THE BROOKINGS INSTITUTION

METROPOLITAN PLANNING FOR SUSTAINABLE GROWTH

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Panel Discussion:

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P R O C E E D I N G S

MR. PUENTES: My name is Robert Puentes, I'm a Senior Fellow at the Brookings Institution, where I direct our Metropolitan Infrastructure Initiative, and I want to thank you and welcome you all here to this forum entitled Metropolitan Planning for Sustainable Growth.

We have a very interesting and exciting program here today featuring renowned architect and planner, Peter Calthorpe, my Brookings colleague, Chris Leinberger, as well as civic, corporate and political leaders from three metropolitan areas out there in the real world who will provide their perspective and experiences with the kind of metropolitan planning efforts that we're going to talk about today.

And I think this is the right time to be talking about these issues here today. As everybody in the room knows, we're here in Washington at a time when our nation faces real serious and structural hurdles to our prosperity and when the role of the federal government, after years of drift, is really now being fundamentally reassessed. One key target for this reassessment is a new approach to transportation policy and transportation planning that will require every ounce of our creativity and our innovation to surmount the historic challenges that we all know that we're facing today. Our unemployment right now stands at 9.7 percent, our housing sector is being battered, and our ability to share prosperity is tested by rising poverty, income and equities, and a growing demographic divide on education and on skills.

And we also face hard choices on the environment, seeing as we continue to be the world's largest per capita emitter of greenhouse gases. Yet this is not just about coal-fired power plants or lagging auto technology. Our sprawling patterns of development help explain why U.S. greenhouse gas emissions have increased nearly 20 percent in the last 20 years and why we have roughly doubled the emissions rate of the United Kingdom and Germany.

Yet unlike European nations and Japan, we are a growing nation. By 2050, we'll grow incredibly by the equivalent of another Northeast and Midwest, as we are projected to expand by 130 million people.

Professor Chris Nelson of the University of Utah estimates that between now and 2030, we will develop another 213 billion square feet of homes, retail, office and other structures. That's two-thirds of the amount of build space that exists in the United States today. So how do we accommodate and support this growing population? Whether we break this pattern of sprawl as usual will significantly influence whether we can secure our energy independence and forge solutions to global warming and climate change. Yet how and where we build also has far-reaching implications for economic recovery and will continue to impact our metropolitan area's success and America's ability to compete globally.

The world might be flat, as Thomas Friedman has famously concluded, but the spatial reality of modern economy is their intense concentration in a relative small number of places. The nation's 363

metropolitan areas house some 83 percent of our population and drive more than 90 percent of our gross domestic product. The top 100 metropolitan areas alone constitute two-thirds of our nation's population, they concentrate the workers and firms that fuel the economy, and they make an outsized contribution on indicators such as innovation, human capital, infrastructure, and quality places.

In short, these metropolitan areas are not the same economies as 50 or 75 years ago. They constitute a new spatial geography, enveloping city and suburb, township and rural area, and a seamlessly integrated and economic environmental landscape. The problem is at the scale of these issues, the ones we're going to talk about today, housing, transportation, economic vitality, environmental quality is mismatched with our political boundaries and our institutions. And efforts to link up these areas of policy, one of the countless road blocks and headaches as we fail to seize opportunities and improve outcomes through integrated problem solving.

In order for us to accommodate the nation's projected metropolitan growth in ways that grow our economy and also protect our environment, we need to understand that yesterday's solutions are not going to address tomorrow's challenges, and that's really what we're here to discuss I think today.

As the Transportation for America Coalition has pointed out, over the last five years, over 80 cities and towns across the U.S. have engaged in a new kind of visioning process to chart a future over

metropolitan areas. Known as Blueprint Planning, it is specifically intended to connect metropolitan growth with transportation investments in the environment, by examining land use patterns, density and urban form to find innovative solutions to challenges like housing, carbon emissions, agricultural preservation and economic development. Three of those metropolitan areas that are leading this charge, Sacramento, Salt Lake City and Minneapolis are here with us today to share their perspectives and experiences on their approaches.

Moderating that discussion will be my Brookings colleague, Christopher Leinberger. Chris has a long and wide range in biography that you can pick up in the back that includes land use strategist, developer, teacher, consultant and author, in addition to his Brookings affiliation. For our purposes today, Chris is also the President and Founder of LOCUS, a coalition of responsible real estate developers and investors working on policy issues such as transportation, climate and energy based here in Washington.

But first we'll hear from our key note speaker, Peter Calthorpe. Peter also has a long and distinguished biography and career in urban design, planning and architecture. His ground breaking work in places like Metropolitan Portland, Boston, Los Angeles have literally changed the way that we think about regional design and planning. He also has considerable experience internationally; he's done a lot of work down in the Gulf Coast following the tragedies there. Peter is a widely published author with books like *The Regional City, Planning for the End*

of Sprawl, which is obviously highly relevant to our discussion today, and *The Next American Metropolis, Ecology, Community and the American Dream*. We talked about this earlier this morning; it was very instrumental in my own personal understanding of these issues and thinking about these lines.

So before we bring up Peter, I want to quickly recognize and thank Neesh and the Transportation for America Coalition for their work with us on this event, on Blueprint Planning in general. Also, Lael Harris and the Brookings team for their work on this, and the Serna and Rockefeller Foundations for their support of our metropolitan infrastructure initiative. So let me go ahead and shut up and stop there, and please join me in welcoming our key note speaker, Peter Calthorpe.

MR. CALTHORPE: So if we could turn down the lights enough to see the screen, that would be great. I'm going to take as a given that everybody in this room will – understands the importance of climate change and its potential impacts; if you don't, it's probably best to leave the room at this point. But there's no Al Gore show here, even though there's a picture of the whole earth to prove that point. My question today really is, how much change is possible and how much in land use transportation world, and what impact will it have. There's a lot of discussion now about kind of the Prius solution, the green technology strategies, a collector on every roof and a Prius in every garage, and that's enough, that's how we're going to solve climate change in the United States.

I think the reality is that the challenge is much more systemic, much deeper, and it will involve the realignment of our physical landscape.

I wanted to look back 50 years in order to say, when we think about planning 50 years into the future, and this talk is about the year 2050, we have to understand how dramatic change can be. And for 50 years, the globe and the United States has been on a pretty dramatic – has gone through a pretty dramatic set of shifts. And here's the global footprint network's analysis of the amount of land to either absorb carbon emissions and/or supply food and materials to growing population of GDP's across the planet.

What's interesting about this is, you'll notice on a per capita basis, which slide is, food, forest and materials, our global footprint is becoming more efficient on a per capita basis. Now, population has doubled, and so even that efficiency doesn't quite hold us steady, but it's at least heading in the right direction. You can see how dramatic the energy component of global consumption is. And so really, on so many levels, it does boil down to energy and carbon emissions as the primary ecological burden on the planet.

And, of course, everybody knows this slide, our share of that is pretty large, and it has been large in the past, and there's a whole set of political dialogues that shape themselves around responsibility for bringing about change, and I won't go there either, other than to say I think we are

responsible and radical change and leadership is really important right now.

One of the reasons the U.S. is so far out of line with European countries and other developed countries is this slide, which shows our mode split for transportation. Transportation is 30 percent in the United States of our energy consumption. And we are so different than other developed countries in how we use cars, it's quite frightening. But, of course, it shows how easy and how much latitude we do have to change development patterns and change transportation habits without really changing quality of life or the wealth of the middle class. My favorite over here is Sweden, where over 50 percent of all tripster walk or bike, and it's a climate zone that's not particularly great, and it's a country where the high – a high average income. So it's not as if wealth or climate are necessarily driving them away from cars. Actually, they have good cars, or they used to have good cars, too, but that went away when Detroit bought them.

So how much change has there been? There's so many measures, but when you think about it, since World War II, the face of America has changed dramatically in terms of land use. And all these different measures, I'm not going to take the time to go bullet point by bullet point here, but this kind of change I think is also possible to flip on its head, and quite frankly, see the next 50 years have a set of changes just as dramatic, inevitably just as dramatic, and the question is, in what direction will those changes move.

One of the most powerful ones that's always quoted and that some of us in the new urbanist movement 15 – 20 years ago were saying new development patterns are eminent because demographics are changing, and finally today we see that as a reality. Whether you want to count the real estate bubble as a pretty clear manifestation of the fact that housing needs changed, but housing production didn't, and therefore, there was a complete mismatch that led to a bubble. Some of us think it wasn't just about fancy finding schemes, it was that we overbuilt a housing segment that, in the end, didn't have an underlying market demand or need.

So as we shift away from families with children towards singles and empty nesters and single parents, a whole new set of housing needs emerge, which were not being satiated by traditional development patterns and existing zoning.

As a matter of fact, Nelson just quoted earlier, well, the Seminole paper now on this matter has projected that we've over build large lot single family over here on the right, yellow is the supply in '03, green is the demand in '25, and of course, there was basically a 23 year supply of large lot single family already built.

So that over building I think contributed to the market demise in real estate. But what we need is exactly what we want at this point, which is small lot single family, townhouse attached units, and multi family. And this is the basis of scenario planning, which is to understand future

market trends and see what that can be shaped into in terms of overall land use patterns at the regional scale.

A couple other interesting factoids, yes, our energy consumption doubled, but so did our population. The truth of the matter is, since 1960, U.S., on a per capita basis, has been holding pretty steady, interesting phenomena. That's obviously not good enough when you're holding steady at a number that's unsustainable.

And certainly, if we're going to meet some of the global goals of getting carbon emissions down to, and I use the 80 percent of 1990 levels, we're talking about everybody in this room, or the average American consuming 12 percent of the energy they do today in order to achieve that goal of 80 percent of 1990 carbon emissions, 12 percent. So it's a pretty radical challenge.

But this is the breakdown. On a per capita basis over time, you'll note that the energy consumption is pretty level, transportation, even level. Even though VMT has doubled in this period of time, we have made up for it with higher mode splits and better gas mileage. One of the fascinating things here is just when you look at the industrial sector, more efficient and smaller, and therefore, consuming less. We are shifting out of the blue collar world into the information economy, and you can see it in simple numbers like the amount of energy consumed.

This is VMT per household, which has doubled, and that becomes a key issue in going forward. We cannot allow that to continue to double. And yet if our land area, if the way we grow our regions

continues to double the physical size of each metropolitan area, there is no way that the VMT cannot continue to follow that. Bigger regions generate higher VMT. More compact regions generate lower VMT per capita on a per capita basis.

But the relationship is not so simple. And there's a recent paper out, I think Tony Downs was involved in it, that claims that – that looks at a density difference from now into the future and then calculates through some I think, I'll be straight ahead, flawed analysis that land use doesn't matter, and it won't have a reasonable impact on carbon emissions.

And, of course, the reality is, it is – the issues are way more than just density. The ADs here, as they're called, the sophisticated traffic engineers and modeling programs, look at all these variables as having significant impact on travel behavior. The diversity of a neighborhood, how mixed use it is, the design of the neighborhood, how interconnected and easily walkable, our destinations cohabiting with transit locations, all that kind of stuff really matters in travel behavior.

How close are regional destinations? How robust is transit service? How large is the development scale? And, of course, demographics has a huge impact on VMT per household and demand management and costing.

So to take and isolate density as the only variable in land use is absurd. And that, of course, is something that we need to do away with. This is why we need MPO's to step up to the plate and do the

sophisticated scenario analysis, to allow us to at least have reasonable choices over time.

Now, this is a very popular set of slides showing carbon emissions on a per acre basis on one side, the red side, and on a per capita basis. Cities are green, there was a big article in the New York Times magazine on that, and I think simplistically that's quite true. The question is, what kind of cities and what – how elastic is the term "city", because I believe there are many towns and even villages set within a coherent regional framework that can operate and perform much like urban environments in terms of how people behave and travel happens. As a matter of fact, here is a mapping of the Bay area, and it's VMT per household, and this map has lots of meanings. Number one, it's not just downtown San Francisco that performs well. The dark green here is under 16,000 vehicle miles per household per year. And actually in San Francisco, in some neighborhoods like Russian Hill, the number is on the order of 8,000 vehicle miles per household per year.

But that kind of performance is spread throughout a region. Over in the East Bay and even in parts down here in Silicone Valley, you have households at 16,000. And then, of course, the more you get into the excerpts and the outer suburbs, the more you move into the orange, which is over 30,000 vehicle miles per household per year.

So there's a four to one relationship across just about any metropolitan area in the country today. And the question is, where will future growth fall, what color will it have on a map like this? And that's the

kind of thing I think we can easily analyze and begin to shape if we become intentional about regional design.

Now, this is just another factoid slide about a single car household. We forget to add two other burdens to travel, automobile travel, the energy consumed in oil refining and the embodied energy in the vehicle. And so when you add those up, you get a pretty dramatic difference between a single car household in an area that's walkable and easily transit served and a three car household in the ex urban area.

In fact, when you stack that together and begin to understand household by household what the differences can be on average, they're pretty dramatic. So sprawl, this is average numbers for the U.S., the red is transportation, and then the other is heating and cooling and appliances in the average large single family home.

Sprawl numbers are from a 30,000 VMT household. Green sprawl, put in a Prius and put up those solar collectors on the roof and you get to that mid point there. The average urban house with two cars and 20,000 vehicle miles per household per year, which is the national average, along with a more compact building form, of course, beats green sprawl all day and all night, and then, of course, green urban is where we need to be.

We've done and been able to work on regional plans across the country, and in all cases, those are case studies in how you can relate land use to a whole range of metrics around energy and carbon emissions and other things. The first pass that I got to work on in '98 was Portland

Metro, which for a private entity, 1000 friends of Oregon who wanted to prevent a beltway/freeway being built out in this valley here, proposed the Westside light rail line, and we invented this idea, Shelley Poticha was part of this little exercise.

We've invented this idea of Transit Oriented Development login, and lo and behold, it took root and became the normative planning standard for the metropolitan government, and they adopted this plan after a lot of political mish gosh.

But what's fascinating, we did that plan back here, excuse me, in the late '80's, Metro adopted their 20/40 plan in '93, and within three years, the impacts of these metropolitan policies, not just the construction of the Westside line and TODs, but over the whole region, the impact began to manifest itself.

So one of the things that people always say to me is that regional planning is too long term, it's not going to have an impact, we need to get something that has immediate effect, and you know, it's a very elusive and long term strategy; the answer is, no, it isn't. Actually, if you do it in a coherent way – and the other thing, it has impacts that are measurable and significant in very short order. And a lot of other people say, well, Portland is the exception, well, absolutely, it's the exception, but it is the exception that proves a rule that I think we can aspire to in just about any region across the country.

For some reason, Portland is discounted as something that can't be replicated, and I think it is and will be replicated across this country pretty widely in the near future.

And so this kind of shift in VMT is dramatic, meaningful, and actually if these lines continue on their courses, we'll see some profound differences. Livability, desirability of this region is very, very high.

Another example, Salt Lake, which Natalie will talk a little more about, was kind of second in line there for us to do this scenario planning, and it's a simple matter, and this is what we think really should be in the transportation bill, that every MPO has a responsible to offer choices for the future of the region and actually analyze and put forward the impacts of those choices.

And so here's all we did in what was a pretty conservative environment. We said, okay, here are the choices, here are the impacts of the choices, the VMT per day, the total emissions per day, the amount of land consumed, which was a really key issue politically there, as there were many conservations on both the conservative and liberal side of the political spectrum. But most significantly, of course, and this is what the debate always boils down to, is you're stealing single family homes, you're destroying the American dream.

Well, it turned out, scenario C here, which was 32 percent multi family and 68 percent single family going forward, turned out to be what the BIA of that region actually, through analysis, discovered was what the market wanted.

As a matter of fact, the existing zoning, which was heavily loaded to single family, didn't allow them, put them in a straight jacket, so they couldn't actually build to market demand, which is, once again, something I think that happened at large across this country and led to the housing bubble.

And so the BIA came on board and said, yes, we actually think this scenario isn't radical, it actually allows us to meet market demand, and even in the Salt Lake area, people become empty nesters, it's just a lot later in life that that happens. And there are young singles and actually married couples without kids, hard to believe, but true. The other thing that swung tied there in terms of public acceptance was cost. And the true fiscal conservatives in the legislature looked at these savings. Fifteen billion dollars in saved infrastructure costs represents around $30,000 per household for the increment that we were dealing with there. These are significant dollars, both for the homeowner and for local jurisdictions, and that had a big impact.

Once again, these kinds of issues never reveal themselves until you do blueprint or scenario planning at a metropolitan scale. And when you begin to do that, you can have intelligent discussions about what is the most fortuitous future to choose. They then adopted the quality gross strategy which has these layers of open space, a structure of new transit systems that are being built, and transit oriented development to go with it, and an attitude towards where until redevelopment happens and new growth happens.

Finally, another example, in Los Angeles Basin, a place that used to be one of the most transit oriented cities in the United States, when we looked at it, we discovered that their fledgling transit system, which I'm just – the blue here is commute train and pink is light rail, as we watch this expand, and then this grid here is BRT, bus rapid transit, we realize that you could capture almost half – more than half the jobs and almost half the housing within walking distance of transit stations in LA.

Counterintuitive, basically something you would never expect, and yet easily achievable, given the infrastructure investments that they already had on the books in their RTP. So, once again, only looking holistically could you get a sense of a whole new direction that could emerge at a metropolitan scale. And so they've now adopted their compos opportunity areas that look at ribbons of development that basically take these gray fields and invest in them in ways that they mature in this fashion.

Now, that's a fantasy simulation, but we've now seen it happen in many, many cities along many corridors throughout the United States. And, of course, we have the daddy of all high density ribbon urbanism, I call it. It's truly an American form of urbanism and it's one I think we'll see more and more of. It doesn't always have to be this – although it's fascinating to see dense urban environments and single family neighborhoods cheek by jowl, which may be a unique American phenomenon, certainly is something that I think – and then on these medium density corridors, these gray fields, these ribbons of asphalt that

run through all our metropolitan areas are ripe for redevelopment and will be I think the backbone of a pretty significant component of what we see building out in the future.

So now we have an opportunity in California based on the new legislation, AB-32, and its companion, SB-375. AB-32 set carbon emission goals, reductions for the whole state. SB-375 was an enabling legislation that allowed the MPO's to develop what they're calling sustainable community plans to reduce carbon emissions MPO by MPO.

And so it's a test drive through something that's being considered at the federal level, which is for the new transportation bill to incorporate a set of standards and goals that has to do with carbon emissions and VMT reduction.

So we were asked to develop some tools to do what we had been doing at the regional scale, which is scenario planning, but in this case, for the whole state. So it takes a different kind of tool to be able to operate at this scale and we've been hard at work, we have a large, as you can see the list of groups. One of the – the leading sponsor of this work, interestingly enough, is the California High Speed Rail Authority, who sees its future and smart growth as joined at the hip, and that there is no future for high speed rail.

High speed rail, of course, is a catalyst for smart growth. It goes downtown, that's where its station is. It's a way of urban development – of enhancing urban development in urban centers of the metropolitan regions and focusing it.

So this is the track of high speed rail. It runs through five major MPO's, which represent 93 percent of the population in California. So this is the game right here. And Mike McKeever from Sacramento sits right up in here, the Bay area.

The Central Valley, which, of course, is the biggest question mark in our state, is a whole series of county scale MPO's, fractured, very problematic. And then you have skag (?) in San Diego down in the southern part. So we've begun this process. I'll show you numbers now that are the first pass, that are the beginnings of the results, they're not finalized by any stretch of the imagination, and I'll show you the 2050 numbers for the most dramatic urban scenario. So there are moderate ones in between, but I figured a group like this would like to see the outer edge of what's possible.

One of the things that's very important to the state is not just a measure one dimension VMT energy or carbon emissions, but also to look at fiscal impacts, social impacts, Department of Health is involved in this looking at the relationship between land use and obesity is a key variable there and another set of social costs that have to be incorporated into a vision about land use at a regional scale.

And then from the environmental standpoint, it's, once again, not just carbon, there are water issues in California that are preeminent and other open space and ag land preservation issues that are key.

Now, putting this in frame, this is a very interesting slide I discovered just recently. If you look at carbon emissions at a global scale,

about a quarter of it is not related to energy, it's methane coming from cows and agricultural waste and industrial process, chemical process, things like that. And transportation, because so little of the world has advanced automobile usage the way we do, is only 14 percent, that's this color, light purple. Watch how this changes. The U.S. – the non-energy sector goes way, way down to around 13 percent, and the transportation goes way up to about 30 percent, as I mentioned.

In California, that shifts again to 50 percent automobile. Why? Because in 1970's, we enacted a Title 24, which really set – created a set of standards for building energy conservation, which was very progressive at the time, and we have a really great building stock as a result of that 40 years later. And our energy consumption in buildings is way down, and therefore, in a relative sense, our primary issue now becomes cars and transportation.

California, state-wide, is built by out of place types; they're not going to model it the regular way with TAZ zones and gravity model and all the rest of that. But each place type, from the most dense, mixed use area to the most suburban will carry with it a set of empirical measures that allow us to actually sum up the impacts of all of these development entities, polygons throughout the state. And, of course, each one of those polygons will carry with it all the key variables that drive a lot of the outcomes that we're interested in looking at that I already talked to. We've done a tremendous amount of analysis, and this is easy to do, because over the years we've been designing these places, of what the

place types are, how real are they, what are the real densities, what are the real mixes, what's the ratio between developed land and right-of-ways and public space and all that, so we can get this model right and we'll have a tool kit that actually any MPO across the country can use to do a very quick sketch plan, scenario planning, so that scenario planning doesn't have to be the arduous task of developing full scale computer transportation models, it can be done using this technique.

Now, here are a few examples, because I'm now going to show you the scenarios, and they are built out of, in broad brush, certain place types, one place type being urban, i.e. dense and mixed use.

Now, that kind of density doesn't always happen as a single location. Here is an example of urban, University Avenue and Berkley, you get scattered sites. So along those corridors, where we see in field and more transit investments, you can see piece by piece redevelopment, it's not all large scale. And, of course, this is something that was implemented some time ago and it's building out quite handsomely. In places like downtown Oakland and many of our inner cities, we have huge gray field areas and brown field areas that can be redeveloped, and can and should as part of future growth scenarios.

An example here being the Oakland Uptown, which is a just completed project. Jerry Brown came into town there and said, I want 10,000 new people living downtown, and by the way, he ended up getting it in two terms. So where there's political way, there's political

commitment, there's true results that can happen very, very quickly in the land use arena.

A gray field of industrial zone in San Jose is another example of urban redevelopment. It went from this here to this. And then, of course, large scale suburban when you talk about compact development. So those first three were examples of urban, high intensity development; compact is really just a reconfiguration of suburban growth.

And so a lot of people are saying, well, it's city versus suburb, and I think it's city and suburb, both redesigned. And so the suburban component here, which we call compact growth, is largely single family, but it's small lot single family, and it's mixed with townhouses, and it's in walkable mixed use environments, all of which are manifest here at Stapleton, which, by the way, even though it's dominated 70 percent single family, it is three times the density of typical suburban development, and it commands a 25 percent premium in a per square foot residential value basis. Prior to the meltdown, we don't – nobody knows what anything is worth anymore at this point, but prior to that event, here's a place where people were trading lot size and paying more dollars in order to get a high quality walkable environment.

So the market is there. It has to do with civic spaces that really work and that are of great value to people. It has to do with a whole range of housing types mixed into one community. Here you have small lot single family townhouses. This home is at the top of the market, was at

one point six million, and it sat on the same block with houses at 160,000, and affordable housing, and open space.

So now, take those components and imagine a future for California in which, under trend, five percent of growth is urban, in one of those forms I showed, 25 is compact. There will be a new urbanist community whether we plan for them or not because the marketplace, ULI Developers want to build them now. It seems that that corner has been turned. But 70 percent is same old subdivisions and shopping malls. And compare it to an environment in which 35 percent of the future growth, this is – the increment here for 2050 is seven million population, seven million new households, excuse me, seven million new households, 35 percent urban, 55 percent compact, and ten percent urban.

Now, you think that's radical, or it seems radical, but when you take the new homes generated by that urban scenario, and it's 34 percent multi family, it has this breakdown to achieve that end, and you blend it with the existing mix of housing, the resulting mix of housing in the end state is actually not that radical. There are still plenty of single family homes for large families. The market in each segment is satisfied.

As a matter of fact, the multi family segment doesn't change, and it, quite frankly, hasn't changed for a very long time historic with the United States. The biggest shift, of course, is from large lot single family to small lot and then a much greater segment of the market, which you already see here in the D.C. area townhouses, a reasonable way to live for many it the middle class. So in the way, you might say this is a utopian

scenario, we can never achieve it, but when you actually look at the breakdown, it's not very – it's not pushing the envelope.

I'm going to go back to the office and actually crank up the numbers one more time, because after looking at this –

Okay. Now it gets complicated and I don't have much time, so I'll just quickly go through this. Obviously, you can solve carbon emissions and transportation three way, by land use, reducing VMT, by fuel efficiency, by putting more, you know, electric vehicles on the road, or my mile per gallon standards. And you need all three to make it all work.

So here's what our first scenarios are looking at. If you look at energy – carbon emissions in 1990, as the base, the trend, which is that do nothing sprawl scenario, looks like this. And, by the way, those two bars are basically equivalent on a per capita basis. So we're saying it gets no worse in the year 2050 on a per capita basis, but it isn't getting better, and getting better is what we have to do if we're going to meet any of the global climate initiatives. So what does smart growth do by changing that mix of housing, and along with it, the walkability and the transit component? It reduces travel emissions almost in half, which is counter to some other studies that are out there, and at some point we're going to have to get in the weeds and fight over these numbers, but I'm pretty confident that these numbers are correct and that that's a big impact for a shift that has many other co-benefits along with carbon emissions.

You'll also notice that the carbon emission of the built component goes down because more compact buildings demand less energy and emit less carbon.

Now let's put 55 mile per gallon cars on that and you have the number again, and let's put – it's not just 30 percent biofuels, it's 30 percent electric cars or anything other than shifting the carbon content of the fuel of automobiles. And you get down to a 90 percent reduction over trend in the transportation arena. Very significant, very important, and I think very achievable.

Now, when we come to the building, it's more difficult, because existing housing stock is hard to change, it's tenacious. In over 50 years, it sits there, and we need rehab programs, but how deep and how many will it penetrate to, that's going to be a big question. So if all new buildings had a 70 percent efficiency standard, improvement, and existing building stock improved by 30 percent, you would get this kind of number. And then if you shifted the utility throughout the state, the utility portfolio towards green energy, say 50 percent green, then you'd get this result.

So we almost get to what is the target, the 80 percent of 1990, we make it in terms of transportation, we don't make it in building stock because, as I say, existing buildings are there and they're hard to change, they're more tenacious.

But the other thing is that there's a whole range of co-benefits. So if you said we're going to do all this just to reduce carbon, I

think politically you may have a problem, because they're not in this room, but there are people who believe that that's not even an issue still. There's still nobody in this room, right, that believes –

But there are other issues that drive this and are equal political motivators. Land consumption and saving open space in California means saving prime ag land, which, of course, is of value to the whole nation, actually the whole world. The amount of VMT is reflected, I've already talked to this one, but it's very significant and it's something that is worth moving ahead with. And, of course, that converts to oil imports, as we all understand, a particular vulnerability and political liability. Fuel costs, if we took the amount of money that is saved on gasoline and just spent it on transit systems, we would have very little issue surrounding the cost of new transit.

However, we tend to do it in reverse, which is by taxing gasoline. You need to burn more and more in order to maintain an income stream. So it's a self-fulfilling prophecy. The only way you get money out of the highway tax dollars, of course, is to drive more, and I think the reverse should be the case.

Water use in California, absolute Seminole issue, and it goes to so many things, once again, not only ecology, but agriculture are both threatened by our over consumption of water. And a more compact metropolitan form, of course, saves water, as well as energy.

And then per household savings, this is an annual saving in an average household in the year 2050, $11,000 less, because of the

efficiencies that are built into the life style of that metropolitan region. And the infrastructure cost, around $20,000 on average coming out of this modeling, it was 30,000 in Utah. There's a lot of debate about how much cost in field will create in infrastructure, but we know on orders of magnitude, when you take the land area, and there's a five – I figured out the dimension, you have 5,000 square miles versus 1,000 square miles, you have 4,000 square miles of additional development. We know that the amount of roads and infrastructure to basically enable that extra 4,000 square miles costs a lot of money, and it's a burden both on local governments, state government, and on individual pocketbooks.

And so finally, the amount of land area it would take in forests to mitigate the difference in carbon emissions is actually larger than the state itself. And so I think that, in the end, we have to remember what – how to achieve all this boils down to some very simple design principals, and they are that each neighborhood needs to be diverse and balanced, both in use and user.

We need to create walkable environments again. It doesn't take away from other modes, it just adds to them. We need to conserve and restore both our cultural and building heritage, as well as our environmental context. And we need to see this as an interconnected hole. And that's the end of this talk.

MR. LEINBERGER: I'm Chris Leinberger and I'm going to first field some questions for Peter. And there's a couple mics roving around here. There's a question up front.

SPEAKER: A very quick question. What is the small lot and the large lot – the numbers – houses? You are talking about the small lot and the large lot to develop. What does the small lot –

MR. CALTHORPE: What is the size of a small lot? The small lot ranges from about 4,000 up to 6,000 square feet. A typical large lot starts at 7,000 and goes up from there to a quarter acre, you know. And then actually what I didn't – there's a whole another segment of rural residential, which is, you know, ten acre parcels, which are – when you look at land consumption, one of the greatest problems we have.

MR. LEINBERGER: Other questions? Rob.

MR. PUENTES: Thank you, Peter. On your – the scenarios you showed, I guess it was Salt Lake City, you didn't see any savings when it came to water/sewer infrastructure, as I recall; do you have any explanation for why that would be? For your four different scenarios, you show savings in other areas, but water/sewer didn't seem to go down very much.

MR. CALTHORPE: I'd have to go back and look at the slide. You know, basically water, sewer and local roads all go together in one bundle. I'm not even sure in that slide we separated it out. So local infrastructure, then there was backbone infrastructure for the region as a separate number. And then water was small, but that was regional water systems, having to do with whether or not there's a new dam and a new reservoir, that was a key issue in that area.

SPEAKER: Time for one more question?

SPEAKER: I'd like to ask you, where is the greatest push back or resistance coming from the implementation of your planning principals? And related to that, at a time when all we're talking about is war, health care, and maybe financial services, how do you enter this into the public debate more than it has been in recent months?

MR. CALTHORPE: Well, push back, push back comes from local government and local neighbors, and I think it's largely because most people, first of all, have grown to know growth as a negative rather than as a positive. So sprawl, for the last 50 years, has basically been a roading quality of life for everybody. So the average citizen sees more growth as eroding the quality of their life. And they don't see that a different type of growth could actually enhance their quality of life.

But that sensibility is now growing as more and more smart growth projects come on line, and people look at them and say, gee, that's not taking away my housing value, it's actually helping it. That's actually giving me another set of options of how to lead a daily life. That is beginning to change, although 50 years of bad practice is going to be hard to overcome psychologically in many peoples' minds, I think that's at the heart of it.

That then gets reflected into local government. Local elected officials reflect that attitude, growth is bad. And, for example, in California, in the Bay area, we have housing allocations that the state hands down and says everybody has got to do their fair share of new housing, and every community either fights it or ignores it.

Now, to the second part of your question, how do we put this agenda back, you know, front and center, I think it has to come through this carbon emission set of issues, and it's already beginning to happen. Case in point, once again, California, where – with the new state law, Jerry Brown as Attorney General, keeps coming back at us over and over again, and he'll be back in – as Governor before too long, is now suing cities that do not comply with their housing allocations, but suing them on the basis of environmental impact, carbon emission.

And there's a huge shift here. The moment EPA, in the state of California because of AB-32, designates carbon emissions as a pollutant, then cities can be taken to suit for not accommodating a reasonable response to that impact.

And so he was able to prove in several cities now that by not meeting their housing allocation, they were generating longer commute trips. These are cities that were close to jobs, and therefore, should have housing because it would bring the working population closer to their job destinations. By those cities saying no, development was happening in more peripheral areas and causing commute times to increase in carbon emissions.

So I think the way this becomes a central issue is, when the energy bill comes forward, when the President goes to Copenhagen and we hopefully start to get serious about climate change, I think that we have to associate land use with climate change, which it is, I mean inherently.

MR. LEINBERGER: I'm going to make one exception, because Bart Harvey has asked a question in the back. Bart, there's a mic. Bart used to run Enterprise Community Partners and is one of the great affordable housing pioneers in this country.

MR. HARVEY: Thank you, Chris. Peter, in your studies and planning, did you – have you looked at Europeans settlement patterns and how that has resulted in greenhouse gas emissions there? I understand Europe has very different policies than we do in this country, but over a period of time they've had very dense development, a whole set of policies to concentrate growth, preserved agricultural land, and to look at the mass transit in every mode possible, and I just wondered, as you were taking your thesis for your savings, whether there were any studies that were out there and look what has happened in various European countries that has adopted similar patterns over a long period of time and what actually their savings are versus any –

MR. CALTHORPE: Yeah; I mean there's no question, I did show a slide that showed our travel behavior versus European travel behavior, and there's a two to one ratio of use of the automobile. Now, I tend not to talk about that much because most people roll their eyes and say, well, that's France, and, you know, we don't want to be like France. I don't know how that got to be a slogan.

But anyway, the truth of the matter is that in the United States, we have a lot of good models. We don't need to go to Europe to find models where we have great walkable communities.

As a matter of fact, just about every one of our communities prior to 1950 was exactly what would be great to achieve again. The street car suburbs, the urban centers, the vital mixed use urban environments that we used to have in our core areas, and suburbs that weren't so dependent on automobile, they were all a part of our history and our fabric, and it's not going to take a lot to have that re-emerge.

And then you don't even have to look to the past or to Europe; as I showed in the Bay area, there are living environments across any metropolitan area that demonstrate the kinds of objectives we want to achieve, they're already there, they're living, working models, they're certain neighborhoods that function well, and all you have to do is study what attributes they have and replicate it. So you don't need to go far afield geographically or in time line to get the models.

MR. LEINBERGER: So let's thank Peter for his remarks. And if the panel could please come up and take your seats, we're going to change out the computer. And the panel is getting seated and we're changing out the computer, I want to make a few opening comments.

Peter has let you in on a secret, so the next time that you're at a cocktail party and you get asked the very famous chicken and egg question of what comes first, transportation or development, I'm sure you've all had that question asked of you, you now know the answer, that at your party, the people are a little too tipsy to ask questions.

The answer is, transportation drives development. And why is that important? Well, you heard a lot of that from Peter, but keep in

mind that the built environment are buildings and the – and all the infrastructure that we use to connect our buildings represents 35 percent of the wealth of the country, it's the largest asset class. We know it's the largest and we know it's important because we, in real estate, the largest part of that built environment, we have created – we have caused two out of the last three downturns, we're very proud of that. And you also saw what Peter had said, is that the built environment contributes over 70 percent of greenhouse gas emissions, by definition, the largest.

So the transportation system we the people select drive the kind of development that we develop. And I first learned this, since this is kind of a California day, first learned this from Governor Brown, not Governor Jerry Brown, but Governor Pat Brown.

Having breakfast with him many, many years ago, when I was a pup, said that he was castigated for putting freeways out into the San Fernando and San Gabriel Valleys back in the '60's. They were a bunch of, you know, a bunch of orchards. But he knew that growth would follow, and sure enough, it did, it began to be load into these suburb and development that the market wanted back in the 1960's and '70's and '80's.

It's time to be conscience about what kind of development our transportation choices – We need to be asking questions such as that Peter demonstrated, how much land we consume, what is the impact on the broader environment, and, of course, especially greenhouse gas, and what kind of built environment do we want to build, what does the market

want. And it needs to be much more of a bottom up approach. Over the last 50 years, it has been imposed from a bureaucracy either in D.C. or out of the State Capital.

So today we learn from the states and the metropolitan regions throughout the country, and you know, this is your – this is the testimony of the laboratories of democracy.

We have three examples; two come from metro regions and states that have taken a comprehensive approach, and the third is from a state and a region, the Twin Cities, where they have attempted a regional planning process in starts and fits, but they still have achieved a great deal in spite of not taking a comprehensive approach.

We start with Mike McKeever. Mike is an urban planner by training, but also, interestingly, a software developer, as well. And much of what you saw from Peter could not happen without the software technology of the last 20 years being developed. He was the Project Manager of the Blueprint Planning Project for the Sacramento Area Council of Governments back in the early part of this decade, he's now Executive Director of the Sacramento Area Council of Governments. Each will be giving, by the way, a ten minute presentation, then we'll open it up to questions, so Mike, if you can start.

MR. McKEEVER: Okay. Thank you very much. I'm going to get under the hood a little bit on this issue of what really is different about sort of the new form of integrated regional scenario planning versus the old style of planning. And something from my past I need to confess.

I spent most of my professional career in Portland, and so I very much agree with Peter's notion that the idea that Portland is just this unique, can't be replicated, little slice of socialism or something is wrong. And what I'm going to talk about is a very information driven planning process and the benefits of that.

Sacramento region is about the same size of Portland, a little more than two million people, about the same number of local governments, we have 22 cities and six counties, it's politically far more conservative than Portland.

I have a 31 person board in red state, blue state terms, easily two-thirds of the board would be red state conservative. And the bottom up information driven planning process that we implemented was very non-partisan, non-ideological, and very much based on what makes just good sense from a financial standpoint, from a community value standpoint. And the region embraced the blueprint based on principals on its own terms that were, again, very non-ideological.

So I'm going to shave a few shades of gray off of this, just the position between the old style and the new style of planning, but not just because of time, but not many, and I'm going to talk briefly about how SACOG used to plan and how we plan now, and the change happened about over a decade.

So in the old style of regional planning, it's really – it's a regional plan really in name only. It's really about a collection of local project lists that are created largely in the Public Works Departments, with

very little interaction between the land use people or the housing people or really anybody else other than the Public Works folks.

It's very highway capacity focused, primarily about how do we build enough capacity to serve the growth. Mentality-wise, you know, we in the transportation business are not in charge of growth and land use and that's kind of a dirty business and we don't really want to get involved in that, but the truth of it is, is that most of the time the Public Works directors who were building their project lists were cheering for growth because they knew if there was a lot of it shown in the modeling, that it would show a need for big, new roads and not small, new roads, and that was really victory, you know, size mattered, a big road is better than a small road.

And so you ended up with regional plans that really didn't look at how the regional organism functioned. It was really fair to say, and a lot of this honestly still goes on, and we haven't completely stamped it out in Sacramento yet either, but we're working on it, you know, it's sort of a stapled together list of local project lists, which are very road dominated.

And the people, the citizens are definitely no where involved in that process. I mean this is a group of Public Works people working with the staff at the MPO creating the plan, and the travel models that were used were very dumb about landing use. Most of the land use data were aggregated up into – they weren't even aggregated up, they were created at a scale of 500 acre, you know, zones, or even in some cases 1,000 acre zones, and so even if you wanted to experiment, as Peter showed you some slides with smart growth planning, the models and the

data were too dumb to do that. You couldn't – you would put different assumptions into the models, and all these differences of, you know,, what percent of the housing stock would be medium and high density versus traditional large lot, it didn't matter because any assumption you put in the model, it gave you the same answer.

Not exaggerating, maybe at the fourth decimal point you might – and with a microscope you could see a difference, but you couldn't learn, you didn't have any – you didn't have the information at your disposal to understand what the true tradeoffs were and make informed decisions.

And so, not surprisingly, the plans just kept coming out the same, you know. Every four years, five years, you'd update your plan, and guess what, it looked just like the last one.

And somewhat surprisingly, the SACOG Board of Directors finally got frustrated with that because the model showed them, and they didn't – they, at the time, you know, they probably hadn't even heard of greenhouse gas emissions, that was the last thing on their mind, but they were worried about congestion, and they were worried about meeting the federal Clean Air Act, because that was necessary to keep the transportation money flowing. And so they, at the turn of the century cycle, just got very frustrated with that because they felt that they were adopting the plan that degraded instead of enhanced the quality of life in the out years in the region and they wanted to do something different, and so they took a deep breath, and instead of just looking at the supply side of the equation, which is how much more capacity can we add to the network, they said, you know, and, of course, they didn't use this

terminology, but let's look at the demand side of the equation, maybe there is something about the way that we're growing that is creating such a demand that there's just nothing we can do on the supply side to fix the problem. And I want to make a quick caveat here that this sort of debate or argument, if you will, that's going on between, well, can you fix the problem with fuels or better engines or electric vehicles and forget about the land use, even if you could fix the pollution problem that way -- and I, you know, that's not my opinion -- but you have all of these other problems that you don't fix if you just have electric vehicles in every garage, and notably congestion.

You know, if you want to be able to travel in a region 20, 30 years out, you don't solve that by just having cleaner cars on the road. You've got to get fewer cars on the road and you've got to shorten the trips, and the only way to do that is changing the land-use pattern.

So that's my quick caveat on that issue. So here's the type of planning process that we do at SACOG now. We have very detailed data. We have parcel-specific data on what's gone on in the built environment.

We have now parcel-specific data on what's going on in the rural environment. We have field-specific data on what crops are being grown. We have very detailed data on natural resources -- vernal pools and wetlands and habitat issues. We're getting detailed data on water supply and quality.

And so it's a very rich set of information. We have state-of-the-art models that know what to do with that data.

So now we don't model thousand-acre chunks of land use. We model parcels of land use, and we have a travel model that operates

as a parcel level so that you can track the estimated two or a household during the day and figure out what kind of mode they are likely to take given their place type, to use Peter's terminology, and environment and context around them.

We've taken those models and developed user-friendly versions of them so not just the sophisticated pros in the back room can use them, but we've put them on the table in community workshops. We've got hundreds of these with thousands of people so that folks can experiment with their different ideas of the future and get the science right back.

And so, it's not a surprise month later when the consultants or the MPO staff comes back, they see the results, and they have a chance to learn.

And so democracy has a chance to work. Good old fashion local democracy has a chance to work, and so what we adopted and are implementing -- we have our fifth year anniversary in December of this year -- is a smart growth strategy on the map -- is the very -- on the screen is the very simplest version of the base case growth pattern.

The dark red shows the expanding footprint from a business-as-usual scenario, where 80 percent of the housing growth is as it's been in the past in Sacramento -- large lot, single family.

So only 20 percent was historically attached and medium density or small single family.

The next slide is the simplified version of the map that we adopted. Oh, good, you know how to rate this. And you see far less dark red is basically the simple story here. The light blue or areas of redevelopment and infill.

It's the exact same amount of growth on over 350 square miles less land, over -- out to 2050. That's a lot of land not to have to devote to urbanization.

The main driver of the change is that the percentage of the market that is dedicated to small lot single-family and attached, either for sale or rental products, goes from 20 percent in the trend line to 70 percent in the adopted plan -- a major change.

And we're not talking about just tinkering around the edges. I will say that was a market-based number we came up with. We stole a good survey that Chris did when he was in Albuquerque on housing market demand, and the local building industry association, chamber of commerce, urban land institute paid to have Robert Charles Lesser replicate that in Sacramento.

It proved to the private industry that that is where the market is going. I think it's going to end up being a conservative number because the first four years of implementation of Blueprint we're already there.

A full 70 percent of our new market is and built product is in either attached or small lot single family, and I'm just virtually certain that when it's fully built out that the 70 percent number will end up being on the low side.

So -- and do I have a couple minutes left or am I --

MR. LEINBERGER: You have a couple minutes.

MR. MCKEEVER: So and the benefits that you get from matter not just in the travel sector. We're showing a third -- a 33 percent savings in water demand from the new building stock versus the old style.

In the State of California that's a pretty big issue. Some of you may have heard the Governor, you know, until 24 hours ago had held

up all 700 bills in the legislature trying to gain leverage over the Senate and the Assembly to put a water bill package together, and water conservation is a huge component of that public discussion.

We show a $16 billion savings in infrastructure, 20,000 bucks a house.

Those numbers meant a lot to my business-oriented and developer-oriented political constituency within the SACOG region. And so in close, I have a lot of hope and conviction that information-based, citizen-oriented scenario planning can make the local democracies work.

And when I say local I mean including when they come to the regional table and can effect major change; that it’s not just, you know, planning for planning sake or more talk-talk kind of exercises.

And I think if the federal legislation on the energy, climate, and transportation side does some fairly simple things, and requires that kind of high-quality planning to be done at the regional level as a precondition of getting federal funds; doesn't go so far as to mandate this is exactly the savings you have to achieve, because, one, that’s pretty tough to figure out honestly in Washington, D.C., and, two, politically that's more backlash than is necessary. I think if the locals are required to do the high-quality information and data and scenario planning, they will figure it out on their terms.

And if more of the funds are sent right to the MPO level, which is where the land use authority is with those cities and counties -- it's not at the State Department of Transportation level; it's at the MPO level.

And finally, if some reasonable pot of money is given out based on performance, not on some kind of a fair-share formula or just,

you know, because -- just because you're on the earth, you deserve this much money, but based on the actual performance of your plans.

You know, we are easy to bribe. If you put a little bit of money on the table, I guarantee you -- chasing money is a non-partisan American value.

And you put an amount of money on the table that is noticeable, and people will compete for that and change their behavior rapidly -- my point is rapidly instead of slowly. Things that otherwise might take five and 10 years and 15 years to happen will happen in the very first plan cycle of the next round of RTCs if these federal pieces of legislation are done correctly. Thank you.

MR. LEINBERGER: Thank you, Mike, so much. You will notice that we intentionally did not have anybody from Portland here because we all know that we have Portland fatigue. And we're tired of hearing about Portland, though it now has come up twice. There's obviously something in the air. They're smoking something in Portland.

Our next speaker is Natalie Gochnour, who's from Salt Lake City. She was present at the creation of Envision Utah, working for a Governor, Governor Levitt, who I consider to be one of the great governors of the last generation, and then when Governor Levitt came back to D.C. to be Cabinet Secretary both of EPA and HHS, Natalie also came back to D.C. to work with him.

She's now the Chief Operating Officer of the Salt Lake City Chamber of Commerce, and deeply involved in securing the funding for all transportation projects, and in particular a dedicated source of funding that has also led to the development not just of more and better and more intelligent freeways, but of their light rail system. Natalie.

MS. GOCHNOUR: Great. Thank you, Chris.

I want to thank Chris for the invitation to be here. My colleague from California has laid out a very good quantitative case for the importance of blueprint planning. And Peter did a great job at laying out the principles and really the foundation for what we're about.

I want to take a step back and think about Envision Utah, the Salt Lake City regional planning experience from really a qualitative perspective and maybe give you context for thinking about this.

And the quantitative measures and the scenarios that Peter put up -- the four A, B, C, and D scenarios -- those are very well documented -- something you can get online and look at.

But I thought it might be fun just to hear the story from someone who had a front row seat and maybe think about what lesson you could learn from that.

In Salt Lake City right now, we're fielding a lot of requests in the business community. And these calls are coming from national media, international media, and Vancouver people because of the Vancouver Olympics that will be there in February 2010.

The countdown has begun, and the Chicago bid, you know, was sort of the milestone that made some of the most recent calls come in. But you go back in the Salt Lake City timeline and put us back in 1996-1997, we were about five years out from hosting the world, and you have to think of an inter-mountain small community like Utah, just under 3 million people and think about what it feels like to know that you're on the cusp of something really, really big; that that spotlight that is so big and so bright is going to descend upon your town -- in my case, my hometown -- and expose every weakness and expose every frailty.

If your transportation system doesn't work, people are going to know it. If your public safety system doesn't work, people are going to know it in a big way. Keep in mind that this was right after 9/11 that we hosted the games.

And many of us home-grown Utahans very nervous. And I don't want to pretend that the Olympics was the catalyst or motivation for Envision Utah, but the same phenomenon was taking place, and that is communities want to get better. Communities want to improve.

And the motivation for Envision Utah was a lot of people who really care about place and who really care about communities. And it's not something that's partisan. And it's not something that is local versus, you know, recently moved in.

When you live in a spectacular natural setting, like those of us in Salt Lake City live, you really care about place.

And it’s something that I think of us as the beneficiaries of, something magic that happened: the magic of regional thinking; the magic of purposeful thinking; and the magic of what I’m going to call post-partisan thinking or even maybe pre-partisan.

I never thought of it that way, but post-partisan is a term you hear now. You never hear pre-partisan.

But back in 1996-1997, as we were starting Envision Utah, we had a context like this, and if you look at this map, you can kind of see it. You can see the big blue water body. That is the Great Salt Lake, a real inland dead sea, if you will, saltier than the ocean.

The other little blue spot is Utah Lake, which is a freshwater lake.

All of the red are steppe slopes, and in Salt Lake City we live

in an environment where you can actually have a cabin in the city. I'm just shaking my head. We can really have a cabin in the city.

The picture that Peter showed of Stapleton in Denver, you know we like to say Salt Lake City is what people think Denver is. We're at the base of 11,000 foot peaks. From my front porch, I can be to four ski resorts in 20 minutes, and we can do that by auto right now, but, Peter, we're planning rail.

And these steppe slopes, the water, the -- a lot of publicly owned land has made it so we have natural urban growth boundaries. In this picture sort of shows you that valley kind of setting.

The other thing we have in the Greater Salt Lake region is a history of purposeful thinking, and it started with what people call the -- sometimes the American Moses, but that is Brigham Young.

And this is a man that led the largest westward migration of people, who came into the Salt Lake Valley and within the first week -- this is in 1847 -- within the first week of stepping foot in the Salt Lake Valley started to plan the city.

And that plan was very specific. It had a city grid. It had setbacks. It had centralized urban development with agricultural lands on the periphery -- something that's received an American Planning Association award called the Platte of Zion.

But it gives you quite a foundation for purposeful thinking. And then in the post-partisan thinking, I want to challenge the idea that, you know, new urbanism or quality growth or smart growth has to be partisan.

I live in a community that really values critical land conservation. I live in a community that really values frugal spending.

And I live in a community that highly prizes choice in transportation and in housing.

And Envision Utah that's exactly what played out. We created what was at the time, and might still be, the largest public-private voluntary quality growth partnership. It was very data-driven. It was also driven by what I'm going to call light and not heat.

So Envision Utah doesn't get involved in a lot of political advocacy. Envision Utah gets involved in being sort of proselytizers of information, and that's the light part of it.

And through that, we created a future, a picture of a future, that included a baseline and what we call the quality growth strategy. And if you look on the left is the baseline strategy, you'll see the Great Salt Lake again and Utah Lake and kind of the urban valleys. You see a lot of orange out there on the periphery, and that would be the low density residential development that was part of our baseline.

And you can see one little red line in the middle of the urban area. That was the existing tracts line at the time of our Envision Utah planning.

If you look to the right, you can see the blueprint, or quality growth framework, that we are presently following, and in it you will see a lot less orange. You'll see the red rail lines, a true system of transit, including light rail and commuter rail.

And then if you look -- what we call locally the Wasatch Back that would be to the right side of the map, this is the Park City, Deer Valley area. It's true treasures of the Wasatch, because they're beautiful communities close to the mountains that have retained a sort of rural setting.

But under our quality growth strategy, they are much more thoughtfully designed.

And in the process, we lowered costs. We cleaned up our air. We conserved water. And we expanded choice.

I want to conclude by just telling you what I think were the secrets of this collaboration, and I've broken them down into eight points.

Again, this is to take a qualitative approach and not a technical approach, but we had a shared problem. So these are sort of the keys of collaboration that helped Envision Utah be successful.

And that shared problem was this overwhelming sense of loss if we didn't do something. The baseline was not acceptable. And, again, if I put in the Olympic touch, when we're going to host the world, we wanted to know what we wanted to be when we grew up. And the sense of loss that we felt as we watched our critical lands go away and as we watched a quality of living disappear, that was unacceptable.

We had a convener of stature and, Chris, I didn't know you were a Mike Levitt fan, but I'm a devotee of Mike Leavitt. We had a committed governor and he convened us as a convener of stature, and he joined with the owner of the Utah Jazz at the time, someone who's passed on now, but Larry Miller.

So we had a wonderful business leader and our governor co-convene this partnership.

Many of you might know Robert Grow, who was our committed business leader at the time. Robert Grow was the founder of Envision Utah. So we had a shared problem, a convener of stature, and a committed leader at the helm.

Then we had representatives of substance involved, and it

took a lot of elbow grease, but we got local government, perhaps the largest barrier sometimes to quality growth, to be right there with us and the business community.

So we had representatives of substance at the table, a clearly defined purpose, and that purpose quality growth, which was written up in a formal charter that really articulated our love for place.

So representatives of substance, clearly defined purpose, formal charter. Number seven would be a common information base. We had something we called QGET, Quality Growth Efficiency Tools -- awful name.

But it worked in our legislature. Efficiency is a good word in Utah; and created a common information base for the planning. And then we had stellar, hands-on what I'm going to call public involvement, and that was the eighth criteria of our collaboration.

And because of this rich public involvement, people were able to see and envision the future that they wanted. Neil Pierce has an aphorism. He says, “Collaboration is messy, difficult, and indispensable.”

In Utah, we are the beneficiaries of a marvelous collaboration that endures to this day and we now -- if you come to Salt Lake City, we have 70 miles of rail under construction in seven years. When you visit Salt Lake City in just a couple of years, you’ll be able to use light rail to our downtown.

You’ll have commuter rail to northern Utah; commuter rail to the southern part of our metropolitan region, where Brigham Young University is located. We will truly have an interconnected region and it’s very popular in something that will lead to both the betterment of our community, and, in the case of climate change and what not, the

betterment of humanity. Thank you.

MR. LEINBERGER: Thank you, Natalie. And the other person who I have always enjoyed from Utah is, of course, Robert Grow, who has by far the best name for somebody involved in real estate development. As a developer, I've always found that quite appropriate.

Peter McLaughlin is a Commissioner in Hennepin County, the major county in the Twin Cities. And he has been in the state legislature. He's been a commissioner since 1990. He's been in the trenches as far as transportation planning for obviously a long, long time.

He's also known locally -- I'm not certain he knows that he's known as this -- but he's known as the Godfather of the Hiawatha line, which is their first light rail line in the region.

As I mentioned earlier that the Twin Cities is here partly because they are a progressive place, partly because they've tried to do comprehensive regional planning, and they have not pulled it off, but Peter has been the glue that has kept together that regional vision. Peter.

MR. MCLAUGHLIN: Thank you, Chris. So I'm here representing the rest of the country that hasn't quite reached this state that we're all trying to reach.

I'm also here as a practicing politician, barnacles and all, an Irishmen believe that politics is a noble calling. And then finally, I'm an avowed what I call an avowed infrastructural determinist.

That is -- and this is a fancy way of saying what Chris was saying earlier -- that transportation drives development; that I believe in that. I preach it, but I don't believe it's predestination.

And so it takes intentionality, both on the planning side and on the implementation side, to actually make it work to our greatest

advantage. And, as I said, I represent the rest of the country. I'm sort of here representing the old Charles Lindbloom muddling through model of how you get things done.

And I'm a big believer of using the financial mechanisms and harnessing these things to do some of the things that we want in the blueprint visioning.

And I want to talk a little bit about a little of the history in the Twin Cities, but also what we might want to look for in the federal legislation to help encourage a better way of doing this.

We have a 40-year-old metropolitan planning agency, the Metropolitan Council. For 25 years, it was opposed to rail. Official policy. We're opposed to rail.

In contrast then, when Jesse Ventura -- yes, that Jesse Ventura became the Governor of Minnesota -- he adopted a very -- he was a strong supporter of LRT, a strong voice for smart growth; brought in Peter Calthorpe, and under Ted Mondale's leadership at the Metropolitan Council, we actually started the process of this scenario planning and then it died with the new administration under Governor Pawlenty.

At the beginning of the Pawlenty administration, you could not talk about the development impacts of transit investment, period. That was off the table. All transit projects had to be judged based on their transportation impact, period, end of discussion.

Those were the rules, and we had to dance around them. Not that particularly forward-looking and, at the same time, it had become an incredibly partisan issue in the State of Minnesota, you know, the great region on the Plains, supposedly progressive. But this had become incredibly partisan.

So that's the milieu in which we were operating. Our transportation policy and planning structures are politely described as a hodgepodge, I think. The Met Council covers seven regions. Our MSA covers 13 regions, including two in the state of Wisconsin.

Our travel shed is at least those 13 counties. Our metro transit taxing district, the group I chair, that covers -- it's a five-county region within the seven, and then we've got a -- the Metropolitan Council controls a taxing district that's about 85 percent of the metropolitan area, the seven-County area.

And I won't describe our MPO. I mean it's just a mess. It's all -- it's a total hodgepodge.

Finally, we've got -- we are the Twin Cities. It's two cities. Not easy folks. I got to tell you. They're 10 miles apart, and we're in different counties.

And that's a non-trivial problem that we're dealing with in terms of planning, resource allocation, and, as you might imagine, the politics of it, compounded, of course, by the usual and traditional suburban-urban tugs of war.

So that's that were operating in. We have muddled through, however. We have Hiawatha. That was our first line. It was opened almost 50 years to the day. It connects downtown Minneapolis with the airport and the Mall of America. It's hitting ridership projections that weren't expected until the year 2022 or 2023.

I like to describe it as putting all our chips on red 26 and giving the wheel a spin now, because the opposition was virulent, we had to create a catalytic project. That was the planning theory that we ultimately ended on: create a catalytic project; let people kick the tires;

ride it.

And, by gosh, it's changed the politics in the Twin Cities. It has changed it because it's so successful. It's met every target. It's reliable, affordable, and people like you.

Our first commuter rail line is going to open up the 16th of November. It's going to be connected to the Hiawatha line at the emerging transportation interchange, a hub, right at our new Twins ballpark, a multi-modal hub.

The first stage of a large BRT project funded by UPA -- that's the 35W and Cedar Avenue corridors right into downtown Minneapolis, that's going to open up later this month.

And we're about to end our final design on the central corridor connecting Minneapolis and St. Paul, and we've got a preferred alignment choice coming up in the next two weeks for our third LRT line, the Southwest Corridor.

So we've got -- you know, we're moving, and we've got a -- I now have a dedicated funding source for transit way investment, major transit investment, that really dealt with one of our key structural problems in that we didn't have a dedicated funding source for transit. So now that's going to allow us to go forward.

As we've done this, we've seen an evolution in how we deal with investment along the line. On Hiawatha, you know, first line we were lucky to get it in in the last three days of the Clinton administration and get that full-funding grant agreement signed, to be candid.

We had problems with the design builder, the autonomy of the design builder and not really -- they're not really caring about development impacts, and we had to wrestle with that.

We had a City of Minneapolis that was candidly slow in putting in the needed land use and zoning structures that we needed. The City of Bloomington, a suburb, major suburb, where the Mall of America is located, they were at first a reluctant partner, not one linear foot of city road was going to be taken for this darn train.

And so at the Mall of America they were scared to death that we were going to ask them to fund part of the station at the end of the line. So we dealt with all those things, and we had -- and we were -- we've come along, but it was very, very tortuous at the time, the first line, as you know.

We used federal funds, the County did, to finance it all -- planning, real planning, around the station areas. Huge deal in terms of getting the kind of investment we want in transit-oriented development.

We used -- we created after the fact what we call a community works project to marshal other investments in public infrastructure and the pedestrian realm dealing with street crossings and other things so that you could actually make the LRT line work better in the community. So we created a mechanism with money and a planning process and community involvement to do that.

On North Star, there's been an evolutionary step. On North Star, we're actually -- the cities that were offered grants to do stationary planning as a part of the development process. In the City of Fridley, a suburb outside of Minneapolis in Anoka County, they actually acquired land, and the county sales tax that we put in place actually funded an infill station that had been eliminated because of budgetary limitations.

So it's now a great platform for TOD, and there's a plan and a vision there, and they've got the land that they need to make it happen.

On Central, Central Corridor to St. Paul, we've gone the next step. We have a funders collaborative, 11 national foundations working along what is an old streetcar street connecting Minneapolis and St. Paul, University Avenue, working with local government, neighborhoods, community groups, and business to look at -- to fund plans along the line, and now we've got a new working group has just been created of local officials, foundation folks, and folks from the state housing finance agency to deal with affordable housing problems in the concerns about gentrification along this old -- you can imagine it; every region has got them -- an old streetcar street. And we're trying to figure out now how we implement.

And the private foundations are going to be working with the public on a vision for how these all tie together and what we need to invest in, the supplementary investments that we need to go along with the line itself.

Brookings and ULI are working with us then on Southwest Corridor on a bigger agenda, and that is to try to look at -- that shows the employment centers. The ULI put that together as a part of this process -- employment centers in the Twin Cities area, and we're trying to work with them with the help of the McKnight Foundation as well to deal with these metropolitan centers and corridors and to try to create walkable urban places.

We're way ahead of the curve on Southwest. We haven't even picked the route yet, but we're poised to pick one. And we're going to have these local planning efforts in place ahead of time to make things happen.

Finally, local leaders have spearheaded the revitalization of

the historic depot in downtown St. Paul, the old train depot that James J. Hill used to bring his trains to in downtown St. Paul, and the creation in Minneapolis of a new Minneapolis transportation interchange at the junction of -- and you can see it there -- Hiawatha, North Star, Central, Southwest, (inaudible) the Cedar Avenue bicycle trail and bus facilities that have over 2,100 operations a day. And that's coming now on November 16th. That's going to actually be happening.

And we've marshaled local, state, and federal resources to make that -- it's a major place making effort and a major effort to create an inter-modal interchange just as the depot in downtown St. Paul.

So Lindbloom would kind of get what's going on here. But it's been harder than it ought to be and harder than we can afford it to be in the years ahead.

So that's why I think we're here to talk about the federal legislation and a couple points that I think need to be made.

One the blueprint planning is essential with the goals if the Feds are going to spend that kind of money, they ought to be providing that kind of direction that's going to help us get over the hump. We frankly used an earmark to get over the hump on Red 26. The Federal Government, if it wants to really get in touch with about this, needs to put these goals in place and provide natural direction, and it will be a catalyst, I believe, for the kind of local effort that's necessary, and it will give some of the local advocates a little bit of backup from the federal level to win these battles, because they are battles about where we're going.

The regions need to be adopting I think in this process there's the suggestion of multiple scenarios coming out of T For America. That's a good idea.

One of the problems here is this -- you have to adopt fiscally constrained plans now. That's not pushing the envelope, and that's been part of our problem: this fiscal constraint.

What you need is a stretch plan to then motivate the business community, motivate others in the community to say, "So this is what we could have if we really invested here." So I think we need to make sure that that's allowed in the new rubric.

I'm a big believer in putting in place these supportive structures and programs to complement the rail investment, the transit investment. That's how you create place.

The infrastructure investment can push it, but you need -- if you're going to really do it, you need to have in place things like we've had like the TOD fund, the affordable housing fund, this Livable Communities Act, which is funding at the federal level. We have an equivalent program that was started under Governor Ventura that's been a big help.

So those, I think, are essential if we're going to get to it, and I think the Livable Communities money at the federal level needs to be for not only planning but for the supplementary investments as well.

Fourth point. Pay attention to the money. Pay attention to the money. You know, a friend of mine is fond of invoking an old -- that old Rocky Mountain adage about water runs uphill to money.

Well, I think we've got to pay attention. I mean that's what we've done. In the absence of a grand metropolitan consensus, we've created these funding mechanisms to make sure the right things or to allow the right things to happen.

So dedicated funds for transit. Support of housing. Transit-oriented development. These community works. These other things are

important.

I think we've got to get into the energy bill for money to not only invest in the planning side of this, but also to fund the basic transit infrastructure.

There's not enough money at the federal level right now in the absence of some major contribution from the energy bill, in my view, to get to that level of investment in transit that we need as a country.

We've got to figure out how to capture more of the highway dollars under this rubric. Let the highway guys just kind of go off on their own, then we're not going to make it either.

Sub-allocation to dollars to regions is important. Mode neutrality between roads and transit very important. It's in the Oberstar bill. Then local regions can make a rational choice based not on 80 percent federal money versus 50 percent federal money, but rational choice on what the region needs.

So mode neutrality is important. In all of this, on the money, think about the federal interstate highway system and the Federal Highway Trust money, every year -- chunk a chunk a chunk -- a cranking out money to build what President Eisenhower and others had in mind. We need to create, you know, a similar mechanism that's going to crank out money based on the values that we want, local planning to make it happen, but we've got to have that mechanism that's going to crank out the money that we need.

Three other points. Pay attention to implementation, the implementation features of this bill. Public-private partnerships need to be easier. I can tell you stories about how hard it is to do them, and we need the private investment in conjunction with these transit lines.

Reform the cost effectiveness index, which has downgraded development impacts. It's a narrow thing that the Federal Transit Administration has used as a queuing mechanism. We've got to get beyond that, which the Oberstar bill does.

Land banking I think is going to be important. We've got to find mechanisms for doing that, and then fund -- adequate funding for inter-mobile facilities I think it's critically important if we're going to make this system where you can really make the exchanges and get away from the use of the car.

I -- here's a parochial one: I think you have to include counties in the rhetoric. It's been cities and regions in the past. I think it's got to be cities, counties, and regions that in terms of engines of the economy, counties, modern counties, are incredibly important and will play an important role in this process.

Finally, we got to get MPO reform right. If we don't get the MPO reform right, if, you know, X, Y, Z township in the third exurb out has a same voting power as the inner-city, this ain't going to happen. I mean you've got to get -- I mean if you look at these maps, one of the things that they do is they reinforce the center as the center, in our case the centers as the center, but the MPO reform and the allocation of votes in those MPOs is going to be important if the idea here is give the locals more control, that's fine, but you'd better make sure that the voting balance is fair and can reflect the values that we want, not stacking the deck. I would argue the deck is stacked right now against these values.

So with that, I think we can -- we're getting the vision right. And now it's important that we create the structures and get the funding streams that will actually make them (inaudible). Thank you.

MR. LEINBERGER: Great. Peter, thank you so much.

And we now have 15 minutes for some questions, and I'm going to kick it off with one for Natalie.

Natalie, you -- you're coming -- your story is quite compelling, but you're coming from a Republican homogeneous and a place that has very nice people. What about those of us that live in, you know, more mongrel places with nasty people. How do your lessons apply to the rest of us?

MS. GOCHNOUR: Fair enough. I guess I would say, you know, when I came back to Washington with a Cabinet member in two federal agencies, EPA and Health and Human Services, and all the professional career staff would say to Secretary Levitt, "Oh, you don't know you're walking into," you know. And these environmental groups against the Bush Administration, EPA, or this Hill issue against a Secretary of Health and Human Services. And Mike Levitt used to look at them and say, "You've never met a Utah County Commissioner."

And sure enough, I just share that story with you because don't underestimate how hard it is to get it done even in a place like Utah, and yet we were successful. And I would point out that even though it's an inter-mountain, you know, western interior western state, it is the sixth or seventh most urban state in the country.

When you saw that picture those mountains, we have to cover it around our mountains because that's where the water is. So we are much more urban than you would think.

And also don't underestimate how trying to do these things in a Republican-dominated place is a challenge. You might have challenges where you don't get along as well in other communities, but in our state,

you know, Ross Perot took second to Bush and Clinton was last.

So there -- each -- I find that each region has its difficulties that you have to kind of work through, but every region has that -- feels that sense of loss when they're losing something good, and also every vision -- sorry -- every community wants to get better.

MR. LEINBERGER: Are there questions? There are mics over on the right.

SPEAKER: Yeah. Rich Benjamin has recently written a book called *Whitopia*, arguing that the fastest-growing parts of the country are very distant outlying suburban and rural communities and that the population growth is fueled primarily by white families leaving diverse urban communities. And, as I read this, I was thinking of your book, Chris, arguing that these are the communities that may become the nation's next ghettos.

And so I guess I'm wondering is this a real trend and what does this mean for principles of smart growth in dense urban walkable community development?

MR. LEINBERGER: Anybody want to pick that up? About the exurbia. Mike?

MR. MCKEEVER: Well, you know, the data -- I think the trend data -- it's a short enough period of time that you have to be a little bit humble about over concluding. But we have looked at that issue in the recent past, are starting to pretty carefully in the Sacramento region because well, we're doing a new growth forecast and a new MTP that's got to comply with this new big state law, Senate Bill 375.

And so I think that what we're seeing is not at all what you're describing. We're saying a -- in terms of market share of the growth over

the last three to four years that the downtown and surrounding downtown areas in our major core, Sacramento and West Sacramento, are increasing their market share.

The other places that are increasing their market share are around our two other major employment centers in the region, both inner-ring suburbs now, the Roseville and Placer County and Rancho Cordoba in Sacramento County, and it's pretty easy to hypothesize why that is because they've been very jobs dominant and not much housing around them. And so the housing is starting to come in, and the market is responding to that.

There is a challenge in the exurban area because so many of those areas have felt poor for a long time, and they're still seduced by the prospect of rooftops, because it feels like economic development.

And so we're doing a whole large project -- we call it the Rural Urban Connection Strategy -- designed to hit that head on and try to show them the growth model that's more sustainable and jobs housing balance and centered on the economy of the farmland that surrounds them so we try to break that economic force.

I do think just with the price of gas where it's likely to go in my opinion in the next few years that the people that have had the luxury to do those 50-mile commutes, you know, good.

Buy a house in a small rural town and try to have it both ways, you know, the small-town environment and the big-city job -- I think there are going to be fewer and fewer just because of the economics.

SPEAKER: But these are trends of the last couple of years when gas prices were very high and even Bill Frye who's a --

MR. MCKEEVER: Right. You start to see that.

SPEAKER: -- demographer here at Brookings says it's a --

MR. MCKEEVER: And, you know, you have to have your own estimates of where gas prices are going in the future, but, you know, if I were placing my bet I think the odds of $4 or $5 or $6 gasoline next five years are a whole lot higher than $1 and $2 gas.

MR. LEINBERGER: Natalie?

MS. GOCHNOUR: Well, I just -- I'm not familiar with the book, but I did want to reference that in the community I'm from, in downtown Salt Lake City right now. It's each room renaissance occurring. We have about cranes in our skyline. We have a 30-story downtown condo high-rise under construction.

There is no recession in downtown Salt Lake City. Right now, we have about $3 billion in investment, most of it private investment occurring. And we'll have about 10,000 housing in the next three, four years built in our central city.

So that's a real point for us. Now that be an accident of some, you know, other trends that have happened, but we are seeing just the opposite -- a movement towards the city, not away.

MR. LEINBERGER: Mm-hmm. Peter?

SPEAKER: This reflects what Chris was saying before that you've got a community of lots of nice people, but in other cities that don't have so many nice people, that's where it's happening.

MS. GOCHNOUR: But we've had lots of nice people for 100 years, and we've not had this kind of renaissance. It's occurring right now, and I would argue that it's occurring right now because there's a whole bunch of underlying trends that are supporting it, whether it's the demographic trends and whether it's the vision that we painted. There is a

wonderful future for people in their central city, and they can see it.

MR. MCLAUGHLIN: And I think if we give people high-quality choices, they're going to make those choices. And frankly, these rail lines have the potential to redefine and revitalize the first-ring suburbs, which have been sort of the tiring element in our regions. And I think they can redefine them and revitalize them in a major way.

MR. LEINBERGER: I will point you to a Brookings paper of about three years ago about exurban growth. It's about six percent of the total population in this country.

So it certainly is a factor, and I think the issue that we're talking about here is choice. I just hope that we don't subsidize certain folks for that choice.

So there's a question up here from Colorado.

SPEAKER: Hi. Two of you, Mike and Natalie, I believe, mentioned one of the motivations behind the efforts was meeting Clean Air Act standards. Clean Air Act. Sorry. I'm losing my voice. We had winter last weekend.

Could you talk just a little bit about how and if you are able to tie some of those benefits to what you have to do to meet those Clean Air Act planning requirements and what your challenges and opportunities there were?

MR. LEINBERGER: Please.

MR. MCKEEVER: When we started the update to our last RTP, which was just adopted last March, so it's about a year and a half old, and that was the first RTP where we were consciously --

MR. LEINBERGER: Regional Transportation Plan.

MR. MCKEEVER: -- Regional Transportation Plan. We

were consciously putting the blueprint land use pattern in as an integrated component of the plan. We worked -- and at the same time, they were updating the air quality plan for the state and our region to be consistent with the new eight-hour ozone standard instead of the old one-hour standard and so it was a toughening standard on the quality side.

And we didn't really know exactly what the implications of that were at the time. We just knew that that was going to get tougher.

And we certainly didn't want to put ourselves at risk of -- you know, we're a non-attainment region for ozone, which means that we're on -- in the conformity path where we have to show good progress. And we certainly didn't want to do anything to risk putting the federal dollars, you know, at risk.

And so we worked really closely with our local air districts and US EPA on what it was going to take to be able to count the benefits from our smart growth land-use pattern in our regional transportation, and use those for the conformity analysis.

And that's, you know, I mean that's in some ways the ultimate inside planner's speak, but it's sort of like the financial constraint requirements that were mentioned earlier. There's also this rub within the current federal rules on sort of what's considered a realistic land-use pattern.

And the language is not as crisp as it is on the financial side, but it's often administered by Federal Highway in a way that really locks in the trendline land-use pattern because you have to -- you have to prove that if you've got one of these visionary plans that you're actually more likely to be able to implement that than that the trendline will simply occur on the natural anyway.

And so we had a very extended discussion, and they were very skeptical initially about allowing us to do that, because they've had in their opinion some bad experiences with that.

SPEAKER: Which they?

MR. MCKEEVER: U.S. EPA.

SPEAKER: Yes.

MR. MCKEEVER: But they did. They did allow us to do it. We didn't do it just cookie-cutter. We've got maybe 10 to 15 percent of the growth in our regional transportation plan that's not consistent with our blueprint, because we're not yet batting a thousand. But they were convinced that we were being honest and that we ha data and models that were good enough that they could figure out if we were fibbing.

And so we were able to count those benefits, and we show declining per capita emissions of the criteria pollutants as well as greenhouse gas emissions and BMTs, and it's a, you know, it's a pretty high performing plan.

MR. LEINBERGER: I'm going to jump in here and ask our other Californian, Peter Calthorpe to talk about greenhouse gas emissions, because California has dealt with their quality far more than any other state in the country. Peter.

MR. CALTHORPE: Well, actually, I have some questions for these guys.

MR. LEINBERGER: Oh, I know you did.

MR. CALTHORPE: So instead of that?

MR. LEINBERGER: But first -- first answer that and then ask some questions.

MR. CALTHORPE: Now what's the question?

MR. LEINBERGER: About the role of greenhouse gas and planning.

MR. CALTHORPE: You know, the difficult part now -- the stage that California is in, which I didn't get into the weeds on, is that they are setting targets. So the air quality -- the Air Resources Board has been charged by legislation to establish production targets for each MPO. And it's a political food fight, as you can imagine.

And contrary, this leads me to one of my questions here, Mike -- was that I don't think that just saying do scenario planning and naturally what will flow out is enlightened results.

Right now, which is Southern California, is fighting for the lowest target that they can get out of the state government because, of course, it's an easier hurdle and nobody wants a high hurdle, especially when it involves all the politics.

So this thing of target setting I think is really one of the issues that we need to grapple with. Mike, you said that you didn't think the Feds should set targets; that they should just restructure MPOs; ask MPOs to do scenarios and then naturally what will flow is more intelligent decisions; and then perhaps put a little sugar cube on the table and say for those that do really well, you get these prizes.

I'm not convinced that's going to be enough, and it's a debate I think we need to have because it's at the heart of the nature of the legislation that's going to be moving ahead, which is we'll either incorporate or not incorporate serious targets.

I'm an advocate for serious targets based on a percentage improvement. You know, so each MPO will start where it is, but then they need to achieve certain results. And I think that would be -- so we need to

debate that, number one.

Number two, what -- and this is the second part of my question -- Peter I think put his finger on one of the key issues and dilemmas and paradoxes of the system. We had in the past utilities that make money not by conserving energy by increasing demand, and, therefore, increasing their investments in their services.

So there was inherent in that system was the desire to actually increase the consumption of energy rather than reduce consumption of energy.

I would posit the same is true with roads and cars, which is the more VMT you have, the more federal dollars you can get for new roads, and the more VMT there is, the more federal highway tax dollars there are to pay for all that.

So it's a system that feeds itself only if it grows. And there's nothing embedded in this structure or of the situation to incentivize conservation of vehicle miles. And then, quite frankly, if you achieve some conservation in VMT, you lose money to spend on infrastructure at a national scale and at a local scale.

And that's a true dilemma that I don't quite have a strategy for addressing. Maybe you do.

MR. LEINBERGER: Peter, how do you muddle through that?

MR. CALTHORPE: But before I leave today Washington, I want to come up with an answer for that.

MR. LEINBERGER: Okay.

MR. MCLAUGHLIN: I actually think it's about pricing gas and pricing travel. I mean it's not directly related to limits at the regional

level on vehicle miles traveled and the like. You've got to send a better price signal.

We're sending a bad price signal right now that engenders additional travel, and we're actually going to be doing -- we've actually applied for a tiger grant to actually run an end of 10,000 VMT experiment in the State of Minnesota to try to figure out how we can calibrate it, how we can calibrate it actually make it work, and try to deal with some of the issues that you've talked about.

But I just think a lot of these problems get solved if we send the right price signal on gas or travel, and fined if (inaudible) can do it. But then you're dealing with tax increase problem. I mean that's the dilemma. But I mean in terms of solving a lot of this, the problem that you're talking about I think it's better done through that price signal than through the.

MR. LEINBERGER: Natalie, from a business point of view, with your utility members of your Chamber, how would you address Peter's question?

MS. GOCHNOUR: Well, just I mean kind of weaving the two our business community has supported a gas tax increase for the last three years, locally, and we're going to do it again this year even though we are in a recession.

And that's exactly because of this point. Right now, we are funding a lot of our highways, believe it or not, with sales tax dollars in Utah, hundreds of millions of dollars. When you buy Levis and bread and milk, you're paying for roads. It doesn't make any sense.

And so we're trying to correct those signals and get them right.

MR. LEINBERGER: Mm-hmm. We have time for one more

question. Right here.

MR. MCLAUGHLIN: Don't I get the answer?

MR. LEINBERGER: Oh, I'm sorry. Okay. I thought you had answered Peter's question. Go ahead.

MR. MCLAUGHLIN: I did not mean to imply that I don't think the targets are in important part of this process. I think that they are. But I do think that the notion of a mandatory, top-down federal requirement, at least in 2010 is a bad idea, and I don't think it's necessary, and, you know, I want to point out that we've had decades of mandatory federal air quality targets in this country. And I don't know anybody who thinks that the federal conformity requirements have led to smart growth regions in this country.

You know, we've tried that approach for a long time, and it's not working. I think if the federal government says this is how much we need to save out of the transportation sector, it is a clear policy of this nation that we want to drive down VMT and carbon emissions out of the transportation sector, and you're going to do better in the competition for the people's money that we dispense, the better you do at driving down VMT and carbon, I think that will result in a wealth of competition and innovation in real change. That's my opinion.

MR. LEINBERGER: One more question.

SPEAKER: And something that might reinforce that is the CDC and their health impact assessments. They're interested in parceled district neighborhood planning stages to demonstrate all the benefits of compact smart growth, and they're working with new urbanism and smart growth folks.

They actually modeled the urban heat island effect and

water distribution systems on a district level that helped make the argument. So, first, my question is, the district level, does that help make the argument more than the global. And but really my question is probably a little more specific.

As a companion to green urban compact growth strategies, have you seen examples of programs for tear downs of deteriorating aged-out sprawl to achieve increasing pervious surfaces and replenishing water tables and aquifers past the green field. I understand that Detroit has something going on and inside some of -- you know, at the risk of it sounding like urban renewal, whether it's --

MR. LEINBERGER: So the question was about tear downs of obsolete drivable suburban places?

SPEAKER: In cases where it just -- reinvestment isn't going to get you as far as you want to go.

MR. LEINBERGER: Right. Comments on that? Have you seen that?

MR. MCLAUGHLIN: So, again, you're -- go ahead. But you're talking about whole neighborhoods. You're not talking about building at a time.

You're talking about this idea of going into entire existing built environment and purposely transforming it into something else?

SPEAKER: If you have a district and you select parcels that should be eligible for a tear down, and, so, therefore, the funding methods and incentives for that.

MR. MCLAUGHLIN: Right.

SPEAKER: And it achieves a number of purposes: helping to establish neighborhood growth boundaries in a sense and compact

development as well as others?

MS. GOCHNOUR: Natalie, you're just about to burst. Go ahead.

MS. GOCHNOUR: Oh, no. I don't have a great answer to it. I do want to say, though, I did watch a very interesting phenomenon in Envision Utah. I helped manage the technical work for it. We had scenario A, B, C, and D, you know, named generically. Scenario D was the most compact.

And it was the one that Peter showed that you kind of said why the infrastructure costs more expensive and different things. We saw an absolute breakdown in the scenario. We saw a scenario that got too dense. We saw a scenario that concentrated people too much. The air quality was not as good. The costs were higher.

And the only connection to your question is part of the reason why the costs were higher was because of the extreme costs of going in and redeveloping areas as opposed to some of the costs of putting in fresh pipe, and, you know, sewer and water and the like.

Anyway, it's not an answer to your question, but it was as someone who was watching the modeling as it came in, and watching the air quality modeler and the infrastructure costs and transportation, the scenario broke down. And sometimes we forget that our best ideas can actually break down when you do the numbers.

MR. LEINBERGER: All right. Peter.

MR. MCLAUGHLIN: Well, we've taken more of a half-step approach. Along these corridors, we're doing this planning to create an urban walkable environment in places that aren't, in places where the infrastructure has been neglected, where it's been very suburban oriented

and we think that -- and you put the rail in and that can be a -- that can draw the private money.

And if you do that smartly, I think that's a better, more realistic route to go than major tear down.

MR. LEINBERGER: So with that, I have to get these folks up to the Capitol. We have a number of presentations up there to staff.

But I think you can see that this is not just a policy wonk's dream as far as a topic; that it really does have fundamental change potential for how we build the built environment and how we live in this country and how we -- and it's a crucial way of how we have to address climate change.

So with that, I'd like to -- if you can thank the panel. Very good.

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CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

/s/Carleton J. Anderson, III

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