

# Insights from a Director-centric Tour of the World's Largest Tech Show

By Judy Warner

MediaPost.com ran one of the catchiest headlines following the conclusion of the 2018 Consumer Electronics Show (CES) in Las Vegas: “It’s CES. What Could Possibly Go Wrong?”

Yes, there was flooding when, for the first time in 116 days, monsoon-like rains poured down into the mostly gutter-less streets. Yes, there was a public relations quagmire when news broke that not a single woman was slated to deliver a keynote speech over the entire four-day program. Yes, there was a 90-minute power outage on opening day in the Center Hall, which housed big exhibitors like Tesla and Intel. (It was rumored that Tesla was the only booth to stay powered up courtesy of its battery packs and that Intel dispatched at least one violinist to perform in front of its shuttered booth, prompting the question of whether having violinists on standby was part of the chip maker’s risk-mitigation plan going into the sprawling show.)

And yes, on Thursday, as some of the nearly 170,000 attendees needed to get to the airport, traffic on the Strip was brought to a nearly two-hour standstill as Vice President Michael Pence paid a last-minute visit to Las Vegas to talk at the opening of the Air Force’s new AFwerX innovation hub.

In the lead-up to my attending CES—my first time in 30 years—I binged on tech news, and if you’re not able to attend CES next year, I hope the following four outlets help you as much as they did me in doing my pre-show homework.

First, the Vox-owned ReCode, which was started by *Wall Street Journal* veterans Kara Swisher and Walter S. Mossberg, who have been writing on technology long enough to tell it like it is and bridge generations. Second is Mashable, a blog started in Scotland in 2005 by then 27-year-old Pete Cashmore, and now a global media enterprise operated by Ziff-Davis. Third, TechCrunch, a blog also started in 2005 by Michael Arrington and now owned by Verizon Communications through its AOL acquisition in 2000. Finally, CNet, the granddaddy of this group, a website launched by entrepreneur Halsey Minor and Morgan Stanley alumnus Shelby Bonnie in 1994 and bought by CBS Interactive in 2008.

So, at risk of violating what’s become an unwritten rule of Sin City (“What happens in Vegas, stays in Vegas”), I’m perfectly willing to tell

all about this annual extravaganza, where cynicism seems to run as high as innovation.

For NACD’s CES Experience, produced in partnership with Grant Thornton LLP, the show’s substance was revealed to me and a group of 20 directors by our personal tour guide, Shelly Palmer, an author, technologist, and the founder of the strategic advisory firm The Palmer Group. In brief, and in order of importance, here’s what should be on directors’ radars if not on an upcoming board agenda.

■ Chinese companies had a strong presence at CES. (Of the 4,229 firms exhibiting, 1,551 were Chinese.) Among the most notable were automaker Byton, started by engineers from BMW and Infiniti, which unveiled an all-electric SUV it says will go into production in late 2019. Medical products company Gyenno was declared by Palmer to have created his favorite new product unveiled at this year’s CES: a battery-powered smart spoon for people afflicted by tremors from Parkinson’s disease. The utensil automatically steadies itself and its operating system collects information about the individual’s tremors that is automatically used to adjust the device’s algorithm and improve its performance.

■ Developing supercomputer power is an area where China stands to be second to none. According to a physicist among our group, only a U.S.-based company such as Intel has the resources needed to win this mission-critical race, but it’s going up against Chinese companies that benefit from government power and funding. (See *Need To Know, NACD Directorship*, November/December 2017.)

■ Artificial intelligence, blockchain, and augmented reality “are three buzzwords changing everything,” Palmer said during his annual morning presentation on innovation, which has become one of CES’s most popular events. He also challenged the standing-room-only audience to think about and become involved in defining “responsible innovation,” as threats to privacy and dire predictions for robotic capabilities become the stuff of reality rather than science fiction.

■ Robotics in prosthetics were among the most promising and worthwhile applications of technology. BrainCo, a brain-machine interface engineered



The Byton concept car

in the Harvard Innovation Lab, is marketing a wearable headband that analyzes brain activity to assess the wearer's level of focus. Educators, for example, might then use that data to improve how they engage with students.

■ Augmented reality through special eyewear and 3D modeling will continue to transform how shoppers envision products in their homes or offices and how media subscribers experience stories and entertainment.

■ Voice-activated commands will be everywhere whether through Apple's Siri, Amazon's Alexa, or Google Assistant, providing us with a receptive audience by way of our refrigerators, vacuum cleaners, clothing, and stuffed animals. And it's not all talk: Nissan Intelligent Mobility demonstrated a concept car with brain-to-vehicle technology that allows a car to "read" brain waves to assist a driver in initiating maneuvers more quickly or to adjust the internal environment of the vehicle to maximize comfort. Another—and very different—application of interactive technologies: an empathetic robotic Aflac duck designed to be a companion for children undergoing long and often painful cancer treatments. Beyond a mere high-tech plaything, the duck can mimic moods and knows when to offer a loving nuzzle when a child needs it most. My Special Aflac Duck won the CES Tech for a Better World Innovation Award. The insurer says it will give away at least 16,000 ducks to children newly diagnosed with cancer.

■ Self-driving, connected vehicles will be on the consumer market before we know it. And the first wave of these vehicles will likely be used for pizza delivery. Ford Motor Co. displayed a self-driving delivery vehicle, and earlier this year announced it has partnered with Domino's to test the service. At CES, Ford also announced a partnership with courier company Postmates to test expanded delivery services in cities to include groceries and other items. Meanwhile, Toyota has teamed up with Pizza Hut to pilot its delivery vehicle. Both concept vehicles are expected to be tested at MCity, a 32-acre urban testing ground for driverless and automated vehicles, built at the University of Michigan with cooperation from the Michigan Department of Motor Vehicles.

■ Smart speakers are among the fastest-adopted technologies, having achieved 50 percent penetration in U.S. homes in just three years. "Any device powered by electricity will be voice-controlled," Palmer said. While Amazon was not exhibiting at this year's show, it nevertheless had an abundantly visible presence through some 30,000 examples of apps and products designed by other companies—from Toyota to Kohler—to be compatible with its Alexa device. Did you ever think you would want to be able to tell your toilet to flush itself or close the lid? Maybe not, but if you could, maybe you would. "Am I that lazy?" Palmer asked our tour group, as we

approached the Toto USA exhibit. "Well, yes. Yes, I am."

■ Companies that might have been considered old-line—think BlackBerry, Honeywell, and ADP—have reinvented themselves through their understanding and embrace of technology that allows consumers to be more secure. "Security," Palmer said, "is the gateway drug to home systems." BlackBerry, he pointed out, just may be one of the most compelling turnaround stories in the tech world, having embraced the smart home marketplace.

■ At Honda's booth, spectators were charmed by an adorable three-foot robot. After the 2011 tsunami that devastated Japan, the automaker discovered that children responded to the robot, which is capable of expressing empathy. "Americans have no interest in this," Palmer said, adding this nugget: "Robotics are way ahead of anthropology and sociology."

■ Some 15 million American homes have cut the cable cord and instead have over-the-air antennae for TV service. So how can Comcast expect to flourish? The broadband giant will provide its customers the ability to connect various Internet of Things technologies that can be controlled through its voice remote.

What hasn't changed about CES since the last time I attended more than 30 years ago? If nothing else, televisions are still large. Thanks to Sony, they are larger and thinner than ever. The 146-inch monitor it introduced called "The Wall" consists of individual, linked panels. When one of the panels reaches the end of its functional life, rather than dump the whole set, the Sony Wall would allow the owner to replace just one of the panels.

Companies like the ones mentioned here are certainly keeping the U.S. Patent and Trademark Office busy. In 1986, the office received 65,487 applications; in 2015 (the last full year for which data is available), 288,335 applications were received. The aforementioned Aflac duck, for example, has four patents pending.

Looking at the pace of invention in this country in hard numbers is dizzying, but perhaps this was always the case. Quoted in a literary magazine at the dawn of the 20th century, U.S. Commissioner of Patents Charles Holland Duell offered the following observation: "In my opinion, all previous advances in the various lines of invention will appear totally insignificant when compared with those which the present century will witness. I almost wish that I might live my life over again to see the wonders which are at the threshold."

Hot on the heels of my CES experience, and as we barrel into the 21st century, I have to say I have a similar sense of wonder at what the future of innovation may hold.

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A portion of this story was originally published on the NACD Board Leaders' blog at [blog.NACDonline.org](http://blog.NACDonline.org).