THE BROOKINGS INSTITUTION

FALK AUDITORIUM

CATALYTIC DEVELOPMENT:
(RE)MAKING WALKABLE URBAN PLACES

Washington, D.C.

Monday, June 11, 2018

Welcome:

JENNIFER VEY
Senior Fellow, Metropolitan Policy Program
The Brookings Institution

Opening Remarks:

CHRISTOPHER B. LEINBERGER
Charles Bendit Distinguished Scholar, Research Professor and Chair, Center for Real Estate and Urban Analysis
George Washington University School of Business

Presentation:

TRACY HADDEN LOH
Senior Data Scientist, Center for Real Estate and Urban Analysis
George Washington University

Panel 1: Leveraging Innovation Partnerships:

CHRISTOPHER B. LEINBERGER, Moderator
Charles Bendit Distinguished Scholar, Research Professor and Chair, Center for Real Estate and Urban Analysis
George Washington University School of Business

PETER CALKINS
Senior Vice President
Forest City Realty Trust (Cambridge, MA)

ADA HEALEY
Vice President, Real Estate
Vulcan Inc. (Seattle, WA)

PARTICIPANTS (CONT'D):

DUKE REITER
Executive Director, University City Exchange
Senior Advisor to the President
Arizona State University (Phoenix, AZ)

Panel 2: Implementing Intentional Placemaking:

TRACY HADDEN LOH, Moderator
Senior Data Scientist, Center for Real Estate and Urban Analysis
George Washington University

CHRISTOPHER CRIMMINS
Vice President and Partner
Chattanooga Land Company

ROBERT F. GREGORY
Chief Planning and Public Space Officer
Downtown Global Partnership

STEPHEN LEEPER
President and Chief Executive Officer
Cincinnati Center City Development Corporation
(3CDC)

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P R O C E E D I N G S

MS. VEY: (in progress) of South Lake Union in Seattle, demonstrates the increasing desire for higher quality urban forms by employers, workers and residents.

In a moment I'm going to pass the mic on to Chris to more firmly situate their work and what they found. And who would be better to do so?

Chris, a long-time colleague and friend at the Metropolitan Policy Program, is himself a developer and a land use strategist, and in his capacity as the Charles Bendit Distinguished Scholar, and Research Professor, and Chair of the Center for Real Estate and Urban Analysis, at the George Washington University School of Business. Chris, I hope you don't have to say that out loud very often -- is also a teacher, a researcher and an author, of this report, among many.

After Chris, Tracy Loh will then give an overview of their investigation and provide highlights from their six case studies. We'll then spend the majority of our time hearing from our amazing group of panelists, each of whom was involved in one the developments.

We'll leave time at the end for you questions, so please keep that in mind as you listen and learn.

With that I will leave to Chris. Thank you again, and enjoy the forum.

(Applause)

MR. LEINBERGER: Thank you, Jennifer. I've been working with Jennifer for 15, 18 years, and she's been advising me, she's been editing everything I do here at Brookings, and making me far smarter than I actually am.

The first piece that I wrote at Brookings was "Turning Around Downtown" and it is a piece that was released in 2005 which is now what we call conventional redevelopment of a place. And it really applies to most places to this day as far as an incremental build upon past successes about how to turn around a downtown.

What we are talking about today is a little different and I've learned this from the first 25 years owning and running the country's largest real estate consulting firm, Robert Charles Lesser & Company. And then when I started my own development company, Arcadia Land Company, and Arcadia joint ventured with the largest foundation in the state of New Mexico where I was living at the time, to turn around Downtown Albuquerque, which had not seen a private-sector building permit in 25 years when I got there in 1998.

And some of the things that we learned there directly applies to catalytic development, that the Foundation provided a lot of money, up-front patient equity, cash, that the city contributed 12 blocks to the redevelopment effort at the gateway into Downtown Albuquerque. And my company did not charge anything for its overhead and invested in the project.

So we have three critical sources of what we call patient equity, cash, land and a lower operating cost. And we also crafted a strategy for Downtown Albuquerque to turn it around from absolutely down and out, which is a term you're going to hear a lot today, to a very vital downtown. And we also created a Downtown Place Management organization, a Business Improvement District where the private sector taxed itself $1.5 million per year led by our company.

But the one thing we didn't bring was jobs, we didn't control hundreds or thousands of jobs that we could move to downtown, that's one of the big, you know, the big factors that you're going to hear about today.

So, that work in Downtown Albuquerque was sort of the stimulus for me to think about what catalytic development could be. It was sort of a proto-catalytic development, nowhere near as successful as these six firms that you're going to hear from today.

But just as Jennifer mentioned, as we wait for HQ2 to be decided and it could very well come here, in some place in this region, everybody is looking at HQ1, which is in South Lake Union, which is one of the case studies, because whoever wins HQ2 will in essence be engaging in catalytic development, and learning from what happened at HQ1.

I want to make sure that you know that this is not just about downtowns, it's about downtown adjacent places, like where we are here in DuPont Circle, it's a suburban town center, it's like in Bethesda, just to give you local examples. It is redeveloping drivable suburban places like what like what Tyson's is going through, or what White Flint is doing so successfully.

It also can apply to Greenfield and Brownfield locations, like the granddaddy of great walkable urban Greenfield, of course rest in town center, and about Brownfields such as Crystal City.

And then finally, it can be urban universities like what GW, our University has done there in the West End, and also innovation districts like what we are going to hear about with MIT and Forest City.

So this research is based upon these six case studies, and it has just taken this concept far beyond anything I could have imagined when I was working in Downtown Albuquerque.

So, I just want to emphasize the three things that we've learned, that you're going to hear a lot about today. One, is upfront employment hundreds, if not thousands of jobs coming early in the process. Number two is upfront patient equity, especially land that needs to be invested to make this work in the capital stack. And number three is a completely integrated development approach.

This is not just doing land development, it's not just doing building development, it's not just doing place management, it's doing all of the above including social equity, and looking at it from a purely affordable housing inclusive point of view.

I have long-term involvement, just to let you know, in three of these places. One is Downtown Chattanooga where I helped develop the strategy for the downtown turnaround back in the late '80s, and I've been involved ever since, particularly with their Affordable Housing Program.

Number two is in Cincinnati where, through Brookings, we did an economic strategy for the City of Cincinnati, and how I got to know Steve, and his remarkable organization, 3CDC.

And finally in Downtown Detroit, where I've been involved in the strategy for Downtown Detroit, through Brookings, and when we released that strategy in 2007 at the annual meeting of the Downtown Detroit Partnership, this fellow came up to me afterwards and said, so I'm thinking about moving my company to Downtown Detroit. And it was Dan Gilbert, Quicken Loans, and the rest is, of course, history.

So, I'd like to introduce Dr. Tracy Loh, my co-author, colleague, friend who worked with me on this project. She's going to produce or -- she's going to share with you our research findings, PhD in Urban Planning from the University of North Carolina. Former Director of Research at Rails-to-Trails, Former City Councilor in Mount Rainier. She's a local girl made good, and she's on the Editorial Board of Greater Washington. And interestingly, she's a real estate investor and developer on her own right. So, Tracy? (Applause)

MS. HADDEN LOH: Good morning. It's wonderful to see some familiar faces in the audience here. Thank you, all, for coming today.

So, we are here to talk about catalytic development, and what I'm going to share with you is the stories of six places and what happened there. What we see here are two images of South Lake Union in Seattle, the first is a historic aerial photo showing South Lake Union in the '80s, and you see low-rise warehouses leading up to the South Lake Union Working Port, and what you see on the right is a rendering of what South Lake Union might look like when it's completely built out.

Although at this point we hardly need the rendering, and I probably should have just used the 2016 aerial, that you can also see on the cover of our report, if you've picked up the print out.

So you can see that when we are talking about catalytic development we are talking about a dramatic transformation.

Jane Jacobs in her famous book, "The Death and Life of Great American Cities" identified two models of urban development, one was what she called gradual money, and is characterized by a lot of the best practices that we are hearing folks talk about in city building today, such as being mixed-use, and it being incremental, and one was cataclysmic money.

She wrote this during the urban renewal period, and she was talking about waves of capital sweeping into and out of neighborhoods, often after a period of credit withholding. And she identified cataclysmic money as monolithic, institutional, sudden, characterized by the use of eminent domain, and associated with infrastructure as often as it was associated with projects.

To visualize this we can think of the pre-World War II period as a Golden Age of American city building, in which we created walkable urban places using gradual money. This is an aerial photo of Over-the-Rhine in Cincinnati. And we can envision a post-World War II period in which we created what we call, Suburban Form, even when located in a downtown, this is an aerial photo of Downtown Cincinnati as well.

You can see all of the large-scale auto oriented transportation infrastructure, the parking, the highway, centered around the stadium. So we identify these two historic periods, but also these two very different urban forms.

So, after World War II and after the Post-War period there were two other major developments in American real estate that have led to the present moment, and to why catalytic development is emerging as a model now. The first is the decline of American manufacturing, and the dramatic growth of the knowledge and service economies. And the second is the commodification of real estate.

So, the drivable suburban form, becoming a formula that is easy to copy and to replicate to create strip malls that are exactly the same, whether it's in Cincinnati, or in D.C., or in California, so basically turning real estate into a product with recognizable types that can be financed by formula, and built by anyone who can get a loan.

In addition, real estate is also now financialized, which means that real property debt is traded through securitized instruments, and that equity investors are directly acquiring real assets as a revenue stream and fund managers are investing in development projects as a way to provide returns to institutional investors.

So, there's this intersection of capital and real estate that is happening now in terms of absolute dollars, and in terms of places of intersection that is unprecedented. And so most recently we see new interest in place-based investing in walkable urban, and not as a product but as a mission, and this started out as philanthropic, and you'll hear examples of that today, such as Chattanooga, but capital, and particularly equity is now discovering the walkable urban is also more financially productive than the commoditized, drivable suburban product.

And so the private sector in the quest for returns has taken a note of these success stories, and is engaging in a new entrepreneurial urbanism.

So, Chris talked about the conventional model of downtown redevelopment contingent on urban entertainment for activation, and we are now looking at a catalytic model of walkable urban placemaking that begins with employment.

So, many of these investors that are at this new intersection of capital and placemaking, creating this new class of place-based investors, are actually major employers themselves and not just real estate investors. We spoke with many of these employers, and we also spoke with their real estate partners in order to learn about their motivations, their strategies, and then to measure their outcomes.

We discovered that catalytic development is a three-legged stool that rests on patient equity, which is capital that is willing to -- cash capital that is willing to accept, you know, perhaps a lower rate of return but not necessarily but is willing -- or most importantly -- willing to wait longer than five years, and willing to wait longer than one real estate cycle, perhaps surviving several recessions in order to ultimately realize their return.

And that these developers are, as Chris said integrated, they're integrated in terms of the real estate roles that they include under their full-service umbrella, they do everything from acquiring land, to new construction, to rehab of existing assets, to investing in tenants, to investing in place through place management, but they also manage their portfolio in a way that integrates their assets with the surrounding community.

And so what I'm showing here, on the left, is the footprint of University Park in Cambridge, and you can see that just looking at this abstract image of the footprints of University Park, that when MIT and Forest City acquired these former factory parcels they reconnected these large parcels to the street grid subdividing them and creating a seamless development that doesn't feel like a closed campus, and if you go there and ask the average person in Cambridge they may not even necessarily be aware that all of the buildings around the University Park Commons were built by the same developer.

These are the six case studies that you are going to hear from today, we have representatives from all of these cities here with us to tell you in their own words and with their own voices, why they did what they did and how they did. One thing that we have learned is that catalytic development originates from a place of crisis, and I think that everyone in this room is probably familiar with the bankruptcy in Downtown Detroit but actually the crisis of Downtown Detroit has been unfolding for a long time and is now turning around. We are going to hear from the Downtown Detroit Partnership that manages Campus Martius, which is the space that's marked by the number one on this map. So, you can see it's right in the center of what's been happening in Downtown Detroit.

And we'll hear about the extraordinary investment of Rock Ventures which is the parent company of Quicken Loans and is owned by Dan Gilbert, which now owns 27 percent of the parcel area inside the People Mover loop, and 25 Percent of the people who work in Downtown Detroit called Dan Gilbert their boss.

So, it's an astounding concentration of investment in a single place in which the success of Rock Ventures and Quicken Loans is now interlinked with the success of the City of Detroit and they are co-investors in this place.

Between 2010, which is the year after Rock Ventures started moving to Downtown Detroit, and 2015 residential vacancy downtown declined 10.4 percent even though it increased in Wayne County as a whole by 11.4 percent during the same time period, and office vacancy of naturally, with all of Rock Ventures employees moving downtown declined 6.5 percent, closing the gap between Detroit and Wayne County during this period.

Downtown Chattanooga is one of is our longest standing case study that has been in the process of redeveloping since the '80s, and we'll hear from someone who was there at the beginning, and who is still there today, so as you can see from the timeline this is a very long story but also a story that originated in crisis where Downtown Chattanooga was a place to work, and had a stable employment base, but it was not a place to stay,

And a college education was viewed as a ticket out of Chattanooga, and not as a ticket to a job in Chattanooga, and to stay there and raise a family.

So, we are going to hear about how Chattanooga turned their population decline around, because between 1990 and 2015 the residential population of downtown increased, an almost inconceivable 53 percent even -- and while Hamilton County, Tennessee as a whole, was growing during the same time period, the rate of growth in Downtown Chattanooga was twice that of their county seat.

And 2007 and 2016 retail vacancy declined 8 percent, and this is during a time where it's pretty tough out there in retail. So, it's really remarkable that a small city like Chattanooga is able to achieve these retail outcomes.

Also between 2007 and 2016, despite this growth, Chattanooga was able to increase the returns that property owners are receiving from their investments, because retail rents rose 72 percent, even though average retail rents per square foot in Hamilton County as a whole were declining.

We are going to hear from Steve Leeper of 3CDC in Cincinnati. Cincinnati is another case of catalytic development originating from crisis in the Over-the-Rhine neighborhood of Cincinnati. The first civil disorder of the 21st Century caused by a police shooting of a young African-American man happened in Cincinnati in 2001.

And because of the civil unrest that happened after that incident, and because of the interest of the many Fortune 500 companies that are headquartered in Cincinnati in staying there and investing in their place, the city and these companies work together to create the Cincinnati Center City Development Corporation, and to acquire a really astounding parcel assembly of mostly historic buildings that they have rehabilitated.

Raising the median for sale home price in downtown city -- in Downtown Cincinnati by 319 percent between 2000 and 2015, and while of course home values also rose during Hamilton County Ohio, during this time period this rate of increase is like five times what was happening in Hamilton County.

Also between 2000 and 2015 retail rents per square foot went up 107 percent in Downtown and Over-the-Rhine and are now outperforming average retail rents in Hamilton County.

We'll also hear about HQ1, as Chris mentioned. This is the South Lake Union neighborhood in Seattle, which is a former industrial neighborhood, many of the sites of catalytic development that we looked at in our case study were available for redevelopment because of the decline of manufacturing, and the rise of the knowledge and service economies leaving available parcels for redevelopment that would not otherwise have been available, and that was the case in South Lake Union.

We'll hear about Vulcan Inc.'s gradual acquisition of 60 acres within the South Lake Union neighborhood, and how they transformed the neighborhood that in 2000 had only three people per acre living in it, to a vibrant residential community today that is home to over 5,000 people, residential density increased 92 percent in South Lake Union in just 15 years. And while Seattle and King County as a whole were growing during that time period, this growth rate is almost 10 times that.

And also between 2010 and 2015 Vulcan added 10 million square feet of new office, which represents almost 30 percent of all inventory added in all of King County during this time period.

And finally, we'll -- oh, sorry, not finally, we have two more after this. So, we'll also hear from Forest City REIT, the developer of University Park in Cambridge, MIT-acquired collection of abandoned factories, and other smaller parcels around it, very gradually starting in the 1970s and into the 1980s, and eventually was able to assemble this big chunk that would represent, like, 25 percent of the MIT Campus if they had expanded into this space,

But instead MIT, Forest City and the City of Cambridge worked together to create a vision for a mixed-use development that could provide a home for innovation growing out of MIT, but also add very much desired retail and commercial amenities to the Cambridge Port neighborhood as a whole, including 137 units of affordable housing.

Between 1980 and 2010, Forest City built 848 housing units, increasing the density of this area to 25 people per acre, which is really remarkable given that Boston, Cambridge and Somerville as a whole, only had an average of 12 people per acre. So, really establishing a new benchmark for what urban density even means in the Boston, New England context, and what it looks like and how it feels.

And between 1980 and 2010 also adding 1.7 million square feet of commercial real estate to the Cambridge tax base, in addition to all of the property taxes generated by University Park, two of the top 10 payers of personal property tax in Cambridge are University Park tenants today.

And finally, we'll learn about ASU's development of a new campus in Downtown Phoenix. So, many of you may be familiar with Arizona State University since it's the biggest state university in the United States, but their main campus is actually in

Tempe, and that's still where most ASU students are today. But in 2006, ASU co-invested with the City of Phoenix in order to develop a new campus in the Downtown of the State Capital, and to bring the College of Nursing and other programs wholly relocated into Downtown Phoenix.

I think that in terms of crisis, we are all familiar with the housing bubble that burst in this -- in the first decade of the 21st Century, and we know that Maricopa County was one of the very, very hot spots for that. Between 2000 and 2010 the population of Downtown Phoenix, in just 10 years, fell almost 10 percent.

But between 2010 and 2015, in just five years Downtown Phoenix grew 17 percent, which would be the equivalent of 6 percent growth from the 2000 baseline. So, not just a recovery, and not just a rebirth, but really a recreation of a new walkable downtown that, historically, Phoenix never really had.

Between 2006 and 2016 commercial rents in Downtown Phoenix rose 27 percent even though they were declining in Maricopa County as a whole, during this time period. In our paper we identify 12 lessons for catalytic developers, philanthropy, city leaders, and urbanists, but rather than repeat these 12 lessons to you now, let's hear directly from our six case studies about how they achieved these remarkable outcomes and the places that they have built. Thanks. (Applause)

MR. LEINBERGER: So, while we are getting mic-ed up, I just want to introduce the three -- you of course have their bios -- and starting from my left your right, we have of course Ada Healey, Vice President of Real Estate Vulcan, and focused primarily, and in fact probably exclusively, on South Lake Union which is a huge project as you just saw.

Ada gave me the first tour of South Lake Union, I had back probably 2004, 2005. And she's been leading the company right from the get-go.

Peter Calkins, Senior Vice President with Forest City Realty Trust, has been involved since the beginning with of course MIT's joint venture which is now effectively finished. Thank goodness. He's now down here in D.C., down at the Navy Yard in -- down in the capital, the riverfront, working on that remarkable downtown transformation, downtown adjacent transformation.

And then Duke Reiter who, I will embarrass him, he's out West, he's got the best name for anybody living out West. Duke Reiter, I mean --

MR. REITER: But you've got the socks that look very out West.

(Laughter)

MR. LEINBERGER: That's fair. That's fair. Duke, again, presentation at the creation of this incredible investment in Downtown Phoenix, and moving major portions of the university, which is growing to become the largest university in the country, and that most of their new expansion over the next -- well, over the last 10 years, and over the next 50 years will be in Downtown Phoenix rather than their main campus in Tempe.

So, I'd like to start with this concept of, you know, we found that there's two kinds of communities, those that are, what I refer to as fat and happy, and maybe fat, dumb and happy, a place sort of like where we are now, DuPont which has been fat, dumb and happy for many, many years. Thinking that: hey, we are DuPont, we don't have to worry about managing this place.

They're finally going to do it by the way, you'll be happy to know, that there's a business improvement district being formed in DuPont after many, many years of effort. But these six places were what we call the second kind of place, which is down and out.

And I'd like to start with -- you know, given the fact that these were all down and out places, what advantages, Ada, did it give you for South Lake Union to be down and out when you started?

MS. HEALEY: Well, that is actually correct. When we were in our early marketing we had many potential users who told us it was a wasteland, and we couldn't imagine relocating our business there. But in terms of advantages, you know, initially our land was very -- you know was very cheap. We were able to assemble larger blocks and, you know, we were talking in the pre-room before, being "down and out" doesn't necessarily mean there are no community stakeholders there.

So, there absolutely were community stakeholders there who were interested in and what happened in the neighborhood. The other advantage I would say is the City of Seattle, you know, when we really ramped up our development activities, was right post the Dot-Com bust, and jobs were a huge priority for the city, and so South Lake Union was viewed, by us, as a place for a new economic engine to deliver new jobs as well as new tax revenue back to our city, it had the capacity to take new development whereas other areas of town did not.

So, I would say affordable land, easier to assemble, and generally policymakers who were interested in seeing something happen in this in this area.

MR. LEINBERGER: So, how about Cambridge, Peter? And this was an industrial section as well, though next to one of the world's leading schools?

MR. CALKINS: Yeah. And that was -- you know, that was what attracted us to this project, was that we were confident that located next to MIT something good was going to happen. You know, I think the advantage that we saw was -- or the one we experienced was that, you know, we spent four years in a fairly intensive master planning process trying to envision exactly what this 27 acres would become, working collaboratively with MIT, with the city, and with the neighbors, and the city and the neighbors are not the same thing, to you know come up with a program that mixed, you know, what back then was envisioned as technology space, now it's all life science.

And retail and residential both market rate and affordable, and most importantly sort of a network of open space and green connective tissue that would bring it all together. And you know I think that master plan which enabled a lot of flexibility, both in terms of timing, and in terms of where certain users ended up, maybe it's very much sort of an early form-based zoning process. But I think that plan stood us well, as we then, you know, four years in, begin to start to develop new buildings.

MR. LEINBERGER: Duke, Downtown Phoenix?

MR. REITER: I'll tell you this. I don't think so much "down and out" might be the way I described it, as much as unformed. You've got to remember that post-World War II Phoenix Metro is a manufactured city based on 20th Century technologies, the automobile, air-conditioning and production and housing.

And with those three things that area had just sprawled like pouring water on a table. So what was the center? What was downtown? What was Phoenix and the 100 percent corner of Central and Washington was, given it's the sixth -- fifth largest city in the United States, relatively vacant, relatively.

So when the opportunity to infuse the city with a population, that's what universities can bring to the downtown area, that appealed very much to the then Mayor, Phil Gordon, and the City Council, and it was driven by a year very ambitious University President who believes that a university, we are the largest, has a responsibility to the area in which it finds itself, on every level.

Whether it's a physical environment, social issues, and obviously around education, and the taxpayers of the City of Phoenix, not the Metro Area, but just the City of Phoenix, voted to pass a bond election two to one, in favor of ASU and delivering close to a-quarter-of-a-billion dollars for us to buy land, the City to buy land, build buildings and bring what's getting close to our goal which is 15,000 students downtown.

And not moving students down there in a satellite way, where there's the main campus and a lesser version thereof. We moved whole colleges, and they wondered why they were going, because it didn't look as though this was a place that was going to a university-like setting, but we moved those that could leverage being in an urban setting. Things like journalism next to the largest newspaper in the state, or nursing next to the hospitals, or public programs and social work, and the law school, I'll conclude was not in that mix originally, but saw what was happening, and realize that's the seat of State County -- you know the city government, they should be there too.

And so now it's thriving, and every school that we moved has increased enrollment in spite of trends that you might see in other areas.

MR. LEINBERGER: So, the interesting thing about catalytic development I've found, and that the research showed, is that it was mission-driven, whether that mission be economic development, whether it be social equity, whether it be public health and green space. Ada, how would you define your unique mission of what you were trying to do in South Lake Union?

MS. HEALEY: Sure. When we started thinking about our land that we owned, we only started out with about 35 acres which we assembled through the process of a failed Park effort in Seattle, ultimately getting up to 60 acres, we wanted to think about how to develop our property.

And so we really came up with four goals, you know, one I mentioned previously, we wanted the area to be an economic engine, so jobs and tax revenue were a super high priority for us. We also wanted it to be mixed-use, so it was active with people. Ultimately it's not about bricks and mortar, it's about people, so we wanted both commercial, as well as residential, and retail, we wanted people on the street during the week as well as on the weekends.

We wanted to be very transit and pedestrian-friendly, the sort of the walkable concepts, and we wanted to be leaders in environmental sustainability. And you know, in the early 2000s that was not on anybody's radar screen, a lead was just getting off the ground, and that was a core value of ours.

And so as we laid out those four goals for the property we own -- the properties we own, those were our primary objectives. And I feel pretty good about where we are relative to achieving those objectives.

Inclusive development was very important to us. I know we are going to talk about it later but, you know, 15 percent of our portfolio, South Lake Union and beyond, was developed to be affordable to people at 65 to 85 percent AMI. And we have also saved five historic buildings in connection with our work, we embrace working with local artists, so we've set aside some funds to include an artwork piece in every project.

And I could give you more examples, but my panelists probably have some things to share as well. So, I'll pass the baton.

MR. LEINBERGER: Peter, mission?

MR. CALKINS: Well, I found myself representing all three stakeholders up here, MIT, and the City, and Forest City. And MIT which really launched this effort by acquiring the land, I mean, its goals were to figure out what to do with this desolate 27 acres right next to its campus where people would go throw their old mattresses on Sunday afternoons, or maybe Sunday night when it was dark.

And so, you know, they wanted to make a place next door, they wanted to create a place where economic activity that was spinning out of the institution could find a sort of convenient place to land, because all those guys want their businesses, and their academic work to be within walking distance to each other.

And, you know, to MIT's credit, and this often gets ignored, you know, they this was an endowment investment on that, they were investing endowment money, they knew it was going to be a long-term play, you know, as Chris said. They were willing to take that bet, I think they were -- this was pretty far-reaching on their part, in terms of what they were willing to do with University endowment money to try and make something happen.

The city of course was -- wanted housing, particularly affordable housing, very much wanted tax revenue, University Park is not zoned for academic use, so everybody agreed in the beginning this wasn't going to be an extension of the MIT Campus for academic purposes.

And, you know, they also, partly spurred on by the neighbors were very interested in making sure that we figured out, how do we control the impacts of what we were doing in terms of added density and traffic? We did one of the very first traffic mitigation agreements, I think, around you know back in 1985.

And then Forest City, which was the third party to the party, if you will, you know, our mission was to figure out, how do we implement all of these other missions, and how do we take this desolate piece of land and come up with a program that would enable us to build some critical mass early that would, you know, begin to give the place some credence, but then over the long term, you know, could evolve and flower and blossom into what the what the place has become now.

And, you know, we share the goals for affordable housing and sustainability that -- you know, that Ada talked about. But it was really about: how do you, how do you create a place that is a place where people want to come, whether you're a resident or whether you're a company. And, you know, at the end of the day, I think we've managed to pull it off with the help of a lot of people.

MR. LEINBERGER: Duke?

MR. REITER: Yes. And if you think about mission, of course there's the place-based part, and I was a faculty member at MIT for 13 years, so I watched their whole development come about. And when I taught there, I think the students at MIT, and certainly the faculty, thought that's where they should be. In educational terms in the state of Arizona, there are a lot of people who have never imagined a university education and, you know, our University now reflects the socio-economic demographics of the state.

Well, what better way to communicate that than to be in the community. And so to move downtown and open up this as an opportunity, especially for some in various demographic areas that just, again as I said before, never thought that they could be there, were welcoming them in, they get to know us by being in the city.

And by not only offering the things you would expect the university offer in terms of curriculum downtown, we have turned around some failing schools, we've taken them over and turned them into charters, which we run, we've worked with the city where they see their most prevalent problems with regard to all kinds of social issues, and we weighed into those purposely, we are told to do that by our President, and the university wants to do that. And that has produced great results for the city.

So, the mission-driven starts at the top. What is the university all about? How do we raise up people from their circumstances, and give them new abilities to imagine different futures? And by being in a place, being very visible, probably nothing has communicated that more clearly than being downtown, people point to this all the time, how downtown has been transformed, not just by us, we maybe started some things, but billions of dollars of development have surrounded us. The people often point to that as a demonstration of the University's commitment to the community.

MR. LEINBERGER: So, all three organizations are sizable, and have great financial resources, but still not enough to pull it off on your own. So who was your most essential partner? Whether it be the public sector, institutional partners, major corporations, who were the -- you know, the ones that were the really essential ones, Ada?

MS. HEALEY: Well I would have to say absolutely the City of Seattle. Very early on we we've entered into over ten public-private partnerships with the city, but in the early 2000s South Lake Union was a -- you know was an area that people drove through, not to. And it had not been invested in, literally, in 50 years.

And so there was a significant amount of deferred maintenance, there was no public transit access, the roads were very car-friendly, not very pedestrian-friendly, we didn't have enough power the parks were dilapidated, and essentially we needed the city, the city's engagement to help address some of those major infrastructure issues.

And so literally over the course of 15 years, you know, a new public transit access was provided via the Seattle Streetcar Phase I, major roadways would continue --

MR. LEINBERGER: Which you, by the way, help pay for?

MS. HEALEY: Yes. We paid for -- 50 percent paid for by the private sector, 50 percent by the public sector. Major roadways were reconfigured, the Seattle City Light is building a new substation with below-grade network, over $35 million was invested in new parks and open space, and we partnered with the city to build a swale which is -- cleans 190 million gallons of stormwater coming off a different neighborhood before it flows into our waterways.

So, there have been over ten major public-private partnerships that ultimately allowed South Lake Union to become what it became.

And in Washington State a TIF tax our commit financing isn't legal, and so we sort of just did a non-TIF TIF. The city invested, and as well as the private sector, about $750 million in infrastructure, and to date, and this course is going to keep going the City of Seattle has received $200 million in tax revenue back on that development.

And every year, you know, that's more and more and more, so you think about the payback ultimately on their investment, financial investment, and then you also think about the new jobs that have been created, as well as the new housing and other amenities.

So, I'd say the City of Seattle has been a huge partner, we also have a robust outreach effort to go out into the community, and many community stakeholders came to the table, and we worked with to make sure we were providing what the community was excited about and, you know, could have a collective vision.

And then lastly I would say many major institutions. Before Amazon came, I mean Amazon's been a huge part of story, but before Amazon came, there were some major institutions that were early adopters, I would say. The University of Washington School of Medicine was a huge early adopter, we signed our first leases with them late-2003.

The Merck Pharmaceuticals actually was an early adopter that came down to South Lake Union, Tommy Bahama, which is actually headquartered in Seattle Washington, the purveyor of the island lifestyle, hard to imagine, right? (Laughter) They were an early adopter. And the Institute for Infectious Disease Research and Children's Hospital.

So, those were sort of the first core major employers that that rolled the dice, and took a bet, took a bet on South Lake Union. So, city, community, as well as some major institutional employers.

MR. CALKINS: Ours was clearly MIT you know we've now been effectively partnered with MIT for 35 years, which is a pretty long track record. You know, the structure of the agreement that we had with them gave us essentially 20 years to develop the place out, as long as we started a building within five years we didn't have a specific timeline we had to adhere to, so that helped us get through a couple of economic cycles that were a little challenging.

All the buildings are on ground leases, MIT's continuing role is as land holder and ground lessor, but the ground leases were structured in a way that, you know, in the early days they were affordable, and you know MIT's reward would come later and given where rents are in Cambridge, you know, everybody is reaping finally reaping those rewards.

We didn't have any -- Cambridge was a partner in terms of their sort of professional approach to what we were trying to do in Cambridge has a great planning department, and a good planning Board and, you know, a great staff. And for 30 years a very dedicated City Manager.

But we didn't have any -- there was no third party money in this other than MIT's sort of patient money, anything that was -- any infrastructure that needed to go in Forest City paid for, as part of the project there's no -- there's no TIF, there's no, you know, tax abatement, this was definitely a private sector initiative, if you count MIT is private-sector.

MR. REITER: And also, based on what I previously said, obviously the City of Phoenix and the investment they made in allowing us to establish this campus and everything that goes with it, but preceding that, and you've got going to remember that the metro area is something of an archipelago of cities.

There's Scottsdale, there's Tempe, there's a variety of things, they decided, and it was very much supported by the federal government, probably 80-percent-plus to put in a light rail system that went all the way from the East from Mesa through Tempe where our major campus is, through Downtown Phoenix, and North, and headed out to where our football stadium is which, you can argue, whether it should have been located all the way out there, but there it was.

But had that thread not been woven through the fabric of the Metro Area the logic of saying you know Downtown Phoenix and where our main campus is, in Tempe which, by the way, is booming in terms of development as well, wouldn't have had the same logic. It provided that logic, and people could imagine, people now moving without an automobile in a place that couldn't be more auto-centric.

But that was crucial to us. And we purposely located the new campus right where the primary multimodal areas in Downtown Phoenix, and our students, I think, in many respects showed people how to use public transportation, at least that form of it. And so that investment was absolutely crucial.

And then thirdly, just turning around with regard to Peter's story, third-party developers were saying: are you really going to do this? Because if you're really going to build a campus down there, we are probably going to buy this land over here, and we are going to do this. And I remember many discussions with the private sector, a little bit surprised that this was all going to happen, and we had confidence that bond election was going to pass, and they have followed through.

And so the mixed-use development around us, and now multiple thousands of housing units, surrounding the campus area have been even more transformational with regard to the large or downtown area, than just what we've been doing, and our colleagues from the University of Arizona have put a lot of into their Medical School downtown too.

MR. LEINBERGER: Now, besides the reason that ASU is such an incredible success story with Downtown Phoenix the other reason that we wanted ASU as part of the six is because it's the only public sector institution doing this of this six. I think it's interesting to know that five of the six are private-sector-led efforts. Not that the public sector wasn't deeply involved, but it was what I refer to as not a public-private partnership but a private-public partnership, which is flipping that term.

So, I think that's quite significant, but it can be done by the public sector with the proper leadership.

MR. REITER: And we've had many universities approached us. I think our colleagues at the University of Central Florida are saying, hey, wait could we do in Orlando what you did here? And they -- I've been out there multiple times, they are saying, we are going to do what you did, we are going to copy that step-by-step.

You know, San Antonio, University of Texas in San Antonio was talking about how they can be in downtown. So, the idea that a university can be a driver of development downtown is now I think commonly understood, and it's different than maybe sports stadiums, or other things, it brings bodies, it brings people and life to a city.

MR. LEINBERGER: In other words, employment --

MR. REITER: Yes.

MR. LEINBERGER: -- which is one of the three major factors that we found. Now, we've touched upon this before, but the issue of social innovation is really important with these projects, and that that we've seen this really brought to the fore by all six of these case studies looking at the connection between the local community and the project itself, particularly regarding affordable housing, workforce development, and those kinds of issues that are now just raising its head so tremendously throughout this country. Ada, how do you, particularly in Seattle, which is one of the poster child of trying to create inclusive development?

MS. HEALEY: So, we've done we've done a couple of different things. You know when you think about affordable housing, there are really two different buckets. It's what I would characterize as workforce housing, you know, which is what, safer people at, you know, whatever -- 60 percent AMI and above, to low-income housing, which is you know folks generally below that but maybe at 30 percent, 30-plus or minus.

And so we have essentially played in both those spaces in different ways. We have delivered, as part of our portfolio, you know, roughly 15 percent of affordable housing, so workforce housing, which is for people at 65 to 85 percent of area AMI, and in South Lake Union, you know, we essentially delivered more of that workforce housing than any other developer combined.

So, I feel really great about our track record there. In addition to that we have also contributed through incentives zoning fees to pay into a pool that the city uses to invest in low-income housing, and so we've contributed, in connection with some rezoning, about $11 million toward low-income housing which the city then disperses to low-income housing developers, and they take that money and they leverage it with you know with tax credits with philanthropy, with philanthropy with low interest rate loans.

The third piece of it which is not a direct housing production but you know given all the new employment opportunities, I mean there are employment opportunities for highly skilled workers, there are employment opportunities, you know, for people just starting out, and for people, you know, perhaps who are not as far along on the skill spectrum.

And so new jobs affords people an opportunity to earn a living which then, ultimately will cover the cost of housing, but it's something that we care deeply about.

The other point I would make on the philanthropic side, which is not where I focus, but on the philanthropic side, Paul Allen, who is my boss cares deeply about affordable housing, and we have a number of projects in the Seattle area that are specifically targeted toward homelessness.

We as a company actually built 30 tiny homes two weekends -- two weeks ago partnering with a non-profit housing developer, and those tiny homes will be delivered -- they have been delivered, they're going to be open in July which will house you know 50 to 60 homeless individuals.

The last point I would make is we are also partnering with mercy housing and the City of Seattle on a homeless housing, a new homeless housing project which will include about a hundred units, we are investing $30 million into this project, it's going to break ground in July or August. And it's going to have a very large Family Services Center on the on the first floor.

So affordable housing and homelessness is something that Paul Allen cares deeply about, and we are addressing it both on the for-profit side of our business through the areas that I'd mentioned, as well as on the philanthropic side of our business.

MR. LEINBERGER: Peter?

MR. CALKINS: The affordable housing, you know, our original -- our original zoning committed us to build 400 residential units of which 150 would be affordable in a mix of low and moderate. So, that's like 37 percent, which was far and above any level than anybody was ever committing to, certainly back then.

We ultimately converted in some commercial square footage to -- residential square footage and built 600-and-something units, but that original commitment was very strong, and we also delivered, you know, the projects that had the affordable units in them, which was several, you know, got delivered early on.

So, it's not like the stuff that piece came late it was an early commitment. I've talked about the sort of traffic mitigation I think we -- you know, we've worked hard to try and manage the impacts positive and negative, if you will, of that kind of a, you know, new growth in an existing working-class neighborhood, you know, the central square previously known as "central scare" area of Cambridge

And the other point I would highlight, and it's less true for University Park than it is for projects, are sort of follow-on catalytic projects in East Baltimore, next to Johns Hopkins Medicine and also here at the yards, is a very strong commitment to minority and local business development, and workforce development. Both on the -- not only on the construction side, but on the soft -- you know, soft consultant side.

and then as a follow on, you know, once businesses get up and operating we have a really aggressive program for: how do we make sure that we can bring people into the workforce and give them the skills they need, and get our big corporations to mentor the little corporations, and do all that kind of -- you know that kind of activity.

MR. LEINBERGER: Duke, obviously ASUs, that's your mission?

MR. REITER: Right.

MR. LEINBERGER: To educate the young and, in particular, first-generation college?

MR. REITER: Absolutely! So, while we may not be able to speak to the issue of affordable housing, we are not developers, given what the city did for us to make it possible for us to be there, we feel this need to demonstrate the value of being there. So, examples would be -- I mentioned one already. There was a large but failing school right next to us, we took it over, turned it into a charter it's now graduating at the99 percent level all of its students, with 70 percent going on to some form of higher education.

Some at ASU, some at the community college level, but that is a remarkable turnaround, and the profile of the students there, their families probably have average incomes, if they're coming from say South Phoenix, 22, 24,000 a year.

So, I think we are proving that anyone can learn, but because our students are in a downtown setting, they're also seeing the world differently, they even say that. They say they carry themselves different than those on the Tempe campus because they're seeing their futures and what they'd like to do.

So, our school of nutrition, students commandeered a bus, in a good way, took over a bus, and filled it with fruits and vegetables and they addressed the food desert issue in that area, and so they are actively addressing something that they saw and doing it.

And the last thing I would say, right adjacent to the campus, right out the windows of the College of Public Programs is a building filled with Section 8 housing, wasn't built for that, it was an old hotel and, there were constantly ambulances and fire trucks in front of that building serving the needs of the people who live there.

And we made that observation and said, I think we can help you with that. So, we put facilities in the ground floor of that building where students are getting a practicum who are in that field addressing the issue in the building the number of emergency vehicles there has been reduced that's what a university should do. You were good to us taxpayers and others to bring us here, now we need to demonstrate the value of that adjacency.

MR. LEINBERGER: Okay. Karen is now going to take some questions, we have about 10, 12 minutes for questions. One thing that just occurred to me -- I can one thing that just occurred to me as we were talking up here, that all six of these people, that you have heard from, that you will hear from this is their peak career moment in their of lives, I mean all six of these people have really --

MR. REITER: (Crosstalk) to know it.

MR. CALKINS: Do you mean it's all downhill from here.

MR. LEINBERGER: This is your peak. Enjoy it guys!

MR. CALKINS: Brookings, we made it.

MR. LEINBERGER: You see, on the agenda. I know, I know, I mean, how could we? I mean you all, threw your entire at these projects. This wasn't just: oh I'll be here for two years and then go on to something else.

MR. CALKINS: They are long term.

MR. LEINBERGER: These are long-term commitments of their career, and this is their peak career experience played out over decades. And for better or for worse, you guys did it. Thank you. (Applause)

QUESTIONER: This is a comment not a question.

MR. LEINBERGER: Ah! Let's keep them to questions. Please, ask it as a question.

QUESTIONER: I want to say -- if you think back on the model for corporate campus when the planning started for University Park is MIT, it was a bunch of buildings out in the green field off an interstate. And I think what Forest City did is absolutely brilliant in terms of creating an entirely new model for that. That's it.

MR. LEINBERGER: So, a question please?

QUESTIONER: I'm intrigued by the concept of MIT being considered private sector. So, my question is actually, do any of your facilities pay real estate taxes?

Because one of the issues is as this is going forward whether it's Amazon II, or whatever, is property tax breaks which sometimes are very long-term, and don't contribute to the -- and in effect it picks winners and losers within those communities. So, I'm thinking University of Arizona doesn't pay taxes, I'm thinking MIT Endowment doesn't pay taxes, and I'm not -- I suspect ultimately your property won't pay taxes.

MR. LEINBERGER: Why don't we start with Ada?

MS. HEALEY: Yes, absolutely. So we are a private sector developer, we pay real estate taxes and -- you know every year because the assessed values have gone up, our real estate taxes have gone up. Certain nonprofits in Seattle did qualify for some tax -- a tax break, and you know we can't -- you know, some we have commercial tenants that are for-profit, and we pay those taxes, and if you're a non-profit tenant and you qualify via the city's tax code then you're exempt from property taxes. But generally we pay taxes.

MR. CALKINS: And all of our buildings pay full 100 percent taxes, we are one of the largest tax payers, certainly, in the City of Cambridge, I think it's -- because I don't track that anymore, but it's 13, $13 million including, you know, we have one building and parts of another that are leased to the Partners Healthcare System which is the umbrella over Women's Hospital and Mass General Hospital.

And they located a research facility in the University Park because they wanted to do some joint programs between the two hospitals, and they needed Switzerland, they needed neutral territory, if you will. And so since 2000, you know, they made that decision, they pay full real estate taxes just like any other corporation in the Park.

As long as -- in Cambridge as long as the building is owned by a private sector entity, like us and, you know, then it pays real estate taxes no matter who's in it.

MR. LEINBERGER: And Duke, I just assumed that ASU does not pay taxes?

MR. REITER: Obviously we don't, but first Phoenix joined in partnership with us to do what we did, then Scottsdale raised its hand and said, we'll invest this in some vacant land which was achieving no tax revenue, and we came in there, now private companies are in there working with us, and others, and Mesa, just the other night, passed a vote to bring us there as well. They'll make a modest investment.

But I think they believe that the ROI on us being there and the knowledge creation I think was on your chart, it was where the future is, the return is highly qualified and valuable to those cities.

QUESTIONER: I'm curious about the place for small retail businesses and related small developers, and I'm asking because of several things I've read recently. One concerns South Lake Union, where a long-time Seattle resident was despairing of the loss of some small businesses that she enjoyed having when she passed through South Lake Union that are now gone, and have been replaced, basically gentrified with, you know, more upscale type businesses.

And also I've been reading about how many developers are now when they build mixed-use buildings, or putting in very large retail spaces that are unsuitable for anything but say a large chain, and I'm also, as I said, I'm curious about: is there a place in any of this for a small developer who may want to build, you know, a not huge building that could accommodate say small businesses, and some have more affordable housing as well?

MS. HEALEY: Sure. Let me let me address that. In our retail strategy you know we have tried to find either local or regional tenants to come take space in our buildings. We do have a Whole Foods which, of course, is a national company, we do have Starbucks which is a national company, although they are headquartered in Seattle, so they're the hometown brand.

But we have we have bent over backward to find local businesses to come and lease retail space in South Lake Union. We don't lease -- we don't put banks on corners, some of our competitors do, we don't think that's a great -- it's a great retail environment. We have built small -- smaller retail units, which of course the rent is lower, because it's just it's just less square footage.

And, you know, the good news is, you know, while it isn't perfect because we do have some national tenants, we have a lot more diversity in terms of the retail experience in our portfolio, than I would say is perhaps more typical. I will tell you the downside of that is, during the Great Recession every retail tenant we had, except for Starbucks and Whole Foods, I think was on rent relief, so they weren't paying -- they weren't paying rent, maybe they were paying operating expenses.

But that was the -- you know, the risk that you -- that you run by not bringing in national chains. But we have we have tried to bring in, you know, local operators whether it's Portage Bay, you know, whether it's the local coffee guy who actually invented the little swirl on the top of your lattes. (Laughter)

He's real famous, I can't remember his name off the top of my head, Cafe Vivace is his store, you know, whether there's a local toy store, or Cactus which is, you know, for Mexican food. But we have we have tried to bring in a diverse portfolio of retailers.

MR. CALKINS: We've taken very much the same approach you know with all of the street front retail. We did have a supermarket which has recently closed because there were too many supermarkets that have opened up in the area now, and it was on the second story, hard to run. But all of the street-front stuff is local.

You know, I'll tell one little story, in about 1995 we had a guy who was working in a food truck that was kind of parked on the place, and the food truck operator was shutting down, and he came to us and said, you know, I can make this work if you give me a space that's inside, and so we leased him 700 feet. This is a guy from Africa, his name is Mohammed Mahmoudo.

A and you know we helped him get started, I testified when he got his Green Card, I wrote half-a-dozen letters at various points over the years when he wanted to bring his mother across to visit. There was a Facebook post, you know, two weeks ago of his son who just got his Degree in Criminal Science from Northeastern University, who I knew this kid when he was this big.

So, you know, that's just another sort of -- it's a microcosm story of the kind of effort that we've made to help the small and the local community grow and thrive and prosper.

MR. REITER: I could give you so many examples, but why don't you go to another question from the audience?

MR. LEINBERGER: For the final question, it was in the back, ah, Calvin?

MR GLADNEY: Calvin Gladney, Smart Growth America. You guys have definitely shown great economic and fiscal impacts and community benefits from your projects, although many communities may not necessarily have had the same great history, as with your companies. So my question would be on the frontend. Do you see a role of mechanisms like, value capture, community benefits agreements, form-based codes, master plans with teeth? The types of things that the public sector and communities are looking to do that might guarantee some of the impacts that you guys made sure happened, but do it on the front end.

MR. CALKINS: I think we had a master plan with teeth, you know. We had essentially formed-based zoning that allowed higher density towards the MIT campus side of the property, and lower density and lower height towards the community side. We had thresholds that we couldn't pass in terms of development until we could demonstrate that we had both delivered on the affordable housing side, and also on the open space side.

So, we very much had that from the beginning, in terms of teeth to make sure that we would adhere to what we said we would do.

MR. LEINBERGER: And Calvin, as you probably know, that Cambridge is the socialist state of Cambridge, so.

MR. CALKINS: Otherwise known as the People's Republic. Not so much anymore.

MR. REITER: It's interesting as to how much you could insert into whether its regulations, or expectations, or documentation, and that has value. As much as faith you might have an that, as the leadership of maybe so let's say an institution like a university or a developer, people need to follow through on those things even though they're codified in paper. It depends a lot on people. And is that in their interest to do it? Do they want to do it? Do they feel that it's part of the -- not just an obligation, it's where they want to be. It's what they want to do. I think that matters a lot.

MR. LEINBERGER: And keep in mind these are generational projects, so it's not as if you're, you know, upfront, you get a guarantee and then all of a sudden 20 years later, I mean there's a whole different set of people except for these six that are still there, But generally speaking, this is more like a marriage, than like a deal. It's a long-term process.

So, I want you to, please join me in thanking. (Applause)

MS. LOH: I just wanted to say, thanks for the great questions from the audience so far. This has been a wonderful discussion. I do really want to encourage everyone to read the paper. Not just because we tried so hard to write it but because I'm hearing a lot of questions that are about this larger critique of mixed used development as kind of like a mega scale product that's really hot right now and that people are talking a lot about. One of the reasons why we wrote this paper is to help distinguish catalytic development as a model from this bigger mixed use walkable urban as a product that's out there now.

This is something we get into in really great detail in the paper. Like how to tell the difference between northern white rhino and a southern white rhino. This has been a great conversation so far. Let's just jump right in. I have here with me, Chris Crimmins who is the vice president and partner in the Chattanooga Land Company now but who had a previous life as an executive at the River City Company who is the subject of our paper. And Bob Gregory who is Chief Planning and Public Space Officer with the Downtown Detroit Partnership and is the dad of Campus Martius. And Steve Leeper, President and CEO of the Cincinnati Center City Development Corporation.

Let's get started. What I want to talk about with you guys today first is those are some great questions from the audience right now and I kind of felt some energy coming from you guys. Were there any questions that were asked so far that you would like to discuss in the context of your communities?

MR. CRIMMINS: I would start off with one of the things in Chattanooga's case, I think our history, thanks to Chris Leinberger's work that began with us in the mid-1980's was a public planning process that started with a grass roots effort called Vision 2000. It was totally open to the public. It was grass roots oriented and it began to create and set a whole new agenda and vision for our community on a whole range of topics.

That was really the genesis of how our whole process began.

MS. LOH: An inclusive vision?

MR. CRIMMINS: Absolutely, totally inclusive.

MS. LOH: And guys anything that you heard asked so far that you're just burning to talk about?

MR. GREGORY: One is the question about taxes. We're a 501(c)(3) but we pay property taxes on our holdings. I know I'm making a case to the city about this. We pay about a million dollars a year in property taxes on our holdings. It was discussed about do we have local tenants and really downtown true as well but we have virtually all local tenants. Most of them are first generation businesses. I was laughing at Tracy because the reason is no national tenants would come to Over the Rhine. Now that has changed and now that we're changed and we're having some success, it is sort of we got forced into that corner and we're glad we did.

MS. LOH: And Steve, is it also advantageous to work with local tenants because you have profit sharing agreements in your leases?

MR. LEEPER: Yeah the way we do it is we renovate property, mixed used commercial residential upstairs. Retail on the first floor. We renovate the property, we hold the asset, they contribute some TI money, we contribute the TI money and we watch the bottom line. It's either $15 a square foot or 6 percent of your growth, whichever is higher, and virtually everybody is paying 6 percent of their gross. Some of our restaurant tenants are paying almost $100 a square foot. Now we build our spaces for Tuesdays in February not for Easter Sunday service. So we're small, very tight, 1200 to 2000 square feet. We think that's been part of our success.

MS. LOH: And just to decode that for everybody here, TI stands for Tenant Improvement. It's basically like if you're going to move into a commercial space and you are a restaurant, for example, you would need it to have a commercial kitchen for you to cook out of. But you as a person starting a restaurant don't necessarily have $50,000 just lying around to build the kitchen. Usually there is an arrangement, and you could apply the same thing to a bookstore. There are things that you need inside your space to fit it out to run your kind of retail. Usually this is an arrangement between the landlord and the tenant.

I think something that distinguishes catalytic developers in terms of operating in the mixed use space and some of the other developments that you may see unfolding in your communities is this real ability to do the commercial side of mixed use. Anyone can build a building and just put spaces on the first floor. Whether those spaces can actually be made to work for retail tenants is a totally different story.

So we just talked about local businesses and commercial real estate but I want to ask you guys about open space. Because in Chattanooga, Detroit and Cincinnati, we have seen really astounding and transformational investments in high quality public open space that doesn't directly serve a cash paying tenant. We're talking about not just a small investment here but many, many millions of dollars and put in up front at the beginning of your processes. Why high quality open space and why spend so much money on it. Chris?

MR. CRIMMINS: In Chattanooga's case when we began in the mid-1980's we had a beautiful natural resource flowing through out city called the Tennessee River and for generations, we had turned our back on that. So when we went to this public planning process, one of the major things that emerged was the reappreciation and renewed public access back to the water's edge. So that was one of the major things was public space both along the water's edge and then where the city meets the river that we should have world class public spaces for all citizens and visitors to enjoy to appreciate the natural beauty of the city. That was one of the early guiding principles.

MS. LOH: Okay. It's nice and it's what the community wanted.

MR. CRIMMINS: Absolutely.

MS. LOH: All right. Bob, what about Detroit?

MR. GREGORY: So in Detroit, it's a story of decades of decline. I think as Chris mentioned, 30, 40 years. We have a beautiful river, the Tri River and back in the seventies, Ford Motor Company decided they were going to build the Renaissance Center on the river but isolate it from everything else downtown from the heart of the city and from the heart of the river as well. So that failed in many ways.

So the décor of downtown Detroit which at one point had 150,000 people working in it has almost as much retail second to Manhattan, I think, in terms of the amount of retail there. All of that left, decades of it all leaving to the point where we had 50,000 people working downtown. All the retail was empty, all the restaurants were gone.

In 1997, we did a plan to revitalize the core centered on public space. We take our main street, Woodward Avenue which runs right up and down from the river up 30 miles. We put a public space there and then in 2000, one of our key leaders at the time, Pete Paramonos, decided he'd move his company downtown. This was 4000 technology folks into downtown only if this public space got developed. It was a but for public space, I'll bring my 4000 people down, $400 million and a million square foot mixed used project. That kind of started it. Without the public space, the development down in the core of downtown would not have started. It was critical for economic development and social transformation.

MR. LEEPER: In our case, civic spaces are a fundamental priority for us. It's not only redeveloping civic spaces but it is managing them thereafter. We identified so far to date, three spaces, about 14 acres between the prime central space in Cincinnati which is Fountain Square, WKRP and Washington Park. We've invested about $140 million in those three spaces that the 3CDC did on behalf of the city with some city money but also primarily private money. In Fountain Square of the $48 million about $44 million of it was private. All of it had a parking component. All of it is management of both the civic space and the parking together. The spaces themselves, we operate on behalf of the city and we operate at a budget of about $6 million a year for those spaces, keeping them clean, safe and programmed.

It's a nice amenity to have but the reason you do it is because one, in the case of Washington Park it is essentially a neighborhood park. But also it is a very much a stimulus for driving people into to downtown, driving people into Over the Rhine, increasing real estate prices around it and it really is a safe haven for many children in the neighborhood.

MS. LOH: Excellent Steve. So Steve, as you mentioned it is not just about creating high quality open space but also managing it. Can you guys talk about what are the most successful place making strategies that you've used in your community? What is working for you to activate these spaces?

MR. CRIMMINS: First of all, one of the great things is on the front end is having the right planning and having the right input on the front end so that when we open them and dedicate them then having the right sort of programming elements coming in to run them and operate them and have an entity to see that over time. River City's role since its inception since the mid-1980's has been to oversee and plan and program these spaces for years. So that has continued for several decades.

MS. LOH: And what is River City doing with the spaces?

MR. CRIMMINS: They oversee the animation of those spaces and the programming of them.

MS. LOH: What kind of events do you guys do?

MR. CRIMMINS: Everything from music festivals that bring in 100,000 people a night along the river front to very small venues. It just depends upon the size of the venue and the appropriate scale whether it's in the middle of the center city in the center business district or on the waterfront. It's a whole range of size of animation activities depending upon the place.

MS. LOH: Bob.

MR. GREGORY: Well I think it's a lot of things. The vision up front, making sure you have spaces there in the right places. You can create new spaces, renovate old spaces. Having the vision for a very flexible programming. I think you need a beautiful space, you need the ability to do all kinds of programming. We do year round programming. Like Steve and I, we're managing almost seven spaces, not including a brand new space that one of our power companies, ET Energy just opened last year. You have to have year round programming, it has to be inclusive, it has to be diverse and has to appeal to many demographics and you need to really market that and really work with the media and PR in your town to make sure people want to come to it and know about it. It's all free programming, it's all privately funded. Again, much like Steve's organization, we invested about $20 million and about $2 million annually. Now we have some spaces that are around $5 million in terms of programming and maintenance and activation that we're doing.

MS. LOH: But Bob, why a beach in downtown Detroit?

MR. GREGORY: We do have a pop up urban beach in Campus Martius Park and we did that five years ago. This is our sixth year in doing it. Really we just had a space that was, even in Campus Martius which is probably the busiest space in

Michigan right now. We had a space that was underutilized and we're always looking to innovate every year. I keep doing the same thing every year no matter what space we're working in. We had this idea for a pop up beach and we're working with Project for Public Spaces. We saw the Paris (inaudible) along the send there and we're supposed to do a small version of that. We now have a container restaurant on it, a bar there, a deck. We do all kinds of programming on the little beach in terms of family day care, games, music, Friday nights. There is so much going on there now that next to our ice rink in the winter time it's the most popular thing we do.

MS. LOH: I heard that kiosk sells $600,000 worth of beer a year.

MR. GREGORY: Probably more than that. We're trying to keep up with Steve in terms of his beer sales but yeah it's a lot.

MS. LOH: Steve tell us more about your beer sales.

MR. LEEPER: We have three spaces, Fountain Square and Washington Park we virtually program every night between May 1 until the end of October. Of course, in Fountain Square in the winter, then we bring in our skating rinks. A program space is an active space, is a safe space is a productive space. We try to make it very diverse. The music genre will change. We hire people that know what they're doing in that field to program that space and we spend hundreds of thousands of dollars a year on talent.

Ziglar Park which we just opened last summer and this is the first full year as a more active space. It has basketball courts. We built it in an urban area and it is a full size 25 meter swimming pool. In the African American community, swimming is a challenge. Young kids aren't learning to swim anymore. Rather than close the old pool that no one ever swam in before, we said we're not going to eliminate a pool we're actually going to build a bigger one and we're going to recruit. Here's the good news.

We had 50 kids sign up for the Over the Rhine Rhinos swim team. We had about 45 kids sign up for swim lessons. Some of the kids that swim lessons are actually on the swim team so I'm not sure how well our record is going to be this year.

Then tomorrow, Tuesday, we actually start our eight week full summer camp for kids. 80 kids will come at Ziglar Park and we partner with a not-for-profit that actually works in the community to provide what I think will be a great haven for kids during the summer. Our programming is very diverse between the spaces and certainly I think in the case of Ziglar Park, has really hit home to the neighborhood that this is a place for them.

MS. LOH: Okay sign me up for a Rhinos tee shirt.

MR. LEEPER: By the way, it is a great logo. Somebody donated the logo and it's fantastic. Go to the Ziglar Park website and you'll see it.

MS. LOH: I can't wait. Okay you guys are all using the words diversity and inclusion. I think we need to interrogate that a little bit. What do those words mean to you and what do they mean in your community? Be more specific?

MR. CRIMMINS: I think in Chattanooga's case it means on any type of ranging from public art to what might happen with the future of the river front. We have developed a public process that is totally open and transparent to the public when we undertake large scale projects. It's sort of become and formally known as the Chattanooga Way. Where any sort of major project we undertake or civic endeavor will host a whole series of public meetings open to anyone and everyone to gather and take down all manner of input from whoever wants to raise their hand.

MS. LOH: Can you give me an example of how input from those meetings has shaped a process?

MR. CRIMMINS: Absolutely. Going back to the mid-1980's, I remember it was a very novel process at the time to put the future of your community out to a public forum process. I remember I was in my early twenties and was attending these and a lady raised her hand and said could we save the Tibley Theater which is a beautiful 1920's style theater that was possibly going to be torn down. By her raising her hand encouraged others to raise their hand and said that's a beautiful place I didn't know it was going to be torn down and we need to save that. That was one of the early first project that the River City Company and the city worked on was the saving and restoring of Tibley Theater. So just the fact that someone could come to these processes and these open meetings and raise their hand and speak their mind about what was deeply important to them about Chattanooga and its history and where it could go, that led to that project being saved as one of the early projects.

That's just one example of many, many. That whole process has sort of become known as the Chattanooga Way. I remember former Mayor Bob Cochran now a U.S. Senator, was amazed he was going to take on a public art project. He said we'll have a meeting at 7:30 in the morning and 500 people showed up. He was like wow this is amazing. 500 people show up for a meeting about public art at 7:30 in the morning. It's a very powerful process for our community.

MS. LOH: Bob, what about Detroit? What does diversity and inclusion mean?

MR. GREGORY: So that's a tough question. In Detroit you have a metropolitan area that's over 4.5 million people and maybe isn't as diverse as you think it is. The City of Detroit has got about 750,000 of which 80 percent of them are African American. How you answer that question there could be a whole session on this. For us in the public spaces it means when we started doing these public spaces back in 2004 we opened Campus Martius. We hired a whole team of people to do all the programming headed by an African American woman. It wasn't just about us just finding ways to make divers music or entertainment, we hired the people who her whole team is African American. We've had that ever since we started this thing 15 years ago.

So we're looking at inclusion not just saying we're going to be diverse, we hired the people that actually are diverse to help us create the programming. I think again, having community engagement, stakeholder engagement all along the way, any new project we start there is always community engagement that continues throughout the whole process. If we can design something, build something, operate something we keep that going. I think you have to have that input all along the way.

MS. LOH: And Steve, what about Cincinnati?

MR. LEEPER: Well obviously, we were formed, in 2003 and it really was in response to the racial unrest and the incident we had in Over the Rhine. So tensions were high and people, I think, forgot to talk about the subject of race. I think taking that subject head on and when you spend $1.3 billion as we have over the last 14 years, the issue of gentrification is clearly going to be on the table. It is going to be the first question that is going to be asked. We've addressed it multiple ways. Sometimes successfully and sometimes we can always do a better job and need to do some soul searching there.

In terms of affordable housing, what happened is that when we went into Over the Rhine, the State Housing Finance Agency which controls the allocation of low income tax credits wouldn't put any more tax credits in Over the Rhine because it had been too dense of credits already there and it was an impacted neighborhood so they cut us off. Well, who impacted them, the State Housing Finance Agency. So we pushed back and were able to begin getting quality affordable housing. Then there is a whole range when we speak about affordable housing, there is not just low income and workforce, there is special needs housing which is very much a need in our neighborhood, particularly for those who that are either homeless, soon to be homeless. We built three comprehensive and residential service places for the homeless. We spent over $42 million doing it. We are also working in the whole area of permanent supportive housing and housing for other special needs.

In the housing area I think we've made some end roads in terms of the enterprises in the commercial districts. As I've indicated, we don't really have national chains. About 23 percent of them are minority owned business, many are them are first time businesses. If you add women to that inclusive category it's about half. So we do things to protect them and make sure in times of good times that we're there for them and in bad times we're there for them as well. Of course, in the programming and employment end in all the areas that we manage, rather than buying that service from the third party we employ people directly. We have about 18 full time field workers and about 100 part time field workers. The full time field workers we pay 100 percent of their medical benefits. We pay them a very competitive and livable wage and we pay them in a 403(b) program. Those numbers of employees from job readiness programs are increasing. So we're doing some things. Again, I think there are some things we could probably do differently in the future and hopefully we're learning from our steps in the past.

MS. LOH: How are doing on time, is that time for us to go to the audience or can I ask one more question? Okay I'm going to assume I have time for one more question. Actually, I have two more questions for you guys. The first is you all have experience working in non-profits in this space. I'm curious to know, in your non-profit experience, what is the hardest thing to raise money for and how do you pitch it successfully?

MR. CRIMMINS: In our case, one over time is the ongoing programming of public spaces. You might have people in the private sector that sign up to do a two or five year agreement but doing that over the long haul is a continuing challenge and continuing to show the benefit of that. I think those that do get involved do see the benefit and are really glad they did it. Sustaining that over time with a combination of public and private funds - that is a challenge.

MS. LOH: Bob, what about you?

MR. GREGORY: Well, I think my colleague will speak to his parking plan which he gets a lot of his revenue on. We can't do that but I think you can get the money to build a lot of these spaces or renovate spaces, getting the capital is easier and still hard. I think you can get money for programming if you can really strategically and carefully do some sponsorships along the way. It's really the administration and management and maintenance stuff that really is a tough thing to fund every year.

MS. LOH: But it is so glamorous.

MR. GREGORY: It is totally unglamorous. If you have a business improvement district that can help fund some of that. In Detroit, we just got one three years ago. We were late to the table on that. That funds a very small portion of what we do. We're constantly pitching the corporations around, the businesses, the property owners, the major tenants around the public spaces to make a voluntary gift every year. Every year we do the same pitch to help fund these operations and maintenance and those kinds of things. It's helping but also growing earned revenue. Again, Steve's organization does a great job at. The restaurants, the cafes, the food trucks, the rentals, the ice rink, all of that for us now makes money. It probably took a decade to get to that point. So growing earned revenue is probably the best thing we can do going forward.

MR. LOH: Fascinating. Steve, tell us more about earning revenue.

MR. LEEPER: The four spaces we run, the three public spaces but we also renovated a cultural facility. It has a 550 seat theater that we operate and manage as well. Those four spaces cost us about $800,000 a year in the negative. So the 3CDC parent budget of $9.5 million absorbs $800,000 of that and that assumes that we're getting about $1.5 million a year in sponsorships. So long term, that's not sustainable. Long term we envision that we can sustain it and it might be at about half that level. We need to get that down whether it is through some contribution through the improvement district or through additional sponsorships. We're getting now where we're driving so much traffic that our traditional givers of Macy's and Kroger and Proctor and Gamble don't have to rely on them so much because there is people that want in front of our audiences, want in front of the number of people.

People are coming to us. When we park two million cars a year in our parking garages, they want to get access to that information. So the more and more that we can be enterprising in that area to help offset that $800,000 a year obviously is going to be important to us. Again, we can't get enough developer fees, make enough loans, get enough rent to offset that annually. In the long term, we've got to work that out. We will not sacrifice the quality of those spaces. That's one thing we have not done.

MS. LOH: Talking about parking in the long term, something that I noticed when visiting all of your communities was the significant amount of money past and present that is going into building and maintaining structured parking. How is demand for that playing out in your communities and is that something you see changing in the future.

MR. CRIMMINS: The River City Company led by Kim White in Chattanooga had just completed a parking study for Chattanooga to really look at where technology is going with your smart phone and ride sharing aps. Looking at the parking inventory that we have now and the garages and surface lots, what sort of arrangements could be put in place where new developments could possible share some of that capacity. There is an emerging trend where some of the newer buildings and adaptive reuse have come online and have zero parking spaces with those projects. They are either sharing or in some cases, people are just taking public transit or just walking to work.

We are on the very front end of that trend and River City is on the forefront and Carta and others, looking at the whole parking picture and they went block by block, garage by garage to look at perhaps an office building might be able to share its capacity at nights and weekends with a hotel development. Parking companies can then allocate spaces in valet in multiple places all over the city. The whole idea of sharing parking facilities is one that we're just really beginning to really get into in the Chattanooga area.

MS. LOH: Yeah. Bob, Detroit probably has some cars.

MR. GREGORY: Yeah I mean we're the motor city. I mean downtown at one point had 150,000 people and had all this retail and how did they get there. They took buses, they took street cars and they took trains. That all went away in the fifties and sixties so now we're back building that population back up downtown and we're having a parking crisis mostly during the day. A lot of garages got built but the parking during the day is mostly sold out. We're seeing a lot of shared parking out. We're seeing the residents that are moving into the conversion of these old buildings and into lofts and apartments. They now work downtown and they live downtown so you don't need two spots just one. So you're seeing a lot of shuttles and our new street car system so it's not just downtown it's our adjacent mid-town area that has parking issues. I think that having shuttles, having our street car, having more offsite lots being built and having shared 24/7 kinds of garages is starting ease up, not so much during the day yet but certainly evenings and weekends.

MR. LEEPER: We have about 4000 spaces that we've developed either renovated or developed. We operate them like we operate our civic spaces. They are totally managed so that we're turning spaces during the day. We turn them over for events at night. Residents obviously pose a different issue for parking than office and the ability to compliment evening parkers with residents is a little bit more complicated. Although you would be shocked at how many people may actually live in a neighborhood but may drive somewhere else to work and actually do move their car during the course of the day. We've taken this down to a science from our equipment. We also know two things we've done. In the case of where the big demand is in Over the Rhine we are not really going to increase, first of all you can't because you can't physically knock down historic buildings and put parking. The ones that we do have we've now started valeting cars. So people come in and where we have a 450 car garage, we may have 600 monthly leases and we may park 550 cars in that garage at any one time because we're stacking cars in there.

MS. LOH: And is Cincinnati ready for valet garage? Can they understand they're parking in Manhattan?

MR. LEEPER: Yeah we park in valet garages. We park them there and we do it downtown there. That's what you have to do is use your existing space. In the case of 8451 where we built a thousand car garage with retail and then 300,000 square foot office above, the three stories above the retail, there is three below and three above. We built the above three stories of retail and it is such a height and such openings that the office that built the 300,000 square feet can go into that space. So their expansion space is the garage. We built it anticipating that and they are about, after opening for three years they're about to take another 74,000 square feet in the next level of the garage.

MS. LOH: They're just eating the garage.

MR. LEEPER: They are eating the garage. And what we won't do is build anymore parking because we can stack that garage as well. We're managing it. I don't know where parking is going. We've got a lot of invested parking.

MS. LOH: You could probably retire and do something else.

MR. LEEPER: Yeah. I think we've already seen the hit of Uber and know that implication is. Now the question is where are driverless cars going to take us.

MS. LOH: Let's be inclusive and open it up to the community. I'd just like to ask everyone, when you ask a question can you let us know who you are. We want to hear your names and what you do too.

MS. CONNORS: My name is Marlene Connors and I'm interested in urban planning and have been all my life. I have a question piggybacking on what you said about parking. Have any of you looked into bike sharing as a possibility with a new demographic moving into the urban centers.

MS. LOH: Bob, let's take it to you.

MR. GREGORY: Yeah so one year ago we launched the new bike share program following New York and Toronto and all these other places. It has been tremendous. In one year, we exceeded all our expectations. It is called MoGo for Motor City. So now we have about 450 bikes and our goal is to probably double that by the end of the year. It has truly become in many ways the last mile in terms of people parking remotely or even if they're going to work around downtown. Another thing is in terms of parking, five years ago we were planning all this residential downtown. We thought every residential building had to have a garage next to it. Now with all the activation on the streets and all the people on the streets now that's not necessary anymore. We're concerned about safety and people will now walk blocks and blocks for parking.

MR. LOH: And just to answer the question, Chattanooga has bike share as well and so does Cincinnati. It's hot right now. I asked Mark Mowery about this, former mayor of Cincinnati and he said he's not personally a bike share user but he said bike share, you've got to have it. It's just one of those things you've got to have.

MR. LEEPER: I use the red bike share and it is probably more convenient than the street car. If I'm going to a meeting downtown from Over the Rhine, I jump on the red bike.

MR. LOH: You heard it here first folks, Steve Leeper jumps on the red bike. Okay next question.

MR. PIERCE: My name is Neil Pierce. I'm a journalist and I spent about 20 or 30, maybe 40 years traveling America and writing books and newspaper columns. So it's terrific to hear the extent of imagination and progress that has gone into cities over the years. I have a fundamental question. Why couldn't or shouldn't city councils and city governments have undertaken all these functions.

MR. CRIMMINS: In certain cities I think they have. What immediately comes to mind is the city of Charleston. You had a dynamic mayor there that did a wonderful job of leading that way. I think that's one case where the city mayor and council was on the very leading edge.

MS. LOH: I think actually it will be interesting to hear from you guys too. Steve, can we jump to you really quick and can you comment on the city's role in the creation of 3CDC?

MR. LEEPER: Yeah the city and the then mayor Charlie Luken and the head of the largest bank made the recommendation to essentially take over what would be a redevelopment authority's function in many ways. I think there was a void there. A lot of it is created by the fact that Cincinnati is a weak mayor form of government. It is the home of the city manager form of government, that's where it started. As a result, I think that has led to some reasons why a private sector driven effort could be more effective.

I came from a city before this, Pittsburgh, when you had a mayor like Tom Murphy who was driving everything every day. It was much more aggressive and had a much stronger form of mayor government. I think it depends on situations, leadership, a moment in time that we were so down and out they wanted something in Cincinnati. I'm not sure there is a cookie cutter answer to that. I think it depends on circumstances, leadership and what is going on in that community at that point in time.

MR. LOH: Bob, do you want to comment on Detroit's circumstances?

MR. GREGORY: I don't want to comment on our various mayors but in 2000, we had a mayor Dennis Archer at the time and he really was a bridge between Coleman Young who was a mayor for over 20 years in Detroit and the other mayor who went to jail, we won't mention his name. He challenged a lot of us. They didn't have the team, they didn't have the planning department. We had the Detroit Economic Growth Corporation which is a pretty good organization but the planning department might be ten people. He challenged us at the time to build the best public space in the world with Campus Martius and we all thought that is crazy back in Detroit at that time. But it was his challenge but he didn't have the team to actually do it. So it really became the private sector in terms of our non-profit organization to really put the team together to do it.

You can't do these projects without the city being right there with you, the mayor's office, city council. Our current mayor, Mayor Dugan, that is totally different. He is building up the planning department again and he is building up his economic development team again and his jobs team. So the whole scenario is changing in many ways. A lot of the plan that we did or have done is now somewhat shifting back to the city which is a good thing. So now it is more about the partnership as opposed to this organization is doing that and this organization is doing that and they don't talk to each other. That's unique in many cities. We have some friends out in LA that are trying to redo Pershing Square and they are still having difficulties getting the city council to work with the private sector to let's redo Pershing Square the right way.

MR. CRIMMINS: In our particular case in Chattanooga, we have very dynamic private leadership that then transitioned to very dynamic public leadership with Mayor John Kinsey and then Mayor Bob Quarker. So we had a balance of both. We had at the time in the mid-eighties, a very dynamic visionary private leadership. Thankfully, then John Kinsey and then Bob Quarker came along and took it to a whole new level.

MS. LOH: And this is something we discussed in greater detail in the paper that there are some inherent tradeoffs between the agility, the flexibility and the focus of a private catalytic developer and a city's need to spread peanut butter over the whole piece of toast. And to make sure they're touching every part of a jurisdiction instead of just concentrating investment in one place. That may just be an inherent conflict. Let's get one more question.

QUESTIONER: An infrastructure question. Chattanooga has a nice benefit of fiberoptic highspeed internet. How has that been leveraged and used?

MR. CRIMMINS: Well it has really become one of the hallmarks of the city. It is a fascinating story for those of you all who may not know it I'm sure you could Google it. Our local electric distributor, the Electric Power Board had some visionary leadership to put some fiber in the ground. Long story short, wound up having the fastest internet in the world, in all places, Chattanooga, Tennessee. So a lot of the mayoral leadership goes back to Mayor Bob Quarker and former Mayor John Kinsey is on the board of Electric Power Board and private sector leaders and philanthropic foundations are all sitting at the same table and have been for about five or eight years. They are looking at how to leverage the world's fastest internet and what kinds of businesses and industries and public benefit can come of that. Schools, government and new private investment to come into the city. So that has been one of the nicknames for Chattanooga now is Gig City because it has gigabyte delivery.

So that has been one of the things we've been working a lot on over the last eight or ten years is leveraging that to try to have new public investment and public benefit from that. And even to have fiber into the homes and lots of internet in the home initiatives to benefit those that may not have internet in their homes to push that out, like you said, to spread the peanut butter evenly over the toast. That is one of the initiatives going on with the internet service that we have in Chattanooga.

MS. LOH: Bob, I bet that's ringing some bells in Detroit.

MR. GREGORY: It's ringing some bells. I don't know whether we're faster than Chattanooga or not. Now with Dan Gilbert, he just invented a fiber company called Rocket Fiber now. So again, of all the jobs that he has brought to downtown Detroit, 13,000 jobs plus another five or six thousand that came after him, they're all tech and finance related. They need the highspeed, they need the latest so that's really the growth modem for downtown Detroit is tech and finance jobs. You have to have this to be competitive.

MS. LOH: Steve, do you though?

MR. LEEPER: I think you need to have, I think it's a matter of degree and whether or not you need it depending on the type of employment you have. I don't think we are up to speed with either of your two cities. We've never seen that as an impediment.

MS. LOH: Do we have time for more questions? Okay we're going to have one more. I see some in that back. Let's get a shout out to the back.

MR. MILBURGS: Well thank you for sharing your peak experience, I assume. I'm Eagles Milburgs, I'm a cofounder of a non-profit in Seattle that works on clean water. My question is about sustainability resilience. I would be interested on your insights on what climate change and issues like storm water, for example, and how to manage water et cetera are going to impact urban design. It seems like these issues are not being managed very well. We have a lot of flooding and drought situations and other kinds of sewage problems et cetera. Is this a concern that you have and where do you think this is all going in the future for urban design?

MS. LOH: That's a big question and I kind of wish we had our designer on the stage right now. I want to hear your answers this but Duke I think we need to call you back to the stage real quick. Duke, please stand up. Just in case you guys didn't know, Duke is from Arizona.

MR. REITER: You've got to take these things into account. I'm not going to toot (inaudible) horn too much but he started the first school of sustainability. I brought a lot of cities together. If you look at the southern tier of the U.S. where we are, we are on the front lines of climate change. Whether you've got way too much water in the Gulf or too little in the desert areas, Southern California and Arizona, failure to attend to those is not a possibility. Getting cities involved with universities, we have some incredible transformations in the recycling of waste which we've all got a problem with that. And turning that into entrepreneurial opportunities or in our case, heat island effects. It is going to be a major initiative for us, not to mention water which, of course, is a topic of great concern.

You've just got to have these in your development projects, in your city development projects, what your universities are focused on, top of mind, it just has to be. And it is going to change the form of cities, the shape of cities, how streets are organized, buildings are organized it has to change, it will change.

MS. LOH: Great answer, Duke. I just want to say also a side note, I will have a post running on Greater Washington today about storm water management and flood resiliency in the D.C. area where we have had several floods recently. I think this is a huge topic, not just in terms of design at the building level but in terms of thinking regionally and starting to be more smart and efficient about where we're putting growth. Because we need to be more realistic about how to raise the money in order to build the kinds of infrastructure adaptations that we will need to survive climate change.

You cannot just found that money growing on trees, it's not going to fall from the sky, just more rain will. Realistically, that means that we need to be really more disciplined about creating financially productive, walkable urban places that can raise the revenue to create these infrastructure solutions. Thank you so much guys.

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