

Metro Revolution

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Greg Dalton: Our topic today is urban regions that power the global economy. Twenty percent of the world's people live in cities and they produce 50 percent of the world's economic output. American cities drive the U.S. economy but they're not getting a lot of love these days from state capitals or the nation's capital. Economic stagnation and federal gridlock are squeezing metropolitan regions that have relied for decades on federal dollars to build roads and deliver services. Add in the pressures of rising temperatures and rising seas, and the country's mayors face some very daunting challenges. Urban America needs a new playbook.

I'm Greg Dalton, and over the next hour we'll look at the future of American cities with our live audience here at the Commonwealth Club in San Francisco. We're pleased to have with us three guests, Mayor Ed Lee of San Francisco and a former city administrator; Kofi Bonner is President of the Bay Area Urban Division of Lennar, one of the country's largest homebuilders; and Bruce Katz is Vice President of the Brookings Institution. He's co-author of the book *The Metropolitan Revolution: How Cities and Metros Are Fixing Our Broken Politics and Fragile Economy*. He's also a former chief of staff of the U.S. Department of Housing and Urban Development.

Please welcome them to Climate One.

[Applause]

Greg Dalton: Thank you gentlemen all for coming. Bruce Katz, let's begin with you and look at the big picture and then we'll get down to some of the specifics of the Bay Area in particular. You write that the great recession was a rude wakeup call that said there's a broken model of growth in American cities. Tell us about that.

Bruce Katz: So I think - first of all, thank you for having me here and for being on this panel with the mayor and Kofi. I think what led to the great recession was a misguided growth model, which basically said we can grow an economy characterized by consumption and debt, and particularly focused on the metrics around homebuilding and expansion of homes, right, and that all came a cropper in 2008.

The fundamentals would tell us that we need to grow an economy, and frankly a lot of this is present in this region that's fueled by innovation, ideas and manufacturing, because those are two words inextricably linked, powered by low carbon, right, your comment about climate, driven by exports in global engagement. We actually build an economy like that. It can be rich with opportunity and we can begin to grow not just more jobs but better jobs. Because what we saw in the last decade as the number of people in poverty and near poverty grow from 80 million people to 107 million people.

In theory, you would want a national government to help you restructure your economy from one kind of growth model or vision to another one. But the federal government has left the building for all intents and purposes, and they don't seem to be coming back any time soon. So what's going to happen and what this book really talks about is the good news that cities and metropolitan areas, and the mayors, and the business, and civic, and university leaders that really co-produce their solutions and co-govern their communities, they're stepping up and doing the hard work to grow jobs, make their economies more prosperous and respond to climate and these environmental

challenges. They're investing in infrastructure, they're making manufacturing a priority again, they're equipping workers with the skills they need.

Power in many respects and responsibilities are devolving down at the United States and leaders across discipline, across sector, across jurisdiction and across party are stepping up. This is a big structural shift on how we think about who runs America and who governs America. I don't think it's cyclical, I think it is now deeply embedded in our DNA.

Greg Dalton: Mayor Lee, can San Francisco and the Bay Area grow a prosperous future without dollars from Washington and Sacramento?

Edwin Lee: We certainly are beginning to do so. We have to in fact. I think the predictions are that we have no other choice. And - first of all, let me thank you for inviting us here to Commonwealth. It's always great to be here and I've been, of course, very lucky to be the mayor of this great city. When we talk about innovation, this city had a history of innovation, whether it was for human rights or societal or same-sex marriage, there's just been that innovative spirit always in our city.

So we never really let national or regional problems get to us. But I found, as I took the helm of San Francisco, I've been lucky to be the mayor for two and a half years now that we were like many cities faced with very traditional financial systems that were not going to save us from the likes of Detroit, Vallejo, Stockton and others. We were really looking at whether we're going to continue doing the same things that would bring other people and other cities into financial problems. So I took the helm knowing and hoping that all of my years of experience, I could have conversations in a very collaborative way and build a spirit where we weren't trying to blame each other what the problem was, except where they are, and then find our talent in our communities, the magic between the board, the supervisors and the mayor's office.

But then the fiscal talent in the city, the business talent in the city, bringing them together with all of the neighborhood leaders and find solutions and create those ways in which we can talk about the problems, see what the facts are. And I think that's incredibly important because having worked in city government for 21 years before I became mayor, I saw those years where the mayor would - well, I wouldn't say they were crying but they certainly weren't having a whole lot of fun with their conversations with everybody else across the aisle. And so I've worked hard to create a collaborative atmosphere so that we could receive facts in front of this and then challenge ourselves based on those facts what we could do and that's I've been working hard on it. I've used all of my past civil rights skills to be able to do that, and I do think - I have very strong feelings about this city.

I've been buoyed so much by what has happened in the past two and a half years. But the thing that drives me the most is when I look at the kids, whether they're in the Bay View or the Sunset or in the Richmond or North Beach, their eyes are sparkling. We created 6,000 jobs this summer when we were called last year by President Obama to try to create summer jobs. And so I worked hard with the city departments and the business community. We got 6,200 jobs for kids this summer because of all the collaboration done.

And when you see these kids earning their way and understanding that something about this city is helping them land their first jobs, the earning power that they have, connect that with the education reforms that we're doing in the city and creating these opportunities for looking at the industries that are in our immediate future, I'd say there's a lot of smiles out there.

And I saw some the other day, they're glad to go back to school. They're glad that our schools now - some of our middle schools have tablets for the first time. I think they're feeling the vibrancy of the

city along with the business community.

Greg Dalton: Kofi Bonner, your company builds homes all across America, and a lot of the projects rely on government infrastructure - roads, schools, et cetera at some level. And if what Bruce Katz is saying is that that infrastructure investment is not going to be funded the way it has in the past, is Lennar thinking about, "Hey, what's the new model for funding infrastructure that's sort of a platform for Lennar and your business?"

Kofi Bonner: Well first let me also say thank you for having us. I think this is pretty important topic. I think the *Metropolitan Revolution* is a fascinating book. I would say that I will attest to the fact that the federal government actually has left the building with respect to my industry. It's been a while since home builders have relied on the federal government to actually provide the basic infrastructure, I'll tell you that. We typically look to tax ourselves and the home buyers ultimately to fund the infrastructure but we are going through all kinds of financial "dancing around in circles" in some respect, trying to understand or create new financial models that will enable us to build the necessary infrastructure that will support the lots and ultimately the homes and the home buyers.

So again, I'll say that I'm really happy, Mr. Mayor, that you're having fun. That's really important.

Edwin Lee: I wouldn't say that. [Laughter]

Greg Dalton: It depends on the day.

Kofi Bonner: Yes. But I will say one thing. I think that with respect to the - I'm very fortunate to be trying to develop in San Francisco, I mean this is a wonderful city and the current leadership and certainly past leadership has created a wonderful platform for me and my company to do some terrific things. As some of you know, we have absolutely terrific assets in Treasure Island and Hunters Point and Candlestick.

But I will tell you that prior to joining the private sector, I was in the public sector and I had a unique vantage point with respect to regional thinking. I was a city manager in the city of Oakland. I certainly was the director of redevelopment in the city of Emeryville, and of course at some point I was leading portions of the redevelopment of this city. And I will tell you that there is, at least in those days and I presume the same as today, there was very little regional thinking going on. And in reading the *Metropolitan Revolution*, I will tell you that it brought back a lot of memories as to the difficulty of just trying to connect different cities with respect to what really are common problems.

Greg Dalton: Bruce Katz, let's talk about the example of Ohio. You write about some cities there that realize that they couldn't go alone and the Rust Belt and how they came together and forged forward together. Tell us that story.

Bruce Katz: So Northeast Ohio, like a good portion of the Midwest, has experienced for decades a level of deindustrialization. But what they began to understand going back five or seven years is they still had tremendous assets in the production economy that essentially was an innovation economy, right? Because they were building off of their major anchor institutions, advanced research, the Cleveland Clinic.

So what you saw were philanthropies in business across Cleveland metro, Youngstown metro, Canton metro and Akron metro coming together and saying, "We've got to help our network of small and medium-sized manufacturing companies," because these are relatively small firms. We're not talking about Ford Motor here, we're not talking about Siemens, we're talking about small

manufacturing firms, primarily family-owned that are retooling their business model, making investments in their facilities, retraining workers, and beginning to design their new products and the new services for global markets primarily.

Because they're small, they really need the help and support of intermediary institutions so they can access capital and really have that steady supply for community colleges and high schools of trained workers, technical skills. They are all in what we would call the STEM economy: science, technology, engineering and math. And the country has really ignored for a long time the fact that we've got to start in the high schools and where there are community colleges having a fairly substantial number of our kids on a track where they're doing computer science and getting those technical skills that enable them to go into these firms and the non-manufacturing firms that are working with them and get really good jobs at good wage of \$50,000, \$60,000, \$75,000. We decided that we would send a signal that somehow the United States would be a post-industrial economy, we would generate the ideas here and we would produce all of them in China. Nonsense.

Northeast Ohio, other parts of the Midwest here, large manufacturing production assets, some of the cutting edge of innovation, and Northeast Ohio what you really saw was philanthropy and business coming together in support of these firms. And now with shale gas and some other global dynamics, they are seeing substantial job growths that really are to the benefit of not just the kids with PhDs from Stanford or Georgia Tech or MIT, but a whole bunch of folks coming out of these community colleges and high schools with these technical degrees and technical proficiency. This is a signal to the country and signal frankly to this metropolis.

Greg Dalton: Well let's map that to Silicon Valley because one of the criticisms of Silicon Valley is it's great with ideas that then get made in China. Silicon Valley is great if you're an engineer; it's not so great if you're a janitor or a middle class, you can't afford to live there. So let's get Bruce and then Mayor Lee sort of how that model stacks up against the Bay Area in terms of collaboration and also -

Bruce Katz: So this is the problem of being at Brookings and running all the stats all the time. I mean about 17 percent or 18 percent of the economy in Silicon Valley is really coming off of manufacturing. There's an intense manufacturing sector in Silicon Valley. The cartoon in the United States is this is the Facebook and Google economy. The reality is much more complicated and much more sophisticated.

So we literally have the Brookings board come here several years ago, and my first recommendation to everyone is "Let's go look at Facebook and Google, and then let's go over and look at some of these production companies." Because if you want to get the full picture of innovation in this region tracking up into the Bay Area, you've got to take this broader picture, you have to understand the power of the Port of Oakland frankly, and how that has become a major export engine for the United States, not just off of agriculture from the Central Valley, but become - off of these products being developed in this region.

The signal to this region is understand who you are - don't forget the cartoon and forget the brand that has been basically understood by other parts - perhaps misinterpreted by other parts of the country and the world. Understand who you are with precision, and then leverage your special assets attributes and advantages, particularly the way they can lift up large numbers of kids in this city, in Oakland, in Richmond, in Pittsburgh and other parts of your region.

This is really critical that the United States go back to fundamentals and understand how productive and innovative we are both in idea generation but also in manufacturing so that we can move

forward post-recession with a much more productive, resilient, sustainable and inclusive model.

Greg Dalton: Well, Ed Lee, San Francisco is seen as a very desirable place to live, certainly the property markets says that. But not so clear on whether it's a desirable place to do business, perhaps for some tech businesses but let's have your response to that and also what Bruce have.

Edwin Lee: Well that certainly was on my mind that particular viewpoint when we were confronted a couple of years ago with the company called Twitter that said that they were looking at a very large building in South San Francisco. It didn't have the payroll tax that they were going to grow from about 400 employees to over two years of about 2,000, and that they couldn't pay that kind of tax for that growth. And we're the only county in the whole state of California that had a payroll tax at the time.

So Supervisor Chu and Supervisor Kim and I got together with Twitter and I thought we could forge something but we couldn't just give it to them. And therefore, we looked at the whole of Market Street where we used to have some great places on Market Street. And I understand some of the history that occurred there and part of it was because we didn't do transportation well that caused a lot of the downturn with all the small businesses on Market Street at this investment if you will.

So we suffered with a very challenged Market Street, particularly in mid-market for years and we felt maybe that's the way to do it is create an area where we could provide that tax break but only if you locate there and you deliver on the jobs that you promised.

And that was I'd say a very good, two-way street that started a very important conversation about how we talk with these new companies, how we invite them in to discuss with us about what their needs are. And lo and behold, today we have 1,892 technology companies in San Francisco. They employ over 45,453 employees and I keep counting every single one of them.

Greg Dalton: And the payroll tax went away and got changed?

Edwin Lee: The exemption at mid-market goes from 10th Street to 5th Street on those blocks that line themselves up. Now, we got some pretty good success because we got some pretty good success because Zendesk, Zeus, Twitter, One Kings Lane, they all came there's about a good maybe five to seven of them.

But I think the real success, the biggest success that we felt was when we saw that Dolby Laboratories, Square and the AVA Housing Project came in at 8th and 10th to Market without any invitation and said, "We don't need your tax break. We think what you're doing here is so positive we're going to locate our business right there." And they moved in and they're under construction as we speak.

That's the real testament because I understand what government can do, but I've been around the corner, too. We're supposed to be incentivizers, but it's not sustainable for government to run programs forever, whether it's - well for - we're supposed to get people on their feet. This is our role and then let them create the opportunities.

And that's why I emphasized that example so much that we used - we created the right invitation. I believe we identified the right infrastructure. We were working with them and everything from bike lanes to transportation routes.

We committed to a safer Market Street so that's why you see the substation at 6th and Market. We

committed all those things to help them realize that we can have a better Market Street and they did so now today. Twitter's got almost 2,000 employees. They're expanding. They're building the whole old Furniture Mart Building is completely filled. They're working on the building behind it. But they have caused the incentive to occur that I think and one of the most important thing that everybody speaks about and I know we really get into is how do we build investor confidence? Because eventually I'm not going to have enough money in the general fund; we've got other needs. I got to find ways in which I can incentivize a private sector company to come into San Francisco and help me build infrastructure or build the buildings above the infrastructure that we built as we've done in Mission Bay.

Greg Dalton: And is manufacturing a missing piece here? I'd like to get Kofi also whether manufacturing can or will come back to San Francisco at Hunters Point or Treasure Island or somewhere else. So you heard Mayor Lee talked clearly about tech encoders, code bangers et cetera, but what about people actually making things? Kofi Bonner?

Kofi Bonner: Well, I certainly think that the Hunters Point development certainly will provide an opportunity for people to make things. I think the question is what kind of things will be made, right? I mean there are different kinds of advanced industries where they require more digital technology and the digital technology is certainly around in the area, and I think there's certain kind of components that can be made in the Hunters Point to the commercial area.

I think there are plenty of areas, I think, in the Bay where maybe even perhaps heavy manufacturing could have gone. I am struck when you stand back and look at the Bay Area and certainly you can put a developer's hat on. But for the fact that what I'm going to say requires you to go through a series of independent individual city entitlement processes which in and out of themselves will each be very, very painful, I think this will be brilliant for the Bay Area.

You think of the Meeru Island which is something that Lennar actually controls, then Meeru Island could be a fabulous heavy manufacturing base because the industry is there, the Bay is right there, water transport has been coming in and out of there for years. Fabulous. If you look at the Oakland Army Base and talk about the strength of the Port of Oakland - I think those of us in San Francisco actually don't pay attention enough to what's going on at the port - the Port of Oakland is a very, very significant asset for this region.

So you think of the Port of Oakland, you think of the fact that the Oakland Army Base is actually an asset that can be developed in a significant manner to strengthen the port and therefore strengthen the region. We have 8,000 homes per grant to go into the Treasure Island and we have another 12,000 or so homes to go onto the Hunters Point Candlestick area with the three million square feet of commercial that could be a portion of R&D. It could be some light industrial manufacturing.

My point is when you stand back and you look at it, you could have a situation where and they're all linked by this wonderful resource we call the Bay. And the biggest problem with entitlement, as you all know, is people are worried about transportation to and from various areas and order of traffic and truck traffic. We have the Bay. Wouldn't it be great if we can have a regional thought around linking these wonderful resources for the benefit of the region so that perhaps the manufacturing that's occurring over there is linked to some of the work and manufacturing that could be occurring frankly on the Alameda Naval Air Station - I forgot that one.

The workers could be living on Treasure Island and/or Hunters Point and could be going to the various respective points of work and play et cetera through the Bay.

That creates, I think, an incredible opportunity to lift the whole region in terms of productivity and capacity in a manner that really makes sense and utilizes the Bay as a regional asset.

Edwin Lee: Let me add to that.

Greg Dalton: Mayor Lee?

Edwin Lee: The manufacturers are alive and well in San Francisco. We have a whole movement called SFMade that we've not only funded with our seed monies but we've instilled with them that we need to really invite those artisans that had been with us for many years. Arts programs are very rich in San Francisco, and in fact when you said STEM, I wanted to say STEAM.

Bruce Katz: Oh, absolutely.

Edwin Lee: Because arts - I'll tell you, who is there at Market Street helping to be revitalize it before even the technology covers? It was the arts program. Great Arts Foundation, Burning Man, ACT, they were all there struggling with these rundown buildings by creating a whole innovative spirit with this. And so SFMade is with us. We have identified, for example, Pier 70 which is the dog patch area of San Francisco where there's these whole warehouses where steel used to be made and shipyard repairing and some of that is still there, but these vast warehouses we've identified to keep the historic buildings intact but invite a brand new use that has manufacturing.

We have companies like Heath Ceramics, chocolates, beer production - all of that is still very good, and I'll tell you people from China come over and they ask me, "What is made in San Francisco? Because if you've got something that says 'made in San Francisco,' we will buy it because we know that that will be a good brand, a high quality brand." So that's what you start seeing Timbuk2 bags in China, you're seeing accessories for your iPads, they're all made in San Francisco.

Greg Dalton: And Bruce Katz, the conventional wisdom is the labor costs are too high that things made in America, San Francisco or anywhere else can't compete globally with prices in China. Is this a scalable model? It's one thing to have a couple of boutique companies but to really have large numbers of jobs.

Bruce Katz: I think manufacturing is a broad continuum and we're really talking about the full continuum here. But for a long time, all we focused on were labor costs. I could take you to a small country called Germany, right? Germany decided we would not stigmatize production, right?

What we would do is we would have these close collaborations between research in universities and companies themselves, and then we would have a feeder system of apprenticeships, vocational education, career academies so that essentially 20 percent of the German economy is production-oriented compared to about 11 percent of the American economy, right? They did not give up on production because they understood it was so inextricably linked with innovation and they are the export powerhouse of Europe, right?

So it's not just about wages. It's about quality. It's about reliability of your energy supply, right? It's around supply networks and supply chains that do need to be closer to each other. What I see happening in the United States right now is a lot of foreign investment coming back into our country because they understand post-recession, we still have the assets, right, whether it's the entrepreneurial culture, whether it's an openness to immigration, let's hope we get federal integration reform, whether it's capital, willing to invest and whether it's still enough of a production platform that if we're smart in this post-recession environment, we won't go back to the economy we

had pre-recession, we will move forward to a radically different future.

So I'm bullish about this. And this region is rich in small batch, in boutique, on up to advanced.

Greg Dalton: Mayor Lee?

Edwin Lee: Technology will have a role in all of that as well. So because if you see this company, 3D technology for example, literally revolutionized the way we look at buildings, engineering systems because you could see it all in different patterns. Well, Autodesk is growing rapidly in San Francisco. They just opened up another portion of their work at Pier 9 and we're all talking about advanced manufacturing where you no longer have just the machines but the machines are operating with an iPad and you're reading out precision-cutting and everything from chocolates to clothing to manufacture products. So technology is going to play a big role in advanced manufacturing. I think it's going to happen right here in San Francisco and the Bay Area.

Greg Dalton: If you're just joining us on the radio, we're talking about the future of American cities and economic growth at Climate One at the Commonwealth Club. I'm Greg Dalton. Our guests are Ed Lee, mayor of San Francisco; Kofi Bonner, president of Bay Area Urban Division of Lennar; and Bruce Katz, an author from the Brookings Institution in Washington.

Let's talk about climate change. We've talked about a low-carbon future of building green cities as export drivers and a low-carbon future as part of the drive or move away from fossil fuels. Mayor Lee, what is San Francisco doing in this area? Your predecessor was quite an evangelist in this area and some people think that you don't hold as deep a passion for this set of issues or you're not out there as much on it. What is San Francisco doing to move toward a low-carbon future and prepare for things that the mayors of Boulder, New York, New Jersey have seen recently when they didn't expect it?

Edwin Lee: Well, first of all, Mayor Newsom, when he made some announcements, I was usually there in the department across, "Okay, I'll do it. I'll get it done. I'll figure out a way to get it done." I was there because I love those announcements and I was the head of his whole electric vehicle production, the whole gamut of it and we created the whole Bay Area region which, going back to Kofi's point about, things that have to get regional. So the electric vehicle, in fact my official cars are Chevy Volt, and I never hardly ever get past the 40 miles of all the things I live in the city. So electric vehicles still -

Greg Dalton: Forty miles runs on electricity?

Edwin Lee: Yes, exactly. People here know what I'm talking about. But we're building the infrastructure to welcome that in. We worked regionally to do so, and that will continue to be a high priority and the governor came down just this weekend to pronounce yet even more subsidy from the state because he is wanting to go from moonbeam to sunbeam, and that's wonderful. I love the governor for that. Those are my years. And at the same time creating businesses, small businesses that support that whole infrastructure.

I want to explore more wind. Certainly, solar power is I think a very huge conversation in San Francisco, and we are working hard to establish larger prints where we can complement our green energy production in the city. And then, we still are very committed to reducing the energy use in the city. No new building. Particularly, no new office building is anything less than a gold standard in LEED.

And that's a great, great thing to pronounce. It is almost law here and we are proud of every one of the 19 downtown office buildings that you see those cranes up and around the Transit Center, they're all going to be at least LEED gold. They're going to be very energy-efficient.

[Applause]

Greg Dalton: Kofi Bonner, there are some really interesting things happening planned out at Hunters Point, including raising at 55 inches the plant for sea-level rise. Automated waste collections, sounds like this Jetsons kind of system that's going to collect waste out there, recycled water - tell us just briefly about that and how you're getting ready for a future that's very uncertain with climate disruption.

Kofi Bonner: Well we're blessed by the fact that the Hunters Point, Candlestick area is right on the waterfront. I mean that's a wonderful asset for us in ultimately selling homes and property there. But obviously, you're absolutely right because of that we have to pay extreme attention to climate change and the effects. I would also like to point out that both the Hunters Point and Candlestick developments and the Treasure Island developments are both LEED and LEED gold, and they're probably two of the largest developments in the country with that designation. So we are very proud to attain those designations.

But certainly, we are going to have to raise and import a great deal of clean fill and to raise the site as you said, above the base flood elevation. We have to go about three and a half feet above before the - we actually even begin to build the buildings. The buildings are set back sufficiently so that we can - we have the opportunity to do what we call adaptive flood management control, which means that we will monitor this situation every year and we have the ability to build and break up the water as it comes into the site. We have all kinds of really innovative landscaping features within the parks area to help manage the rising levels within the soil.

And candidly, we expect to spend a great deal of money in the overall infrastructure, so it's something we paid a great deal of attention to. We believe that climate change is real and as such we have to engineer the solutions. But in addition to that, as you mentioned, the automated waste recovery system is actually pretty cool. Typically you find it in most of these sort of medical campuses and more campus-like situations, but the notion is and it really has to do with reducing the amount of space that garbage trucks run through cities and picking up garbage, and then everybody has to move their cars on one side or move the cars on the other side or just the noise from these diesel trucks going through the town.

So we've created a system where people will deposit their garbage within several feet away from their buildings into these shoots that ultimately every 10 minutes or so, automatically shoots to a central waste collection system. So the garbage trucks actually go to that location only, and there are about two or three in 700-acre development to really minimize the amount of trucks running through. And we're doing this in conjunction with Recology, the waste management company.

So there are a few things like that which we think are pretty innovative. We're working with some of the technology companies in town to really create a very technological - a smart community as we call it so that the Fiber comes not only to down the road and is tied in by CARPA but actually goes to the home. And the home then can continue to Fiber so the people, if they choose to live and work in their home, they'll have the appropriate speed if you will, within the home to do the kind of work that we expect to see people in the San Francisco today.

Greg Dalton: Sounds cool if it actually happens and it gets built on time and on budget. Bruce Katz,

I want to get your response to that.

Edwin Lee: They will.

Greg Dalton: And also your – you write that something about cars and driver licenses, I'm going to get to that but the first.

Bruce Katz: Sure. I just wanted to build on Kofi and what the mayor said because obviously, climate is an existential threat and we have to grapple with this for the future of the planet, right? It is also an economic imperative. We've mapped the clean economy in the United States, about 2.7 million jobs. That's bigger than the fossil fuel industry. It's very varied and distinct?

Greg Dalton: Today or the future?

Bruce Katz: Yes, today.

Greg Dalton: Today.

Bruce Katz: It is more production-oriented, it is more innovation-fueled, and it is more export-driven than the economy as a whole. This is the vanguard of the next industrial revolution. We want to be at the head of it.

So in the book, *The Metro Revolution*, we talked about Portland, weird and crunchy Portland, right? Portland actually doubled exports.

Greg Dalton: Here in San Francisco, we don't think that's crunchy but yeah.

[Laughter]

Bruce Katz: Yes. I was just saying that I'm not sure how San Francisco would respond to that. We're weirder and we're more crunchier. But what Portland is betting on is a brand because they were so smart with sustainable development at the metropolitan scale, the urban growth boundary has shifted the transit to tear down of the freeway in the 70s. They've attracted a lot of firms that excel in sustainable products and services. Their new brand is "We Build Green Cities."

What they're saying to the Asian cities and to the Latin American cities is we can help you plan for sustainable future so you could literally breathe and drink clean water, and we want to help you plan but also supply these products. If we innovate in the clean economy, we will export those services, export those products, good jobs, quality jobs, a very different model, I think we need to get beyond labels that mostly come out of Washington D.C., that are mostly partisan-driven, that are mostly ideological about what the clean economy is.

We've mapped it. It is very real. It is very productive. Cities will get about the business of actually developing and fueling this.

Greg Dalton: I want to follow up on something that you write about which is cars, and you know how in 1983, half of young Americans had driver's licenses; today only 29 percent. So that speaks to a future of fewer cars and perhaps more density, more people, cities with fewer cars and more people. I'd like to get Mayor Lee to respond too about that this cultural change and the role of cars and how we get around.

Bruce Katz: Well, there's some big demographic preferences and demographic changes that are underway and we see it really with the rebirth of our cities not just as residential communities and communities with great amenities but really as sort of the vanguard of the next innovation. But April Rinne is here and sort of has written a lot about the shareable city, collaborative consumption. We're seeing people sort of treat some of these products that in the past you would need to own that you can now share, right? And we see these obviously with companies like Zipcar. We see this with many different sectors that the consumption economy.

So something has been unleashed frankly in the last five or ten years in the United States fueled in many part by technological innovation. But also because of these vast demographic preferences that millennials are sending signals to the market. We do not want to be working in closeted science parks 30 miles away from the vibrant central core dependent on the car, depending on all that that brings with it in terms of the cost. We want options. We want choices in how we live our lives and where we work and how we literally get around.

This is profound and it's only been underway for a relatively short period of time. And cities like San Francisco that basically can get ahead of this curve are going to benefit immensely.

Edwin Lee: And again, part of it -

Greg Dalton: Mayor Lee?

Edwin Lee: We're not going to have too many other choices unless we do create multiple modes of transportation and you're going to have this one choice. You want to sit in the car for four hours getting down to Santa Clara to wait for the new stadium to open, the Levis Stadium, right? Or what Mayor Lee will probably do is get on the Bay Area bike-sharing program that happens to have a station at City Hall, ride down the Caltrain, hop on the Caltrain and get down to Santa Clara and get off and get to Santa Clara transit that brings you right to the door of Levis Stadium. We got to start talking about that.

Don't talk about we lost sustain of it. This is what we do to support our Niners in the business and the excitement here but - and that's why I was a big supporter of free muni. I know Ed Reiskin is in the audience here. It was going to challenge us a little bit financially but I wanted another generation of kids to understand and enjoy riding our muni. That's what my kids told me. They said, "Dad, you don't need to drive me where I need to go. I'm going to take muni." Because they know where it goes; they're used to it.

We need more and more reinvesting and investing in our transportation infrastructure now that conversation is for the whole Bay Area as we talk about electrifying Caltrans, high-speed rail right in the downtown. I need it. We need it. I don't have any more room to expand the airport runways, and we're losing out to larger airports because international flight is where our economy is going.

And the only way I can get more room at the airport is if I get that commute between Los Angeles and San Francisco eliminated with high-speed rail, one-third of our flights, then I get to open up free international markets then we can have Latin SF and China SF and open up the rest of Africa and all the other places we want to go to.

Greg Dalton: If you're just joining us, we're talking about the Bay Area and other American regions and cities at Climate One. Our guests are Ed Lee, mayor of San Francisco; Kofi Bonner from the Lanner Corporation; and Bruce Katz, an author and analyst from the Brookings Institution. I'm Greg Dalton.

I'm going to ask one more question until we go to our audience participation and that is, Bruce Katz, you write that cities are the future or the economic engines and they can fix our broken politics. I haven't heard yet how they can fix the broken politics that is crippling this country.

Bruce Katz: Well, the federal government is government. States are governments. Cities are really networks of elected officials like the mayor, the county leaders but also corporate, civic, union, university, philanthropic. All of these different sectors of our city are different portions of the network. They can do amazing things by themselves, but when they come together they can do grand things. And I think cities are really governed, co-governed but I would call a pragmatic caucus. They put plays over party, they put collaboration over conflict and they put evidence over dogma. It's almost the opposite of how Washington operates today.

So I think what can happen in the United States and it's already happening so all our book does is really chronicle and capture the energy, the positive pragmatic energy that's underway in the country. If we can see city after city, metropolitan area after metropolitan area collaborating to compete and finding their game changers, and finding their transformative interventions, and becoming more competitive and more inclusive and more sustainable, over time, that pragmatism will infect states and ultimately infect the national government.

Because at the end of the day, the last time I checked, we still have a representative democracy. They represent us. And if the signals coming up our system, is we want you to act in the service of these transformative interventions, at some point they have to respond. It's not going to happen tomorrow. In fact, tomorrow they may shut down the government. [Laughter] But it will happen over time. America is the most resilient society and the most innovative economy. So folks, we will get our act together but this time around it will come from the communities that are the engines of our economy, the centers of trade and investment and now the vanguard of policy innovation.

Greg Dalton: Some people might question whether the representative democracies are really working when, for example, things like 97 percent of members of the NRA want a background check and yet it doesn't happen. So, there's some broken link there but let's go to our audience questions. Let's have our audience questions.

First of all, if you'd like to join us, the line will start over there with our producer Jane Ann. If you're on this side, please go through those doors over there and then we'll have a line and include as many as we possibly can and invite you to come up with one-part question or comment. I'm here to help you keep it brief and on point if you need that help, and we'll include as many as we can in the next 18 minutes.

Let's go to audience questions. Welcome to Climate One.

Peter Jesella: Thank you. Hi. My name is Peter Jesella and I really like that word collaboration but I always see it failing. And I was wondering especially with Mayor Lee talking about youth summer job core program how he was able to collaborate money for that to happen.

I'm really intrigued how you did that and what were the downsides? What positive things can you mention all three of you that help be productive in this idea of collaboration? Is there any new technology out there that can help facilitate that or document it, too?

Greg Dalton: Thank you. Mayor Lee?

Edwin Lee: Well, this has been two years in the making. As I said, we wanted to really take jobs seriously for everybody in the city and I've always felt a pretty strong passion for our youth because somehow they're going to take our jobs in the future. I want them to be prepared.

And so we set up pretty high goal this year, this summer, of 6,000. We did a huge room of all of our chamber businesses, our technology companies and we just really asked them to do one simple thing: take a minute and remember how you get your first job and then find out who helped you get that job. And as they went through that minute, they all realized they got to start helping our kids get those jobs.

And that's how we came about. Now, we have 115 companies join up. In the private sector, the established 2,000 jobs and in all of the city agencies, 4,200 jobs, and they're all good-paying jobs expose them. But we also have nonprofits in the community do the training because some of these kids, they'll look down at their shoes and goes, "Give me a job." And that's the interview. We have to teach them how to put together a resume, put it online, these are all the nonprofits that have been doing good training, and then we practice interviewing with them.

I even had to enter into a tie-tying contest with the kids, but we were part of this day-long training where they can present themselves and go from "Hey, I need a job," to "My name is so and so. I work hard. How can I help your company be successful?"

And those are the kind of issues that took place, and that's why there were 6,200 jobs that the kids fulfilled this summer.

Greg Dalton: How did you do in the contest?

Edwin Lee: I lost.

[Laughter]

Greg Dalton: We still have time for that. Let's have our next question. Yes, welcome to Climate One.

Margaret Brodtkin: Thank you. My name is Margaret Brodtkin and I have devoted my life to making San Francisco a model place for kids, but my question is the feds are leaving and the feds have left big way. And that means they have left a lot of money, a huge gap and we need - so we not only need to do the kind of wonderful things that Mayor Lee is talking about but we need money in our cities to make sure we have the kids that are going to be able to take these wonderful jobs and you've all admitted that and that's implicit in what you're talking about.

So I hate to use the word taxes, but how are we going to create the revenue at the city level to do the kinds of things that the feds have just left us hanging to do? Because the kids are in poverty and the things are getting worse and we need our cities to step up.

Greg Dalton: Thank you. Mr. Lee?

Edwin Lee: Well, first of all, we have a pretty robust budget. Now it's approaching \$8 billion a year and we do two-year but - by the way, I think in order to get the kind of revenue, Margaret, you're talking about and the things that we need, we first of all begin with the basics. We have to have a strong business approach to our budget. And so, creating that economic infrastructure in the city was something that I spent a lot of time doing.

The very first thing I did was tackle pension reform and then we created a healthcare, a health trust fund so that we could start paying for the unfunded mandate that would hurt us a few years down the road - \$4.4 billion. So we can't even talk about stuff until we built an infrastructure to be able to be successful.

Well, today we are because we've done all the things that rating agencies, insurance companies, other failures of other cities across the country did not do and pay attention to - all these unfunded mandates, we put them in to the mix. And so now we do two-year budgeting, five-year financial planning, and we invest and we got four different reserve accounts for the city. Now that we've done that, companies can come in and say, "I'll pay for that. I'll pay for that." I mean why would the lawyers come in and spend \$120 million fixing up a dilapidated pier before they can even put a structure above it? Because they've got confidence that this city is doing the right things with its infrastructure investments, with its financial conversations, with its economic structure and that's what invites innovation to occur.

You can't really innovate if day-to-day your argument is over, "We don't have enough of this and that." You can actually build that base and this is what we've done with San Francisco and I'm very, very proud of it. That's why more companies want to come in, more employees want to live here and they want to build that tax base for us. And we're going to do a lot more with it.

Greg Dalton: Bruce Katz, I want to get to you briefly and we'll go to another question. You think that there's going to be sort of the Detroits of the future and the San Franciscos of the future, and that San Francisco is going to be a much better positioned because it's going to get tighter fiscally.

Bruce Katz: Well, first of all, we just need to understand the federal government does certain things but it doesn't do everything, and there's almost a mythology that this is an all-powerful government. What they really do is redistribute the income around the social safety net, particularly healthcare and particularly retirement benefits, and they invest in basic science and research, and they basically invest in our security, right? There's a whole bunch of things particularly with education and with skills and with infrastructure where the cities and the metropolitan areas and the states today before we even see a squeeze down, are really carrying the lion's share of the investment in this country.

So the federal government really what it needs to do is do less better and we need to demand that from them. And I actually think though that the other challenge we're going to have, and this is really your question, Greg, is we're going to have spatial and even growth because this is a very powerful and very prosperous economy here. And when you make the hard budget choices, hard budget decisions you've done in this city, then you're preparing yourself off of a very robust and vital economic base to grow even more and better jobs and to sort of bring in the youth that you're describing.

Now can Detroit do that? Actually Southeast Michigan is seeing an enormous rebound and recovery in the aftermath of the recession because automobiles are really just computers on wheels. And the question for them is now how to engage a city 138 square miles in Detroit but with still some amazing assets in the core or the downtown or the midtown - how to engage the city of Detroit in that rebound.

But look, it is what it is. Okay. We can try to wish a different kind of national government on the next year or three years or five years or 10 years; it is not going to happen. This is going to happen - cities and metropolitan areas working across different sectors and disciplines and parties and

jurisdictions getting their act together and making the hard choices.

Greg Dalton: Let's have our next question. Welcome to Climate One.

April Rinne: Good evening. Thank you very much for an excellent panel. My name is April Rinne and I work in the space called collaborative consumption or the sharing economy. And I want to pick up on something that Bruce Katz said.

Really when we look at shared resources, it's not just transportation. This is extending into every sector we can think of. From accommodation and space to services for children, education, financial services, the list goes on. And we think about what it means to share assets as opposed to own them, it's economically more efficient, it's better for the environment, and it's also really good for community-building.

And Mayor Lee, earlier this summer, you are one of 15 mayors here in the U.S. to sign what's called the Shareable Cities Resolution, basically declaring your support for this kind of activity. And I'd love to hear your vision for a shareable city. And in addition it's not just about sharing assets, we're thinking really around collaboration, what does this mean for the government as a sharing base platform, collaborative financing mechanisms and so forth.

Greg Dalton: Thanks.

April Rinne: Thank you.

Greg Dalton: Mayor Lee?

Edwin Lee: Well gosh; I can talk all night long about the sharing economy. I'm excited about it but there are other industries that have provided us with great examples. When you look at the Mission Bay and all the pharmaceutical laboratories that are established, there are now Fiber, Nektar, Bayer - and we did a lot in the infrastructure to invite them in. But now they're realizing that the federal research dollars are drying up.

So they're innovating. What did they do? They start thinking sharing. And when you go down there today, you'll see these very expensive laboratories that are being shared by two or three pharmaceutical companies that wouldn't even talk to each other five years ago because of the competitiveness and the protection of their patents. They got all those agreements. They're saving money to bring the drugs faster to the market. They're saving each other invaluable time.

That's another example. That's why I get so excited about when you get this attitude about sharing things, you got talent to share, you got assets to share, you got people that can share space. It will be, I think, very revolutionary for us.

And it can happen naturally in urban settings where some things are naturally have to be shared. The roads have to be shared with the bicyclists and the pedestrians. We're getting more and more use of that. We have to teach people how not to drive alone if they have to do that. So there's a lot more to say about this but it begins with an attitude of how you can apply it as you suggest to literally everything that we think can do where we used to do it alone, used to do an isolation, used to say, "I'm not worth anything unless I own those things." And the other point, you bring a lot more people into the economy when you do the sharing you have. A lot more people participate and can be just as successful.

Greg Dalton: So does that mean San Francisco can share the Warriors arena with Oakland?

Edwin Lee: If they come over here. [Laughter]

Greg Dalton: All right, let's have our next question.

Katy Miessner: Hi. My name is Katy Miessner. I'm actually from Vallejo and I'm running for Vallejo City Council and I'm very interested in this topic. When the Navy left and the city contracted severely, we went into bankruptcy, we're out and we've got some things going on Mare Island. We have Lennar Mare Island.

But in this region where there's so much wealth in San Francisco and Silicon Valley, how do we compete without taking - we actually fought liquefied natural gas plant development back in 2002 and won. So how do we develop in our area without taking those kinds of businesses that other communities might not want so to make our - to build our community and make it strong and create good jobs in our area?

Greg Dalton: Who would like to feel that? Bruce Katz?

Bruce Katz: Well I think this is raising a really essential question and not just for the Bay Area but for Silicon Valley, because there are a lot of communities being left behind. And a lot of the conversation we have is about improving access for those communities and improving the education and skills of the residents.

I think we have to talk more broadly about an economic transformation. I mean if we are truly going to have a shift in our advanced industry and a growth in our STEAM economy, a portion of that really can be located in these places because they all do have tremendous access to infrastructure, right? They're sitting in one of the wealthiest and most prosperous regions of the country. I mean this is a broader notion of a sharing metropolis, right?

And so I think if you took a 10,000-foot view of this metropolis and the San Jose metropolis and we begin to think about how do we imagine transformative assets and transformative industries being located in some of these areas that are really hard-pressed today, given these disruptive changes which for the United States could be very, very positive, this is a conversation that I don't think is a conversation in circles in 2005.

So my sense is this requires some regional collaboration. It requires a level of regional imagination that we should be able to do together. I'm beginning to think that regions need not one but sort of a nucleus of what we would call chief strategy officers in companies, right? And we should be thinking about your global position off your base of advanced industry and STEAM and so forth, but also be thinking about the location of some of these areas that used to be industrial areas going back many, many years but now could be repurposed for a very different economy. So I'm really glad you brought this up because the past does not need to be proud of.

Greg Dalton: Kofi Bonner?

Kofi Bonner: I think that is basically entirely the point I made earlier that there are so many assets on a regional basis. But what I have found over the years, certainly in the time I was in the public sector is, there is just not enough time spent amongst the various cities talking about these regional assets.

Now that's not to say we don't have any number of regional agencies. As you know, we have a ton of regional agencies and they are all full of brilliant people. Unfortunately, there's very little authority to do anything in these regional agencies other than somehow sort of try to collaborate with the various cities and what they wish to do.

So I think perhaps if there is a challenge from the Metropolitan Revolution for this region is to really think about how we can begin to create regional think tanks or strategic offices with top economic development officers of each of the cities. It should be forced to meet on a regular basis to perhaps think about what are the regional assets that are perhaps located and that just happened to be located in their particular political jurisdictions, but there may be a regional asset because it makes more sense because of their location, because of their economic dynamics to satisfy particular need for the region. And that particular location shouldn't suffer some economic consequence for the fact that that particular regional asset is located there.

Greg Dalton: Let's get Mayor Lee to respond to that on more regional collaboration, then we'll go to our last audience question.

Edwin Lee: And I've been telling Bruce and Kofi as we began to start that I have become more and more using some time to participate in regional entities, and the Bay Area Council, Silicon Valley Leadership Forum have begun giving us the opportunity to meet with the other mayors, all the different cities to talk about regionally on topics that we all care about.

Transportation is always going to be one because we have to have the ability to have a regional Bay Area transportation system that works. And if we do, I always speak not just of San Francisco but as the Bay Area region when I go to these international cities to compete for their investments and their companies to come over here because ultimately, I don't necessarily care that a company might be located in another part of the Bay Area, we're going to still be able to benefit from that economic upkeep.

And so as a Bay Area, we've got to keep this system that we have very strong. That's why working on an environment, working on regional transportation issues, those sorts of things bring us together and I think we'll share resources to continue getting that done.

Greg Dalton: Last question. Yes, ma'am.

Female Participant: Well, thank you so much, Debra. So many of our realities of course have changed, and we have geoengineering helping with the modification of climate change. We also have quantum computing now that we know NSA is creating and working with artificial intelligence, which is all about reducing the human's need to participate in the workplace. We're seeing robotic machines rollout all across China. We just saw the Golden Gate toll-takers replaced with machinery, and the future is really about replacing humans with machinery, and we see that pervasively in the economy.

So I guess I would like to talk to you, Mr. Katz, about that because certainly the Brookings Institute has been largely supportive of that research that is essentially replacing humans with machinery and working with Google.

Greg Dalton: Thank you.

Female Participant: Thank you.

Greg Dalton: Bruce Katz?

Bruce Katz: We've been here before, right? I mean there have been very disruptive technologies in the past where people basically said this will remove work, and this will diminish employment. Naturally, the opposite has occurred.

And so, I do not by any stretch, want to be Pollyanna-ish about robotics or in certain segments of our economy what that means for certain kinds of work. But if we focus, I think as the Mayor and Kofi have focused throughout this conversation about growing a very different kind of economy that's productive, that's innovative, that's sustainable, that's resilient, right, and we begin to talk about some of these issues like the shift to a lower carbon economy, as an economic first giving cities and metros first-mover advantage, large job potential, I don't think we should be overly worried or concerned about this technological innovation. We have to be always at the vanguard of innovation in this country and the world.

And we went off course for a very long time and we had comeuppance in this recession. This is our wakeup call. This is the moment that we need to understand what assets and advantages we have in the world and we need to leverage them and we need to maximize their potential for people in places like Vallejo that have been left behind. If we can stay on that focus, I think we can make up not only the jobs deficit where we have in the country about 10 million jobs right now, but we could also grow better jobs with good wages, quality jobs, dignity of work that can help a large portion of our youth make their way into the economic mainstream.

Let us not be scared about innovation. Let's embrace it and let's embrace it for ourselves and ultimately for the world.

Greg Dalton: We have to end it there. Our thanks to Bruce Katz, vice president of the Brookings Institution and co-author of the *Metropolitan Revolution: How Cities and Metros Are Fixing Our Broken Politics and Fragile Economy*. We also heard from Kofi Bonner, president of the Bay Area Urban Division of Lennar, a large homebuilder; and San Francisco Mayor Ed Lee. I'm Greg Dalton. Thank you all for listening to Climate One. Free podcast of this and other Climate One programs are available in the iTunes store. Thank you for coming tonight.

[Applause]

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