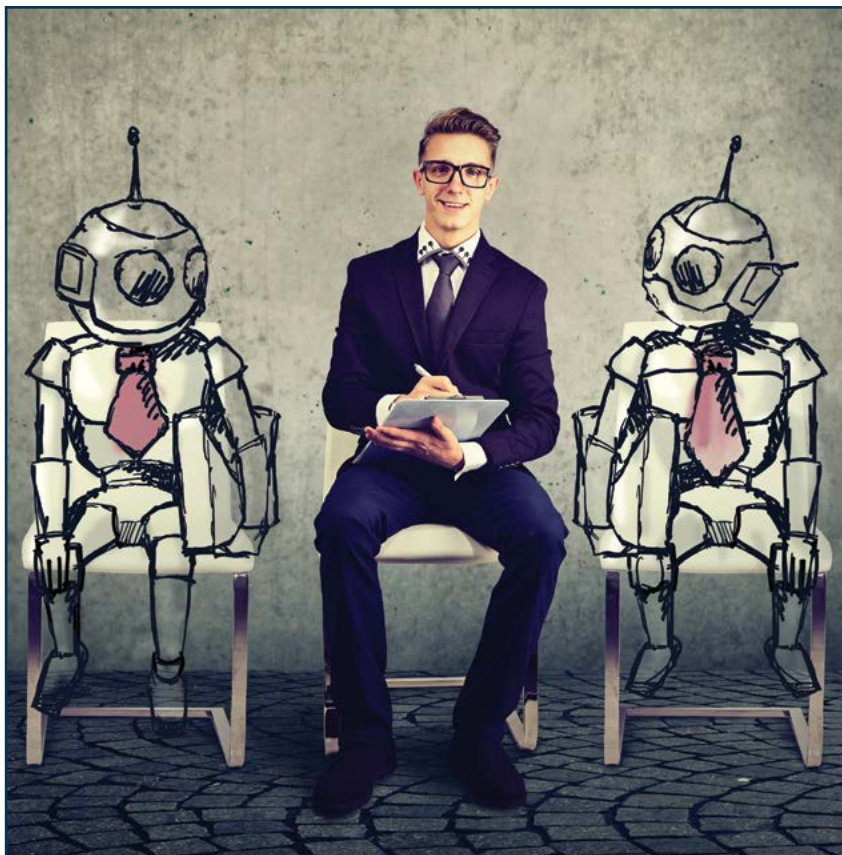# Update: Will Tech Take Your Job?

By Dave Berkus

As the digital wave ebbs, the rising wave of the thinking machine means fundamental changes in infrastructure and hospitality jobs.

Many of you were in the hall last year when I gave the first keynote of the conference at HITEC 2017 Toronto. I asked the rather startling question that you see above and used lots of statistics and quotes from experts to posit which of our jobs will disappear, which will change drastically, and which will remain much as we know them during and after the next wave of technology evolution.

Yes, waves. I made the case that there is such an upheaval, a regeneration about every 50 to 55 years, going back to the industrial revolution. And that we are coming to the end of the digital wave that began around 1971 with the mass acceptance of the mini-computer and integrated circuit, along with the many advances that followed.

I compared a few computer metrics from 1971 to today to make the point. Computer speeds have increased over 200,000 times, while costs have decreased a million-fold. Communication speeds have increased 10 million times, as wireless communication speeds decreased a million-fold. I compared an IBM360 which in 1970 ran at 1 million instructions per second (MIPS) to a 2017 Apple iPad at 1,400 MIPS.

Dave Berkus (dberkus@berkus.com) has a well-established track record in operations, venture investing and corporate board service, both public and private. He has been actively involved in hospitality technology since 1976, creating Computerized Lodging Systems, Inc., which at one time claimed 16 percent of the world's market for automated PMS systems. Today, Berkus is a managing partner for Wayfare Ventures, investing in travel technology, augmenting his current portfolio of over 170 investments in technology companies. He is also an inductee to the HFTP International Hospitality Technology Hall of Fame. 2018 will be Berkus' 40th consecutive HITEC without a miss.

How This Wave in Tech Soon Plays Out

We reviewed the carnage that has taken place in many industries, with technology forever changing newspaper publishers, telephone companies, calculator manufacturers, camera companies, record labels, bookstores, travel agencies, big box retailers and more.

I posited that, for businesses, much of this change has been driven by the usual suspects: need to increase customer revenues and decrease costs, and lately by the need to enhance the customer journey as a competitive tool.

And I used 2024 as the identifiable turning point for the next technology wave, that of the thinking machine.

The Next Wave and How We Will Fit In

First, we will need changes in infrastructure and then assume mass acceptance. For infrastructure, by 2024, 90 percent of the global population will have regular access to the Internet. 5G will be "old hat" and Internet of Things (IoT) devices will be connected everywhere at speeds that exceed a gigabit per second. Things that need to be miniaturized will have been miniaturized. Artificial Intelligence (AI) and machine learning will have changed the face of the travel world along with almost every other field of endeavor. Blockchain will have been commercialized, overhauling the way we communicate, do business, trust our counterparts and treat sovereign currencies. Augmented reality will have brought data, directions and disintermediation directly to our eyes and ears in the same way that two decades ago search was delivered to us via our desktops.

We spoke about the rise of robotics, telemedicine and more.

And then we turned to how this will affect us personally. If you had been in manufacturing during these past 30 years, the number of available jobs would have been cut to one fourth in that period.

Travel and Hospitality is Still Top of The List

But how about hospitality, now that we've painted a picture of such volatile change about to come? We noted that 88 percent of millennials put travel at the top of their bucket list today, and that travel is the last thing people eliminate in a downturn, and that travel represents 28 percent of all service exports by the United States. That's the good news.

So, back to the question. "Will tech take your job?" We are hospitality technology and finance professionals. Our jobs will change drastically, much more so than the jobs of those directly on the front line of customer service. We will be challenged by the growth of our current jobs as they require higher levels of analytic and social skills. There will be fewer accounting,

computer science and business college graduates coming into our competitive universe, but they will be augmented by cognitive science, data analytics and interdisciplinary majors graduating into the business world, equipped with skills most of us have not developed in ways to view the world of tech and finance as an interrelated whole with many other disciplines.

In the big picture, as many as a third of American workers may need to find new lines of work during this next wave. But there will be plenty of new jobs for them. Many more care providers will be needed, including surgeons and nurses for example, to care for a population that by 2030 will include a majority in the age range of over 65. But again, how about us?

Our Jobs Will Drastically Change

Technology professionals will still be in demand, even if the job specs change dramatically. IT professionals will be needed by our hotels just as today. But the need will split between digital and robotics

Berkus presents this question a year ago at HITEC 2017 Toronto.

" We are using more digital technology today than ever before, and that will grow exponentially as we cross into the next wave. Think of AI as the new electricity. It will help you to become more comfortable with the changes we'll see. "

systems, between information and hardware, between analytics and infrastructure. Those in IT today will be challenged to keep up with these new hires fresh from college with cognitive science degrees, looking for the bigger picture linking our core business with the technology that underpins it. Installing and maintaining technology will become a commodity job in hospitality.

Finance professionals will be challenged even more. The basic jobs we take for granted in 2018 will slowly give way from ingesting data from suppliers, contracts and connections. From manipulation of data through accounting systems to analysis of that data which is brought to us in finished form from source to financial statement with little intervention and certainly little manual data entry.

But don't fear. We will have digital assistants to listen to our commands, to inform us of our next tasks, to guide us through processes that may be new to us. However, these alone will not prevent the need for each of us to seek education opportunities to

catch up and keep up. AI built into our systems and processes will guide us, teach us and challenge us on a regular basis. In some cases, it will displace us, requiring finance and tech professionals to seek retraining to find new jobs, not just to keep present ones.

Massive Retraining Effort Will Be Required
How will that massive retraining be accomplished? Our present system of higher education with its limited seats and escalating costs can't handle it. What we once called distance learning will become commonplace as education will be delivered in smaller slices using online courses, videos and on-the-spot AI applications for guidance. We will learn much more about countermeasures for hacking, new forms of connectivity, accelerating disruption in our hotel distribution networks, and the convergence of on-demand machine learning and job autonomy.

We are using more digital technology today than ever before, and that will grow exponentially

as we cross into the next wave. Think of AI as the new electricity. It will help you to become more comfortable with the changes we'll see. In 1850, with the new electricity, factories could work night shifts, hotels could provide entertainment, services and safety through the night. Here comes the AI or thinking machine revolution. And we can't even imagine how AI will enhance the traveler and guest experience, meld humans and machines into a seamless interface, and enhance the quality of our lives.

If I am right, we have between six and 10 years to recognize and adapt to the demands of this coming wave.

How About This Week at HITEC?
So, we come to the HITEC 2018 experience. I urge you to look closely on the exhibitor floor for the beginnings of this coming wave that is only several years from becoming universal. Look for sessions that push your knowledge of blockchain, AI, robotics, machine learning, analytics, big data and integration of processes. Walk the floor watching for new products built on AI, new services built upon data analytics, new ideas using new technologies not available or developed enough to be useful even as recently as last year. Challenge yourself to ask these presenters, these vendors, and your fellow professionals: "How will this affect us? And what should we do to prepare?"

That's where you'll gain most in protecting your job, advancing your knowledge and learning of things that will change your personal and professional lives. That's why we attend HITEC. ✴