

**ILLUminate Blog Transcript: Shift Happens: Andrew Ward on Preparing for Societal Shifts**

Recorded April 2, 2020. Listen to it [here](#).

- Rob Gerth: 00:00      Welcome. I'm Rob Gerth, director of Marketing and Communications for Lehigh University's College of Business. Today is April 2nd, 2020. And we're talking with Andrew Ward about societal shifts, and how your organization can actually plan for things like COVID-19 and a world pandemic believe it or not. Andrew is a professor in the Department of Management in the College of Business at Lehigh University. He conducts research on issues related to corporate governance including CEO succession, CEO compensation, CEO board relations, reputation, and leadership. And he's also working on a book titled Shift Happens, which is a great title, Andrew, for a book.
- Andrew Ward: 00:39      Thanks, and thanks for having me this afternoon.
- GERTH: 00:43      Oh, glad to have you. And I'm assuming that the whole pandemic thing is going to be in your book now.
- WARD: 00:49      Well, that's a good guess. Yes, it will be covered for sure. It's actually not one of the societal shifts that we'll be framing the book around as we're kind of looking forward into the future rather than at things that are happening right now in the present. But pandemics are certainly things that are exacerbated by trends that we cover such as rapid urbanization, and has impacts on lots of other things like changing demographics.
- GERTH: 01:18      Yeah, and I'm sure this isn't the first-- well, it certainly isn't the first pandemic and probably won't be the last.
- WARD: 01:23      Right. Yeah, for sure.
- GERTH: 01:24      Now, speaking of the pandemic though, I wanted to take a really specific example to start, and I think it might give us a good jumping-off spot. So there's a grocery store chain in Texas. I think it's called HEB, and there was an article in a paper that they actually planned for the pandemic. They were thinking it would be flu or something like that, and, of course, they didn't see the whole toilet paper thing happening. But what was it about this supermarket that was-- this chain of supermarkets that was on target where the rest of the country wasn't prepared?
- WARD: 01:58      I think it's actually more surprising that this one store was prepared, rather than the others that weren't prepared, right? Because most of us don't really think that far into the future or how the world is changing around us. Businesses also run by individuals are the same way. So businesses tend to focus on executing their business in the environment they face today and spend relatively little time thinking about what is coming down the pike. I mean, really we all had a chance to see this coming when it began in China and started getting publicity in January and started spreading. So it's not so much that we can't see it coming. It's really that we don't want to. We prefer not to make changes in our lives until we're forced to do that. And yet when you have big changes like this, change is going to be forced upon us, and it is those who are prepared and take that early action that have better outcomes. So it's actually, I think,

more surprising that there was this store that were prepared, and kudos to them for doing that.

GERTH: 03:12 Well, can you give us some examples of some things that caused societal shift in the past? Like some actual events. Or was 9/11 a societal shift?

WARD: 03:22 So I would say not really, right? That's say an event, and there's certainly these individual events like what's happening now or 9/11 that are sort of big events, big crises, big disruptors. And most of the things that we're talking about in terms of societal shifts are more of these kind of big, continuous disruptors that happen over a longer period of time, rather than being sort of individually event-driven. And, I mean, one of the things about these individual events is that when you have a kind of immediate, obvious threat people can be mobilized to take action to overcome it. So as difficult and painful as it can be, and as we're seeing at the moment it can be done.

WARD: 04:24 It's often much harder to mobilize people to combat these continuous, incremental disruptors like climate change, for example. When there's a climate change event, like a hurricane, people will jump into action, but even though we're facing higher and higher frequency of these events, it's hard to mobilize people into making changes to their everyday lives to address it. So that's why we're thinking about this, and it's why people like Greta Thunberg, movements like Extinction Rebellion are trying to draw our attention to these kind of emerging trends and emerging crises before it's too late. But equally, it's why most people are ignoring these things.

GERTH: 05:10 Now, we're talking about giant crises because there's a lot going on around us at the moment. But let's take something like an example, I think, is Amazon Prime and coming up with the idea of two-day shipping that solved a problem that no one even knew existed, and now everybody wants two-day shipping. So they made a problem for all the other businesses. Is that a societal change or societal shift?

WARD: 05:35 So I wouldn't necessarily even say that Amazon Prime, the two-day shipping, solved a problem that didn't exist, right? Rather I think of it as taking some of the sort of friction out of the system and the problem that was already there. I mean, so if you think about shopping, right, in general, and the shipping of products in particular, we have a situation where somebody makes a decision to purchase a product, makes a purchase, and then has to wait for the product. That waiting is that friction in the system, and so that's always been there, right? In purchasing a product in the store, that friction doesn't exist. You go into the store may be a limited choice, but you can buy the product immediately, and there's no friction in that system. There are other frictions like having to take time to drive there to the store and shop and that sort of thing. But in purchasing online or, as we previously did it, from a catalog, there's always that friction or delay between purchasing the product and receiving it. Amazon, in introducing Prime two-day shipping, reduced that friction. Now, instead of waiting a week or so, we've waited two days. Now, in many cases, it's one day. But one of the strange things though is that most of us just kind of accept the friction that remains in the system. And then it changes, and we think, "Wow, that's great. Now I only have to wait two days."

GERTH: 07:07 And then we're like, "How did we ever live without that?"

WARD: 07:09 Exactly. But so even though over time things have improved and that friction's been reduced, we don't think about what if that friction gets reduced further? How will that change our behavior? What if instead of 2 days we could get virtually anything in,

say, 15 minutes flown to us via a drone? How does that change behavior? So now instead of ordering our pound of coffee to make coffee at home, you could just get a piping hot cup of coffee straight from Starbucks. Now we don't have to keep a drawer full of batteries or spare pens and other things if we could get things almost instantly when we need it. So I think Amazon Prime changed how we shop and shifted our behavior more away from retail stores to online shipping for many of those things that we didn't need instantly but also didn't want to wait a week or more for. And that's going to keep changing, right? And it's going to keep changing that shift from retail to online, and it will move more and more the faster the shipping gets, right? So just taking friction out of that system. And that's how a lot of these shifts happen, I think. In smaller but meaningful increments. And so from a business perspective, you have to think about that. I mean, in this instance, if you're a retailer, whether you're online or offline, you kind of have to think about how those shifts happen and sort of preparing for those. So when one competitor, whether it's Amazon or somebody else, comes in with the next thing like 2-day shipping or 1-day shipping or 2-hour shipping or 30-minute shipping or 15-minute shipping or whatever it is, it's just reducing that friction more and more, then you've just got to be prepared for that to happen and know how to kind of respond and be proactive about it. And--

- GERTH: 08:59      Now I know in the book that you're working on, you're following eight major societal shifts. Can you run through those and give us a little example of what each one is?
- WARD: 09:09      Sure. So we're looking at eight different things, right? So the changing demographics, climate change, big data/fast data, rapid urbanization, social commerce, blockchain, technology advances in particular artificial intelligence, and energy generation and storage. And so, I mean, just briefly a few words on each one.
- GERTH: 09:37      Yes, please.
- WARD: 09:38      So changing demographics, I mean, I think we have two stories going on in the world now, right? So in the developed economies like the US, people are generally living longer, healthier lives, but they're also having children later and fewer often. And so we're seeing an aging society and a declining population. In developing economies we're seeing a very different sort of picture. We've got a younger, booming population, and there's vast potential there for a sort of economic development. And so we'll see maybe a big sort of shift in the economic pattern of the world there. Urbanization, if we think about rapid urbanization, back in the 1950s less than 30% of the world lived in urban areas. By 2008 we crossed that threshold of 50%, where now more than 50% of the world lives in an urban area. By 2050 this is going to be probably 75%. The US is already pretty urbanized, but you're going to see huge growth in urban areas in Asia, in Africa particularly. And this development of these sort of big megacities which continue to get bigger and bigger. And that has big implications for things like the spread of pandemics, right? When we're all so packed into small areas and relying on public transportation and dense populations.
- GERTH: 11:13      Do you think that will-- not to interrupt you, but do you think that will turn some of the-- slow some of the urbanization, this whole pandemic that we're going through right now?
- WARD: 11:21      Yeah. I mean, I think what we're going through right now is certainly going to give people pause to think, right? And these people who are planning urban areas because on the one hand, urban areas are sort of very efficient places to live. People like living

in them. There's just tremendous amounts of benefits to these urban areas, but at the same time, they come with potential costs, right? And the spread of pandemics is one of those potential big costs for urban areas. And so people thinking about-- and I'm sure now after this-- or people are doing it in real-time now, but afterwards, people are going to look back and reflect on what's happening in cities and kind of thinking about, "Well, how do we shut down a city? How do we really have the capability to control the sort of population and shut down a city to be able to stop the spread of things like pandemics?" So, yeah. So I think there's going to be big implications for urbanization.

WARD: 12:33

So our next one is climate change. We're focused on climate change as a big shift. We've seen this huge, dramatic rise in these major weather events. I mean, we track sort of these weather events that cause more than a billion dollars' worth of damage, and the just number of those over the last forty years has just escalated sort of tremendously. And that's a big factor. Sort of relatedly, energy generation and storage is one that we're looking at. There's a vast potential to shift energy generation both at the grid level but also in terms of microgeneration. We're trying to see a shift to renewable energy, but storage is key to that, right? So the problem with renewable energy is that the generation of it is unpredictable. When the sun's out, when it's not out, when the wind's blowing, when it's not blowing, and also obviously the sun is only producing energy during daylight hours. A lot of energy is used when the sun goes down. How do you store that energy to be able to transfer it within time? And it's also going to lead, once some of these technological hurdles are overcome, to the transformation of transportation, digital devices, all sorts of wearables, and kind of other industries that will be spawned from that.

WARD: 14:08

The next is big data and fast data, and by fast data, we mean sort of data that is then analyzed in near real-time so that it can be used straight away. We're currently analyzing only a tiny, tiny fraction of the data that's collected, and there's just such a huge potential in so many areas, particularly in healthcare, right? And the use of data and big data in healthcare and addressing diseases, addressing things like pandemics. I mean, one of the keys that everybody's talking about now in terms of controlling this pandemic is the lack of sort of information and data that we have about its spread and who has it and testing and things like that. Then we're looking also at technological advances so whether it's robotics, internet of things, or something, but particularly artificial intelligence and how AI will transform will transform the workplace and will disrupt many professions, occupations, particularly white-collar jobs.

WARD: 15:23

And then our last two are social commerce and blockchain. And the common theme here is trust, right? The way trust has-- I mean, we've really seen a transformation in trust in society, and the decline of trust in institutions whether those institutions are Congress or the Supreme Court or public schools or the healthcare system or churches or whatever it is, banks, businesses. We've seen this big decline in trust over the last 40 years in the institutions of society, and what are we using as a basis for trust now? And so these two things. And social commerce, these peer-to-peer platforms that we're using more-- trusting more peers and reviews and things like that and these platforms like Uber and Airbnb where we do things that we thought we'd never do, right? Getting into cars with strangers or staying in strangers' houses. It's just reflecting a big change in the nature of trust. And then there's the rise of social influencers, the people who are-- not necessarily celebrities, but people in

spheres whether it's going to be talking about recipes or looking after dogs or whatever it is that you've seen this rise of social influencers who are creating a new basis for trust through relationships.

WARD: 17:06

And then finally there's blockchain which is also all about trust, right? So we've heard of bitcoin probably and other cryptocurrencies, but what the underlying technology of blockchain is all about is just connecting secure records of transactions and digital products so we can use and have a secure record of different transactions. And so that has the potential to sort of replace potentially a lot of institutions, and so you're seeing blockchain being used in financial services a lot right now but also in other areas like healthcare and digital health records and areas like that. So, yeah.

GERTH: 17:57

Is there a hierarchy of these? Can you say, "Oh, here's the one I think is the one we should be watching the most, and here's the one that no one's really paying any attention to and somebody should be paying attention to. And this one's not as big a concern immediately but long term." Do you have any kind of hierarchy?

WARD: 18:20

There's no real hierarchy, right, because it really depends on your industry and your business. Which one of these is going to have the biggest impact will vary for different people and for different businesses. And I think if I had to pick one that's sort of primary and one that's a kind of sleeper that nobody's really talking about, I think the - yeah, if you're pinning me down to one, I'll kind of join the voices who say that climate change is more imminent than we think and more severe than we think, right? It's also one of them that's going to impact everyone even though it will impact some dramatically more than others.

WARD: 19:03

But as I alluded to before, even here in the US if you look at the number of weather events that have caused more than a billion dollars' worth of damage, right, in the 1980s we had 28 of those events. 1990s we had 52. The 2000s we had 59, and in this last decade, in the 2010s we had 119 events which caused over a billion dollars of damage for a total of eight hundred billion dollars and over five thousand two hundred lives. And so that pace of escalation of those sorts of events should be a scary statistic to everyone, and it's not just the coastal areas. In this last decade, every state had at least one billion dollar weather related event, so. It's something that's growing rapidly, becoming more and more serious. And we see these impacts whether it's hurricanes or wildfires or whatever it is, but we don't necessarily connect them to climate change. But there's certainly evidence of changes in our weather, right, which is our climate. And then for the sleeper, the one that I think nobody's really talking about which I think is going to have a big impact is this whole energy generation and storage, right? As I said before, I think this will have a huge impact on a lot of areas whether that's transportation and the shift to electric vehicles, but also whether it's wearables, mobile devices, as well as this kind of more micro-level generation and storage of power.

GERTH: 20:54

When it comes to storage the other thing I think of-- or generation of energy. The other thing I think of is the countries that aren't first world countries, I guess. Like you said at the very beginning, the population is growing there, and, of course, all those people are going to want to use energy. And that seems like a societal shift too in the demographic area.

WARD: 21:18

Yeah. I think, I mean, from an energy perspective I think the hope is that just like the developing world kind of leapfrogged over-- in telecommunications kind of never

really went to landline phones. They just jumped straight to cell phones. That as the energy demand explodes in the developing world, they'll jump straight to renewables rather than the older fossil fuel technologies that we have. And the other advantage is obviously in those parts of the world, they're advantaged in their ability to capture renewable energy, particularly solar, so.

GERTH: 22:08

So what is it in us-- I'm thinking of the guy-- you talked about floods. I'm thinking of the guy on the news that's standing next to his house that's been flooded for the millionth time by the Mississippi river or whatever, and he's like, "Yeah, I'm going to rebuild again. It'll be the third time." I'm thinking, "Really? You're going to rebuild again?"

WARD: 22:26

Right. Yeah--

GERTH: 22:27

Same with CEOs. Is there something where the denial of it all is just too great?

WARD: 22:32

Yeah, I mean, in some ways we don't like change, right? And so we want to be able to rebuild where we lived. Our families are there. Our employment's there. All of our connections are there. Our networks are there. And so people are very reluctant and only sort of make these moves when forced to. I mean, if we look, 40% of the US population lives on the coast right now. And so you see more and more of these coastal weather events, and you wonder if that's going to change. But people still want to live by the coast. And so it's only really when people really are forced to make changes that they will make those changes.

GERTH: 23:26

Is--?

WARD: 23:26

And I think the same is true for CEOs, right? I mean, I think part of the problem is this very short term focus in US business and this shorter and shorter tenures of CEOs. And a lot of these things that we're talking about-- it's going to be 10, 15 years before people are literally forced into action, and so what we're trying to say is, "Well, let's kind of think about this." But the incentives aren't necessarily there for people to think of them if they're being rewarded on a short term basis, if their likely tenure is only relatively short: 2, 3, 4 years. Then people aren't necessarily going to be thinking about, "Well, yeah, we could do this now, but we're not going to really benefit dramatically for 10 or 15 years."

GERTH: 24:24

I guess same thing goes for governments and even small businesses. That it's like, "I've got to make money right now. I can't afford to invest." Because it's about investment and taking the time, right?

WARD: 24:34

It's about investment and taking the time, yeah. And I think, I mean, governments though-- I think governments should absolutely be paying attention to think because governments both have the responsibility to manage the outcomes from some of these societal shifts, but governments are also in the position to be able to shape some of these, right? I mean, if you think about urbanization, if you think about energy generation, even in terms of demographics and how demographics change over the course of a decade through immigration policy and other sorts of policies. And of course, climate change which we've been talking about as one of those areas where the UN and other bodies are trying to get governments to work together to be able to address these causes of climate change. And so governments particularly should be paying attention to these because not only will they have to address the

outcomes of these, but they can also actually fundamentally change the direction of some of these shifts.

WARD: 25:44

And small businesses, yeah, absolutely. Small businesses are often more concerned with survival in the short term. They have limited resources to look beyond the immediate, but on the other hand many of those companies that are now the household names: the Amazons, the Googles, the Facebooks, the Teslas. They were all small companies not very long ago, right? And those are companies who have been thinking about these changes and how these sort of impacts of these shifting technologies and societal shifts and have taken advantage of those. And so, yeah, so small businesses should as much as they're able also kind of think about these things.

GERTH: 26:34

And are there any factors besides denial? That make it hard to plan for these shifts?

WARD: 26:42

Yeah, I think a couple of things. One is, again, that kind of short term focus. That kind of trying to execute on what we do in the environment that we're in is the main focus of a lot of businesses. But also I think there's that in order to really think about these shifts and where they're going, you have to be willing to kind of embrace what I call wild futures, right? Things that are very-- the future that looks very different from what today's environment looks like. And both to have the imagination to be able to think about what that future could look like and the sort of confidence to say, "Okay. Yes, that actually could happen. If it does happen, how should we be sort of planning for that when there's a good chance that may not happen?" And so you're looking at different potential outcomes, some of which are going to happen, some of which are not going to happen. And you just don't know at this point, so you're planning for things which maybe 80% of the time is not going to work out.

WARD: 28:07

And I kind of think about as companies think about these things almost like you're acting as a venture capitalist, right? So if you think about a venture capitalist, a venture capitalist is investing in lots of different small businesses and technologies that they're placing these bets on knowing that probably 90% of them are not going to work out. But the 10% that are going to work out, it's going to be huge and they're going to make their returns on their investment for the whole pool just on those that do work out. And so it's the same thing as people who are thinking about these potential futures states of society. Yeah, there are many of them that the future is not going to look exactly like we think it might look, but some of those they are and some of those are going to have huge consequences for society and for individual businesses. And so they need to be able to kind of think about those and place bets in those areas.

GERTH: 29:18

And can you give us examples of companies that are doing it right?

WARD: 29:22

Yeah, I mean, I think one of the best examples-- and I think very few companies are doing it right, I would say. And that's part of the problem, and that's part of what we're trying to address here in looking at these societal shifts. But I think one company that's doing a great job of this, even though they are getting some backlash from investors on it, is Alphabet or the parent company of Google. Because they know that their core business, Google, is not going to last forever. I mean, technology will change. The way we behave, the way we interact with things will change. The way we get our information and advertising and that sort of stuff-- it's not going to last forever. So Google has this whole other bets division part of which is Google X, which is actually why they kind of created the parent company of Alphabet is so they could

have Google, but then they could have all of these other things. And so they're really conscious about thinking about what are the big problems that they could potentially solve. What are the billion person problems that society needs to address, and how can they start investing in these different technologies? Whether it's internet being provided by systems of balloons, whether it's digital glasses, wearable technology, whether it's self-driving cars, or whether it's drone technology. They're investing in all of these different types of areas which they think are going to be big problems in the future.

GERTH: 31:10

And so how do companies get there? So I'll date myself a little bit, but in the '80s I remember reading the book *In Search of Excellence* by Tom Peters and Robert Waterman. And I remember what stood out for me at the time was this term skunkworks. And you actually mention it in some of your materials that excellent companies always had some sort of small group off to the side that was not reporting to anybody except to the top people, and their job was to figure out what was the next big thing. And I think if I'm-- and I'm not conflating these things, but I think that Xerox had a skunkworks and actually invented the mouse and the PC and the little folders that we now click on instead of typing in lines of code. Is that the way to go? Some version of that that companies should be doing?

WARD: 32:01

Yeah, in a lot of ways, Xerox did a fantastic job, right? They had this Xerox PARC which was in Palo Alto, California. The problem was that the main headquarters of Xerox was on the East Coast in New York state, and so they had this Xerox PARC which did a lot of amazing things. They invented all the things that you talked about and many others like laser printers and all these other things. And because Xerox was thinking about the future and obviously Xerox were in a paper generating business, right, in terms of office machines and copiers and things like that. And they were thinking, "Well, what if that business goes away? What if we are moving towards a paperless office and an electronic office?" And so they set up Xerox PARC and sent a lot of brilliant people out there. And they came up with all this technology which we take for granted today. Their big mistake though was in keeping it completely separate and never sort of connecting it back to their main business, right? And so that's what you-- and never really kind of thought about the commercial aspects of launching these sort of inter-products so much.

WARD: 33:36

And so other companies like Apple-- so famously Steve Jobs went to visit Xerox PARC and saw all this stuff and then turned it into the Lisa and then the Macintosh. But the problem with Xerox is that they never kind of went into kind of thinking about how to tie this back into their main businesses. And I think that's where I would say Alphabet or Google is different in that they're very much kind of focused on, yeah, here are these big ideas, here are these big problems that we're looking at solving. But they're also very conscious about is this viable commercially within five years or so. And if it's not, then they won't do it. They'll abandon that project. And so they're very much thinking about the commercial applications and implications of what they're doing and turning that into part of the sort of core business of the company. And you see how they've done that over time starting from a search engine, and then they sort of developed Gmail and Android operating system, kind of all of these things Google Maps and so on, all of which kind of came out of these other sort of explorations but then are sort of brought in and tied into the main business of the company. And so that's really the key difference. Xerox had, like I said, great ideas. They were doing almost everything right except that one key aspect.

GERTH: 35:30

Yeah, they didn't finish it up. So what could companies-- I know that the book you're working on is going to deal with this so let's talk about some of the things that companies can do whether there's tools or techniques or blueprints that they can use to plan for disruptions. I guess part of what you have to do in your book is talk about how you talk people into thinking that this is important.

WARD: 35:57

Yeah, absolutely. That's one of the things, and maybe these whole disruptions that we're seeing right now kind of will then jolt people into thinking, "Oh, actually we do need to kind of think about the future and disruption because it can happen very quickly," as we're now discovering. But I think some of the keys if we kind of think about some of the steps that we go through and talk about in advising companies about how to do this, and the first key is to really conceptualize your company. What is your company really? I mean, let's take an example like Ford, for example. Is Ford in the car and truck business? Is it in the transportation business? Is it in the sort of technology business? What business is it in? And so how you conceptualize what you do is important to appropriately sort of open up the possibilities to what you might do in the future, right, especially as those conditions, those markets change.

WARD: 37:15

Then the second thing is to kind of think about each of these societal shifts or any others that you might kind of think are going to be potentially important to your organization and kind of just kind of think about each of them. Now, as I said before, some of them are going to be more applicable than others to any given organization. And to take on all eight is very complex, and maybe there's two or three of them that are really going to have a big impact on your business. And so you sort of then take those two or three or four that have a major impact on the company but not just on the company, on your strategy, on your customers, on your market, on your suppliers. Which are going to have big impact on any of those constituents or stakeholders? And then kind of thinking about how do we know if the world is moving in a particular direction? What are what we call some of the sort of key indicators of these societal shifts - we kind of abbreviate that to KISS metrics - but that tell you which way the world is moving? For example, you can have a metric about life expectancy measuring changing demographics or population density for urbanization or whatever it is that-- but basically, indicators that are relevant to your product or market that also connect to those different societal shifts.

WARD: 38:52

And then it's like taking these indicators and saying, "Okay, how might these dials be turned, or how might they vary in different ways in different combinations?" And sort of to build scenarios or really pictures or stories of what the world might look like in 5, 10, 15 years time sort of based on these different indicators. And then when you've got those different futures mapped out, those different scenarios, those different stories, it's like how would your company thrive or even survive in that environment? Would your current strategy work in that environment? Would it not work in that environment? What elements would work? What elements would not work? And then at the same time thinking about for a successful company in that environment, what would that successful company look like? What would it be doing? What sort of activities would it be engaging in? And then from there you kind of get that gap analysis if you like to think about how what we're doing currently is different from what we would need to do to be successful in that environment.

WARD: 40:13

And then to think about what are the resources and capabilities that you need to build or acquire to be able to become successful in that environment? And where

those gaps are will tell you what are some of the bets or investments that you need to make. If you're thinking about yourself-- conceptualizing yourself as a venture capitalist as we talked about before, it's like what are those investments that you need to make which will cover those shortfalls in the future? And then the last thing is-- that's basically the process, but it's also important to note that it's not a one and done process, right? It's no good just kind of doing this now and then taking this plan off the plates 15 years from now and say, "Oh, did this work out?" But it's tracking this over time so you can see is the world moving in one direction or is it moving in another direction. And so is one scenario becoming more likely and another scenario becoming less likely? Or do we need to kind of redo this whole thing again and go through that exercise again?

GERTH: 41:23

The other half of that that I mentioned earlier, and you were like, "Yeah," is how do you get-- if you're not the CEO of the company, how do you get someone to buy into this? Because there's a lot of resources that are involved. There's personnel that have to be dedicated to this and money that will probably have to be spent to get the research. Do you have any advice for somebody who's trying to look on this side?

WARD: 41:53

Yeah, in order for this to happen successfully in an organization, it really has to be driven by the senior leaders in the company. The people who are responsible for what the company does and its strategy need to be the people who are guiding this process and thinking about this. And so, yeah, in as much as somebody else in the organization can kind of position and say, "Well, we need to be able to think about this because in a lot of instances if the world changes dramatically, then we're going to go out of business."

WARD: 42:41

I mean, I think one of the things that's really interesting about what's going on right now with the COVID-19 crisis is that we're seeing, I mean, just today the new unemployment numbers came out, and it's 6.6 million. It's 10 times higher than it's ever been before except for last week, and it's twice what it was last week. And so you're seeing this massive shift where you've got a lot of companies which are effectively shutting down, right, and going out business even if it's temporarily but not able to operate in the environment that we're currently in. And on the other hand, you've got other businesses which are producing as fast as they can and growing as fast as they can and ramping up as fast as they can because that environment shift's in line with what they're doing, and what they're doing is just even more in demand than it's ever been, right? And so this is just a picture, a kind of rapid speeding up of what is actually going to happen over a longer period of time due to all of these types of societal shifts, right?

S3: 44:05

And so hopefully this will serve as a wake-up call for companies that when things revert to "back to normal" when this particular crisis is over that companies will think, "Well, this can happen again in a short term burst like it's happening right now, but it's also going to happen for sure in different ways. If we think about our business from now till 10 years from now, and what we do is likely to be dramatically different. The environment we're in is likely to be dramatically different, and so if we don't plan for that change over time, then we're going to be shutting down just like businesses are shutting down right now."

GERTH: 44:57

Well, it seems sort of a sad place to end, but I think it's a good place to end, Andrew. Thank you so much.

WARD: 45:03

All right. Well, thank you for having me, and it's been great. I enjoyed it.

GERTH: 45:07

And thanks to my guest Andrew Ward. The book he is writing with fellow Lehigh business professor Josh Ehrig is called Shift Happens. You can visit Andrew's website at [thegreatdivides.com](http://thegreatdivides.com). That's divides with an S, so [thegreatdivides.com](http://thegreatdivides.com).

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