DEBRA SCHWARTZ

Okay, so, you know, what an act to follow. [Laughter] Who would think that the funnest panel was the Data and Government topic.

Todd Park: Whoo whoo!

Aneesh Chopra: Yeah!

Debra Schwartz: And David said very kind things about my youthful demeanor, but I -- I don't know about the rest of you, but I feel like 20 years younger listening to you, because I'm like so excited as I go out there -- and I can tell you, I've spent the last ten years in and out of funding lots of different data projects, and if it had been as easy as you're describing now, with APIs and all the rest, I would be 15. So. I'm looking over here at Page Kincars [?] which we made a grant to help create in 2000; the CDFI data project which launched in 1999; Francie Ferguson and Strength Matters and your data warehouse which is on its way and is benefiting from a lot of this technology; and Rick Sampson from the EnergyScoreCard tool which I'll talk about in a second, Mark Pinsky and Donna Fabiani, partners in the CDFI Data Project. I'm not kidding. In and out of all of our Affordable Housing and Community Development work, data, data, data. And Aneesh, you're keynoting a conference that two of my colleagues are involved with this afternoon.

Aneesh Chopra: Oh, good. Oh, I am. That's right.

Debra Schwartz: On data. So it's a big theme for us at the Foundation, and the reason MacArthur gets itself involved in all this data, even though we never set out to be chief technology of anything, is because without data you can't have good policy, you can't have good practice, and you can't have capital. And that's, of course, what this conversation is all about. And you need all three of those, the practice, the policy and the capital, to get the impact. And so I think there are a lot of really great points that Steve made and that the earlier panelists made. I'm not going to repeat those. I will at the end offer a few of my own thoughts about some of these challenges. But certainly some key points have already been raised that need a little underscoring -- the issue of privacy and making sure that as we push toward greater disclosure and transparency that we harness that technology so that the privacy issues can be wrestled to the ground. And as (unintelligible) we just saw that -- I think it was Time Magazine, raising questions. That isn't to be underestimated in terms of its challenge. I think for me it's not about the technology, it's not even about the privacy, it's not about the carrot or the stick, it's just the slow, long slog that it takes to bring all the different groups together, because as was noted in the first conversation, we're talking about people who have a lot of different objectives and a lot of different measures of what success looks like, whether

it's the perfect, random assignment control double blind or whether it is, help me as a J.P. Morgan, you know, donor-advised fund investor -- those are really different standards, and how you get those folks on one page with the practitioners who need data for different reasons, with the policymakers who have accountability and different concerns, a lot of law and justice [?] straight financial investors, like the folks that invest in the Bay Area Fund and some of the other VC funds, I mean, you said Zelick [?]. I'm having a very strange experience here, because everybody's telling me how diverse this is, but I see our venture fund investees in this room, I see my affordable housing partners, our CDFI partners, Treasury partners, so I'm actually having a bit of a mind meld. This may be the first room I've ever been in where all the parts of our PRI program at MacArthur are in one space. So I think that just tells you again that the data issue and the impact connection to capital strategies is a really deep connection across the board. So we've been through this. I'm going to give you an example of the latest foray, but there are people here who really have been on the frontlines, like Francie and Bill and Don and Page and others, who can really talk about what it takes to negotiate among all of us. So I'm going to show you something that looks really cool, but just remember that the negotiating of the fields and the data protocols and the data definitions, even if you have great technology, it's getting those people in the room, getting people to a common set of standards. That's the part that needs support and subsidy, and that's the part that the market doesn't always like to pay for. But I'm also

glad to know that, from the first panel, the fact that we've been paying for all this stuff is actually normal and not like we just got hoodwinked, because everybody said -- Well, actually, no one wants to pay for it, except for us. Okay. So. Is there a clicker that I can use? Is this it? Okay? And this is -- All right. Speaking of technology. To do this in front of the Chief Technology Officer [Laughter] is a little terrifying. Okay. I'm going to show you an example of a tool, of an app. It is an app that we hope one day will be fueled by giant vats of Government-provoked data, whether it's Government-supplied or whether it's Government helping get the private industry, particularly utilities, to share their data about energy use in the multifamily sector. But today, this is an effort called the EnergyScoreCard that MacArthur has funded, and that is being scaled up, moment by moment. And so a couple of you were here in Washington last week with us when we had a convening around the whole issue of energy use and energy efficiency, in the multifamily and commercial sector. And certainly one of the biggest barriers to bringing impact investment and capital into that sector is the problem of data. We have it in pockets, but we don't have it in a critical mass where people can really use it and have confidence, and I think, Greg, maybe you also mentioned earlier, the issue of data integrity and privacy, those are two really big key things to keep in mind. So this work that I'm going to describe came out of our work for a decade to promote the preservation of affordable rental housing. We did not come into this because of green or carbon. I have an international colleague who

oversees our work abroad on conservation, but we have not historically focused on environmental issues in the US. We came to this because energy is one of the top, controllable costs for the owners and operators of affordable multifamily housing. It's one of the few costs they can do anything about -- others being insurance and property taxes. Those are obviously a lot less under their control. Just to give you a couple of statistics -- and since this is a metrics meeting I can throw some numbers around and not be out of line. These are the numbers that I happen to have, and they may not be exactly right, but order of magnitude. US homes in the United States, all homes, are responsible for about a quarter of all the energy consumption in the United States. So any effort to try to really do something about energy consumption has to take into account the residential sector. And multifamily is about 15%. And multifamily, I'm referring to buildings with five and up in terms of the number of units in the buildings. And estimates based on the EnergyScoreCard work and a very large demonstration in Chicago that we've been funding since 2008 suggests that a 20% reduction in energy efficiency is a pretty readily-attainable goal through better management and retrofitting measures, and that that would reduce energy consumption by about 20% a year. So, how much housing are we talking about? In the United States we have something like 17.5 million units that are in those five-and-up multifamily buildings. And about 6.6 million of those multifamily buildings have some kind of Government connection. They are subsidized, regulated,

they've got tax credit equity in them, but there's a Government hook on those buildings. And if you take that 6.6 million unit stock of affordable and government-assisted housing, and you apply that 20% reduction, you can save a billion dollars a year out of the Government's own pocket, because HUD spends close to $7 billion a year on energy. Let me say that again. HUD, which includes -- who knows what HUD's budget is? Tom, it's like, what, $30 billion, something like that? Thirty, forty billion? Almost seven billion of it is going right into the pockets of energy companies because of the consumption of energy by those buildings. So we could save a billion dollars on that 6.8, and we could reduce carbon by about a ton -- by 6.6 million tons per year. She's telling me I have a minute remaining, so I'm going to go quickly. That's a bit of a disaster. Okay. So. What is the scorecard? The Scorecard is a tool that we launched with the Stewards of Affordable Housing and a for-profit app developer, Bright Power. We have today what we think is the largest database of multifamily buildings in the country -- the energy consumption data on those buildings. It's principally been created to help owners manage their energy use. It is helping inform policy. Fannie Mae is going to be using it for a large demonstration, but it's principally for the owners. It looks like this. It's a scorecard. It's a grading system. And the only reason they can give grades is because there's 1200 buildings' worth of data in it and they can group them by climate and by the age of building and by a whole bunch of characteristics so that the comparisons are valid. It not only tells the owner how they're doing

relative to a relevant peer group of buildings, it also tells them how they're doing on CO2, which is different than obviously just the consumption, because I think the CO2 is based on where the energy comes from. It tells the owner something about how they are spending their money, and to your points earlier, it makes it friendly enough that a typical property owner or manager can make heads or tails of it. It allows the owner to figure out buildings -- and you've got owners here like Mercy Housing, which we fund, and they have hundreds of buildings. It allows them to distribute this and see which buildings need improvement, which ones aren't worth focusing on, so to be strategic with their efforts. It allows, importantly, and this is where the impact investing piece comes in, you can compare what they were doing in a building before and after some changes, and so you can see, point by point, how their grades improve, from a D to a B on their overall energy index -- their CO2 emissions go down almost 20%, as we've said, so this is a detail of that part of the tool, and I think Jeff built in all sorts of groovy little things here. This was a lighting retrofit that I guess accounted for that big change there in the electric. You can see what a building looks like and really actually control for weather -- they built a regression analysis. That's why there's two lines, one is the actual use, one is the regression model, so that they could actually isolate and see what's happening because of the retrofit and not just the weather, because think about it, the weather alone could just change your energy use and you wouldn't know whether that investment you made paid off. So you

can see, here is a building that had an old boiler, new boiler, and you can actually quantify the savings. And I'm not going to jump to that last slide just yet, and I know Heidi's being really nice and not waving her sign at me. This is just one tiny example, and it's not even all the functionality of EnergyScoreCard, but it's a good example of how, when we can have the data and put it into the hands of folk who need it, it can be helpful to investors. I mean, we think if we can't quantify those savings in a reliable way, it's really hard to think about creating debt products and building it into underwriting standards. But I want to make a different point, which is, yes, we can use data to drive capital, but we also use it to drive capacity, because having the capital without owners who can do a good job, we won't get the impact. And if we don't have policy environment that, both through carrots and sticks, through incentives and regulatory disclosures, that creates the environment in which data is out there and creates incentive to respond to that data in certain ways so it's -- to your healthcare point, we're going to get what we measure -- we've got to think about all those pieces going together and not think about it just as a linear relationship between information to money to impact. Because in fact in our experience, it isn't really about measuring the widgets. It's about creating better-informed and more-effective partners, whether it's in the for-profit or the nonprofit sector, who, like Mercy Housing with fifteen thousand apartments -- we need them to be using the data, because we're not going to get the impact on those low-income seniors and families if they can't get their

energy costs under control. So that's just the example we wanted to share with you. Bill and Rick Sampson are here if you want to know about EnergyScoreCard. This is their project and labor of love, and I'm happy to take any questions during the after-part. [Applause]