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>> Okay. Great. Ready to start second panel. Well, we'll give the word to my colleague from Barcelona. We have a delegation of people leaving Barcelona. We conquer a lot of good guys trying to change the wonder. So (inaudible) has been working in SmartCitys with his theories and he'll be our moderator. I would like to invite our panelists. Eyal, Priya and I, Kriti and Stephen are just to come inside. I think we can start. Thank you.

>> Thank you, Renato. Pleasure to be here. I want to thank Renato for inviting me and I think we're missing a couple panelists. I think we will change the order while we wait for them to get here. As Renato said, before the break, we will start moving toward tangible solutions now and we will start engaging more of our audience. We have a very smart audience and we're in a smart city, talking about SmartCity. So we're not going to just be talking on stage, but engaging with you. Keep in mind they passed these out earlier and you should have access to these. These are part of the co-creation process where the ideas to start getting some thinking collective thinking around projects that can be collaborated on together and sort of nuggets of ideas that lead to some kinds of projects. So just -- just sharing for the purpose of sharing.

I had two points from the first session that I write down that are sort of aligned interests I have. One is discussion about distributed versus AI. I am interested and I will mention it in my presentation and standards and how those might play be a role as we roll out AI and emerging technologies and cities. So as we wait for our other panelists, we have Stephen Kelly on stage and Kriti is also going to be joining us from Sage, I believe. And then we have Priya from design and social change. We have Eyal Santo. We will start with Priya who is going to be sharing with us about people, power decision making. With two case studies combining human and AI. And just to make sure, our goal is 7-minute real fast interactive talks, hopefully inspiring and we'll have an open conversation for at least a half hour after that.

>> Priya, over to you. Whatever you want to do.

>> PRIYA PRAKASH: Does this work? Okay. Cool. Good afternoon, everybody. How are you guys doing? Great. How many of you guys have tried to change something in your own city? Can I see a show of hands? How many of you guys have succeeded? Interesting. Okay. That's where I'm coming from. So this is a person's story. I will talk about two case studies today. What I am interested in is looking at human intelligence along with Artificial Intelligence. I have been psyche lang for 15 years. Before that, I was working in operating systems and I had a pretty bad cycle accident. Who was really annoying is I could predict this was happening. I put in enough reports, but no change. Unfortunately, that made me really angry thinking how can people seeing issues coming up in the city do something in real time. So any city the main issues are people like us, citizens or residents, we're doing our own stuff going on Twitter and complaining and things are not working. Then you have the people and the contractors that manage the city and roads infrastructure. Then we have the (inaudible) itself having their own customer channels and website, what have you. And all the three entities are trying to improve cities, but they're doing it on their everyone silos. I same up with a platform. It is really about improving people, power decision making in real time. And decision making is one of those biggest problems in cities governments and it touches on challenges. It is basically addressing people, cities, service providers. It is realtime decision making and making cities resilient. So man issues is all about instrumenting the city with sensors and what happens when you have a big problem like you have a disaster or you have a climate change issues coming and electricity goes down. It comes down to people to rely on each other to improve the cities.

So let me give you some case studies around this. The first

one is on smarter streets. We ran this project in the City of Plymouth with the service provider called any. So any managed all the road highways in the UK. They also managed (inaudible) airport. They wanted to so how they can improve the infrastructure with the people in the streets in order to make streets safer. So we (inaudible) your psyche lift and just normal people with families and children and we kind of created camping with 150 people. 150 being the done bar number for a number of real time connections people can have within each other in order to create that kind of empathy within each other. We created an interface and application protocol with a front end app. You take photos of things, issues that you see on the street and then basically you use the camera of (inaudible). It is based on a traffic light system of green being good, orange being watch out and red being urgent. When stuff is bad, people like to complain. And the metadata is the ones to take the photo is automatically attached to the report and also what we do is take data from real time from CCTV as well. It is about human intelligence along with central intelligence and we get people to vote in small clusters. If I am walking down the street and Boyd is on the report and Santo is there and agrees with my report, all of us come together and say yes. Priya is on to something. When you finish doing the reporting, you come into little businesses. You can have them tie up on camping to improve the streets as well. So this is about increasing foot forward on the high street. It is not just some automated system sitting somewhere else in the Microsoft dynamic. This is about realtime getting everybody on the street engaged. The counselor also gets a report to show what is trending. So you can see from kind of civic governance perspective. They are interested in solving realtime issues and when the issues start trending, we can do something called a data challenge. In this case, it is a cycle ride like you have a kick starter challenge. Realtime data around infrastructure issues and they bring it become and that is how the API gets integrated into the operations of the service contractor. So imagine a cities operation, our system because it uses AI and machine learning is working in the background and it is using this prioritized reports from people using the traffic light system to say you guys need to send your gangs and crews in this particular street to improve issues. So we have done this and it's also the people can rate the quality of the work in the contractor. So we get rid of extra cost of inspections. So in terms of getting people together, people have their own data card depending upon the quality of reports. They have loyalty cards and use that in the shops. So we created this circle of data economy system. From an impact perspective, what we notice is the response time

for the contractors it really increased. So people are doing this real time cities where instead of sending an e-mail or tweet, you have a real time conversation with people maintaining the cities. You are reducing costs of inspections. The UK cost 150 pounds, but because they're qualifying the quality of work, we're saving money on that. If Boyd sees something interesting and comes up with a new proposal improving the round about and Santo and myself support him, that becomes a new business opportunity for the contractor. So the three circles I spoke about citizens, service providers and environment are coming together in real time to solve open challenges. I am not interested in (inaudible) but I want to talk about things applied across the infrastructure. You are taking data from sensors and various CRM system along with human intelligence in the location at the time, we have done this also in (inaudible) one city opened data competition about improving public safety in realtime and there we work with a company which manages the CCTV using computer vision and what we have there is take real time CCTV footage for raw footage looking at things like air pollution to give people real time feed and social networks to so how they can improve the city. So we have done this and made it really easy for anybody to sport snaps to prioritize the change, create the feedback loop and we have a product and API all the usual suspects. What I am interested in is partners. If you guys are looking to roll this out in your own city or your own UN or campaign or IT campaign and looking for partners because we have the system ready to roll out, it is working in China. I am interested in the development goals and I believe this approach of human collective intelligence can really solve more hairy problems. If (inaudible) independently Singapore, he has an IOT healthcare system put in the housing care, currently if Mr. Lee is not well or he hasn't shown around, then the call center from SGP calls to check in on Mr. Lee. You get a notification. So all the neighbors go and check on Mr. Lee. So basically that's it. Seven minutes.

>> Wow. She is so full of energy. Thank you.

[APPLAUSE]

And Priya just got off a plane. Imagine her after a full night's rest. Wow. And now poor Santo has to follow her. Great insights and the direction we wanted to go on real use cases, discussing convergence, looking forward to the rest of the conversation.

>> EYAL SANTO: Welcome. Some people claim that I'm bicycle crazy. I really don't know what it is about. Maybe because -- I will stop here. Where's clicker? Thank you. Anyway, do I need to stick to the microphone or can everyone hear me?

>> For the audio online.

>> EYAL SANTO: Okay. I understand. Can you hear me? Okay. So thank you. Welcome, everyone. My name is Santo. And I'm from urban mobility. We use AI to make cities smarter and people happier. How do we make this -- okay. So I mentioned today when you were paid to leave your bike at home and instead cycle or walk to work or do errands. When employers pay their employees to leave their car at home and walking and cycling. Or the day when our local, are paid to switch from delivery trucks out to clean and cycle logistics. Imagine the impact that it will have on our cities. In order to create this, we need more than the behavior change. We need a cultural chief and our solution helps cities do. This there are lots of challenges along the way and you are familiar with most of them. And just to catch the numbers, U.S. cities alone bleed almost 2 and a half million dollars a year every year for urban sustainability. But we're here to produce to show a solution that tackles seven important SDGs. With focus on SDG11, the urban sustainability. So the solution ices AI to help cities predict and solve sustain act challenges with the first and foremost focus on urban mobility and AV. For sustainability, it will help cities engage with incentivizing for the use of private cars and with AV, we help cities preferences making sure that AVs move around our streets in the most sustainable manner. Where is that? Why isn't it clicking? Okay. Sorry.

So we bring together cities and people. Employers and employees, commuters and local businesses to create an ecosystem benefiting from sustainable urban mobility. In essence, what we do is we map for the city. They were based on city strategy. The mismatches between city sustainability strategy and the status on the street displayed by populations or by geographies color coded by urgency. And when clicking each of the mismatches, this is a project that we're doing in tele vive. Then drilling down you get a lot of details about the mismatch, but more so we use AI to provide actually insights and recommendation for the city how to resolve and optimize this mismatch. Those recommendations are machine learning generated. We use predictive analysis and best practices and shared through other cities of the world. Those are accommodations that can be aimed either campaigns going out aimed at cities such as first line campaigns for sustainable commuters, for drivers we want to switch as well as campaigns that are aimed at (inaudible) itself IE for city planning and urban design such as change or reproposed public spaces, build bike lanes, change or modify bus lines, et cetera, et cetera. The solution is based on city strategy. We code industry stat gees about AI algorithms. We have data on unifying silos from all corners of city hall. This

is very important. We then match this data and analyze it together with city strategy to come up with this (inaudible) of the mapping of the gaps and the actual insights and recommendations. Those recommendations are first and foremost as I said are focused on urban mobility in AV, but future models will take care of additional dimensions of urban sustainability to civic engagement urban forestry, et cetera.

All with the aim of creating a global network of cities sharing their knowledge for the benefit of their people. Current models actually existing standard models already show precise information how. Damage is inflected on our cities in urban societies by each and every car driving in our streets. This damage is shown by -- we can see expressed in public health in affordable housing prices, in pollution, in deterring local economy, in social inclusively and loss of social increased (inaudible). And the very same models show how much cities and urban societies can gain from each car removed off the streets and the driver switched to sustainable commute even as little as one time a week. It is like raindrops, if you will. And actually they make up an ocean and it helps cities build their own for themselves, strengthening their fabric, the social fabric, strengthening actually the infrastructure cost and doing all the things within SDG including, for example, strengthening the local economy when corporates were part of this ecosystem. The city would allow their employees to redeem their incentives and rewards with local businesses does the value and money go back into the local economy.

One last word. Our solution will help cities insure that past mistakes do not occur again when the AV generation comes. Our vision for the cities will have share good congestion free. I invite you to join me in changing the world one city at a time. In the words of my spiritual mentor who I was privileged for her to sign her book for me saying keep fighting and I promise I will keep fighting for our cities. Thank you very much.

[APPLAUSE]

>> Well, our first two presenters finish right on time. 20 seconds ahead of time even which putting pressure on me just because I'm the moderator doesn't give me extra benefits. They actually asked me to present. Or do you want to present now? Do you want to present?

>> Go for it. Yeah.

>> Okay. Okay. Yeah. Okay. So I have another seven minutes. I'm going to time myself. You will find that we are actually all talking about mobility in some way directly or indirectly. We're also talking about incentives and how we can get users to embrace this. We're talking about urban

sustainability which is the key focus. I am waiting for my presentation to be loaded. So I guess I get to reset two of my presentations. There we go. I appreciate it. Yeah. Thanks for that.

>> (inaudible) you have like 20 seconds.

>> I already used T. so I will introduce to you a few things. A block chain project I developed with co-founders and there's potential applicability in our project. And I'm also going to talk about convergence which is being addressed in this conversation. So some of the problems, some of which we have already heard from the other speakers that were experiencing around mobility in inner cities is that we have extractive sort of global companies that are imposing their will on city infrastructure and mobility and settles and that's of course not always well received. We also have and this was talked about in the first session a lot of emerging innovators start ups who are introducing all kinds of cool forms of alternative mobility solutions such as electric scooter sharing or even peer to peer bike sharing, for example. In Barcelona, we have peer to peer boat sharing. We have 51 identified shared operators in Barcelona. But each one of them is independently trying to build their entire technology stack and each one trying to build their own network effect. Each of them trying to complete with the global behemoth as well and they're not succeeding. March cities looking for ways to increase efficiency, address first mile and last mile and gain better insides into how they should roll out further transportation solution. So these are some of the problems that we have identified. This is sort of an early demo of the technology we're building which is a two layer architecture with block change, marked contracts at the base of it, but we're using a lot of open source technology all the way to the end user. With the ultimate goal that the end user will have seemless access to every legal private and public mobility service in their city. Instantaneously through a single or (inaudible) app. If you want to leave here and go somewhere on the waterfront and I plug it in, I could be given through an application driven by this technology a multi-modal solution that might include walking, bike sharing, public transit, car sharing, car pooling, any service that's legal that meets my requirements or needs to go from here to there could be aggregated with a routing booking and payment integrated functionality so that I can in one stop seas every mobility service and book it and pay for through unified application. This is scaling around the world this concept of mobility as a service. So there's different ways of thinking about mobility as a service, but some people believe that ultimate sweet spot is you have an aggregation of public and private service. You

get unlimited access to any of those mobility services during that month. That's one model mobility as a service. We consider what we're trying to build this internet of mobility is like a next iteration or next stage because it is an open platform allowing unlimited public and private services to plug into the platform and also allowing an unlimited variety of options for users in ways like you can package what we call a DMOS, decentralized mobility as a service. Instead of a single company deciding they will aggregate the biggest companies in one package for you, you get a package designed customized for your needs based on the 51 or 61 or 84 mobility services that are available that might be useful for you and your weekly transportation. This is our founding team. I want to particularly highlight Joseph who is our CTO, but Victor Lopez is finishing up his Ph.D. in machine learning. It can be a benefit to our project. So I'm going to role into that in one second.

So I mentioned I wanted to touch on convergence. I think people are talking about convergence in one way or the other. Priya talked about it in the sense of human and AI intelligence. And I think throughout the conversation, we're hearing big data and AI and all the rest of these and how it will relate to SmartCitys. I think another really powerful one is blotching in AI. One of the things I am most excited about with blotching is how it can keep help in check AI. I mentioned about this go? Decentralized AI versus centralized. It can facilitate a more decentralized in AI which doesn't give a power to Google or Uber, but it sends the information to end users and participants in the ecosystem. What are some examples of how we're looking it might play a role as we roll out our solution? So one interesting thing. Imagine with aggregated data around realtime user demands from all around the city. You can have like a liquid bus line. But it movies around the city based on demand in different areas. And this relates to when you think about that, you talk about resilience as well. What if there's a disaster? You can mobilize certain flights of certain types of vehicles? Can you offline demand in peek areas to non-sort of public transit solutions to F to P, peer to peer providers to solve peek demand issues? These are examples of things that we believe can AI and machine learning will facilitate. So you're going to see a lot of dots on this. Where do we think we can play a role? What are we doing have anything to do with poverty? Sustainable goal one. One thing we're looking at is the individual of tokenization. So could you, for example, like I was in Singapore. I don't know if any of you have been there, but Singapore has very expensive car ownership, which is a really good idea because it is shifting people to non-personal

vehicles. They're doing that through a lot of approaches, but one of them is through making it very expensive to own a car. You can tokenize car ownership and turn that into peer to peer car sharing platform. So maybe I can't own my own car. Maybe I am retired and I want a little extra income. I want to put into something that's being monetized and being used. So that's just one example. I have to wrap up because I also had seven minutes. One proposal for you to think about we're working with a group of other global organizations to call a block chain city alliance is the idea of aggregating several cities and other organizations to collaborate around use cases for block chain and AI and how can cities, SmartCitys embrace the technologies in ways that will be useful for society. With that, I will leave you. Thank you very much.

[APPLAUSE]

>> Over to our colleagues from Sage. They have a slightly allergy window. There are two of them. So they get twice as much time.

>> Thank you so much. Thank you, Boyd. I want to share two stories from my childhood with you guys today. The first one I grew up in India. It is a fairly conservative part of the world. As an 8-year-old girl, my parents the first advice they gave me was don't go out on the streets alone. That was probably because I was a child. Great. I wasn't allowed to go out on the streets with my mother either technology made me curious what was going on. It turns out my mother, my sister, every other woman around me in my community it wasn't safe for us to walk out on the streets alone by ourselves after dark. That was kind of disturbing for a little child. But it's not going to be all doom and gloom. I have a second memory from my childhood too. When I was 12 years old, I got really interested in computing. I wanted to build a computer because I didn't have one. I can read a book and build one. The next thing I did was build a robot. I was 15. It was solving a very big problem for humanity. It would have the chocolates from the snack bar every day. What I learned from the experiences from pyro bot was wow -- from pyro bot is machines have the power to make autonomous decision. Now try to Connect the first two points. There are so many women, young girls, even adult women around the world who don't have access to safety. It should be a fundamental human right. On the other hand, there's incredible technology that can start to solve real problems facing the world today. And that gave me a lot of hope. I grew up and lived in many places. I lived in Asia, Africa and now I live in Europe. It was another shocking thing I learned. It wasn't just a problem in India. It was a problem everywhere for women who don't feel safe. What was worse is the place I felt

safest, my home, was a problem for many. They were unsafe in their homes. And this is what they're going to talk to you about today. The combination of using AI to solving massive issue plaguing society that we never speak outloud about. That is domestic violence and abuse. The safety at home should be a fundamental human right.

So let's go back to my positive vision about AI and technology and how it's going to save the world. And this is why I learned technology. I became a technologist. I have been doing this for 15 years. What all this optimism came is the power of development. But yet again, I was disappointed. A few years ago, I started to see while the machine learning is progressing, at the same time, there's a fundamental lack of emotional ethical leadership in the projects we are solving with AI. As most of you know, maturity of the benefits of AI are going to advertise, marketing. You kind of decided to shy away from solving the most difficult issues we should be tackling. So now we go back to the bold vision I on in mind as a child of solving real, difficult uncomfortable challenges using technology. It all coming down to ethics to the point you don't have to wait for a machine on algorithm to become sexist, racist and then try to control it. We need to build machines and AI ethically from the get go. We need to solve the right problems using technology. We need to make sure the right people are building technology. And we need to make sure that it's in safe hands. And that's where Sage comes in. I am really excited to share with you that the Sage foundation is focusing a lot on making AI accessible and available to communities to women, to youth at risk and I would love to invite my friend and CEO Stephen Kelly.

[APPLAUSE]

>> STEPHEN KELLY: Great job. Thank you. So today I want to speak out on behalf of the millions who we feel miss out if we don't wake up to our responsibilities as Artificial Intelligence disruptors. So let's address the big elephant in the room right upfront. Too many big companies have been called out and abusing their powerful platforms and helping themselves, but what that led to is the rich get richer and making the poor get poorer. Now we believe that with the full industrial revolution we can be caught out again. We have a moral duty to build technology for all humanity. Now Europe second's largest technology company in the software business, Sage takes its responsibilities extremely seriously to insure development of AI benefits all communities is part of our DNA and this is our noble cause. As Kriti said, it's about strong ethical leadership and a clear moral compass. And that's why Sage was the first company in the world to transform the code of ethics

into the ethics of code for Artificial Intelligence. We believe in addressing the diversity and inclusion that AI offers for businesses to haul in the long-term future. We want to be part of the movement to design AI for good from the start.

It is about reimagining how we use these technologies and great things available to us to tackle some of the biggest challenges we face in our cities. The reality is if we don't tackle this head on now or just repeat or worsen the deep inequality that exists, if we let this happen, we'll be guilty of squandering a unique opportunity in our hands, a once in a lifetime opportunity that we could miss. We want to talk about the injustice. This might make us feel uncomfortable. I don't apologize for this though. As a sustainable goes highlight, gender based on a widespread problem especially in developing economies. In south Africa, domestic violence as an example is deeply entrenched in institutions and fundamentally part of the culture which has led to the highest rate in the world. Almost five times higher than anywhere else. In 2016, official statist ages recorded 32,000 domestic rapes. The scale of the injustice is greater than the highlight. Reporting to the police is courageous. And yet painfully low. And with a study, it suggests that only 1 in 25 cases of rape will be reported. The statistics tell half the story. Today, I want to show the personal testimony of three women who were supported by our social justice partner in Africa. Their words are the reason why Kriti and I are here today. The first woman said: If there's no conclusive proof, if he doesn't push me or hit me, we tell ourselves maybe it's not abuse. The second woman said it was difficult to relate to it. Before it happened to me, you just don't realize it's happening before you're in it. It's not as simple as it seems. And the third testimony. Even family would judge me. Thinks are said. What's wrong with you? Why don't you leave? What are doing that provoked him? You feel judged by everyone. You don't expose it. You lose face. You are shamed by the people that you love.

So I want to be very clear. There is a great opportunity for AI to help with abuse and harassment. And this has to be a fundamental priority for our small and inclusive cities within our strategy to focus on. The potential for AI to revolutionize how we tackle this evil is there for the taking. And in the era of me too, the world is woken up to the scale of discrimination and the abuse of power, but it is our responsibility to go beyond hashtags and find solution for all women.

So let's imagine a world where technology took the stigma and the fear out of speaking out about violence in the home. The listening would allow people to use their voice and to shape a solution with tailored support showing us the way that someone

out there was listening. What if this could all be achieved at unprecedented scale enabling countless women to get help and the support that they need without fear and without shame. Is that possible? I turn to my friend Kriti.

>> Kriti: I'm an optimist. I would say yes. And reimagining Stephen outlined how we can create a platform that gives voice to all of these women is being turned into reality by Sage Foundation. We are using our technology, our expertise and our ethical leadership to solving this demanding problem to saving lives and supporting women in crisis who live in fear of domestic abuse. For us, it's not about building SmartCitys. It is about building smart ethical inclusive cities.

Let me introduce to you rainbow. Rainbow is a smart assistance, a relationship companion that will save lives in South Africa lib rating women from violence, abuse and harassment. It's reliable support service for women seeking information and advice. You will be amazed to hear. Today if they want to get advice, they are given the south African domestic violence act of 1998 a long legal document to understand what is wrong with you of what is going on. In reality, when people go through this experience and I spent a long time, a lot of time speaking to many of these women for days, they don't even associate with the term domestic violence. If the information we're giving to them is in these words, it doesn't work. That's where AI comes in.

So I'm going to show you a very quick demo if you turn to the screens. As you can see here, Rainbow uses words such as I'm a relationship companion. My friends call me bow. It takes the issues of being age to speak up or not being able to speak up. And also adds a friendly relationship just by using a nickname. I wanted to dig deeper into the design of this product for the next minute or two so we can truly understand how do we make this work for everyone.

Now, if you pay attention to a couple of points that I really want to pull out, it talks about abuse and relationships or even helps you understand what your rights are and Connects you to experts. We know it is not about replacing the human connection entirely. Stephen mentioned, only one in 25 cases of rape gets reported to authorities. This highlights a deeper cultural challenge and there's a need to offer help. When talking to human, it is not possible or comfortable. That's a design in lesson number 2. When I spoke with these women, I learned a very interesting insight. Quite often for them to speak to another human being to ask for help even their closest friends, families or networks in the religious communities is very difficult. But (inaudible) to talk to a machine instead. And that's because machines don't judge you. Humans do.

Moving on. There's another design offer number 3. You will see an action there where you can talk to rainbow as my friend. There's a story behind this. We started talking to the women and they said oh, this happened to my friend. And she was in a controlling state two hours later when they're really into the discussion, they say actually, it was me. It is reducing the barrier to getting people introduced to the service by giving them this persona that you don't have to be uncomfortable talking about what is going on to yourself.

You also see a lot of information on Connecting to human experts when they're available. So we do use machine learning to understand the psychological patterns and what is going on in the event and right them to our partners we have a strong network with.

Also I want to talk about mets and misinformation. Stephen mentioned in one the testimonies, a very common misconception is that if the abuser is not physical, it is probably not real. And Rainbow gives you information about how to address that and changes it. Free to use and first of its kind launching in South Africa is available 24/7. It gives women access to their information about their rights, guidance and emotional support in a discrete and secretive manner T. gives them the freedom to act when they are ready. If you don't want to report what's happening today, you want to take your time. You don't have to lose the evidence of 25 incidents that happened to you and that's where it is revolutionary. When humans make a move faster, why don't you act. Why don't you work on it whereas you need to take your time. That's what we enable today. Reassured and less intimidated. We're looking to give people the power to take the first step. You also make sure it operates in the space where people need it in that they can access it and other services with no additional mobile costs, no app to download.

Lastly, we want women and men using the service to become peer educators themselves. Many people in the communities once is normal. (inaudible) as a young child that it is normal not to be able to walk out in the street. That behavior needs to change.

We also let them understand what the first signs of abuse are and what a healthy relationship looks like. And how they can gain help from their community. So this is how we build a foundation of the smart ethical inclusive cities of the future by solving some really difficult challenges using AI designed in a compassionate way. We have done a lot, but there's a lot more to do. We're looking forward to collaborating with you guys if gone -- and I already spoken with a couple of you and we're really excited getting call Friday Brazil, Kenya, Nairobi, Australia, California already. Many of these people we met here

just yesterday who really want to get access as soon as possible. I would love to speak to anybody here who wants to work together to make sure that we reach over 100 million women who face abuse in these countries.

And now, Stephen.

>> STEPHEN KELLY: As Kriti said, we can't do this alone. We are looking for partnerships funding and support to each over 100 million women. It is not about hashtag. It is about real solutions. You have seen a real solution with an app. I would like to thank you all for listening. We show case just one small part of solving the puzzle of using artificial intelligence. I hope you agree it's an incredible moment at this time when we can seize this opportunity and the potential of artificial intelligence and you can build this as part of your strategy for smart inclusive diversities because it is a time where we can solve the hardest challenges faced in society. It is a time to create mart ethical cities that work for everyone. It is a time where we insure we build AI the right way, the ethical way from the get go and embrace the disenfranchised. And that isn't just an after thought. So as ambassadors of the technology industry, we need to make a stand. We need to double down and offer more leadership and not bow to the pressures of AI just to be used solely for the commercial or profitable gain. Thank you very much.

>> Thank you.

[APPLAUSE]

Thank you S. this working? Okay. So we have a range of experts on the panel today talking through a whole bunch of things. All of them I think there's at least one Connecting point which is understanding the human implications and human engagement around AI in cities is going to be really important. I'm happy that was sort of a common theme.

We want to turn it over to you for the last 15 minutes. So we're going to take questions and dialogue from the audience. I know you have speakers in front of each one of you if you want to be yeah, I think you should use it. Otherwise they won't hear abroad. You might have to press a button to make sure they can hear you. You have a question here in the front? Yes.

>> My name is Elena. I am the founder of Acorn initiatives. I am also survivor of domestic violence. Until I came to citizens advise bureau, I did not know I was suffering. I was an abusee. So I want this tool available in schools for all girls. How can this happen?

>> I think you are absolutely right. I'm a fan of the work you're doing. I know we have connected a few times. I actually think the way we would evolve it, we don't want it to be a bottle neck. It has to be embedded in the agenda of making

cities work where it's not just solving certain problems, but works for most difficult challenges. And I also think digital tools give us the ability to reach people. If you learned in south Africa, especially request young girls, it becomes a norm. My own experience where you don't know what these issues are. And some of the design patterns we are using is it starts not by saying as you saw in the little demo. It's not to say I am here to tell you about domestic violence and abuse. Your relationship companion, what is going on. And pattern detection, we can identify almost think of it as a score on what level you are. A lot of it is early intervention. Once somebody has gone through a very difficult situation, humans need to jump in. That's where non-threatening conversational approach would work really well and not just for violence, but also a lot of other areas where teenagers struggle. This project has opened up so many ideas in my community of AI buddies.

>> We both agree you educate boys as well. And therefore, there's a unique opportunity and we would love to talk to you afterwards about how we start something around a pilot to make that a reality.

>> We have another question here. I will go here and then here.

>> Alejandro Saucedo from the machine learning. Does this system support languages beyond English as I would be very keen to not just take it to Mexico but to other places where I have connections.

>> Yeah. Absolutely. We are -- in fact, I am building something in Hindi for India right now. They have their own limitations in that it works much better in English. But I believe, I strongly believe when we start solving problems in developing countries as well in non-english speaking countries as well, technology would mature. That's another form. You haven't invested enough research in the languages and we don't have enough digital data, but that's changing now. Let's talk.

>> We have a question over here. Also I have been informed we have until 12:30, which is great. And also, some people are submitting questions through that are going to be displayed on the screen as well. But over to here first.

>> Thank you very much. My name is KJ. I am a member of parliament from Kenya. I wanted to know if the husband real impact on how governments and I'm talking about local governments in your community are prioritizing the project. They really have an effect on how maybe not just maintenance, but also the development of new projects that within the community are done. Also the (inaudible) and have an impact on how local community policy is developed. Am.

>> thank you. Hello? Can you hear me? Perfect. That's an excellent question. It started as a pilot, but what became very interesting is once we started collecting those reports and we could see they were pockets of money in the local government with the counselors following local neighborhood projects. So the concepts of crowd sourcing and funding is a step. There were lots of local crowd founding initiatives. They created a cusp of new proposals like a pipeline. And they had a 10-year contract with the City of Plymouth would go away from the OPEX budget and that's very interesting infrastructure because if you know how cities don't have much money, most of the time they're (inaudible) on the OPEX cost. You can start looking within the same across the budgets how you can start managing efficiencies in OPEX together and there was also some discussion. Unfortunately the city we were doing it change of government three times and not because of the platform, but it was just the nature of the politics in the UK at that time. And one of the funny stories that there was a local counselor who was using this application to understand the realtime sentiment of the constituents. But unfortunately because he moved on, he was no longer the counselor, but they realized they could create this transparency outside Facebook which can be quite noisy and create a focal point. That was quite helpful. We can skill this upon. Only we have tried this in the City of Shanghai, but we're seek local partners to bring this concept and this framework. So I would love to go --

>> I would be very interested.

>> Over here and I think then we'll go to some request questions online.

>> Thank you for your presentation. I have a research institute. I would like to know and ask the same question from Priya and Stephen. Which AI tool have you used in your system and how you could get data, label data and how much is accurate?

>> So we are -- because of the sensitivity of the information, we are holding and we are very conservative at the approach we follow. A lot of it is structured natural language understanding a natural language processing kind of tools. In terms of storage of the data, that's where we are most cautious. We don't store a lot of the information at all. You make the decision based on the conversation and then at the moment, we are destroying that information unless there's a need to create evidence. In future what we would like to do and that's where we need support from authorities where if people -- if they want to use our tool to create logs and evidence, then we would want to store it on a distributed chain kind of network securely and also create the handoff mechanism. As Elena was talking about, the citizen advise bureau, we're not the police. We need to

create those transfer mechanisms so we can route to the right people. That link at the moment is what we are missing to complete the entire experience.

>> In our case, it is very simple. As for data, we don't own any data. It all belongs to the city. So the city is the trustee perfect organization that keeps (inaudible), et cetera. We allow the city to -- we actually allow them to use it or grant them the usage. So we are not handling any data. For the tool itself, we are coding it using gum and python if it gives you any idea, but again, as for the data, it is not ours. We don't have any access to it. The city does.

>> Do we have the questions coming up here?

>> there was more questions from the audience.

>> I want to blend it. If not, we'll go back to the audience.

>> While we're waiting, we'll go to another question. Yes.

>> All right. Thank you. My name is Kenny Chen. Earlier you much talking about the common ties between all of your work. I interpret this as all of you pursuing means of technology to enable access to resources within urban environments. And this is something that's been a promise and ideal for (inaudible) since the internet became a thing or phonebooks. It's exciting with the use of AI and more skillable technologies, but I think some of the same issues still come about. Three or four of them, one accessing and marketing of the tool itself and getting that user option. Two, the actual user experience, you know, whether or not you can get that kind of ease of use around highly complex information. Three compatibility with partners and systems that you have to work with especially when some of them are not technological adapt or (inaudible) to fit with your systems. And finally scalability within the scope of a city. So I'm curious from each one of your perspectives in terms of everything from early testing to insights on how you continue to navigate that environment, what worked really well and what questions might you still have that could potentially be pursued within the scope of a project? Thank you.

>> Excellent question. I'll start with just what we're working on at IO mob, you touch on various factors with respect to whether the adoption and success of the technologies will reach some sort of ubiquitous access for all users so that the impact is optimized and we're working on that at IO mob in a lot of different ways. We're building the entire stack ourselves as a starting point. So all in open source with the idea that the community of developers locally and globally can contribute to improving it the user experience and the rest. Also I think what's maybe different about our model compared to others is that it is so decentralized in the sense that any legal mobility

provider can plug into our protocol and therefore be discoverable by users which is a really inclusive. You are referring more on the user end, but I would also argue on the provider end that what we need in cities is a mechanism to allow individuals and local start ups to compete on a level plague field and one of the things we're trying to do is enable that by allowing each of them to have access to an open network effect. Then that goes to something else that's really interesting which is the what you would call the web 2.0 world of people who want to build (inaudible) and have their own IP and network effect. How do they play with a market place like the one we're building. We had some interesting conversations with some mobility service providers, CEOs who are actually not that excited about the idea of collaborating in such an open format. So they want to say how can we offload demand and we can't meet it without letting others have access to our user base and other things norm ail and we're designing mechanisms to allow for that sort of scaled integration to a more open market place. On the end user side, I think obviously the UI is really important. I think in our case, we are hoping more often than not to collaborate with cities rather than just operate independently of cities and that the public transit authority embraces the technology and integrates public transit into the private transit system to address first mile, last mile. When the city embraces this, they have the marketing muscle and capability to enable residents and give them access. There is mobile penetration rate, smart phones and location base isn't as high as in others. So that's a barrier because in our case, you will have a hard time using our technology without having access to a Smartphone. That's a base requirement. One last thing totally off track, but not connecting to that last point. I used to live in Argentina. There's this tiny town called (inaudible) Argentina that's this little town that could. They're embracing SmartCity approaches. I think they have a population of 20,000. They have CTOs really smart about smart stays and they decided because they were rolling out all kinds of services that we're dependent to end users, they would have their own cheap Smartphone program with a national telecom company. I would say equivalent to like $20. So even as the digital divide could be addressed in a smart city, but I will pass it over.

>> Thanks. It's a great question and loaded question as well. I will use my personal experience. I think there's a famous line that technologies are a solution, but what is the problem? Most of us have been told to come up with solution, but what is more interesting is the problem. Falling in love with the (rather than the solution is the first design principle I would use. So in our case, I think smarting with the small

sample set instead of going city wide and trying to take a neighborhood or a group of people and having a close trial and really figuring out with those group of people and how you can (inaudible) user experience, finesse the data. From a technical architecture side, I think it is really important that you're creating enough APIs that can talk to Middleware. Normally in a city stack, it is the most problematic past because you have large companies who have procured into a contract and you can't talk into that. You can't do (inaudible) on somebody else's system. You have to put in some time and what are those CRM and middleware stacks and you have to find ways with working with a contractor to develop a sandbox just for the time of the pilot. Going back to Kriti's point. There's an important thing around data. We did a (inaudible) demonstrators and the ethics of data from pilots because there are so many smart pilots and people get misused as well as signatures to become sensors, but they never get to sigh the results -- see the results of these pilots. You need to have a contract in order to manage expectations after the pilot, what is going to happen. Is this going to be a live service? Is this going to scale up? I think having a communication offline not trying to maintain everything online is important. So in our case, we used to run a lot of meet ups in pubs where young mothers go with (inaudible). It was more conversational and less about the technology and then people could see the benefits. So I think having that human dimension and normalizing technology that is shiny and new is quite important. From financing perspective, there is no money in SmartCitys, not yet. That's why if you see IBM and Sisco and these companies moving out and they're going to whatever else is the latest buzz word. I think you have to be quite humble. As a developer, you might be forced to do a free project. Not going into the idea you can take funding and sustaining your projects. So you might need to be commercial from the big thing and not look at smart cities, but really look at individual challenges. What Santos is doing is quite interesting. It is not about the city, but as a vertical (inaudible). I will let them continue.

>> thank you. The question is very interesting. We have presented the solution to dozens of cities and there's no city like the other. In the, casings and user cases are different even the Legacy systems are different. Of course from our perspective, the hardest thing is separate silos in cities. The Legacy systems where education department does not know or does not talk to traffic and traffic does not talk to welfare and welfare does not talk to revenue. You have to plug in to each and every one separately down the line would see collaborating with a big player because we don't want to be project company,

but a solution company. The project companies, the IBMs, the (inaudible) et cetera, they are the ones who already have the expertise and actually APIing everything and we do see that. But coming to this definitely we have different cities presented of different types. (inaudible) wanted us to focus on their bike share. Chicago asked demonstrator they had with the redline train especially on Monday evening when they have cubs games and everything is condensed and congested there. See everything is different. Eventually we're boot strip start up and we have to choose the best. We cannot respond to all. We can work and the strategy means putting pedestrians first, psyche lifts second, solid public transfer third place, delivery and logistics fourth and public cars on the bottom of the pyramid. They can finance it either way through public private partnerships and they're ready and have some kind of relation with their citizens, with their population. And we chose eventually to work with our back yard tele vive. It doesn't have the correct strategy in place yet, but it is -- we're working in the same time zone at least.

>> Okay. Turning it over to our Sage companions. If you can quickly address this question, it is obviously a massive issue for the tools they need to engage with the service. But if you can follow up with an answer to the second question listed here, which is directed to you as well, which is in a case of abuse, where is the data?

>> We'll do that. Also, you can ask the questions and one of the hats not with Stage until 2014, I was very privileged to be chief operating officer for the UK government. I will tell you about a project where can changed the lives of 6 million people. The government had 132,000 URLs of websites to deal with the public. It was a complete mess. So brilliant people got together at the time. (inaudible) who invented the internet and came up with a new design for the government upside down do everything from the perspective of the citizen. You starting with the use casing from the citizens point of view. That basically resulted in turn in project of the UK, which reported to me very privileged and a couple of things in terms of learning. One is technology was what we're talking about today is revolutionary, but technology changes the policy paradigm. So we found when you put this into unification and put the citizen of the heart of government and allow the citizens to choose services, then you need to stay in that central government, local government cities. What it also allows to you do if they come up with radical new solution for the policy makers where there was a gap, it was almost like the tail wagging the dog because normally policy drives things and big government lock down on citizens. This turned the world upside

down because the citizens were in charge and they control their destiny and how they wanted a relationship with government. The other thing we found hugely effective. So there's a loft education we policy makers we needed to do. Second thing was around behavioral psychology and how we can (inaudible) into algorithms what citizens needs were. Relative maybe a care allowance that would be relative, but other related services they needed to support their oddly relative, housing, community social care. So what it also allowed us to do was streamline a lot of government and make it more efficient because when you look at it from the point of view of the citizen, you find historically over 10, 20, 30 years. Governments build up bureaucracy or services that don't meet the user need. Now in the world of AI, they go on a journey to really accelerate everything. The technology this was 2014, this sort of technology wasn't ready for prime time. But it is a lot of hard coding algorithms with the UK website. There's learners there. If you want to talk to the king government about their experience, good news is it was all open source. So that code is used in the Canada, Australia, New Zealand and also we have been out to Washington and helped a lot of governments redefine their relationship and completely reimagine the role of government serving its citizens. They can tell you about the bucket loads of cash for the tax payers as well. Now back to Sage. I thought that might be interesting. In terms of got questions whether data is fully centralized.

>> Kriti.

Some bad news. The data doesn't exist in most cases. We are -- that's something you need to start working on now. It's because there is massive amount of underreporting of abuse. We talked about 1 in 25 cases get reported. The rest of them don't even when they do get reported, it is usually the 25th incident on average when they do go out. A lot of this information is lost for various reasons. When it does get reported, it is fragmented. They don't speak to the judiciary. We're all at all in many cases. And also their challenges where non-profits are involved. They're there to help people on the ground. But they're not equipped with the processes in place to collect and gather that data. The most aye ever seen is the hashtag metoo movement on social media. That's the only source we have. Some guys are doing amazing work. You guys in Brazil maybe you can jump in and tell us more about what you solved. You're the first person I ever met in this world who is working on abuse and they have charts and numbers to share. So what's your secret?

>> You want to answer that before we move on to the next question?

>> Sorry. Excuse me. I wanted to add to the question. I wanted to know -- I'm Marla. What happened do you do with the data you get on the Rainbow app?

>> Yeah. Within the app, we don't store the information ourselves. I was answering Ale hasn't row's question earlier. We don't store that information right now because we are not equipped to do so to handle that information. We do work with our NGO non-profit partners who guide us on what to do. The next step we really need to do is work with authorities to create a trust or a platform for us to be able to create that data and accumulate that. And also make the whole reporting process more transparent. It is very fragmented by cities, counties, countries, all of those issues need to be solved. But there are some people doing great work. You guys in Brazil which should be great. I know you will be speak later.

>> It's work. Thank you for the question, Kriti. And thank you for (inaudible) yesterday. We have the data cause of the job. The long term job with house (inaudible) told you. During this 27 years, we are working with this woman. So we have this data, but we need to transform this data in AI. This is our problem right now. We have this data and we have to transform this. So we have really a good job there. We know this woman, but we have to talk with more women because we know we have a lot of women more to talk about it. So if we can work together, I think we are going to a very good partnership. That's it.

>> Sounds like a plan. Okay. I know we have a question over here and maybe we'll go back to the online as well.

>> So this question is for Mr. Santos. So yesterday when we talk in passings, you made a comment about the Uber are killing the comic of the cities. Are you referring to all the car companies? What is your thought? Why do you say that? Am.

>> thank you for the question. It's a very interesting one. Well, I refer actually to what you call PMCs. The traffic network company such as Uber, LYFT and the others and the data is accumulating. The first report was almost a year and a half ago made by Bruce Sheller who was the deputy commissioner that Uber and the like are clogging our cities. In New York City alone, they generate extra 600 million (inaudible) must travel. And the evidence is piling up not just from New York City, but UC Davis had their own research about other cities from Toronto to Chicago and others also places in Europe where it has been shown that contrary to -- I am referring to Uber as a general. But they're actually taking -- well, they claim they take people off private cars, but the effects show it is very marginal. Only like 2 or 3% of their passengers get off cars. Most of them have been pulled off public transit and cycling and walking. And last year in Washington D.C, there was like a 40%

drop in the metro rights which was attributed to that effect which almost caused the collapse of Washington D.C metro. So in this regard, I'm afraid that this is the pre(inaudible) we have to use for cars because what I say is we do have autonomous cars. They have a driver right now, but for us as users, we don't care. For us, it is exactly the same experience as an autonomous cars. If we let this future continue without proper strategy and regulation and policies, then I am afraid we will not solve congestion for the cities like social inclusive, health cost and everything that is derived from congestion. We have to be very, very cautious about how do we form our cities form our policies because as you see, congestion and project all over the city on all of the fabric of the city. At the end of the day, we have to remember that people shock. Not cars. Cars were limited or bend and became more pedestrian it has actually projected on all layers of society from local businesses that increase foot traffic and increased sales. And researchers know how much local businesses are important for the fan wreck of urban society. I'm talking about the moms and pop shops that are extremely important to property taxes, et cetera. So we have to really, really plan very, very carefully to how we will implement strategies and policies for autonomous cars. As I said for us as users, Ubers and the likes are the autonomous future. I hope this answers your question.

>> I could add more to, that but I won't because we have 10 minutes left, but we have a taking on that. I want to go over one of the questions on the internet. It is getting a lot of interest from people that we touch on this one and it's a really important one, which is how do we see underneath bold in Africa? What tools can we put in the hands of the youth to build their part in SmartCitys?

>> I think that's a great question and one of the things is giving people the right tools whether it is giving them tools where they can also make it and build it and shape it around their neighborhood. So I think anything from starting from very simple mobile application to actively do things like fab labs and starts building things. I think the main thing that we are speaking about here is accessibility off the resources to people where they are. So I remember when I was visiting Caberra when I was designing Nokia phones, it is amazing to see the kind of technology coming out of there itself. I think it was reverse inspiration that the youth can bring two large companies that doesn't have to be one way. I think if you can get people to co-create services for starting from youth base needs itself and finding universal drivers, we have already covered things around abuse, for example, for young women. How can we make people be able to start their own small businesses in local neighbors like

that and see how they can scale it up. So (inaudible) spiking about block chain. We have Santos talking about mobility. I think creating a local economic system where the youth can contribute and build and shape it by using various tools can be a start.

>> Can we try to get through this relatively quickly? We have more questions.

>> I totally agree here with Priya. I see Africa as a cradle for innovation. I think things like Empeza came out from Africa and they proved that Africa and the youth in Africa can lead the future. One of the things I remember are the traffic jams in Nairobi and other places I visited. And I think that we should emphasize the youth educating them that it can be different. It can be different and I just read a very nice article saying that the future from mobility is actually 200 years old and it's two wheels. So I think that leading the youth in Africa to innovation about a bicycle is not just simple two wheels. It's a technology platform that can lead to very, very amazing innovation and to a new way releasing Africa of congestion and traffic jams, et cetera.

>> Hi. We have Joanne to lead the initiative. We have a core; a lot of my young people we say there's a huge opportunity. But also mentorship, (inaudible) and all the elements at every stage of their business journey. And then in terms of the contracts, the other thing is obviously education we touched on responsibility, but we think there's a huge opportunity for artificial intelligence to program the core future makers which targets disenfranchised children and all those sort of things as well. So they can be very much included in the mainstream.

>> Great. I think I saw some more hands over here. Is that right? Yes.

>> Hi. I am maria.

I work for the global partnership violence against children. And I'm so heartened to see your presentation from Sage. We work with 20 governments and (inaudible) partners in the field. We have 60 more governments waiting to get on board. Especially to make links between the app and service provision and getting integrated into the systems because I think if we raise the demand and you raise awareness around the issue, it needs to be around services. I see it as people tell in making this happen. So happy to meet you later.

>> Just one thing. You have a unique opportunity to do fine the responsibility of all the solution partners to provide the service to particularly women and men who need both the education, but also support. We have had lots of questions and actually, we believe in transparency. But to support

yourselves, define how the relationships work, I'm sure we have to start with the end in mind. But fundamentally, you have lots of charity agencies or authorities that you're working with and Connecting. It gives you a unique catalyst to have discussions as part of the complete solution.

>> We would love to have you as an Ambassador to support our partnership.

>> Okay. So we have several more questions that have come in here. I will pick on one that has three votes, which is if you had a magic wand and could change up to three traits or practices of critical partner stakeholders such as government, large or small companies, general public, what would you prioritize? And hopefully in that, Priya, you can incorporate in response to that other question that ties into this. I would like everyone on the panel to respond to this one because I think we all have different perspectives. I would focus on a couple things personally. One would be, I think, obviously I'm doing a lot of work with cities where we're at a city's event. Cities are increasingly recognizing and embracing innovation and disruptive innovation in a faster pace. Cities are having a hard time keeping up with the accelerated pace and I think they need more space for sandboxes, for procurement and innovation. For participatory budgeting, they need to start owning up more areas that allow them through regulations to react quickly and test new ideas without going through traditional practices and bureaucracy. So I would like to see more cities embraces those policies, which some of them are. And I think on one other point I would like to make which I mentioned earlier, I think we need to start getting companies that work in cities or that have an impact on cities to start appreciating the idea of contributing to a common. It is not about always creating meets around everything you do in your own technology and your own network effect and your own IP and start embracing the 21st century of distributed block chain technologies where the ideas instead of being extractive, which is where I highly align with Santo around some of the things around his Uber response, you create platforms that allow other entrepreneurs to be successful and the ideas that if each project is successful, then you can be as well. Just real quick example of how we're embracing that. We have no revenue model. Some investors, I don't understand. What's your business model and revenue model? But we have embraced in idea called a community token economy. What you do is actually build open source technology, make it essentially freely available to the entire ecosystem and the only way you actually succeed is if the token you have created that's associated to your protocol grows in value. And the only way it grows in value is if the ecosystem succeeds. So we're

aligning our own mutual interest around the success of the protocol, which is an open protocol with the idea that everyone on it could have more success than they could without it. So I think trying to break down the paradigms that it has to be about owning everything and building meets and shifting to a more open model would be something I would like to see more of.

>> I'm going to combine the two questions about prioritization and if I had a magic wand is a lovely way to put it. There's a fundament problem in the business model. I think people think the government or city has the money. From my personal experience, nobody has the money. You have to follow the money and look at value chain. I will call a spade a spade. Cities can afford to keep small start up with non-sustainable solution in IBM or Sisco. Once you follow the money, you will understand where you sit in the value chain. You have to look at hard numbers. We focus on potholes because it has insurance industry. Then you can make a claim and you start looking at the value chain of the players. You know it has 350 pound us and start modeling the numbers by taking a single use case of the problem. And that's how you try to understand the ecosystem. Only the potholes are like the crack of civic tech. That's a famous line from one of the other companies, but I believe the civic tech industry is not great for entrepreneurship. What we really need is we need to have an ecosystem approach. That's why if you do the B to B or B to G, we need an ecosystem like what Google has done with Android or apple. So we have very good expertise in the room of people that have done that and he's doing that in Dubai now as well. If you can find a way where companies like city map have taken advantage of open data from cities run services, then we can see the actual walking the talk of now they have their own buses as well. For me the prioritization of the problems, if you think about what's the most powerful over difficult problem to solve by creating transparency of showing the real time pent up demand from the residents side backed by local counsel, that starts to challenge the idea that decisions happen under closed doors and always through self-selected people. By use things like reach out and things people are uses rather nan a separate apps which nobody downloads, then I think we'll have a better case of developing that dialogue. I am speaking very fast. I'm sorry.

>> I guess if I had a magic wand, I would give it to Harry Potter. Are we all here for democracy? Do we all believe we all have the same rights equal before the law? So you agree with me that a bus that carries 50 passengers has 50 times more right of the way and space of the way than a car holding one passenger? I don't see too many hands here. I would like to quote on this good friend of mine the mayor of (inaudible) who

said that an advanced city is measured not by the poor driving cars, but if the rich are using public transport. From my view, it would be encourage to our leaders whop (inaudible). What they do is sometimes they may seem anti-democratic taking away driving lanes and taking parking lanes and that Connects to the visionary part that those politicians will mission and division and the courage to see beyond that. Because many times those project will eventually benefit and change the status quo will end up after their tenure. And they will not be the ones to harvest the low hanging fruit from this. The last thing is to have the courage also not to work with the citizens, but also to put foot in the door and hold against what I see the tech giants and the car makers. What they see is if you let the tech giants and the car makers, their wish is to sell us to as many cars as possible because that's their business model. If we let them again repeat the same mistake we have done for the past hundred years, we're up to what is called karmageddon. I would sell those three things with a magic wand.

>> For me, it's really about inclusivity. The problems we solve, the data we use, the algorithms we develop. They need to work for everyone and not just a small fragment of society. We see this with AI algorithms a lot. That's very important. Second is I will tag on to what you said about developers and SDKs and open nests, which is absolutely brilliant, but I would add a bit of caution on that when large tech companies do open up their platforms. They also need to put the right controls in place. The fact that just because it is available or accessible shouldn't mean that everybody should do whatever they want with it. Ultimately the data does belong to each one of us here and we all have a number of how much money companies make from our own data which we assume is a is free service. Those would be my big ones. Am.

>> so what does that mean? We are the world's creators. We are the big tech companies. You look at consolidation and success and market value. That gives you unique opportunities, but it can be prosperity for customers and partners and colleagues and shareholders, but we must focus on the communities and the cities we serve. We have to get out of our glass offices and get out in the streets with bodies and clarities and government that can make a difference because the world creation we have and the prosperity that drives the reserve can really move -- we're aging at unprecedented at times and we have the opportunity to do it right. I think big business, somewhat business should always think compassion and capitalism and step think in the community and always do the right thing.

(writer change)