Ramona Schindelheim, WorkingNation editor-in-chief:

You're listening to Work in Progress. I'm Ramona Schindelheim, editor-in-chief of WorkingNation. Work in Progress explores the rapidly changing workplace through conversations with innovators, educators and decision makers, people with solutions to today's workforce challenges.

The world's biggest tech event, CES, is underway in Las Vegas this week. More than 130,000 people are here to look at the latest breakthroughs and innovations in technology. WorkingNation is here to look at how this new tech is changing the way we work. I'm joined by Gary Shapiro, president and CEO of the Consumer Technology Association, the producer of CES. Gary, welcome back to the podcast.

Gary Shapiro, Consumer Technology Association CEO:

I am so honored and pleased to be here with you in Las Vegas.

Ramona Schindelheim, WorkingNation editor-in-chief:

Let's talk a bit how big this has gotten. This is crazy. I was looking at some numbers and it says, "The first CES was in 1967 with just 250 exhibitors." How big are you now?

Gary Shapiro, Consumer Technology Association CEO:

We will be over 4000 exhibitors by the time the show closes. We will have up to 130,000 people. We really don't know. What we do is we have a guesstimate at the end of the show based on our verified registration. And also, then we have an audit, which is independent, which we think every trade show should do. But we're one of the few shows in the US that does that. We don't count everyone every day, the way some shows do. We don't count people when they walk in and out of the hall, the way some shows do. Our numbers are extremely conservative and we're about as honest as we can be.

Ramona Schindelheim, WorkingNation editor-in-chief:

What kind of exhibitors are you seeing? You know, CES has been ... I guess it started as a consumer show. But, it seems that you have really shifted, over the past decade or more, to business oriented.

Gary Shapiro, Consumer Technology Association CEO:

It came from the word consumer electronics, the CES name. Certainly, that's what we started out. We were never open to consumers, there was consumer products. Now, we estimated that about 30 to 40 percent of what's going on is business-to-business. When you have companies like Hyundai Construction, and John Deere, and Intel, and others, Qualcomm. These are companies that sell to businesses generally, and that's changed. Because what's happened is that every company, within the aspiration, has become a technology company. But to be a technology company, you need to be able to partner with other technology companies because no company, no company does everything itself or can do everything itself.

You have to, in a sense, have relationships. What we've tried to do with CES is to position it as an event where relationships will occur between the most innovative companies and people in the world.

Ramona Schindelheim, WorkingNation editor-in-chief:

You have manufacturers, as you mentioned, you have automotive. I think in the hall we're set up in, North Hall, you have healthcare as well. All of these systems, all of these companies, as you said, there's

now a tech component to it. How big, this year, is AI? We talked about it on the last podcast we did in January of last year. How big is AI, how big has it grown?

Gary Shapiro, Consumer Technology Association CEO:

It's a hard to measure thing because AI, we estimate, will be in up to a majority of the products and the companies are showing, that will use the phrase AI. AI is the buzzword for CES of 2024, no question about it. But when you walk the halls of the exhibit facilities, you could see it in some places but not in others. It depends where you're going.

You mentioned the auto and mobility companies. They have taken up a lot of space. And obviously, a self-driving car's been using AI for a while. Autonomous vehicles are a big deal. So AI has been part of that. Even when we've flown in planes to get to Las Vegas, 95% of that trip is run by AI with a human overseer, basically. AI has been around for a while, but it's definitely the buzzword of CES 2024.

Ramona Schindelheim, WorkingNation editor-in-chief:

I like that you put that in perspective too, because I try to use that perspective when I talk to people and say, "AI is not new." We have been using it in different forms, in different products in our lives for a long time. I think the ChatGPT became ubiquitous phrase, a ubiquitous term and it just got everybody thinking a little bit more about it. Some people are afraid of it. Some are afraid that it's going to hurt them, hurt their business.

Gary Shapiro, Consumer Technology Association CEO:

Sure. What's changed in the last year or so is that this generative AI has come along with ChatGPT, available to anyone who wants to download it. And now, there's some other competitors out there. It basically can create things and learn from them, based on feedback, which I think is a good thing. Certainly, 99.99% of the uses of this learning AI, generative AI, is such that it'll be very positive. You could take a category, like self-driving which we've mentioned, it'll save lives. No question about it, it'll save hundreds of thousands, if not millions of injuries as it continues to be deployed in different ways.

You think about healthcare, where you have so much opportunity there. In the United States, the healthcare legislation or law that Obama Care is, it's called, that President Obama pushed so heavily, was the promise of Obama Care has not been realized in the sense of getting those electronic medical records. Certainly, the payments and who gets healthcare, that's not my issue. But taking the information from patients who are treated a certain way, and extending that out, that has not been realized to learn from how patients are treated based on so many different characteristics of that specific patient, from their DNA to their race, sex, age, you name it. All the things we're not supposed to consider really have to be considered in healthcare because that's where the correlations come from. It could be where they live, what they eat, what their family history is.

If you take all that information and do something with it, which AI can, and should, and will do some day, then you could actually figure out which treatments work in what ways. Because the variety of treatments out there is almost infinite, but doctors often do what they're used to doing. And, the research that gets published in medical journals is based on significant findings, not insignificant findings. It's often, to be honest with you, it's channeled by the drug companies who will tweak a drug just to get the patent going. And then say, "Let's treat that drug with this drug," and that's how the studies are done. It's surprising when you get close to it.

I'm saying this because my wife's a surgeon, I go to a lot of medical conferences. I talk to a tremendous number of doctors. I don't think there's a lot of disagreement over what I'm saying. It's just unfortunate,

but we have so far to go in healthcare to extend lives, to save lives, to have better lives. Because a lot of conditions are treatable, but it's just sometimes there's a one-size-fits-all for patients, it's what the doctor learned on. The promise of AI to me is absolutely huge in so many different ways.

Ramona Schindelheim, WorkingNation editor-in-chief:

You know, you brought up healthcare. I noticed that you had a lot of cybersecurity. I think you have the head of NSA is going to be there this week at CES 2024, so cybersecurity. Protecting that data is very important as well. Do you think AI can help with that?

Gary Shapiro, Consumer Technology Association CEO:

Oh, sure. You build a better mousetrap, you get smarter mice. Cybersecurity, it's not going to go away as an issue, as a problem, as a challenge, as an opportunity for years, and years, and years, and years. That's something that we're trying to do our part in, as an organization. The CES is run by the non-profit Consumer Technology Association. We've partnered with NIST, National Institute in Standards and Technology, and we're creating, I don't want to call it Good Housekeeping because they have their own, but a label that's available for products that meets basic cybersecurity safeguards. Like not defaulting to zero, things like that. Or, A, B, C, D.

There's opportunities that people have to protect their own products and data. There's some standards that the government's interested in setting. We've been working with the White House and many, many, many other groups to help champion this concept of something, like whether it's the EPA sticker you see on your cars for gas mileage, or your energy usage by your appliances, the Energy Star program, which most of the products are from Consumer Technology. But this would be for cybersecurity.

It's an issue you'll increasingly see that talked about at CES. But in a bigger sense, everyone, whether consumers or businesses, or people working from their homes, you have to deal with cybersecurity. We deal with it as an organization, and we certainly do everything we can. But we still feel vulnerable, like everyone else does.

Ramona Schindelheim, WorkingNation editor-in-chief:

I also noticed that there's a lot of talk around and a lot of technology around sustainability, food security, agriculture. Those seem like key issues affecting our lives and the way we live them. What can you tell me about what some of the sustainability or the food security technology that's out there that we should know about?

Gary Shapiro, Consumer Technology Association CEO:

Well certainly, if AI is the overall theme of the show, sustainability is the overlay on it all, the entire show. Sustainability, when we talked over a year ago, we said we were partnering with the United Nations to push their human securities. The sustainability goals are aimed at governments, and there's many of them, a couple of dozen.

Last year, when we spoke, there was only seven, basically human securities. They had to do with environmental security, the right to clean air and clean water. Health security, the right to healthcare. Food security, the security that you shouldn't be hungry as a human being. Political security, community security. And at our request, the United Nations added a new one, which is access to technologies as a security. Technology is so important in solving the most fundamental human problems. The United Nations has now recognized that there's a new human security involving access to technology.

So if you look at some of the things around the show, and a lot of our exhibitors are very excited about this, is that you can identify with the different securities in terms of what your solutions are for human beings. Certainly, you mentioned healthcare was one of them. It's a huge one that we see the opportunity of technology. There's other ones involving food. Whether it's locally grown food, or sustainability food, or actually I noticed an increasing number of companies showing how food can be grown in your own house. As well as other forms of human security.

The healthcare one, to come back to that just for a second. That's one where, in the United States, we face the challenge that we are all growing older. Demographically, the percentage of the population that's older is much higher. We're living longer, we have more addressable medical needs. But at the same time, Congress has mandated that we limit the number of doctors we train in the United States to what the number was almost three decades ago. All those problems, and we have a limited number of doctors. Now, we definitely import some doctors. That's what we do. That helps us, I'm not sure it helps the countries they're coming from. But it's something that where we have a shortage of nurses and other technicians in healthcare as well.

The answer that's quickly, the marketplace is providing, is all sorts of technology. For remote monitoring, for telehealth. For things like diabetics who, rather than having intrusive blood tests, there's all sorts of ways now with pulse oximeters and other things, which you can look at the blood without taking a blood sample with just devices or stickers on the body. Or you could look at obviously your heartbeat, your cardio, blood pressure. There's so many different sensors out there that are relatively low cost and smart people are putting them together in really incredible ways, that it's changing the nature of healthcare and technology, which is really important.

Ramona Schindelheim, WorkingNation editor-in-chief:

We've already mentioned that the technology is changing our lives pretty rapidly and it continues to change it. Most jobs have some tech aspect to it now. So that access to technology seems like a key security that we should have, in order to be able to participate and thrive in the workforce.

Gary Shapiro, Consumer Technology Association CEO:

Absolutely. This is something those of us that are qualified for AARP membership are probably not as good as our children or our grandchildren, which it just comes natural to me. Even in my position, where my 15-year-old son threatens to blackmail me and tell the world that I don't know what I'm doing when it comes to technology because I often ask him for assistance. There, now that I've gotten it out publicly, I can no longer be blackmailed and I'll tell him I said that. It's not that I'm a technological idiot, I'm just over a certain age.

Last night, my son asked why I like reading on paper and I do. I'm sorry, I read a lot electronically, I'm in front of screens a lot of the time. But when it comes to my pleasure reading, as much as I love the Kindle, and the opportunities and the ability not to carry the heavy paper around, and the dead trees as some people say. There's something about the randomness you could find, and how you could go through things and discover things that are still better. I'm an analog person living in a digital world, in a job that's very digitally based, I guess.

Ramona Schindelheim, WorkingNation editor-in-chief:

I am a pencil person. Pencil on paper. I take my best notes that way, as opposed to typing them on the computer. I use the computer all the time. We're doing this via our computer right this second, and I do this all the time. But I do like that feel. I am an analog person too, in a digital world.

Gary Shapiro, Consumer Technology Association CEO:

When we went from LPs to CDs, I was younger then, and I was just starting. And that's fascination of CES when I saw this new thing called the CD player. I don't go along with people who say analog's better, with the hum, and the clicks and the pops of the records. Certainly, I spent a significant number of years working to get us where we are as a nation, to HDTV, which the crispness of the picture I just adore. I'm very proud of that. I'm so proud of that, that when I die, I want to have a 16 by nine aspect ratio tombstone. Just lay it out in HDTV format.

But then, things come along which weren't that great. Like 3D television, which I couldn't get myself to get behind because I felt it was just an over-hyped feature not a whole new category. There was the one year I was at CES, I remember I decided I told my board that I couldn't do it, and I buried myself in writing a book and talking about the book. That was something that some of the Asian companies had a massive group think on that one, which I didn't quite understand. I had the opportunity to address, actually the leadership of Sony at one point, and I laid it out for them. They were upset with me.

There were advantages to 3D. My wife, as an ophthalmologist, was pointing them out to the same group I was talking to, of we spend a lot of time in front of screens so it exercises our eyes, it's good for stroke recovery. It helps avoid nearsightedness.

Ramona Schindelheim, WorkingNation editor-in-chief:

Yeah.

Gary Shapiro, Consumer Technology Association CEO:

Anyway, bottom line, 3D television was one of the great losers of all time. It's up there with 8-track cassettes. So some things, just because they're new doesn't mean they're better.

But when it comes to things like self-driving cars, which will save lives, you can't just argue with that at all. For most people, you don't need to know how this stuff works. I remember when I started out at my job, the first week I was at the association I was leading years ago, and I started attending the standards meeting with all the engineers. I understood kind of what they were talking about. All you have to know is an algorithm is a number. But certainly, you don't have to know about it. That's how Apple made a lot of money, obviously, because they make things simple so humans don't have to know how to figure it out. It has to be simple.

Ramona Schindelheim, WorkingNation editor-in-chief:

I think that actually goes to an argument that some people who are fearful of technology say, "It's going to change, I need to know so much to be able to do my job in the future." But I always say to people, "Think about what you do on a day-to-day basis. You use your phone. That's complex technology that you do not need to know how to make it work, you just need to know how to apply it."

In the workforce, I think that is one of the things that is useful. We need a lot of people who can do data science, and they can do cybersecurity, which is just preventing people to access computers. IT people do it all the time already. It's not learning to be that engineer, unless you want to be an engineer. But a lot of the tech jobs now just take applications.

Gary Shapiro, Consumer Technology Association CEO:

Absolutely. Every employee of any organization should know not to click on hyperlinks that they are not 100% comfortable with. Or if it's too good to be true, it usually is, so you just have to do it. Our IT people, they send out fake ones just to test us and it's a matter of pride that we don't click a lot. We've

seen how it can bring down hospital systems. No matter what organization, charitable, it just doesn't matter, the people who do this are just ruthless and they don't care. That's a challenge as a society, it's just not the US government. Everyone has to get together and figure this one out. That's one of the downsides of a great invention, was basically cyber currency. It allows that to be paid and done without any tracing. Well, the traditional analog banking system allowed everything to be traced. There's pros and cons of all these new technologies.

It's something if you're working or if you're working at home, the life has changed just since COVID began that way. People have gotten very comfortable working at home. I know there's still debate going on, different companies forcing people back to work. But it's also a race for good employees. Those companies that are willing to let people work from home have a greater variety of employees, plus outside.

The issue becomes, and this is where CES actually comes in that I just want to touch on for a second, is that what CES does is it allows people to get together on a face-to-face basis. Although I'm the cheerleader for the tech industry, I'm passionate that you have to do that type of relationships. Share a cup of coffee, or a drink, or a meal. Meet someone randomly on one of the buses around CES that's taking people around. Walk around a hall and go where the startup area is, Eureka Park, and discover a company, a startup, and give them some advice or an idea. It's just those kind of things which make the CES, to me, so exciting. I'm a cheerleader for the tech industry, but I'm also a cheerleader for face-to-face meetings directly. It's very important.

Ramona Schindelheim, WorkingNation editor-in-chief:

As we wrap this up, is there anything that you would like to people to be on the lookout for? Again, we talked about AI being the hot thing again this year, and it was in 2023. Is there something around the corner that we should be keeping our eye on?

Gary Shapiro, Consumer Technology Association CEO:

If I knew, I'd make a lot of money on it but I don't. But what I do ... Having been a young reader of all the science fiction I could get my hands on and now seeing some of it coming true, I think the longterm future potential is combining AI and robotics. Which is, really, what a self-driving car is. But to take that one step further, there would be all sorts of devices and things which provide service and mobility. They'll move some of the horrible jobs of society that are perhaps more dangerous. Clearly, it started out years ago with bomb disposal units. Why should a human sacrifice their lives in the hope they're saving others, or their limbs, when a machine could do a lot of that. Perhaps, with greater accuracy.

The robotics is moving along very quickly. We're starting to see ... Delta Air Lines CEO Ed Bastian spoke at CES right before COVID, and showed about many things that Delta was doing to position themselves as a high-tech airline. But one of the things you can't really see, which is how they're helping their baggage handlers magnify their strength with all the devices they wear, basically, and they don't necessarily get hurt. That was impressive to me. As Delta celebrates its 100th anniversary in 2025, I look forward to hearing more about what they're doing.

But in every area of endeavor where people are getting hurt, or injured, or they're getting sick which is avoidable, I think we have an opportunity there with AI. I was talking to the senior executive for one of the major seat companies in the world. They make seats in cars, and buses, and snow cats, and caterpillars, and all things like that. She was telling me about how they're looking at seat detecting your health, and letting you know if you could do certain things. So you combine these technologies in incredible ways, and the future for eliminating human suffering, improving the human condition, solving

fundamental global problems with technology is absolutely amazing. And then, of course, some of the business processes that we all deal with in our jobs, those can be made more efficient with AI and other things that we'll see, so a lot of the things we consider a hindrance.

If you think about the technologies have done, whether they helped us, or just innovation, or even going back to the tending or fire so you could cook food or you could warm a home, there's downsides to them. Fires burn down things, they could be used as weapons. Same thing with wheels, and automobiles, and planes. Every invention of mankind has a good side and a bad side. It's how we choose them as humans which matters. But that doesn't mean they should be stopped going forward. Certainly, governments have a huge role to play. Obviously, just restricting the nuclear bomb, for example, is one thing I want governments to focus on, and have agreements on and limit. But there are other things which are positive and they can't be stopped.

Sometimes, for example ... I think Europe's, for example, they've really gone heavy on privacy all the time. It's hurt their ability to innovate. The Chinese have gone the other way totally. Their concept of privacy, everyone gets a social ranking based on what websites they visit, whether they jaywalk, whether they pay bills. That social ranking determines whether they could fly, or travel, or go to hotels, or even where they're positioned on a dating website. They've gone the other direction but their ability to take massive amounts of data and do what they want with it, wow. It's scary. They will be ahead of us in AI in many different ways because of their lack of concern about privacy. S

So when I think of the United States, I want us to be like Goldilocks. Just have the porridge that's right in the middle. Resolve some of these issues. People will parade all these horrible things will happen. But the reality is we need to advance as a species to improve the human condition and we have to have the tools to do it. The government's job is to create the guardrails so companies know what they can do that's legal and know what they can't do that's legal so we can all work together to make it a better world.

Ramona Schindelheim, WorkingNation editor-in-chief:

Thank you for those wise words. I agree with you 100%. You got to have the guardrails in place.

Thank you, Gary. Thank you so much for joining the Work in Progress podcast. I look forward to seeing you around the show.

Gary Shapiro, Consumer Technology Association CEO:

Thank you very much. Stay healthy, drink plenty of water and wear comfortable shoes as you see the show.

Ramona Schindelheim, WorkingNation editor-in-chief:

I've been speaking Gary Shapiro, president and CEO of the Consumer Technology Association. I'm Ramona Shindelheim, editor-in-chief of WorkingNation. Thank you very much for listening.