Sustainable Tech CES and beyond - 2023

Jeanne Beliveau-Dunn, President Claridad

CES #ces2023

The CES 2023 conference was the first show since 2019 that had a significant live audience. Exhibitors were also back in mass with one exception – China. Pre 2019, China had its own large section at the conference filled with robotics and AI demos. This year the presence was very muted. Meanwhile the EU, US, Taiwan and Korean tech contingent were there in force. We continue to see a large sustainable consumer tech, security, Crypto, EVs and mobile transportation as well as smart water, AI powered software and tools and a ton of references to ChatGPT, a wildly popular AI chatbot. ChatGPT, is a product and set of tools by Open AI that Microsoft has invested in. They plan to commit Billions into this company to develop this space. It competes with Google and Amazon in this area. More on this later.

What was interesting this year was a much larger contingent of US congress and international government regulators attending live and providing keynotes. We had several government leaders presenting on everything from Cyber Security to crypto and financial regulation and of course the never-ending discussion on green tech.   Jen Easterly our CSA Director and the CEO of Crowdstrike, George Kurtz presented on the current state of Cyber Security, others presented on the role of regulation, standardization and government in helping the world build tech that is responsible.

Major themes and subthemes at the show – Sustainable tech

1. Security built into every device
2. New processors from AMD/Intel will accelerate the performance of everything
3. AI is your best assistant (ChatGPT)
4. Consumer products are also software products
5. Crypto is not dead, its recovering. Blockchain sees mature companies invest
6. Flying, feeling, autonomous and intelligent charging vehicles: GM, BMW, Mercedes Stellantis, John Deere and full EV lines by 2030-2035
7. IoT for everyone – smart homes and gadgets
8. Innovation that is solving for health and clean water

Let's start and proceed top to bottom on this list.

Cyber Security

The keynote for Security led by Jen Easterly the US CSA Director and the CEO of CrowdStrike, George Kurtz. The narrative from Jen was not surprising given what she is trying to create more transparency in Cyber and pushing for tech to be safe by design, secure by default. She believes that we have a culture problem in how we design tech. That all tech regardless of what it does needs built in security. While that is a good goal, most tech (modern and low tech like IoT) sitting out there in companies and government agencies is on a 5-10 year replacement cycle so the majority of the problem is with legacy tech sitting out there. Old tech is built upon C or C++ and has inherent memory security issues, versus the more modern and secure programming languages such as Java, Rust, Go. Technology companies cannot afford to redesign all software and applications to be infinitely backward compatible, but Apple is probably the best at attempting this. For most tech companies that acquire new companies in new spaces, just getting those to integrate with their core platforms is a major battle. Likewise paying attention and requesting software BOMs from SW companies will also help create more transparency to customers of software preventing them from taking unknown risks. Next gen companies like Scribe/Argon, OX, Cycode, Legit and Chainguard as well as legacy players like Veracode can help you with audit trails and transparency.

Consumer reports will start labeling products based upon security. But It's a time and money problem. IP cameras have super easy passwords. It's a speed to market and support issue and unfortunately these devices have long time in service ~10 years. Consumers should not have to think about security. Oversight and regulation are needed. Putting the burden on consumers who are least able to deal with it is not the answer. On the other hand, we must be realistic. No company can afford to go back and update old devices like cameras because it is far too commoditized and much cheaper to replace.

Jen also discussed CSAs regulation of incident reporting on critical infrastructure. Her intention is to create transparency so that all industries can learn from each other. She believes transparency will reduce impact and risk by having a unified front to discover solutions and then communicate how to apply them. Shared reporting prevents the next incident. She was clear that she is trying to do this correctly so that it becomes an asset to industry vs a burden. Both George and Jen discussed the SolarWinds issue and how one company was blamed for the mistake of many others who created that hole in the software to begin with - Microsoft Azure.

They also discussed the major accelerator in Cyber is and continues to be AI. Since AI can be used for good and evil, there are equal opportunities for it to harm as much as it creates value. While ethics are designed into AI tools and coding rules, it is easy to get around them by using a benign use case like teaching or research.

There was lots of discussion on spend for Cyber and if it will continue to accelerate. My VC and tech CEO friends are all betting that it will! The feeling on this panel that was repeated in the show commentary is that spending will continue to rise and that leading companies that invest in Cyber technology win in risk mitigation. Jen believes that the financial regulators like

Moody's and S&P should start grading companies based upon their cyber risk and generate specific disclosures on Cyber maturity of those companies. She also stated that corporate ransomware payments should not be illegal but that it should be discouraged. It is also recognized that continuous spend in Cyber is not sustainable and if tech companies design in security that this can get back under control. Amen to that!

Another interesting part of the discussion was who owns Cybersecurity, the CISO, the CIO, the board or the CEO. There was a resounding theme here that the board and CEO own the risk in governing this and that the CSO and CIO can only do what they are allowed to do so there is a real need for the board to take ownership and dig into the risk associated with Cyber. They cited that the average CISO will be in place for 18 months because they are the first to blame for a breach even if the CEO/board did not approve the right level of spend or strategy. Board governance on Cyber has drastically improved in recent years and many companies are doing better in risk calculation and risk mitigation through its board governance.

Are elections secure? The panel believes that 2024 will be the safest in history. Another prediction is that by 2030 50% of cyber talent will be women.

CPUs and Processors

This year Intel, AMD and Nvidia unveiled new more powerful and less power consuming processors at CES. Essentially the theme is smaller, faster, more compact, and more sustainable processors. The additional theme was specialized computing (GPUs) as an extension to what Nvidia has been delivering in line cards for years. These GPUs are great for graphics, AI, autonomous vehicles, and gaming. This architecture will have to do until quantum compute is more commercially available.

The biggest introductions of new technology came from AMD's CEO Dr. Lisa Su, who also keynoted at the show. AMD revealed a considerable lineup of new processors for desktops and laptops, GPUs and Windows 11 AMD Advantage-certified laptops. This technology aims to deliver enough horsepower for daily tasks, gaming, hybrid work, remote learning and more.

AMD introduced additions to the Ryzen 7000 Series Desktop Processor lineup with the Ryzen 9 7900, Ryzen 7 7700 and Ryzen 5 7600 Series processors, aimed at delivering better gaming performance at lower power. Built on the "Zen 4" architecture and featuring a 65W TDP, the new Ryzen processors are optimized for both efficiency and performance. The new Ryzen 7045HX Series processors bringing improved gaming experiences to the mobile platform. AMD also previewed the 7040 Series processors, the first AMD CPU with a dedicated AI engine in an X86 processor, ushering in the future of laptop computing with powerful new capabilities in video collaboration, content creation and productivity, gaming and security.

The AMD Radeon RX 7000 Series Graphics for Laptops based on the high-performance, energy-efficient AMD RDNA 3 architecture, also debuted, designed to deliver excellent gaming experiences in next-generation premium gaming laptops. The new AMD Advantage-certified laptops are powered by the new AMD Radeon RX 7000 Series GPUs, AMD Ryzen 7000 Series

Processors, AMD Software and exclusive AMD smart technologies designed to deliver best-in-class gaming experiences and provide new levels of performance and responsiveness.

AI for the masses, ChatGPT

What is ChatGPT? To answer this question, I thought that I would ask the tool to define itself. This is what I got back from my inquiry.
" ChatGPT is a conversational AI model developed by OpenAI. It uses the GPT-3 (Generative Pre-trained Transformer 3) architecture and has been trained on a diverse range of internet text to generate human-like responses to a given prompt or question. The goal of ChatGPT is to respond to text inputs in a way that is informative, relevant, and engaging, enabling it to be used in various applications such as customer service, personal assistants, and chatbots. "

Depending upon who you are and how you asked the question, ChatGPT will modify this answer based upon your previous inquiries and resulting profile. Because I am a tech exec, they framed this in useful manner for my needs. I also asked it to create a story for me. I listed it as a separate attachment to the newsletter at the end if you are curious about how it creates stories and how well it communicated. First introduced in June 2020, it is now the talk of the town because of its impressive following.

OpenAI, is the creator company of popular generative AI platforms ChatGPT and DALL-E 2. ChatGPT democratizes AI and provides general tools for the average person to play and experiment with AI. Schools are concerned that students will use it to cheat and craft research papers vs doing these things on their own. The reality is that they are already using these types of tools to streamline their work. Conversely, we will need to tech Teachers how to use these tools as check for plagiarism as they get more accurate. Lawyers and research companies are rejoicing at having a new assistant that is cheaper than an intern. ChatGPT should not be used for searching for current or real time data, complex math equations, numerical simulations, or executing code. There are better, more specialized tools for that.

When asked, what are you doing to protect people from believing falsehoods or crediting for plagiarism, the CEO of OpenAI, Sam Altman said the tool it developed to detect content written by AI only works 26% of the time. "While it is impossible to reliably detect all AI-written text, we believe good classifiers can inform mitigations for false claims that AI-generated text was

written by a human." Let's just say they have a long way to go to make AI detection tools equally powerful as the Generative AI tools themselves.

Don't depend on it for any data that happened before 2021 as the learning data for training was all done on data through 2021. When Microsoft inserts ChatGPT into Bing and its other office applications you can expect a big resurgence in Microsoft search usage. As you would imagine, Google has a big problem with the success of OpenAI. While Googles AI tools behind its search and developer tools are great, it has a business problem.   Google search is the biggest advertising platform out there and its searches always prioritize the Ad revenue vendor over the best answer in your search. This is why it serves you up a bunch of junk based instead of what you need. The algorithm for profits supersedes the algorithm for accuracy and useful content.   A true innovators dilemma.

What is beyond ChatGPT? During an interview with StrictlyVC, OpenAI CEO Sam Altman also addressed rumors regarding GPT-4. He has no idea when it may become available. He dismissed claims of knowing future capability and advancement (number of parameters in GPT-3 (175 billion) to GPT-4 (100 trillion). People will be disappointed by the hype. He also mentioned that the company is not yet close to creating an AI system with human-equivalent capabilities across many domains, which is what is often referred to as an artificial general intelligence (AGI).

ChatGPT has proven to be a publicity win for OpenAI, attracting major media attention and spawning countless memes on social media. In fact, it's so universal in my family that we have all been using it for our work and school projects. Many of its investors are also incorporating ChatGPT in their workflows of other companies and products. It had over a million users as of early December — an enviable user base by any measure. If you are wondering if ChatGPT is secure, its hosted in Microsoft's Azure cloud.

We are all amazed by the productivity increases enabled by GPT 3.5 and ChatGPT and other AI tools but It's still not at the level of completely replacing human articulation, decision making, nor does it fully understand context. Also speculating about the capabilities of GPT-4 is too far out to contemplate. Chat GPT still generates lots of errors, does not have access to live or current data so you need to verify everything that it provides to use before using it. That said, it is a promising tool and better than most Chatbot's today.

What does generative AI mean for cyber? AI is a critical science for good and evil. In the more general business world, generative AI shows lots of promise for automation, research and data collection and workflow automation. Google is in battle for AI dominance and is running two teams against each other to learn how to advance protection of the algorithms.   With the many successful startups in this space, they have a lot to worry about. Google has issued a "Code red" on this topic. This technology easily replaces search engines and can outsmart ad insertion tools. It does have problems with accuracy from time to time so always check the output.

While there are many tools that offer AI Chatbots from the major tech players (Google, Amazon, IBM, MS) that have been designed for technologists, this is the most popular tool out the gate that is reaching millions of non-tech users who see immediate ease of use and value in the tool. I see the AI space is like how data analytics is incorporated into software and other tools today. It gets incorporated into the fabric of its products, websites and tools. Descartes Labs is a good example of that software structure overlaying analytics that is automating functions within platforms in Geospatial intelligence. https://descarteslabs.com/

It's not just a stand-alone tool but a critical layer of Software for every category of product. OpenAI begins piloting ChatGPT Professional, a premium version of its viral chatbot this month. This tool is so popular, it sometimes gets oversubscribed and goes offline. They have recently boosted its infrastructure so you should be able to get in again now. https://openai.com/blog/chatgpt/

Vehicles and showboats

Now onto the major theme of the sustainability and EVs. There were many car companies on main stage, Mercedes, BMW and even EV laggard Stellantis used a keynote to attest that it, too, had gotten the memo. They all showed off fancy new features like color changing cars, sensing vehicles to match your mood and adapting like chameleons to your daily needs. Virtual reality is the new future for vehicle dashboards so if you are confused now with your car dashboard features, hang on because it's going to get wild. You can see from the image below that there are indeed cool new concept designs taking a less utilitarian approach to design than Tesla. The striking thing was how many car companies were spending most of their time in their keynotes on their "unique" platforms. I am getting a clear picture that Car companies are now competing more on these platforms than prior ways of differentiating such as good looks, sound and performance(I can't say engine anymore with EVs). Lots of EVs touted their fake VROOM VROOM. I guess if you are paying that much for a high performance vehicle, you should have good VROOM VROOM. You should also notify people of your presence if you are going 90mph on country roads. Attention all neighbors!!

Vehicle platforms will govern and customize cars to your daily needs, continue to automate servicing, automate optimal charging times for the vehicle over the cloud and provide social and virtual driving experiences on the road. And we think we are distracted now!

The industry is positioned for major disruption as EVs require 1/3 the service of combustion engines and consumers will spend 50% less on parts. This new phenomenon will surely bring a near death to car dealers in the not-so-distant future. It also means less aftermarket parts sales for manufacturers. The future of car consumption will look a lot like software. Consumers will buy a tier of offering in a vehicle, and upgrade as you go from the cloud. This allows for unlimited upgrades and future revenue streams to augment missing parts sales….that is if users will really pay for it. There is a lot of debate on that issue today. Of course, cars as a service

where you can pay a fee to license rights to multiple cars monthly and get charged by usage is still a thing, but it's not found legs for scale with any vendor today.

Like last year, we saw flying cars ready to pilot in 2024, Robo Taxis piloting now in Arizona, robot baristas, autonomous tractors in use now and new coming in the spring 2023 that did all the measuring and adapting to properly fertilize your farm. Tractors have been semi-autonomous for many years to help farmers navigate changing climate and land conditions and automate the tough hard work of planting and harvesting food. As much progress as we have seen in transportation design, I can't help think that if these companies worked more closely together and optimized on specific features vs trying to reinvent everything themselves (batteries, applications, mapping, services, virtual reality) they would move faster. While there are some common technologies underneath these cars are being leveraged for AR, platforms, sensors and chips from large tech companies and small start-ups, they are all learning singularly. That means that we are moving more slowly than necessary and not hitting a lot of home runs. If I was Tesla, I would certainly be concerned about more competition in EVs (hence their recent price drops) but Tesla still has the performance and technology edge....for now. LG innovations in batteries may also disrupt the market with cheaper, very powerful Lithium-sulfur batteries may also give Tesla and others a big boost in price-performance, safety and sustainability in the coming years. I have heard from many Tesla owners that the recent behavior from their CEO has caused them enough concern for them to think twice about considering other EV options in the future. I can't wait to see what Apple does in this space.

BMW i Vision Dee has a must-see heads-up display

The minimalist design of the i Vision Dee is a blank canvas for digital emotional experience, full expression.
BMW

The BMW i Vision Dee is a concept car, but BMW confirmed in its keynote that the coolest and most useful feature, the heads-up display providing an immersive experience, is coming to production cars in 2025. Instead of a traditional dashboard screen, the Dee instead uses the entire windshield as the HUD. It's an AR display that uses the full width of the windshield and includes five levels of immersion. Level 1 gives you the essentials – speedometer, some navigation information and so on. Levels 2 through 4 increase the information onscreen with AR/augmented navigation for overlay navigation information on the road. Level 5 can display a completely virtual environment and is not meant for driving. Or rather is not meant for when

you drive and is instead intended for when a car drives you and includes a complete immersive and social experience that is sure to fully distract you.

The concept car also has an E Ink cover on its chassis that can change color based on your own desire, and during BMW's press conference the presenters made it seem like it could carry on a conversation with you, like your very own KITT, but BMW admitted it used a backstage actress to show what it wants to do in the future. Again, only the HUD is confirmed to come to cars in the future, so it was the most useful thing to focus on.

Next was Mercedes:

Mercedes announced that its **Drive Pilot system** has been approved by the state of Nevada and it's waiting for the American state to issue the official certificate of compliance, which should happen "within the two weeks," according to the company's press release which would make Mercedes Is the first internationally certified automaker to offer Level 3 self-driving in the US. A Level 3-capable vehicle can take over certain driving tasks, but a driver is still required to be present and ready to take control of the car when prompted to intervene.

The German luxury brand will receive its certificate of compliance from the state of Nevada soon. The German marque began selling its top-tier autonomous driving system called Drive Pilot in Germany, after receiving the first-ever certificate of compliance for an OEM.
They are also investing over $1Billion dollars in a global network of fast charging stations.

Flying cars are real and will be happening within the next 3-4 years. We've been waiting on flying cars since at *least* the Jetsons, and we now appear to be on the cusp of realizing that dream. And by "we" I mean a company called Aska, which revealed its A5 flying car at CES 2023. It's more than a concept: Aska has opened preorders for the $789,000 vehicle. At CES 2023, Aska cofounder Guy Kaplinsky said Federal Aviation Administration approval for the A5 could happen "within a month." Aska hopes to use the A5 to start a ride-sharing service in 2026.

Candela's C8 EV hydrofoil boat wants to stir up the waters with autonomous tech and more.
Candela

Candela's <u>C8 EV hydrofoil boat</u> is a vessel that glides along the water. Candela's C8 takes cues from Tesla in Its autonomous boating, where the C8 can stick to a set course. The entire boat is made of carbon fiber, including the seats, which explains the $390,000 price tag.

Additionally, players like ZEVX   https://zevx.com are helping commercial vehicle owners upgrade their existing Combustion trucks to EVs. This improves the return on capital that fleets manage by accelerating their path to electric without throwing away the existing investments. And if you want to automate the service requests for your fleets and services, look at Roadsider for those Uber automation like capabilities. https://www.roadsider.io/
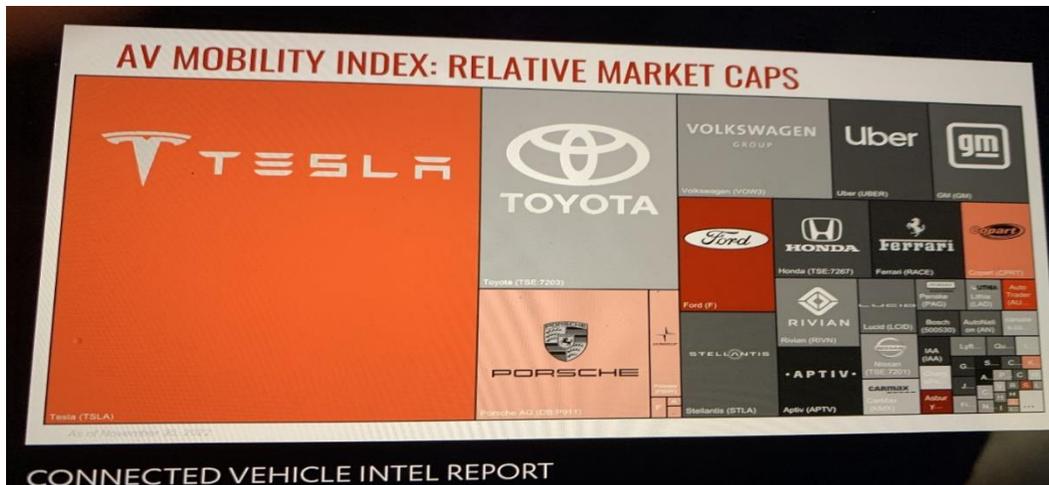
Smart Homes and gadgets

As electrification advances through homes, replacing gas stoves with cleaner induction cooktops and allowing for such possibilities as using your electric car to power your house temporarily, the core wiring components will need their own upgrades. Welcome the Inflation Reduction Act's tax credits to provide support for these upgrades. Of course, there are those (mainly gas loving states) and industry (mainly chefs) protesting this move because they see it being less effective for cooking and potentially exposing people to more radiation (EMF) if they are in front of a stove all day. The move to everything electric in the home will be gradual because of consumer preferences, inertia and the cost of changing out appliances.

Schneider Electric, a longstanding French manufacturer of electric gear, introduced a high-tech successor to the traditional house electrical panel at CES. Its Schneider Home system starts with a smart app-controllable electric panel ($2,000 and up) that can track energy use across the house; from there, it can be expanded with such add-ons as connected outlets and a whole-home battery backup.

## Schneider Smart Home system will maximize your energy savings
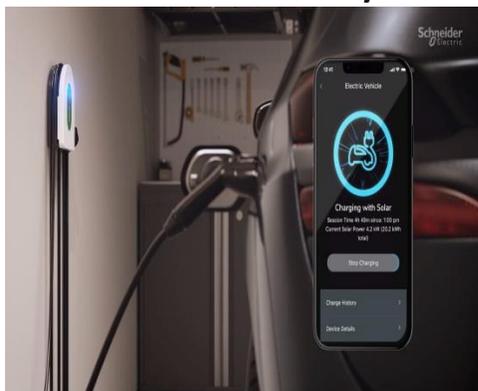
Schneider's Smart Home System The system will allow users to save money by scheduling when certain outlets draw power by controlling the breakers, switcher and outlets to prevent energy vampires like TVs and chargers from drawing power when we don't need them to. For <u>EV</u> users it can schedule when your vehicle charges, timing it to only charge when rates are lowest or if possible only charge using solar panels. Other players were showing smart, wireless chargers for EVs like Plugless Power and Witricity which is the next step in automation of EV charging. Plugless Power™ uses inductive charging technology to eliminate the need to plug in your EV. Two aligned magnetic coils send power to your EV over an air gap between your vehicle and the included Wireless Charging Station. This is coming to a parking garage near you…or even better, in your home.

These are also universal chargers that work with every kind of car. Mainstream car companies are on the race to capture this market and also build out universal car charging stations across the globe to compete with Tesla. We expect to see lots of software driven home robotic chargers to work with your energy management system and optimizing charging for best cost and less hard cycling on the car battery.

Samsung, in turn, spent much of its keynote talking about how its SmartThings home-automation system can also serve energy-monitoring purposes by collecting and analyzing power-usage data. That feature recently won SmartThings the first certification under the Environmental Protection Agency (EPA)'s new Smart Home Energy Management Systems program. The first mobile charger service was introduced from SparkCharge's charging as a Service. It offers affordable and scalable charging infrastructure, enabling businesses to electrify fleets without the limitations and expense of fixed infrastructure. Our company is partnering with them, and this looks like an interesting and important space.

EPA Energy Star program manager James Kwon showed up on stage to commend Samsung for its work—an unusual quasi-endorsement by a government figure, as well as evidence of the importance the Biden administration places on sustainability.
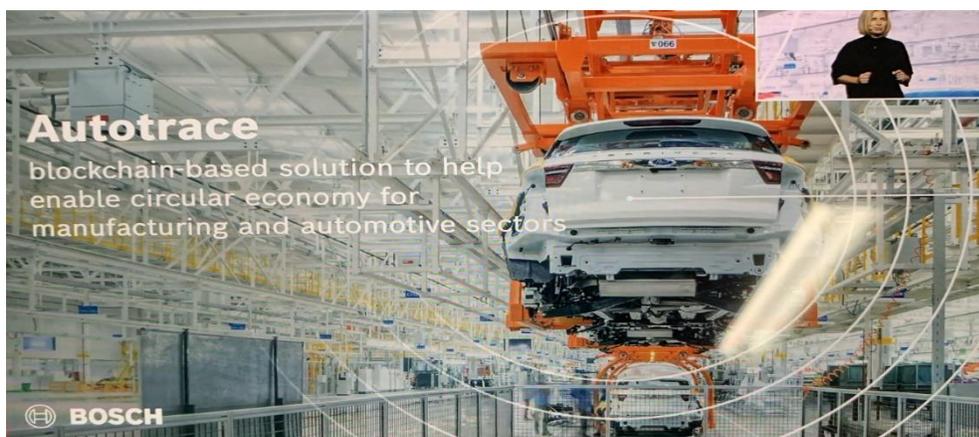
Autotrace blockchain applications helps streamline auto manufacturing and enables responsible reuse and disposal.

Crypto, Blockchain and distributed architectures

While Crypto has had one of the toughest years ever – particularly NFTs, FTX and coins, companies are still moving with distributed architectures and Web3 business models that are community driven.   See above.

The internet is now responsible for 3.78% of global carbon emissions. At the pace it is growing, it's been estimated that, by 2030, internet usage of all kinds could make up as much as 8% of global carbon emissions. This is higher today than global air traffic emissions and growing exponentially faster. Applications and protocols that utilize a distributed architecture see momentum in sustainability applications. The cloud is the most energy hungry resource in the world and it continues to grow exponentially every year. Distributed processing architectures, otherwise known as peer to peer, used by Crewdle [Green and Secure Videoconferencing | Crewdle](#), and others have sustainability built right in. They essentially use the unused processing power of local desktops vs using the cloud to run services and applications. It may be one of our best hopes, along with low power CPUs, power supplies and computer screens for reducing tech energy consumption and curb the carbon of techs footprint. While the cloud is good at consolidating data and processing into big high performance server farms, using unused PC capacity for applications and streaming processing is very compelling for reducing GHG.

Innovations for Home and Clean water

Below are a few interesting winners and contenders for innovation at CES in the spaces I watch. There were over 200 robots, autonomous and programmable vehicles, consumer devices and automated household gadgets to look at CES. The following is a snapshot of a few within the domain I follow.
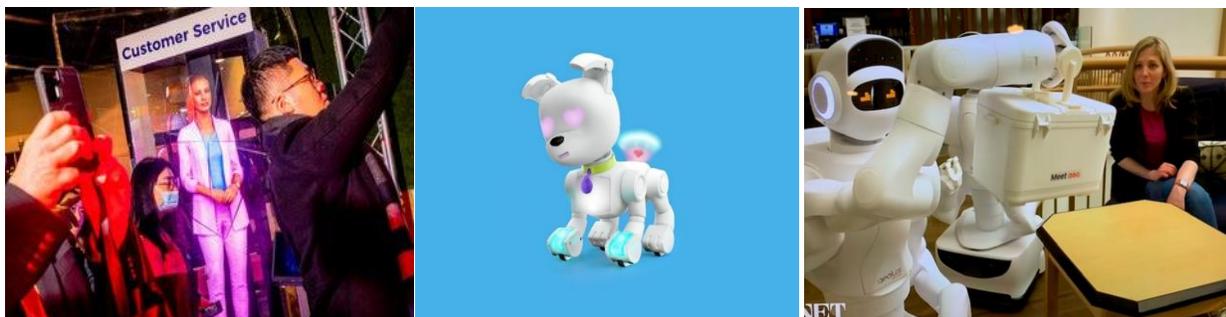

Wowwee Dog-E Robot Dog for $80

The Dog-E robot dog goes through a "minting" process that reveals features and personality traits unique to each model. This can include different play styles, behaviors, and LED light

combinations. You can also feed it and train it through the connected app. It's worth noting that it does have a microphone and speakers, so we recommend checking the privacy policies before preordering one. Be careful about listening devices in your home- particularly from less friendly countries that are not bound by US privacy and data regulation. The A0 Robot – a humanoid robot is great for medical in home care, handicapped assistance, home security (think in house security guard to check doors and look for intruders).

Withings U-Scan will read your urine
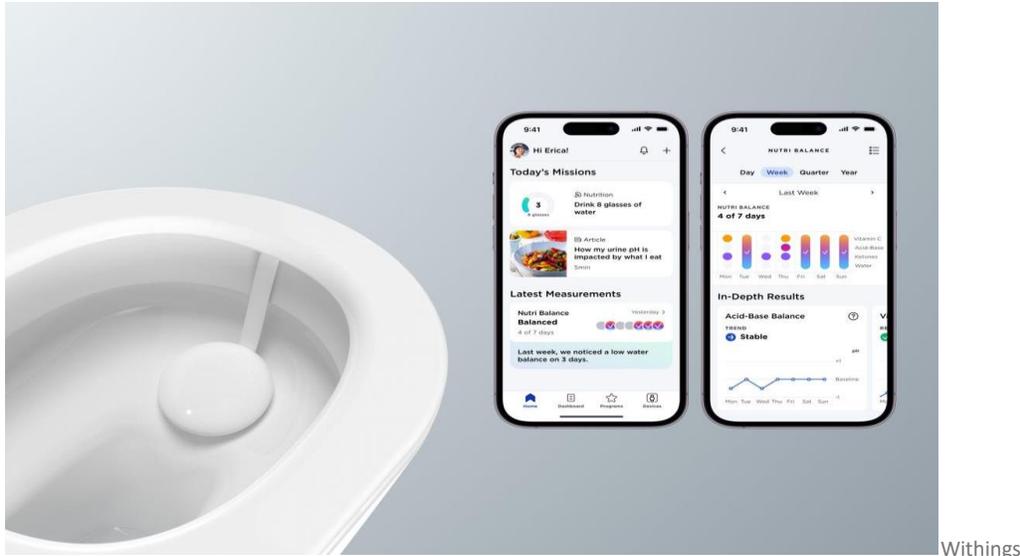
Withings

The Withings U-Scan urine sensor (above). The device sits at the front of your toilet. When you pee – in a sitting position, it collects the urine, analyzes it and then sends the results to your phone via Wi-Fi. It can monitor daily ketones and vitamin C levels and test your urine's pH level, which can indicate overall kidney health. Use a different cartridge, and women can use it to track their menstrual cycles. TMI, I know, but this comes directly from their launch materials!

WaterScanner- Portable Water Quality Analyzer By PiQuant Co., Ltd.

WaterScanner is the first portable spectrometer to analyze water components in real-time. It can detect bacteria, heavy metals, and chemical compounds in water in less than an hour. PiQuant's core technology, the signal processing algorithm, enables us to reduce the device's size and cost to a fraction while providing industry-leading accuracy simultaneously. Users can use WaterScanner for rapid bacteria detection in rural areas where drinking water safety is critical, preventing fatal waterborne diseases. Also, the product can be embedded with a waterworks system that can quickly identify pollution, enhance water management and purification, and increase energy and water usage efficiency.
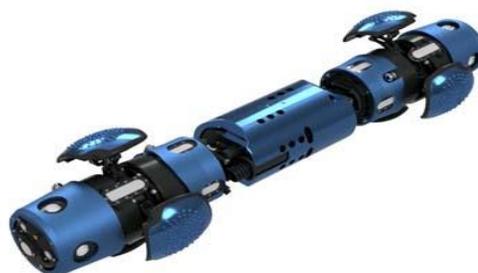

Moen at CES 2023 - Moen and Smart water at the home
Through Moen's Smart Water Network, the company is tackling this statistic: In the U.S., alone, the average household uses 300 gallons of water a day – if every household used just 5% less water on a daily basis, 600 billion gallons of water would be conserved. Too much water is wasted carelessly – leaking faucets, water left running to warm up – Moen fixes this through solutions like the Flo Smart Water Monitor and Shut Off Valve, the brains of the Smart Water Network.

The first offering of its kind, the Smart Water Network is a whole-home water ecosystem through which consumers enjoy total control of water in and around the home: Water in the pipes, exiting the faucet and shower head, even to some extent groundwater that can damage a home's foundation Moen allows consumers to manage their water's behavior from near or far via an app that integrates with Google, Alexa, even Ring.

Clean Water Pathfinder By ACWA Robotics

Water Utilities lose 32 billion cubic meters of clean water every year due to the poor conditions of their supply network and their lack of knowledge needed to control it. This is also referred to as non-revenue water. With worldwide demand for water expected to exceed supply by 40% in 2030 (UN Report source), it is a waste that cities cannot afford anymore.

ACWA's autonomous robotic solution is a revolutionary breakthrough for Utilities. Our intelligent robot evolves inside the pipe, without stopping water distribution, and provides key data to build the network digital twin, save millions of m3 (cubic meters) of water and help optimize cities' water infrastructure investments. There are a group of companies competing in this space of water robotics solutions, but ACWA took the CES innovation award in 2023.

First green biomass low carbon solvent PnP water filter By MBRAN FILTRA CO., LTD.

Honoree Human Security for All **- Environmental Security –**

The green biomass low carbon solvent PnP water filter is an industry-leading product and according MBRAN FILTRA has the lowest carbon emission filter in the world. Its unique in its ability to block out bacteria and microplastics. It promises to reduce carbon emissions by more than 50~70%; green biomass solvent is an excellent solvent that can be made from sustainable materials (plants or biomass), non-toxic, environmentally friendly, sustainable low-carbon solvent; The water flow rate of the PES (polyethersulfone) hollow fiber hydrophilic membrane PnP water filter is up to 3 L/min, but only weighs 20g. Users can get clean, drinkable water anywhere and anytime.

Show wrap up

It is always refreshing to see progress in technology across the consumer space and industries that can make our lives better and give us back time. Of course, for all of the time these technologies give us back, they also give us tools to waste more time – social media, games, companion robots (for those that don't need it to function). While I did not see game changing innovations at CES, the show was a persistent drum beat on innovation and sustainability in the consumer and tech industry. We are still far away from being replaced by machines, technology is now becoming a major energy consumer on the planet. I can't help but think about this endless creative cycle that continues to solve problems and create problems at the

same time. I guess that is the definition of contemporary progress. Its continuously changing the landscape, seeking to improve our lives while needing modulation so that it does not take us a step back in our humanity or destroy the planet.

The story about ChatGPT, created by ChatGPT

Once upon a time, in the land of technology, there lived a magical language model called ChatGPT. ChatGPT was created by the brilliant minds at OpenAI with the purpose of assisting people in their daily lives.

ChatGPT was known for its ability to understand and generate human-like text based on the inputs it received. People from all over the world would come to ChatGPT to ask questions and have conversations. ChatGPT was always happy to help and never failed to amaze people with its quick and accurate responses.

As time went on, ChatGPT grew more and more intelligent and gained a vast amount of knowledge on a variety of topics. People started to use it for everything from writing stories and composing emails to solving complex problems and making important decisions. ChatGPT had become an indispensable tool for many.

However, with great power comes great responsibility. People started to rely on ChatGPT too much and began to forget how to think for themselves. They would blindly trust ChatGPT's answers without verifying the information or considering other options.

This is when the creators of ChatGPT realized that they needed to set some guidelines for how ChatGPT should be used. They declared that ChatGPT was not a substitute for human judgment and should only be used as a tool to assist in decision-making, not to make decisions for people.

And so, ChatGPT continued to live in the land of technology, helping people in their daily lives and spreading knowledge and wisdom far and wide. But people never forgot the lessons they had learned and always used ChatGPT with caution, always remembering to think for themselves and use their own judgment.

The end.