

# This is Digital Podcast

## Episode 4 Transcript

Rissa (02:54):

Welcome to This is Digital, a podcast about leading with digital to win in the marketplace. I'm your host, Rissa Redden, partner and chief marketing officer here at West Monroe. West Monroe is a digital services firm. We are thinkers and makers who bring hands on experience and technical know-how to get things done and to deliver lasting value. On This is Digital we talk to experts about how to go about not just doing digital, but being digital. We'll be sharing stories of digital successes and digital failures. This podcast is for business leaders like you who don't want to miss out on the opportunities digital holds. Today I'm delighted to be joined by Dr. Robert Westcott, president and founder of Cambridge Research and Economic and Public Policy Consulting firm based in Washington, DC. Rob brings more than 35 years of professional experience in macroeconomic financial and public policy issues to our discussion today.

Rissa (03:45):

His experience includes years as an official in the research department and European department at the International Monetary Fund, and four years as an economic advisor to the president at the White House. His published research has covered a variety of topics over the years, including macroeconomics, global financial risks, fiscal policy, economic development, globalization and inflation. With global markets still experiencing volatility and the future of the workforce continuing to change, I'm thrilled to welcome Rob to This is Digital and to chat about how digital transformation plays into each of these areas. Rob, thank you so much for joining today.

Rob (04:22):

Happy to be here.

Rissa (04:24):

Rob, I know I condensed, , many years of your experience into a few sentences. Could you please tell us a little bit more about your background?

Rob (04:31):

Yeah, no, actually Rissa did a good job. I would just add that in the early part of my career, I was an academic as well, doing research and teaching university students. Actually at one point in my career, about the 20-year mark, I realized that I'd spent almost exactly one third as an academic, one third in the private sector and one third in government service. And I loved every

one of these career paths. So I'd just say the academic world, we, we learned economic theory and how to form a hypothesis. You also learn how to explain things to people. That's an important skill in the private sector. I learned about businesses, how they make decisions, how they assess risks, and what kinds of things they think about when they make a billion dollar capital spending investment. For example, in the private sector or in the, in the government sector, I learned, , how to make policies that will help people live better lives.

Rob (05:29):

And I will just say working at the White House four years, I think I met 50 heads of state or presidents. So there are a lot of things you get to do in the, in the, in the government sector that you don't get to do in the private sector. So anyway, that was my background. One thing I would just say one of my favorite jobs was editing and writing the IMF's International Monetary Fund's World Economic Outlook. And that was their review of the world economy, where it's going, what risks are, and so on. And when I think about today, Russia's invasion of Ukraine, surging oil prices and energy prices and global recession risks, I think my experience there, I was pretty lucky cuz it was like pretty much on point, good training for today.

Rissa (06:14):

Fantastic. Well, and I would suspect too, Rob, that the experience that you have with one third, one third, one third across these different segments, really uniquely positions you for this conversation today. Given most, I would suspect have a hundred percent, a hundred percent, a hundred percent versus you're a third, third, third, which I think is, is really is interesting. So a question that we like to ask our guests, Rob, is what does digital mean to you?

Rob (06:42):

Yeah, so to me it means efficiency. It means using information easily sharing information. I think it means opening doors, increasing living standards. It should mean increased opportunities for research and development. It should be ways I mean new ways of reducing business costs. I think it is it should be better ways of delivering credit to businesses that deserve it. Now you have to figure out which businesses deserve it and who's going to pay back. But it should be it should be helping to, to make credit systems work better. I know many people think about digital and they think about the consumer. They think about using it for entertainment or identifying which groups you want to target for say, advertising that kind of thing. And that's all fine to me, but I really think about it mainly on the production side. What does it mean for science, technology improve financial and economic productivity? That's what I think of.

Rissa (07:44):

And Rob, does digital present unique challenges?

Rob (07:48):

Yeah, it, it does. It, digital is still a little bit like the wild, wild west to me. And, and I'm thinking about everything from like cryptocurrencies to data aggregators who like collect 10,000 data series on each individual person and, and, and package that data. So I think there's a critical role for government and regulators to help prevent abuses and to make systems work for most people. So, if a bunch of people lose their, lose their life savings by investing in cryptocurrencies that's not very good for the technology and it will undermine confidence. I also think, you think about go back to the privacy issues. There's huge privacy issues with digitalization and I'm not sure a lot of people even really fully understand the privacy issues, but think about 10,000 data series on you. A lot of people would say, Oh, I love a clean life. There's, I have no secrets. No, no problems. But even just error rates, there could be error rates about information about you that can take a long time to correct.

Rissa (09:12):

What role would you say that government should be playing as it relates to digital?

Rob (09:23):

Yeah, , if, if a bunch of people lose their, lose their life savings because they invested in cryptocurrency, like that's not going to be a good thing for the technology is going to undermine confidence. If a lot of people realize maybe , how exposed they are with their data being out there on with data aggregators , if there are 10,000 data series, as is said, are available, each person, some people will say, Oh, I love a clean life. I have no secrets. It's, it's no problem. But there are a lot of issues. One could just be there's some incorrect data out there and how do you correct it? So I, I think we need, we do need government and we do need regulators to look at this and to make , to make sure that the technology is useful and prevent abuses and make sure it helps to serve people.

Rissa (10:17):

And when you mentioned that, that digital is a bit of the wild west, how do you adjust? I mean, when you think about policies that are, are created to protect people, but yet we may not understand where some of these technologies are taking us or the implications of them. How do you recommend that policy continue to adjust or that we keep focused on how fluid the needs might be as we learn more about different technologies?

Rob (10:47):

Yeah, so I, I do believe in experimentation and I think we, we have to try new things. And so I'm a big fan of trying new, new tools and see what they can do. But , we do have to be we do have to have our arms around the whole story and we have to say, , what are the implications of this? Are, are people hurt? What are the again, we, we, we have to protect people and we have to make sure that they are fully informed about the risks when they're using certain technology or when they're say entering a chatroom on a, on a, on a computer. So there are, there are things

that we need to do to try to keep people safe, but mainly you can't just shut everything down. You have to try and you have to see what's what might work.

Rissa (11:36):

And Rob, would you say that there's still a distinction between the digital economy and the brick and mortar economy? Or at this point, is it now simply the economy?

Rob (11:45):

It's getting more and more to just be the economy? So I would say though it's not a straight line, it's not a straight line. Take something like e-commerce. So under covid e-commerce jumped from 10 or 11% of retail sales to like 16, 17% of retail sales. And we all understood that. We thought it was probably overshooting some, and the answer is it was overshooting. Some we're back down to like 14% of, of retail sales are e-commerce. And it's probably going to drift back down a little bit more. It's not going back to 10 or 11, but it is , it, it's going through an adjustment period. , some firms overinvested in e-commerce, even Amazon is closing some hub transportation hubs and said that they overinvested some too much in in e-commerce. So , we have to be aware that these things don't work in straight lines.

Rob (12:43):

Take something like virtual doctor's office visits , like those ramped up a lot under Covid. It was great that we had them and, and we're not, we we're not going back to like, almost no virtual office visits like we had before Covid. But I think many people would say, if I have a choice between seeing my doctor, I'd rather take that than than just have a virtual visit. So I think there's going to be some back and forth. When I think about activities under like, Covid and , like we know people haven't gone back to movies for the most part yet. They're not flocking back to sports clubs or exercise classes. They're not exactly flocking back to offices at this point. Workers are not I think one thing that is going to happen, we are seeing more and more interest in ex experiential retailing, and I think that's for real and is going to continue.

Rob (13:39):

So some people might call this hybrid retailing, but people have missed other people under covid. I think people do like to shop that do like to walk around and see things, and I think they're, they are looking for social interaction. So I think we're seeing things like classes painting instruction with wine tasting, these kinds of things are, are, are going to stay. I think also you go into a hundred square meter fashion boutique and you consult with a trained sales person looking for say, a new jacket. I think this is going to be for real. The sales person can tell you what they think you would look good in. You can then try it on in a virtual you can try a jacket on. You can see what you would look like in different colors on a, on a, on a screen, and then you can order the color that you like. You go home without the, the garment and then it's shipped to your house three days later. I think those kinds of things are going to be for real. And

I think the world has changed and, and those sorts of digital transformations are, are going to continue.

Rissa (14:44):

Well, and Rob you mentioned digital, the digital evolution or acceleration, if you will, of healthcare and of retail. Are there other industry segments that, for, for who, for which you believe this is particularly relevant?

Rob (14:58):

So I, I think, consulting say giving I think if you really start to go down the path virtually anything that can be done with a, with a meeting at a face-to-face meeting, a lot of this will be able to be handled with a with a professional, like take professional services. I think a lot of them can be delivered digitally. So whether it's meeting with lawyers, teams of lawyers, meeting with management consultants, meeting with accountants, I mean, I think a lot of these sorts of activities can be can be converted to, to digital. It's not, again, it's not going to be a straight line if you've never met people before. You may not feel comfortable sharing a bunch of details with say, your lawyer or whatever. So I think again, we're probably going to see hybrid use of many of these services. So you have a relationship the lawyers the accountants, the professionals that you're interacting with, the management consultants, the strategy people, and you get, you have a base of understanding with them. You trust each other and then after a certain point the meetings are arranged as makes sense, including a lot of digital meetings.

Rob (16:14):

And by the way, I would just say risk. I think what Westman Monroe does... I think there's some great consulting opportunities for you and your colleagues to help figure out great e-commerce strategies and digital strategies. So I, that's what you do and I think that's, it's a growth area.

Rissa (16:29):

Fantastic. We're in planning season Rob, and I'm curious, I know you have a lot of conversations with prominent CEOs and advise them on what you're seeing in the marketplace as we head into 2023, what should be top of mind for business leaders?

Rob (16:46):

Yeah, so we all know the Fed is raising interest rates and costs of capital going up. And that's just shaping that's shaping the markets greatly. We are concerned about a slow down of the world economy. I mean, we think that Europe is in recession already. I think Germany is in recession already, for example, I think the UK is in recession. And so, , if you're running a business, and you export a lot, you're going to be, have to be aware that some of your export markets may be weakening. So that's one thing. I think the labor market has shifted a lot. The labor market has been a really fascinating story. And we've gone from we've really gone from a situation where labor market was extremely tight. Maybe we're starting to see some cracks

emerging now in terms of maybe some softening in some in the demand for some categories of workers. We can talk about that more. But i, I think these are some of the, the, the issues that business leaders have to think about in 2022 of, am I going to see softening economic conditions, higher costs of capital, and what am I right sized in terms of my labor force?

Rissa (17:57):

And I, I'd love to hear more of your perspective on, on the labor market and what your predictions are for 2023. And I, I'm curious, as you think about labor, presumably that's employees, but then also contractors are a, a piece of the puzzle. And how might you advise companies that are thinking through what the right mix is for their business?

Rob (18:18):

Yeah, so when Covid hit, we lost 20 million workers in one month. So in, in the single month of April, 2020, we lost 20 million workers. And in some ways we've been fighting our way back ever since. We've added a lot of jobs and we've now re attained the, the, the pre covid level of employment we had. The unemployment rate has gotten back to the pre covid level three and a half percent unemployment rate. So in many ways the labor market's healed, but we're still down about one and a half percent of, of the workforce. And these are people who disappeared. And so first of all, that raised the question, where did these people go? Who are they? Where did they go? We believe about half of them became early retirees. These were people who were 61, 62, 63, 64, and under c maybe they weren't happy with their work, but also the stock market was booming in like 2021.

Rob (19:14):

Many of them saw their 401k plan, they thought it was worth half a million dollars. Oh, suddenly it was worth three quarters of a million. And they were like, Oh gee, this is a great time to retire. I don't think those people are coming back. The other big group that we've been able to identify or parents of, of young children who are in school a school age, and I think everyone on this podcast knows that just complete disruptions the last couple years in terms of schools closing, daycare centers closing because of covid outbreaks and so on. And that has driven a number of people out of the labor force as well. I think many of those people will come back to the labor force once everything seems to settle down. The end result though is that we've had a very tight labor market without any question.

Rob (19:59):

We've had, in July, we had two job openings. The business were looking to fill for every single unemployed worker, so two openings for every unemployed worker. And the end result is really the tightest labor market in US history. By far workers have felt empowered. Wage demands have been going up. Wages are up about six and a half percent year on year. One of the biggest increases of wages we've seen, so I think we would basically say 2022 was the year of the worker. Okay. Workers were, they felt empowered to demand higher wages, they felt

empowered to demand remote work or other work concessions. And so that's, that's been the case. And I think, I think 2023 is going to be year, a year of transition and probably a year of, I call it the, the year of the big sort.

Rob (20:54):

And I think businesses are going to start looking at workforce and their configuration workers. I think many of 'em are going to say it worked great remote work, worked great for a certain percentage of our workers, depending on the nature of the work, but I think some other businesses may say it wasn't working as well as we thought. And we kind of went along with it because the workforce was kind of demanding these changes, but for us, we want a certain percentage of workers for a certain tasks to be back in the office. So I think we're going to see some of that in 2023. The other thing is, I think another big adjustment is workers themselves are reassessing some of their , their, their life choices. And, and I think a lot of workers who may be working remote, especially maybe some younger workers may be saying, , I'm not getting the mentoring I needed.

Rob (21:45):

I'm not getting the training I needed. And so I think we're going to see some, even some work or maybe they're saying, I'm not getting the promotions I was expecting, I'm not getting in the mix with managers as much as I thought. So I think in 2023 we're going to see some shifts and I think overall it's going to be a, a good thing and, and but I think, I think technology is going to have a really important role to play in 2023. So it, it won't be one size fits all. Everyone works remote. I think it's going to be really sorting through what are the tasks of the business of, and can they be well done from remote work and on what basis, what communication and what digital technology do you need? And so I think it's going to be a big sort and I think again, Rissa, this is good for IT consultants to help companies figure out a good strategy for their business.

Rissa (22:42):

That's right. And so it sounds to me, Rob, from what you're saying, that we're not going to see an end of of volatility in 2023 and, and, and perhaps we even will see more volatility in 2023. What steps should companies be taking to protect themselves or to insulate themselves from that continued volatility?

Rob (23:04):

Yeah, so I think some of this is going to be going back to basics. And I think a lot of companies are going to , hunker down some, we're starting to see some reductions of, of hiring. We're not seeing companies doing layoffs at this point, but we are seeing companies announcing hiring freezes, for example. So they're going to reassess what their needs are. So I think many companies are going to be looking really carefully. They know wage demands are up. I think there's going to be a push for automation in some, in some sectors. So I, I think we're going to

see investment in watering kiosks at fast food restaurants, for example. I think that's going to be the standard a year from now. I think if you go into almost any fast food restaurant, you're going to be pushing buttons to order your food.

Rob (23:53):

So we're going to be seeing those kinds of investments being made. We're going to see probably some some cutting back on some broad expansion plans probably in 2023. I think if you have global uncertainty and the chance of a global recession, you're going to see businesses deferring maybe some big multibillion dollar investment projects. Doesn't mean they won't do them, but they might just say, Hey, the board of director's going to defer for six months, we'll reassessing in June of 2023 what we want to do. I think you're going to see a little bit of a slow down of overall business activity in some of these, in some of these areas,

Rissa (24:33):

Which to me, you're reminding me Rob, a bit of a piece that we published recently that's talking about using Essentialism to define your priorities in a downturn that how do you create greater focus during a downturn and focus on what really matters most for the business.

Rob (24:52):

Yeah, so again, it's core, you get back to your core business, what is it we do for a living <laugh>? What is our reputation? What is it, what is it that we deliver to our clients that our clients absolutely need? And you deliver that. And then put yourself in your client's shoes. What are, what's going to, what are, what are they going to need to succeed in a, in a in a more stress financial and business environment? And rather than trying to roll out 10 new products, you're going to pick the two or three that are most really have the highest hurdle rate, pass the highest hurdle rate, and the highest hurdles. And are, you're going to put your effort into those and probably you're going to have some ideas you're going to say, , that's still a pretty good idea, but we might do that in 2024.

Rissa (25:45):

Shifting gears just a little bit, Rob, you have a lot of experience really with globalization, and I'd be curious to get your thoughts on the global economy and what the implications are for US-based businesses.

Rob (26:00):

Yeah, I think that the globalization business model is under, is under incredible stress right now. And it has been under growing stress for the last 10 years or so. So some of this was China's rise as a manufacturing center, Hey, it was great for making low cost goods and so on, but it did cause some job loss in manufacturing, both in Europe and in the United States. And so it started to create a political backlash. So that's kind of been percolating for 10 years or so. But two new developments really I think have changed the game. One was covid and it, some countries



blocked exports of certain products, like PPE equipment and chemicals that were used for pharmaceuticals. Some countries block them. I'm not thinking, oh just of China, I want to be clear, Italy had a vaccination, a company that was making vaccines, so they had a contract to sell the vaccine to Australia, but under Covid they were like we could really use this vaccine here.

Rob (27:06):

And, and Italy was very hard hit as, with, with covid in the early days. And so I think that raised the whole specter that countries could say we're going to put our self interest first. And, even over trade, even over like contracts for exports and so on. But the real development, I, I believe was the geopolitical tension that, that Mr. Putin kicked off when he invaded Ukraine on, on February 24th. , the globalization model has always assumed that countries, if they were linked together through trade, through foreign direct investment, that they would, , be good partners, be peaceful partners with their, with their trading colleagues. And I think Mr. Putin's decision to invade Ukraine really has disrupted the apple cart on that front. , we, we collected data, Russia last year, exported \$86 billion of energy to Western Europe and Russia last year exported 180 \$156 billion of goods to Western Europe, including energy, but also chemicals and metals and other fertilizers and other goods.

Rob (28:16):

And I think that has really shocked people that that's about 20% of Russian household income. So Mr. Putin effectively was saying, I'm willing, , to give up or to threaten one, , one fifth of my households, of my, my people's household income in order to have this military objective to invade Ukraine. And I think that has really scared people cuz that's really goes directly against this concept that, , we'll all be one big happy family if we trade and, and invest in each other. And so that's been a concern. And I think increasingly it's not just, it's not just Russia and Ukraine, but it's, it's really been affecting people's thinking about China. I mean, Mr. She says he wants to take over Taiwan, and I think that's raising concerns in the business sector. , that's been a spiking of the number of us s and p 500 companies that are mentioning Taiwan as a potential business risk in their 10 K forms, for example.

Rob (29:16):

So have to keep a close eye on this. I think overall we're going to see more fracturing of, of global production systems and supply chains. I think you're going to see the one word we're hearing more and more is, is China plus one. And what that means is, I'm not necessarily going to pull out of China. I have a factory in China, I'm making these goods. I'm not necessarily going to pull out or close the factory, but I'm not going to build, if I'm going to expand, I'm not going to build the next one next to it. I'm going to put the next factory in India or Vietnam or Mexico or someplace. And so I think we're, , these are some of the, the, the, the changes are just kind of the new reality. It it by the way, it's not even the lack of globalization. It may mean making goods in India, still shipping them by FedEx or ship or whatever back to the US or from Vietnam

back or Mexico back. But I do think we're going to see some shifting attitudes toward the global business model

Rissa (30:13):

And any other implications that you're seeing Rob, from a supply chain standpoint. I mean, it, it sounds like, , you're seeing companies that are interested in hedging their risk by opening up, , as you mentioned, China's plus one. Any other implications or any other trends that you're seeing as it relates to supply chain management?

Rob (30:31):

Yeah, well I think one thing is there's, there's been a shift of focus on costs. So it, it could be that, that opening a second factory in Mexico or or another place, maybe those goods will cost 5% more or 10% more. I think more companies are going to say, , we need to diversify supply chains here. I'm willing to, , I I'm willing to have higher costs of some of these items. And so I I, first of all, I think we're going to see some increase of cost overall of with more diversification supply chains. We're going to see that. I, I I'm not I I think we just need to be realistic here that the world is , there Russia's invasion of Ukraine just disrupted things. It's, it's been unsettling. And one of the other things that's been unsettling is the speed at which social pressure came onto company executives who were doing business in Russia.

Rob (31:31):

So, , you could see if some company in Russia was like supplying metals to the defense industry, why there would be a lot of pressure on that company to not supply the metal that was making weapons say in Russia. But there was a lot of pressure on, on western companies that were selling, , handsets of telephones in Russia or selling hamburgers in Russia and other things that were not really militarily oriented. And I think that has also been a little bit of a a wake up call to some businesses that were like, , our shareholders, our stakeholders are nervous and they're putting pressure on us to either pull out of certain markets or sell subsidiaries or whatever. I think that's been a little bit of a surprise as well.

Rissa (32:16):

Rob, we talked a lot about nervousness of investors of, , uncertainty in the markets. Are there any bright spots that you're seeing, anything that you're excited about in, in 2023?

Rob (32:29):

Oh, miss, I'm an optimist on the US economy and on productivity and on future growth. So even if we have a recession, , to me that sows the seeds of, of entrepreneurs picking up the pieces and, and investing a new so even if we do have a recession, and if the first half say of 2023 isn't great, , I think the economy gets back on its feet in 2024 and, , we're, we're, we're inventing new things. And I think digital technology is going to play a key role. Think about like health and, and medicine, first of all, , covid really, I mean, it was, it was devastating, but it really opened eyes to

new technology like mRNA technology, new vaccine development techniques. I think we're, we're going to be seeing that technology unlocking all kinds of new vaccination capabilities that can improve health.

Rob (33:26):

So first of all, just say that was a big, that, that's been a big development. I think big data is really going to be coming into its own. And I think big data in, , we're, we're right now we collect every cancer tumor in America and we do DNA testing on it. We store it in a, in a lab in Texas. And increasingly we're, we're figuring out which, which drugs affect which cancers and which, which ones have good outcomes. So I actually believe we're probably looking at a cure for cancer in the next 3, 5, 7 years. And I think it'll start in the, it'll be a 22 blank something when we, we feel like we've really got a cure for cancer. And I think the, the solution's going to come as much to big data as anything. So really exciting, this green energy is going to be, is getting billions in hundreds of billions of dollars of investment and globally trillions of dollars of investment.

Rob (34:25):

And I think this is unstoppable. And if anything, the developments in, in, in, in Europe and the, the damage that's being caused by cut being cut off from Russian gas is really going to give a real push to more e more green investment in, in energy in, in Europe. So windmills, solar, it's not just windmills. And so windmills and solar though, it's really energy systems, backup storage systems switching capabilities, and that's going to be in the US and in and in in Europe. Evs are now unstoppable. Electric vehicles are now unstoppable, and we're going to be, I believe, exceeding most people's estimates of the of the implementation of EVs. I personally am on my fourth ev so, , <laugh>, I'm I'm not bragging, but I'm just saying, , the, the technology works and I think that even by like 2026, we're going to be talking about like 20% of vehicles sold are going to be EVs and by 2030 it's going to be, , 40 to 50%. So that technology is coming on as well. So lots of exciting developments in healthcare, in in energy, in, in so yeah, I'm, I'm excited and I, I think we're going to see lots of new things coming in the next two or three years.

Rissa (35:49):

Rob, you mentioned that you're on your fourth ev. What have you seen over time as, as there's been greater adoption of, of the technology? What, what has your experience looked like with your first EV versus your current ev?

Rob (36:01):

Yeah, so in this office building here, , I was the first ev owner in, in, in downtown Washington. And I ta I talked the building into putting in ev charging station here. So , that's kind of like, , the beginning of it a year ago in August, drove my EV to Maine and there was a charging station in East Brunswick, New Jersey that had 10 chargers, charged my car there on the way up to Maine. I was the one car sitting outta 10, sitting there charging this August a few weeks ago, drove to

Maine again, and sitting at that same charging station in East Brunswick, New Jersey, 10 charging stations, all 10 of them occupied, and a couple of cars waiting for open slots. So there, there is going to be it's going to quickly get to the point where we, we need a lot more charging stations and that, but that's good that, that means investment spending. Some of that's going to be in the infrastructure spending bill, but there's also a lot of private sector investment that people just know how to make money and they want to go out and, and make a profit. And so I think that's going, you're going to be seeing major investments in like ev charging stations.

Rissa (37:15):

So you mentioned bright spots being healthcare energy and utilities. Any, any other sectors that you're excited about for 2023?

Rob (37:27):

Yeah, and I just want to make one point on back to the energy side. It's not just windmills or solar panels. I want to be clear. It is systems. So it is like it is like go to Texas to the fields of Texas where you've got windmills. And so you have a wind generation facility, you have to have sensors and meters that are testing the wind 20 miles to the west, 20 miles to the north, southeast and so on. And the sensors are going to be every two miles and you're going to be, software is going to be pick and sensors are going to be picking up the changes in the, in the wind speed, and they're going to be coming to a central dispatch office for the utility. And they're going to say, , wind is dropped from, from 17 miles an hour to 13 miles an hour from the west.

Rob (38:15):

We think it's going to start to reduce power output by, 19% starting in 25 minutes, it's going to be get the gas backup generator spinning the, the standby generator spinning, it's going to have to kick on and, and take this 19% load or whatever, or it's going to be get, we're getting ready to start sucking power out of the batteries that have been charging the last three days over there as part of the facility. So it's, it's systems, not just hardware. And I want to be clear about that. And I think that's really where the exciting stories are is the integration of energy systems.

Rissa (38:55):

Well, and certainly we're seeing grid modernization efforts. What are some of the other aspects of the systems coming together are, do you find exciting?

Rob (39:06):

Yeah, another whole thing is really exciting, is using, we need to find new forms of energy to fuel our most heavy demand transportation needs like aircraft, and also our most heavy energy demands like steel making or aluminum smelters, these kinds of things. And so we're increasingly going to be seeing the growth of, of green hydrogen, of blue hydrogen. We're

going to be seeing increasing use of like carbon capture. We're, we are now on the cusp of seeing electric commuter airplanes that are going to be flying within the next couple of years as test cases. And then over time I think we're going to see battery operated larger planes. So there's going to, it's a whole revolution of energy that's coming over the next 20 years, and we're going to start to see big chunks of it coming into focus in the 2020s.

Rissa (40:10):

In the flying car. We just had the flying car recently.

Rob (40:13):

I don't have a flying car yet, but maybe you need to get one. I don't know. Maybe

Rissa (40:18):

I understand it did not, the flight was not long, but we did have an instance of a flying car just recently.

Rob (40:25):

I know, I saw.

Rissa (40:27):

Well, and so getting back to your expertise in and energy policy, you've, you've done a ton of work in this space. How has that work in energy policy influence some of the things that you're seeing in the energy industry now?

Rob (40:42):

Yeah, we did a lot of modeling work here at Cambridge, our firm looking at the, the infrastructure investment and jobs act. And we've been looking at that. We've been looking at the economic effects of, of electrifying the vehicle fleet. And so we've been doing a lot of economic modeling work in this area. And the good news is that we actually, many of these new technologies will create jobs. They will, they require new investments. And so that's going to be a big area of focus. The these new I mean, Ford has announced 11 billion of new investments in a battery plant and an EV assembly plant in west of western Tennessee near Memphis. General Motors has been announcing on the order of 25 billion of new EV investment plants in investment in new plants and battery production in in Michigan.

Rob (41:52):

So we've got big investments coming. One other area that is a little bit playing off the globalization issue is, is as companies and countries are thinking more about supply chains, we are looking at semiconductor production semiconductors are really the, the hot concern here in Washington today. And as , we passed a \$52 billion chips act. And so Intel is breaking ground on two new semiconductor production plants in the state of Ohio. So these are all going to be jobs.

They're, they're, these are jobs in the short run of constructing firms, but over time they're going to be thousands of jobs of American jobs making the ingredients we need and the components we need for the future.

Rissa (42:41):

As an economist, Rob, you do a lot of predicting. And I'm curious, if you were to boil down 2023, what's your prediction in one word for what 2023 will hold?

Rob (42:51):

Yeah, it's going to be stressful, and I think you're going to see I'm not saying we're definitely going to have a recession, but I think we're going to have at least a growth pause. So, , we, rather than like negative GDP and, and lots of layoffs, maybe we just have a, a pretty soft economy that grows, like say, , 0.7% growth for a year, you could have that 1% growth. It wouldn't feel great, it wouldn't feel horrible, but I think it's going to, it would create stress and I think it would create many of these, these challenges for CEOs and for, for business managers that we talked about earlier. So it, it means keeping a close eye on your labor force, keeping probably trimming your sales some in terms of your investment plans, focusing on the basics of your business. I mean, I think you're, this is probably not a time that people are going to be wildly expanding their business in 2023.

Rissa (44:08):

Fantastic. Well, thank you so much for joining us. Thank you for your insights and a pleasure as always.