

EPISODE TRANSCRIPT

[Introduction: Workplace transformation in a time of disruption and change]

Welcome to the next installment of *Tech+*, an exploration of the intersection of technology and the human experience. In this episode, we're going to discuss tech plus the social pressures of pandemic change. Specifically, how our workplace technologies are going to be transformed necessarily due to things like COVID-19. At the time of this recording, we've hit over 3 million cases in the U.S. alone. So in some sense, I'm really talking to you from a rare point in history. It's a time of disruption and change, of course. And in particular, we're seeing disruption in how we socialize and work and how we do commerce.

It's probably obvious then why I've moved from a topic that I was planning on covering, to something that focuses on tech plus something as grim as a pandemic. Humankind has always focused since the inception of society, in some sense, on longevity... and as a corollary to that, disease and death, from ancient Egypt to Babylonia. So it's no surprise that that happens. It happens to this day. Because just underneath some of our basic needs, the need to belong, to express yourself, to connect with your colleagues, is the fundamental mental need to survive, of course. I suppose it's imprinted in our DNA that when a pandemic hits, it's necessary to examine what that means for us and how it will change our society and how we work together.

In fact, it's not a surprise that we're willing to sort of refactor and reformat the way we even approach our daily lives in the face of existential threat. So it's no wonder that the pandemic is going to have long-lasting impacts. Of course, there are short term impacts on some aspects of our society and how we interact day-to-day, but I want to explore longer-lasting social change that makes its way even into the workplace. And in particular, of course, since I'm a technologist, I want to look at how technology will drive some of those changes or accelerate due to the pandemic.

[How Will the Pandemic Impact Our Acceptance of Technology and Collaboration?]

Before I get too deep into it, of course, it's a two-way street. Technology transforms itself as a result of change from pandemic, and from disease, from social disruption. But there's also been some research that shows it can go the other direction, that technology can have an ideological link to technology. What I mean by that is the technology could even accelerate pandemics. If you're interested in that topic, I would point you to a really interesting read called *The Impact of Technology on the Emergence of Infectious Disease*. It's a great read. It's very interesting. **But I'm going to focus on the other direction, how did pandemics and diseases impact our acceptance of technology? Which technologies will be accelerated? Which ones will be abandoned? And then where will this change really occur?** Because they won't be uniform across the board, of course. Where do we come together, I think is where we want to really focus. When people come together, where we interact closely, where we look for meaningful contacts, for meaningful relationships; or even in a single word,

where do we collaborate? The word collaborate tends to be overused, but in this sense, collaboration is really a threat, I think, due to pandemic.

I want to look at collaboration in that light, through that lens. It's really the center of the bullseye where I think lasting change will occur in our modern workplace and where we educate one another. And that's where I'll focus in this episode. I'm going to explore how this disruption will impact where we work and learn – mostly, both types of spaces that I kind of refer to as the workplace.

How will the pandemic impact the workplace? There, of course, will be broader impacts. I mean, we can see them today in things like, laying off 13,000 workers in the airline industry from a single carrier. Medical technologies will accelerate. Obviously, other ways that you have societal stressors of accelerated technology adoption. And I've covered some of that before in a [previous episode](#). Things like, the invention of penicillin due to World War II and all the pressures that it caused. But really, I want to really, really laser focus on the workplace and how pandemics impact it.

If you're interested in some of the broader sort of historical view of pandemics, I would point you to Frank Snowden's book called *Epidemics in Society from the Black Death to the Present*. That really examines how outbreaks of disease have shifted economic structures, kind of solidified racial discrimination even, and shaped our politics over time. It's a good read. And it's kind of a companion to some of the topics I'm going to cover today. So pick that up. It's a little bit heavy in some areas, but it's a fun read.

So is this going to be a really negative podcast? I mean, we're talking about a very heavy topic. We're coming to you from a time that's really unique. I mean, I think that people have predicted the multiple evolutions of the workplace over time. And sometimes people talk about our era as the fourth Industrial Revolution that really brings about unpredictability, uncertainty in the AI sort of era. I think even that picture isn't very accurate given where we're sitting today in the midst of a global pandemic. So is this going to be negative?

Well, if you've listened to my podcasts before, you know that I am a positive futurist. And so [when I see disruption](#), what I see is a challenge that we will rise above through technology. If you look at historical trends, that, of course, has happened many, many times. We usually come out of these types of things with things that ultimately improve our lives due to our own innovation. I talked a little bit about times of war and famine giving us penicillin and radar, and even in World War II, Bletchley Park producing the general-purpose computer out of the pressures to crack German codes. These are things that seemed terrible at the time and of course are, but they can lead to humans coming together to innovate in ways that just were unpredictable almost in the past.

[How Pressure Leads to the Acceleration of Change]

This pandemic, I think will be no different. It's an opportunity for us to accelerate really important lines of innovation and discard technologies that just aren't needed when you have these types of pressures. There's some biological similarities to this type of concept that innovation isn't linear over time. I mean, if you look, if you didn't have a slow march towards a general-purpose computer that transformed personal computing in the home and everything, it actually spikes when you have these pressure times. In biology, that's known as punctuated equilibrium. It's a term that was coined by Stephen Jay Gould and Niles Eldredge, really about this idea that, hey, if you're a living thing and you're experiencing evolutionary change generationally, it's not linear either.

So if you are happily sitting in a pond somewhere and you have very few predators, you're pretty much going to stay a frog forever. But if suddenly you have lots of pressure, or the pond begins to dry up, or predators consume most of the frogs that are slow, then you have an acceleration of evolution, and that's really no different – there's a corollary here with technology as well.

This is one of those times, and now how do we predict what that means? I think that's really going to be interesting. I thought a lot about that in prepping for this podcast. I definitely don't want to be one of these futurists that just rattles off the top 10 things that will change due to the pandemic, and I tweet that out and we move on. I think you want to be a little more contemplative in times like this. So what I've done is, I think it's probably valuable to look at historical precedents and how maybe we can draw some lessons from those and then apply them to the modern workplace.

[Cholera and the Industrial Revolution: How the Pressures of Pandemic Force Change]

If you look at how a pandemic disruption enters our workplace technology landscape in the past, there's not a lot of examples because the workplace has transformed so dramatically, even over the last 30, 40 years. But if you go back far enough, you can imagine us almost sitting at a time... when we did have a cholera outbreak starting in the UK and spreading through a time where the workplace seemed like it had already solidified into something we now refer to as the Industrial Revolution. Factories were everywhere. But there was change that resulted from a massive outbreak of cholera. Let's look at that.

Imagine yourself working in the heart of the Industrial Revolution in one of those cities in England. That's an interesting time. You walk to the factory floor, you stand elbow-to-elbow with other workers. Because the light bulb has been invented, there's no real limit anymore to daylight hours of work. So you end up, of course, working 14-, 16-hour days. That was the average workday for an industrial worker at the time in a factory, particularly textiles, which had just had a massive boom due to automation. All kinds of things related to technology, and even societal changes, drove us into this thing called the Industrial Revolution.

So your workplace was pretty interesting, but here's the problem – it was missing some key elements. And one of those is a bit hard to talk about, but it's sanitation – and plumbing – and it ultimately led to this outbreak around the 1840s. Plumbing at the time is a little bit weird, it was viewed as a luxury. So,

if you're wealthy and you're in one of the great neighborhoods, you have 24-hour running water plumbing that takes away human waste. But if you work in a factory, you do not qualify for modern plumbing. In fact, there's just a hole in the floor, probably somewhere. And if you're lucky and you did have plumbing in your neighborhood in one of those gray areas, it's maybe not the rich part of London, but it's somewhere else, you have a few hours per day where water would actually turn on. You really had this weird mix of the luxury of plumbing all the way down to basically nothing. What does that lead to? Well, poor sanitation, of course, leads to disease. Crowding leads to disease. And you had an outbreak of cholera that strikes the heart of many major cities, and it actually spreads throughout large parts of the industrial world.

Well, there's some interesting things to look at. There was a lot of misunderstanding about what was happening. The medical community was not nearly as sophisticated as today. Of course, they actually said that cholera, initially they were claiming wasn't even contagious. It just had to do with people not taking care of themselves. And then there was a classist view that happened, of course, like often in pandemics, there is blame, plenty to go around. And the rich, who seem to not be sick, blamed people that just had bad self-care habits. Of course, it was really related to the disposal of human waste.

So productivity drops, right? You almost have near riots in Paris where funnily enough the poor working class realize, "*Hey, it's only striking us.*" And rumor starts that the rich are actually poisoning the water for whatever reason. And then this near riot breaks out. Workers stop arriving to work in London and in towns like Sunderland where the cholera epidemic actually started, so it's basically effectively a strike. So what happens? Well, the first instinct was shouldn't we quarantine? Should we stop people from going to work on purpose, or at least stop having ships show up in harbors and carry away giant piles of textiles to other countries? And that proposal, as you could probably guess, was shot down. And of course, the people that shot it down are the people that stood to benefit from a healthy textile industry.

I think there's some very strong similarities to what we're seeing today in society. The spread really ensued because they didn't do the 40-day proposed quarantine for all the ports, and it ended up actually costing the textile industry very dearly. I'm not sure if anyone's gone and computed what those costs were, but I think they probably should have just done the 40-day quarantine to try to limit the spread, but it ended up being a disaster.

[How Cholera Accelerated Workplace Innovation in the 1840s]

Eventually, there's a slow realization at the time that this is a contagious disease and it is in fact related to and highly correlated to the lack of plumbing. And then these... what changes? Well, let's look. You had this workplace that was everybody crowded into a space, there's no allotted time for personal time to take care of your hygiene, and there's no infrastructure to take care of your hygiene. Well, that changes actually.

Here's the positive thing. In 1844, a law was passed that formed a thing called the Metropolitan Court of Sewers. And these guys, their first action is to really require new building construction, in particular

– factories, to be connected to working sewers. That sounds obvious now. But there were a lot of public advocates for this stuff, like Edwin Chadwick, who was like, hey, advocate for cleaner water supplies, better working conditions. And he even advocated for this on behalf of the factory owners, because guess what? You get productivity when people are healthy, when they're happy.

So this is 1844, and you have a fairly significant outcome. I mean, I think in 1835, if someone had said, let's spend a lot of money and time and make it harder for us to build new factories right in the middle of the Industrial Revolution, you can imagine what that reaction would have been, "*No way, are you crazy? We just want to build more factories.*" Well, the pressures of the pandemic at the time forced change, which I think can be a very positive thing.

Now, of course, there's always the backstory to the personal, you know, the victims of these kinds of pandemics. And I don't want to gloss over that. It's important to always remember that there are human beings behind these things that cause the change to happen. And it is somewhat unfortunate that you have to have a pandemic for massive change in the workplace. That's not necessarily true. What I'm trying to point out is that in times of these kinds of pressures, you have accelerations of innovation. You have acceleration of societal change like laws that come into play that maybe couldn't have been passed 10 years earlier. I think we're staring that in the face.

[Well-Being in the Modern Workplace]

Let's go forward a little bit in time now to today and maybe compare the two. Well, here's the great news. We are definitely not at a point like the Industrial Revolution. While you could probably find working conditions that are similar to that in some countries, and in some areas, and in some industries, almost all the world's GDP is tied to things that don't look like that any longer. Many of us work in what I would call the modern workplace. And in today's modern workplace, you often hear a word called well-being. If you've got a workplace where yoga classes happen, or kombucha is served, or that has a cafeteria that's got fresh fruit, that's not rare these days. I see that often. Well, why does that matter? Well, it means that... we have a mentality in the workplace that will allow us to adopt change even faster than what happened in the 1850s, 1840s.

This for me means that well-being will grow. The term well-being now will encompass even greater things. It won't be necessarily, are there free yoga mats when you come in? It's really that the employer is a steward of the larger picture of health for the employees. And I think that's an awareness that's already started given the pandemic. And that stewardship over employees and their health and how they interact with one another in healthy ways is going to bring a sharp focus on a very specific part of the workplace, very specific. And I don't mean all of it because there's plenty of types of work that probably won't be impacted, but let's look at where it will be impacted.

[Workplace Collaboration in the Pandemic Era]

I really think about work in a couple of different ways. When I work together with others or when I work solo in productivity – alone. Those are two sort of very big categories of work. Working with others really falls into two categories: presentation and collaboration. If I'm presenting to you, like I'm kind of doing now because you're not sitting right across from me, we can't have a direct dialogue, that's me doing information transfer, it's me educating, it's me informing.

But when I'm collaborating, that's a two-way street between me and another individual, or five or six individuals collaborating together. And there's very specific reasons to collaborate versus present. But if you really think about what that means, when you start to look at the profile of a pandemic, collaboration is under existential threat, as I said before. So that's where the changes happen, right? It's, *"Hey, my workers can no longer go to the factory, so textiles can no longer be produced. That's an existential threat. We better make a change."* What's the root cause? Let's go find that out.

Well, let's look at collaboration then in the workplace, because if I collaborate, I'm standing near you, I'm with you. I might be synchronously discussing things with you. We are brainstorming. Well, how does that happen now, in an era where you hear the term six feet apart, probably every 10 minutes these days? Can I do that still? And how will technology enable it?

First, let's define collaborative work a little further. There's really two types of collaboration. There's synchronous collaboration. That's the type I'm really focusing on right now. That's the real-time interaction, typically done in person with many people or one other than you. It's not really a... it's not instant messaging. That's something a little bit different. It's live dialogue. It's content sharing in real-time. It's gesturing so people can see your excitement around a new idea. It's moving quickly to the whiteboard or looking disinterested so people know, well, this is a topic that half of the people that I'm collaborating with don't find very interesting. It's all that high bandwidth, high real-time, live interaction. And technologists have dreamed about replicating that through technology, through a thing called telepresence, for a long time. That's probably worth an entire podcast. That's a very, very human-centered, valuable interaction that is now under threat.

Now, the other type of collaborative work is called asynchronous. Emailing is probably the best example of that. I don't have an expectation of a live feedback loop. If I post a Google Doc somewhere and I want you to work on it, that's also asynchronous collaboration. Message boards in the old days were kind of that. And then even collaborative classrooms where you're not doing it in real-time, but you're maybe doing a session record in an educational space. And you put that online and your expectation is students can comment on it. That's an asynchronous collaborative environment. I think we want to focus heavily on those collaborative workspaces. And that brings us directly to a vision of the workplace that's made up of environments that it focused on collaborative, synchronous work, which is really the meeting space, the huddle space, the lobby. Let's look at those spaces.

[A Tour of Modern, Pre-Pandemic Workplace Meeting Spaces]

If we're going to really look at how the workplace changes, let's take a tour of the workplace today. Like what does it look like? I mean, I think most of us know most of us spend time in the workplace. In

fact, in the modern world, you spend more time in the workplace, waking time anyway, than you do at home. It's a little bit depressing, but it's true. Let's take a tour of that workplace. You're mostly expected to work at a personal space, like your desk, or maybe you share it with four other people, but a pod somewhere that you sit. That's the space that you're sort of expected to occupy most of the time, that's where your personal productivity happens. And that's where probably the biggest change over the last 10 years – is what I would call 'asynchronous collaboration' – has appeared.

So, you're instant messaging, you're posting on boards, you're using Slack, you're pushing Google Docs to the cloud and expecting your colleagues to find them and work on them. That's the asynchronous environment. But when it's time to meet with your team to enter into that synchronous collaboration stage, you get up, you go to a conference room, you walk down a hallway. Typically, you're now in this, in the modern era, you're surrounded by what's called corporate messaging, which could be, in the modern era – in the old days it was posters that just said great things about the company, or whatever – but now it's digital signage as you pass through those hallways. And in the modern enterprise today, they've really focused on dividing their meeting spaces into this interesting taxonomy that focuses on the types of collaboration or presentation that happened in them.

What you'll find if you survey the corporate 5,000, they've divided their rooms into large, medium, and small meeting room spaces, they have a thing called huddle spaces where those typically aren't scheduled. You dive into those, you sit very close to someone, you collaborate. Maybe there's a screen there, maybe it's just pen and paper. And then there's these areas called transitional or open spaces, where there's a lot of focus there these days, where I can sit at a table with friends, with colleagues, and those are definitely not scheduled. They're really ad hoc, which has been a big trend in the last eight years.

If you booked a conference room, you probably did that when you were sitting at your personal space. In the modern world, you get up, you've booked a space, you've done it based on what you expect to happen. Let's pick like maybe out of their taxonomy, we'll look at the medium conference room. That typically seats eight to twelve, and my team is six, we'll have plenty of room, so I book it and we can walk in and have a meeting. And if my meeting has outside vendors or maybe my colleague was working at a home for the day, I find a video enabled-room because I want to put them on camera. They want to see us. So I do that. And when I come into the space, there's typically a flat panel display. A lot of those are touch-enabled. If I want to go and interact with that digital display at the front of the room, I can do that.

And there's always a...almost always, anyway, a control panel. There's a huge industry called AV control that provides these panels in the rooms for me to control the space. Sometimes that's things like lowering the shades if there's too much sun in the room. If I want to present on my laptop, maybe I'd tap a button on that control panel and say, give me HDMI input so I can plug in my laptop and present that to the screen. And then even more so, if it's like, for example, a Zoom room, I tap a button on that panel to start the call so my colleague at home can hear and see us on the video system. That's kind of a view of what's going on in those modern spaces.

There's even some sophisticated stuff that goes on now where if my meeting runs over, like they always do, I can go to the door panel outside of the room and even interact with a thing called the room booker and just rebook the room for 30 minutes in an ad hoc way. And in some spaces, especially in education, you'll see what are called interactive whiteboards, where I can go up and, maybe it's the Samsung Flipboard, or maybe it's a Surface Hub, but I can actually go write on it and interact with it. And then there's of course the physical whiteboard, usually in a space where I can... the biggest use for whiteboards probably is to write the Wi-Fi password.

That all happens in that space today. I interact with my colleagues in this, what I would call like an anchored star topology, because the room is the anchor in that synchronous collaboration event. My colleagues are jumping up and writing on the whiteboard. I post content by plugging in a cable. And occasionally, there are remote needs for users to dial in and see us do that and interact with us so we can hear them.

I'm immersed in all that stuff in a modern world. And in educational spaces, you know, I said, I'd focus on both. The picture isn't that much different. I mean, education has some very unique, kind of cool things about it, where instead of meeting rooms, you're going to have similar experiences for lecturers who tend to book the room. Students don't do any booking of course. And I teach, of course, just similarly to presenting content, I plug in a laptop. Students act more as observers typically, unfortunately, but there are big trends to try to get them more engaged, to get out of those tiered classrooms. But really that technology picture looks very similar. There's a panel, there's a display, there's a camera for the distance learning, occasional-use case.

[Envisioning the Future of Workplace Collaboration]

But let's now take that in light of the pressures of a pandemic and try to envision what it looks like in the future. We're going to take a time machine a bit and fast forward to what I'll call the post-pandemic era. I'm not even going to predict when that is given what's going on, but let's say we go forward in time. So it's time for that same meeting to happen. Or that classroom is about to start. I'm going to envision that. Close your eyes and envision the futurist view of a space that's been transformed by that.

So it's time for that same meeting to start. But when I go into the room, I'm going to notice something's changed right away. The whole team isn't even there. I said, hey, maybe there's six people going into that eight to twelve capacity room. There's maybe two people in that room, maybe three at the most. I'm already hearing from consultants and other people that work in this space that there's like a 30% occupancy requirement that they're going to enforce. So I come in, I find three people. Well, that's weird. Where are the other people? Well, maybe three of them are in a different space. I don't know. I can't figure it out yet. We'll find out as we start to dig in here, but I can tell you that that

anchored star topology no longer holds, right? There's probably multiple rooms where people are sitting and interacting somehow.

The other thing I'm going to notice is there's very little stuff in the room. I mean, the display is maybe hanging in the front of the room still. I don't see a panel. I don't see cables. I see a table and I see users sitting at that table with their own devices. So what's gone? I mean, the touchscreen's certainly gone. Nobody's going to touch the touchscreen because it's just a vector for transmission. The video cable disappeared. The control panel disappeared. The room booking panel outside that room is gone. The digital whiteboard is gone. Even the whiteboards are gone. Users, I notice they're not touching anything in this space. That's really, really interesting to me.

That vision of the user is not interacting with the space physically. Now, that doesn't mean that they're not collaborating and interacting with one another. They for sure are. In this future vision, they're engaged, super, highly engaged, but there's a technology underpinning that's going to support that in a totally different way. Now, I'm going to give you a little bit of an analogy to try to get you excited about how this is going to happen. If you go look at user interfaces from Sci-Fi in the 50s, 60s, and 70s, right, I'm talking about, now I'm going to show my age a bit, but like movies like "War Games," or if you look at Uhura in Star Trek, they are clicking buttons constantly in those interfaces, click, click, click, click, click, right? It's like, "*Uhura, put someone on screen.*" It's like interacting with these analog buttons for three seconds to get stuff to happen.

[Acceleration of Touchless Meeting Spaces]

Fast forward now to sort of the modern futurist view in movies like... I don't know... if you look at anything in the last three years that's come out, this is us as a society envisioning how we think things should be, right? Well, those are touchless UIs. Those are transparent UIs that just appear when I need to interact with something, or they're voice-controlled. They're gestural-controlled. They're transparent to the experience. It's all about the human interacting with their infrastructure in a way that's human-centered, not analog button-centered, right?

I'm going to argue that the vision of a touchless meeting space, a collaborative synchronous space that has no touch happening anywhere other than me interacting with my own ecosystem of technology, or me commanding the room to do what I want it to do from there, is actually what we've wanted all along. I'm not saying that... technologies will suddenly change, you know, 90-degree turn, we abandon everything. I'm pointing out that the vision, the dream of a touchless seamless UI user interface and a workspace that embraces me and then my needs automatically has already been here. It's already been worked on. It's just going to accelerate dramatically over the next three to five years, because of the pandemic. Which is really cool.

[De-Densifying Meeting Spaces]

Let's go look at that modern workplace again. What got removed? Well, I gave you that list, but what's left? Well, there's a camera and there's room audio. That's what infrastructure should provide. And there's a big, beautiful display, right? There's something different too because people aren't sitting right next to each other. Of course, there's societal changes that have to happen because of the pandemic pressures. Like tiered classrooms, for example, are going to be less populated. Even though you have a giant, tiered, almost theater seating, you're going to have students spread out in that space. Some of them sitting in places that just aren't effective or good, which I think technology can also help.

But I hinted at this idea of hybrid meetings. Instead of a meeting taking place mostly together, I think we'll have more, what I'll call a star topology of meetings, where you have rooms that are interacting with other rooms based on the requirements of how much you can occupy in those spaces, and almost a 50/50 split of people being remote. Let's take that six-person team that had one person remote. Maybe now only four people were allowed in the office on that day, maybe it's their day to be in the office. Two of them go to that first meeting room. Let's look at how it unfolds.

I get up out of my chair. I walk to this modern futurist view of a post-pandemic room. On that screen, it says room occupancy is a max of three. When I walk in, the room knows I'm there. And that number goes to two, two spots left. My colleague arrives and when we fill the occupancy requirement based on policy for the corporation or for the enterprise, an email automatically goes out to the other five people in my team and says, "*Conference room 9 has already hit capacity. Why don't you use conference room 10 for the remainder of the team?*" So, users who haven't made it to that room, go to conference room 10 and sit down and they start to interact.

What's great about that is the system itself detected and helped to sort of embrace the new policies about safety and well-being in the workplace and split our meeting into two rooms. And likely, because now we have this new focus on remote work and the seamlessness between remote work and on-premise work, half my team is probably sitting on a couch, or in their backyard, or on their patio, and dialing in to that call. So now we know we've hit safe capacities.

[Human-Centered Design: Touchless, Seamless, Intelligent Meeting Spaces]

Well, what else happens? I don't touch anything on the control panel to start the meeting. In fact, when I walked in the room, the display powered itself on. And when I walked in the room, the phone in my pocket buzzed, and I took it out and it says, "*Looks like you have a Zoom meeting in three minutes. Do you want this room to bridge to that meeting?*" And all I have to do is tap a button on my own device to say, go. On that same device, I can control the shades. I can automatically let other users know where I am, what room I'm in, and I can share content. I can tap a button on my own phone and say, "*Let's share those Google docs that we wanted to look at to this big, beautiful screen.*" And I browse to my Google drive on my phone and I hit share and it appears on the screen. I did not plug a video cable. That's obviously a really interesting thing to look at. It's a technology, exactly what I said before, that's already been underway in the workplace.

Cabled video sort of started to see its death when the Apple TV entered the home and then corporate enterprise and educators realized, why are we digging holes in the walls to run cables to our big screen? Why are we making users plug in a single cable? It sure is a lot more seamless and more engaging to just hit a button on your own device to show your content, right? That's called wireless video sharing. It's a space that I'm obviously very familiar with. It's only accelerating, right?

Think about all the technologies, about touchless and seamless interaction and intelligent spaces and smart buildings and smart cities, all that stuff's been underway. It's only going to accelerate because of the pandemic. So, no explicit control. That means users don't walk into rooms and start clicking buttons. Things are going to be different. I won't even switch on a light switch. The system will know when I come in and the lights will turn on, right? The room panel is gone. Traditional AV control systems are definitely disappearing. Video cameras and audio bridges of course are going to be huge, and interactive monitoring and room intelligence is going to play a massive role here. Users are going to arrive. The display tells them when you hit capacity like I hinted at.

There'll be all kinds of intelligence behind things like, *"Hey, where are my most effective meetings?"* Because there's still a cooldown period for that conference room that I wanted to meet in because somebody went in there now, and I can't have the meeting any longer. That's a booking pressure that's going to be huge. Technologists are going to find ways to solve it. I think I would definitely look at that area if you are an innovator and are interested in the workplace.

And I already mentioned the disappearance of the video cable, but it's also going to now emerge that all cables will disappear. I keep talking about the video cable, but imagine now that same user having to plug into a camera because they want to be on camera. Well, that's ridiculous because that's definitely not going to happen in this vision where it's a transparent, seamless UI. I go into the room and everything wirelessly appears to my laptop, right? That camera appears as though I've plugged it in. The audio is a beautiful room audio system with 16 mics in the ceiling, all appears on my laptop, and my content wirelessly transmits itself to the screen in the room. And we have a really effective video conferencing meeting.

[Moving Forward: Components of the Post-Pandemic Meeting Space]

I think that's a fantastic vision of the future and why I sort of started this podcast by saying that this isn't necessarily a negative view. I mean, there's plenty to be negative about, but when you look at it through the lens of technology acceleration and what might happen, I think it's really exciting. There will also be other pressures, of course, that are outside of the core technology transformations that will happen. There is flexibility around acceptance of work. You know, I said, we are in a positive era of the workplace. I think it could be even more positive. If you really look at what's going to happen post the pandemic era, there'll be a real acceptance of flexible in- and at-home work because we're learning that there are some at home work styles that are very effective, like solo productivity. When I need a deep dive on a document by myself, why wouldn't I do that where I'm comfortable sitting at home?

And then there'll be, of course, a return to work for the synchronous collaboration needs that we all have that really are productive and creative and generate new solutions. That stuff won't go away. I've heard some consultants say, "*Oh, it's all going away. We'll never go back to work.*" I don't believe in that vision. I think it will be a hybrid, a seamless hybrid. So why didn't we allow this super flexible, you-can-work-at-home-when-you-need-to, in the past? Well, I would sort of argue, it's like the Industrial Revolution era. There wasn't a need for sanitation until there was a need for sanitation.

It's like, "*Hey, I have a six-month-old and I sure would love to work at home twice a week.*" That's not enough pressure, apparently, for us to all have created these great work-at-home policies. But we definitely have the pressure now. Those kinds of policies will also happen. Keep an eye out for that. **I also think one of the bigger, more interesting things that's going to happen is that we're going to come out of this with clarity around the need for new innovations and the areas we need to focus on and areas we should just basically abandon.**

The technology areas that are ripe for innovation, that I've sort of outlined, I think in this podcast, are touchless rooms, touchless user interfaces. If you're thinking voice control, that's one way. Gestural control. Or full automation and intelligence so that you don't have to touch anything. The room knows what you want even before you arrive. That draws in artificial intelligence as well.

Video conferencing will be everywhere. Keep an eye out for what that means. That means things like background removal is big. Noise-canceling is big. How do I put cameras in huddle spaces? How do I have a video opportunity when I'm even in a transitional area between meetings? Workplace analytics is an area I think that will take off dramatically. We've already seen a trend towards intelligent building management, but that's really been for things like, can I drive elevators more efficiently by predicting which floor it should be sitting on? That's an energy savings move. What we now have around analytics is how can I be effective and predict where I should meet given all the constraints, including well-being and safety?

In conclusion, I think I would say, a lot of people are predicting the end of some workplace technologies. **I'm really going to predict the acceleration of some things that we've already been dreaming about, that transparency of infrastructure, that embracing of the human experience, and allowing us to still come together when we need to and have a meaningful interaction with our colleagues in spaces we enjoy.** That is going to come into laser focus. What challenges will come out of it? What innovations will come out of these challenges? I'm excited to see what the startup looks like that's currently raising, you know, a \$10 million round on Zoom with some really excited investors to address these problems. Because I know they exist, right? People haven't stopped being innovative and creative. I think we're going to see stuff that I haven't even covered. And I think it's going to be an exciting era.

Thanks for tuning in, stay tuned for the next installment.