart home and health care that enable safer aging-in-place and health monitoring for elderly relatives.

Monitoring and information-sharing in the family and with other groups like healthcare professionals, police/fire departments, etc. are being negotiated every day with growing children, with neighbors and with the tech platforms that provide the services.

All this adds up to complex relationships between families and the companies and brands that make up our understanding of privacy and security. Fears about issues like pervasive surveillance and tech addiction bump against the real advantages of monitoring and alerts when someone is in need. "We're not going back" on tech was the common theme.

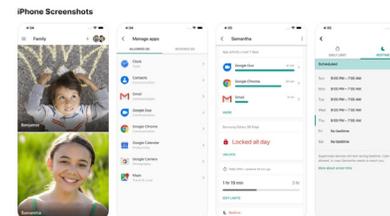


A space just for your fam.

Private Circle
Life360 syncs your family into a private, invite-only Circle, making it easy to plan and coordinate at the pace of life.

Location Sharing
Location Sharing gives family members a view of each other's recent and real-time whereabouts.

Smart Notifications
Be notified when your family comes and goes from your most frequented Places. Plus, get alerts if anyone's phone is running low on battery.



Avast Family Space

For safer parenting in a connected world

Keep your children safe online and off with **Avast Family Space** for Android and iPhone.

- State-of-the-art GPS location technologies let you know your child is safe at all times
- Keep the internet age-appropriate with customizable child content filters
- Use our pause internet feature to help children focus on homework or get a good night's sleep
- Get battery status updates from your child's phone and remind them to stay charged up and in touch



Kids@Play sessions and new toys

The pulse of our feelings about technology



The Kids@Play sessions and the toy exhibits are always a worthwhile glimpse into the first experiences many children will have with tech, as well as the aspirations of parents and their feelings about technology.

Brands and agencies can take away real insights from watching this space and what the parents and kids are making of it, what kinds of behaviors, attitudes and expectations will emerge. There are now 21 Million families with children 2 to 7 years old.

This year, there was an emphasis on children's tech that encourages social play, virtual plus physical interactions, and creativity.





The show

What there was to see at CES

The Age of Experience

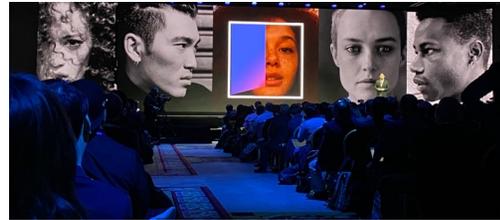
Samsung's vision is everyone's vision

CES keynotes are beautiful entertainment that bring the manufacturers' visions vividly to life across vast immersive horizontal screens. Part of the conference and part of the show itself.

Ubiquitous connected systems driven by human needs and powerful computational intelligence is the vision Samsung shared with us. A world of connected experiences that adds to more than the sum of technologies and products.

And it's shared by all the largest technology manufacturers and technology companies, supported by countless products tied to use cases for smart homes, health and wellness, autonomous driving, connected cities, and AI assistants.

Trust here was invoked in their highlight of on-device AI — intelligent systems that don't need to process data at the corporate mothership as voice tech from Apple, Google, and Amazon do today.



More connected world visions

Toyota, LG, Amazon



Samsung Ballie

Still dreaming of home robots

Home robots that aren't vacuum cleaners like the Roomba have had a hard time connecting with the public. Jibo and Kuri, two compelling attempts with great design and features, failed. And even the CES trends researchers declared task-specific robots like vacuums and pill-dispensers to be the current direction of most companies in the market. But that didn't stop Samsung from introducing a new contender, Ballie.

Introduced as the next wave of the Internet of Things, Samsung showed a home where Ballie used its image recognition and other sensors to learn about the people and their habits in the home and to then manage other connected devices such as lights, music, blinds, and, yes, robot vacuum cleaners. It has a voice and follows you around and can also "understand you, support you and react to your needs to be actively helpful around the house" according to Samsung.

Sebastian Seung, Samsung EVP and chief research scientist, also went on to remind the keynote audience: "Of course we want Ballie to be fun, smart, and helpful, but we also want Ballie to keep our secrets. We want an AI we can trust."



Didn't quite make it: Kuri and Jibo.



Autonomous vehicles

Beautiful future visions while we wait



Augmented Driving Concept

While manufacturers are pulling back on when we'll see autonomous cars taking us on magical tours of the nation's highways, they haven't given up on our love of the automobile. Every year, automakers continue to show us some of the most desirable objects on the planet, although these vehicles seem destined for travel in another universe altogether.

It is always a great pleasure to see the designs they come up with every year.

All those sensors and C-V2X

Increased safety on the way to autonomous

We're going to be waiting some time for personal autonomous cars. So CES vendors doubled down on nerdiness, focusing on sensors and the cellular vehicle to everything (C-V2X). 5G connectivity will play an important role, but the industry has designs on getting many of these features in production today.

You may not be daydreaming in your car on the way to work while downloading movies and in-car AR entertainment anytime soon, but the connectivity groundwork is being laid now. Driving will get safer with the steady introduction of this tech, and we'll get closer to trusting self-driving cars through the experience.



From Qualcomm

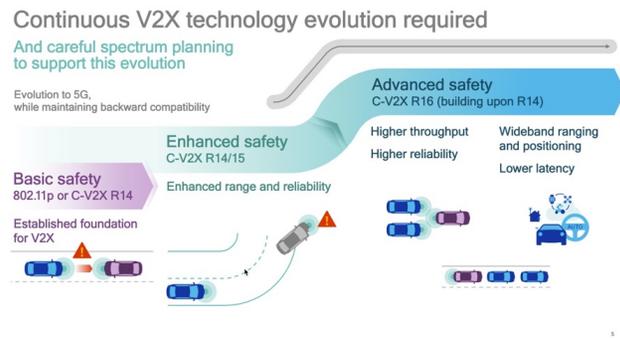


Exhibit demonstrating all the sensors in cars today

8K and just beautiful TVs

Amazing, if you have the space

TVs are getting better all the time, and the prices keep coming down, though 8K is still pricey. The largest sizes still go for over \$30,000. And as Shelly Palmer reminded us, at anything below 75 inches, you can't see the difference. But also exciting is the computational processing advances that can manipulate video in real time. The processing can upgrade content currently available and manage other adjustments to optimize and even change the image, including object placement/replacement.

Consumers don't upgrade their TVs nearly as often as their phones, so the promise of personalized in-program advertising is years off.

If CES has a Mona Lisa, it's Samsung's the Wall TV.
Everyone comes to pay homage to its beauty.



LG's rolling screen TVs, that can retract into its base are very beautiful. LG says "coming soon"

5G and wifi 6

Revolutionary...but not ready

Although we keep hearing about 5G, and more 5G phones are being launched, you will probably first encounter it in the outside world or a business-service context. 5G will have clear advantages that make for wonderful immersive experiences and personal device capability, but that remains a few years away.

Wifi 6 routers are also making their way to market, and so to new devices with wifi 6 built in. This can be very attractive for large homes or homes with many devices and promises increased speeds. It should be the new standard by next year.

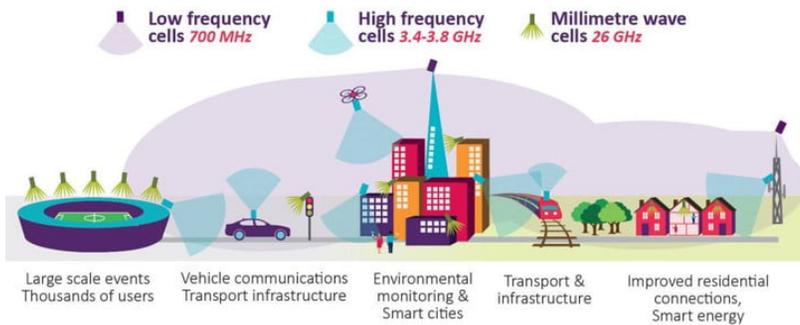


Image: CableFree



Samsung Galaxy s10 Lite - Image: TechRadar

P&G LifeLab

Back again, and even more influential

P&G made its CES debut last year. The company returned to big crowds and a here-to-stay swagger that included its venture labs mentoring program, upgrades to its digital and AI-driven products, and a confident, tongue-in-cheek toilet-paper-roll robot.

At CES in 2019, P&G's chief brand officer, Marc Pritchard, said, "We need to start thinking about a world with no ads." But this year, he was at CES to reinforce P&G's leadership in advertising spend and innovation.

Pritchard interviewed Jeffrey Katzenberg, who with Meg Whitman co-leads the forthcoming short-form-video network Quibi, set to launch in April. P&G has played an important role in Quibi's [beginnings and design](#) and its quest for a platform that incorporates advertisers' needs. Will P&G build the NBC and CBS of the future? We'll see in April.



Privacy everywhere in Eureka Park

If Eureka Park, the CES start up space, is where we're headed, then it looks as if privacy is only going to get even bigger. Going beyond regulation, these tools put the control into your own hands.

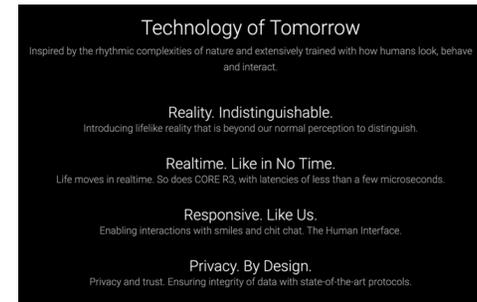


Samsung Neons

The most mysterious product at CES this year was Samsung's Neons. Representing many personas, this new artificial "life form" envisions assistants with varied human characteristics that would ease human machine collaboration.

Neons can express emotions and learn through interaction rather than simply access a knowledge base, as in the case of Alexa or Google Assistant.

This is very experimental and is screen-delivered in its present state, and it left many wondering exactly how this technology will be useful. (One imagines a community of Jarvises from the *Iron Man* movies.)



One problem, two solutions

CES this year was headlined by Meg Whitman, who with Jeffrey Katzenberg co-leads Quibi, the short-form-video network set to launch in April. In an interesting example of parallelism, Quibi announced a video format, Turnstyle, that can play in vertical and horizontal orientations to accommodate mobile video behavior.

At the same time, Samsung is introducing at TV that physically flips to present horizontal and vertical video and social media.

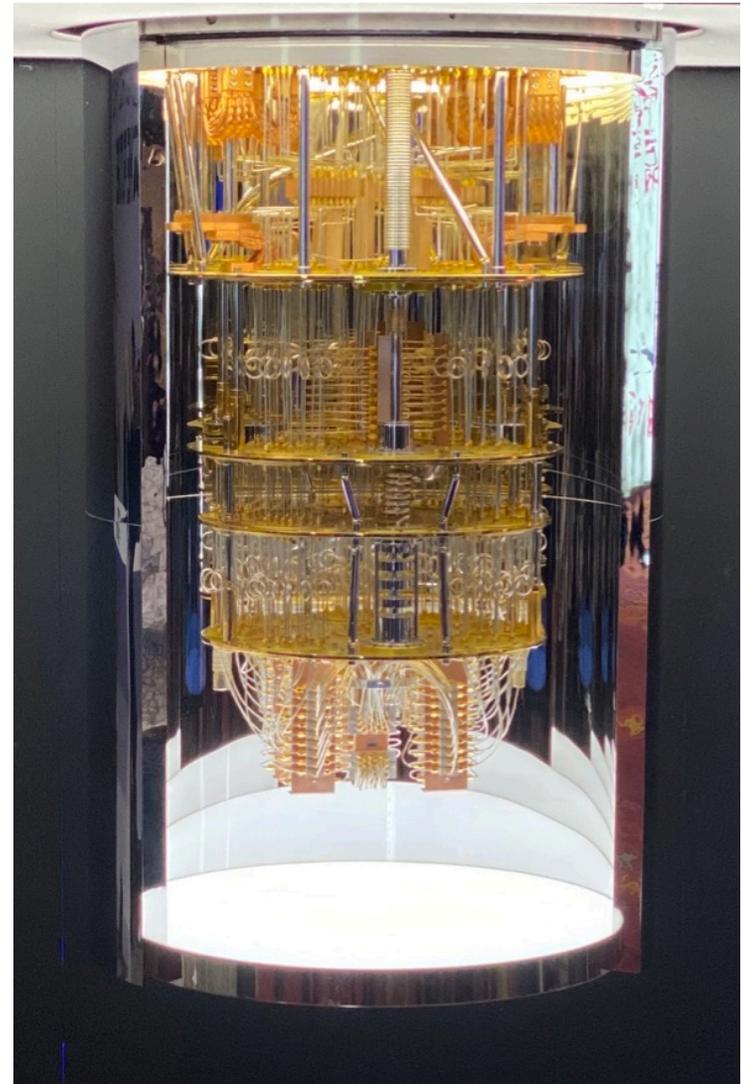


SAMSUNG

Quantum computing

Look, don't touch

Quantum computing is still the province of a vanishingly small number of advanced research scientists, but the the machines are so beautiful IBM can't help showing them off. Not ready for prime-time business use yet.



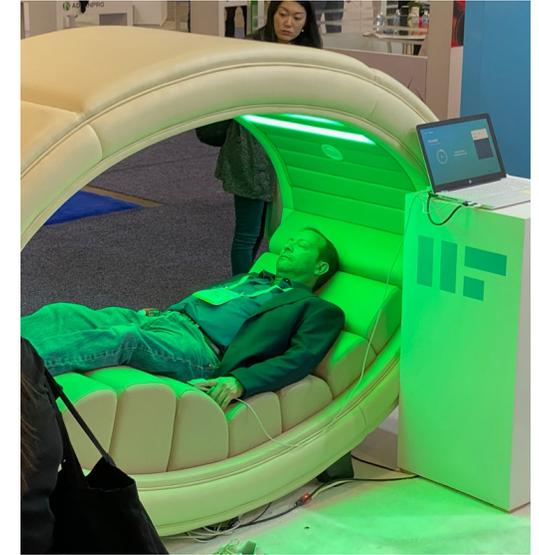
Strange but true!



Comfort robots really only need a tail to make you happy.



GJS's Award-winning battle robot that mimics your arm movements with a small controller: [see it in action here.](#)



Oxygen, mood lighting, stress testing...just...relax...



[Nicholas Baldeck's NeuraSpud](#)

DNANudge: a personal DNALab that communicates with a food shopping recommendation app



Gatebox Digital Assistant: for anime lovers?



Litter box with image recognition and AI analyzes stool images and excretory behavior to monitor cat health.

Cheers to 2020...on to 2021!

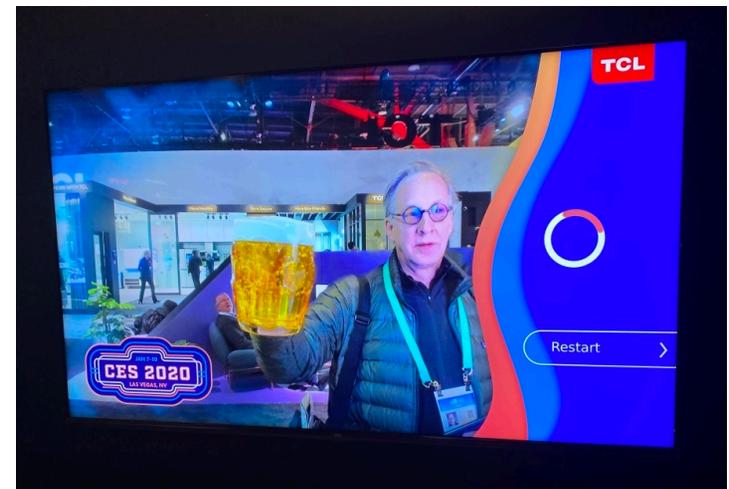
Here's a toast to a trustworthy future!

Take a close look at my selfie from the TCL booth: The face is mine, but the beer is virtual. You're looking at TV technology that can place objects into live-streaming video: AI-driven video processing that's likely to be common in next-generation TVs.

That's exciting for advertising of the future. Product placement, and even character placement, could be customized to program context, demographics, and other variables.

Of course, that's also the challenge of advanced tech and trust. If any stream can be customized to my profile, where's the line between helpful personalization and a deceptive [deepfake](#)?

We're still learning how to deal with a world of an augmented reality, increasingly realistic immersive experiences, and overwhelming amounts of information, comments, and interpretations. Our physical senses and native intelligence at times feel unequal to deciphering the truth. But if brands and marketers stay close to human needs and well-being, and create trustworthy messages and utility, we can contribute to the better future we all deserve.



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