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AI FOR GOOD GLOBAL SUMMIT
IDEAS FOR IMPACT: AI BREAKTHROUGH TEAM PROJECT PITCHES

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>> Good morning. Welcome, everyone, to day 3. This the moment you're waiting for. You want to see the last remainder, I would like to introduce you to day . This is the day of sharing back to everyone the tremendous work that's been put together on day 2 with all the different tracks and you a all participated. It is my pleasure to welcome Kenney from Pittsburgh, he's director of global innovation at an incubation center in Pittsburgh and producer of large music festival, travel festival, one of the largest in the U.S. and produced last year an Open Source report of the Summit. A few people know about that! I'll share that maybe!.

Kenney will bring you back one by one all of the track leads and share back with you what the tracks have done in day 2.

Kenney, up to you.

>> Thank you very much! Good morning, everyone! All right! I see -- I have seen a lot of sleepy faces this morning, clearly people were out partying late last night, by partying clearly we mean having long, heated debates over robotic ethics and Human Rights and whatnot, as mentioned, this is the most

exciting part of the Summit. I was here last year, it was already phenomenal and this year has been proven to be even better given action-oriented focused conversations that have been had over the past couple of days. The way that this morning is going to work, I'll bring up each of the track leads, they'll each have about 10 minutes to give an overview of what was discussed and determined yesterday over the full track periods. While they're doing that, that pigeonhole web app you have had access to, we're going to use that as a means of gathering not so much questions, but suggestions. Ideas for resources, implementation strategies, partnerships, to Wendell's point, you can identify also risk factors and if you do I encourage you to propose an actionable either solution or strategy for addressing that risk. I don't want to take up anymore time here. We'll go ahead, just right in the order of the programme. First representing the AI and satellite track, Stuart Russell.

>> STUART RUSSELL: I'll wait for everybody to come up on the stage.

We need to have the slides up. Thank you.

So we had a really fascinating day. As I mentioned the day before yesterday, I'm lead in name only and far from an expert in this area. All the real work was done by the experts you see on the list and I would like to thank Phil. Ipa for amazing note taking and John and Sean for the Rapporteur work they have done during the day yesterday.

We had a great deal of expertise in the room. We worked through details of three major areas and each of those led to a project definition. The first project is predicting deforestation before it occurs. Many of you are familiar with the problem of deforestation and the unbelievably awful scars it leaves on the earth. The idea is that we can supply imagery of the deforestation event once it is easily detected, and then we can supply imagery going back let's say a year in the past, an image every week, if we're lucky, an image every day of the same area. Then we train a system to recognize the early warning signs of deforestation about to occur. Rather than waiting for 50-square miles to be destroyed before you alert the local police, the army to come, put a stop to it, you could actually do this before it happens. That takes away the financial incentive to get in there and strip out all the trees, whatever else and then skip town with the money.

This is an old picture from 1988. You see the deforested area where the roads were taken out. Before there was the deforestation, there was a road. That might be a clue that deforestation is about to happen because you can't take the trees out or bring in the heavy equipment unless you have a road

to do it. Not all roads are actually leading to deforestation, there are plenty of perfectly reasonable reasons why you may want to have a road through the forest. We have to look for other clues as well. That's going to be the job of the machine learning algorithm to figure out combined possibly with other background information like permits, you know, the existence of habitation and so on, other reasons for building roads. That's project one.

Al project two, it is to basically keep track of cows. Cows are a very large part of the economy in many parts of Africa. They are a form of money. They are a form of status. They are the cores of many inner tribal disputes and wars, a lot of that has been going on in South Sudan, for example. What you would like to do, you wake up in the morning and the cows are gone. You like to take out the cellphone, say where are the cows and the system says here they are. You can go find them in this place and these are the people that took them. Wouldn't that be a nice thing to have. The trick is, not so much recognizing the cows, we can easily provide lots of supervised data using crowdsourcing where people draw a a little circle around the cows and the image and if you have high resolution, you can find the cows easily. The trick is figuring out if it is the same cow. The resolution is not enough to actually recognize the cow individually, this is daisy, butter cup, and most cows are not carrying GPS or license plates, although some fortunately do. With the ones that do carry GPS we should get training data on how, for example, cows move, how the appearance of cows changes based on context and the various other parameters of the model that you need to solve -- this is a data association problem. This is the same problem as tracking missiles with a radar, the radar sees the missile every 1.2 seconds and has to track it that way, here Bessie the cows 1.2 days and we track the motion that way. It is the same mathematical problem.

Here are questions from a cow from satellite photographs, here are cows in Texas writing out the word Hi. This is Elk. It is easy to spot the animals and you have constraints on how they move, they can only walk a certain distance in a day and you can track heards as they move around Africa.

Project 3, it is to implement the necessary analytical capabilities to support micro insurance. Many small holders all over the world are too small to be worth insuring for the insurance company because it costs more to go and visit and assess and undo claim adjustments than the premium that the insured is able to pay on a small holding. If you can use satellite information to assess the value of the holding, I assess the lost based on yields and the extent of flooding, then

you can basically automate the whole claims assessment process and make it very, very cheap to provide insurance to small holders, which is really an essential part of secure and stable agriculture living. .

Again, we can get fairly easily crowdsourced data about what crops look like on the ground and then we can correlate that with what they look like from a satellite image and you can measure yields, flood is straightforward. You know, from an ariel survey, the is visual and satellite, and you have all of the red, it is in regions covered by water, relatively straightforward to assess the risk of floods and the losses that the insured have incurred. Those are three projects, I want to talk about another project which sort of under lies all of these and this is a comment that came up over and over again during the day, we have had enumerable pilots, many resembling these projects and some resembling projects we'll see from the speakers and the world is drowning arguably in pilot projects for doing good. There is a huge gap between a project that does good in a pilot and an actual global service that's then available to everyone all the time. The project 0, it is to provide infrastructure to make the difference between a pilot and a global service. I'll explain what I mean by global service. For example, you take out the cellphone and type in weather Patagonia, you can type in whether where my dad live it's, if there is a storm you can see where he's -- how he is doing, anyone in the world core access that service. It is not magic. It feels like magic but it is a huge satellite infrastructure data download, storage, enormous banks of computers crunching through the weather data to make forecasts and then feeding that, the output of all of those analysis to various sort of vendors of information whether public or private so that people can access the weather information individually. That's what is I mean by global service platform. There is enormous amount of stuff besides just the analysis part. In the weather service, the analysis part would be the thing that crunches the numbers and makes the weather forecast. All the rest is common to any other global service which may be for example urban traffic state so many search engines, if you look up an area, say how do I get from A to B, they'll tell you the current traffic State of all of the roads between A and B coming from cellphone data which is then sold to the search engine platform which they then use to estimate the State of all the roads.

Global forest watch has a service to look up the State of your local forest and see what's going on. That costs them a huge amount of money because they had to build the global service platform for that one application. Another one that I'm

working on actually for a while, the global seismic monitoring service provided in Vienna and they report every major seismic event everywhere in the world every day and that report goes to all the Member States of the organization every single day. There is a huge global infrastructure, more than a billion was spent to create the global service platform. We can have one global service platform which we then look at overall of the imaginable applications we can ever think of for applying AI to satellite information and other kinds of data global streams that may come in existence. I think that would be how we move all of the pilot projects which are amazing, fascinating, they have enormous potential to do good and turn them immediately in global services. That's the fourth project, and thank you very much. [Applause]

>> STUART RUSSELL: By the way, ladies and gentlemen, honored delegates, that's exactly -- 9.5 minutes, let's have that kind of set the internal benchmark. Stuart Russell has both cost and benefit of being the solo lead here. As we go on, I would like to next invite the AI and health team with Marcel Salathe and Rameth Krishnamurthy. I think Sameer Pujari is not here or he's -- okay. Excellent. Yeah. Please go ahead.

>> MARCEL SALATHE: Good morning, colleagues. Before I begin, I want to thank my colleagues both Rameth Krishnamurthy and Sameer Pujari in the audience, they were coleads and also with me, part of the presentation will be made by Thomas, the second part, so with that said, we had a fantastic session and we proposed two key messages, it was every project proposed would be mapped into SDG in the way that the country would be adopting them and make sure that there be a mechanism for the countries to adapt them through a national process. There were four principle aims we had in that track which is to identify bottlenecks and with that said, we have four streams that articulated this process. The first was primary care and service delivery, the second was outbreak and emergency response, the third, health promotion and AI for health policy. The pitches made were consolidated so there are 15 pitches actually so I'll go rather quickly and show you enough to remember in pictures and there is a name to each of them. This is a picture that kind of summarizes all the different projects that came in in the pictures that will be categorized and each pitch was asked to simply produce the core issues and what the solution they're offering into the set template.

The first one, it is about detection of vision using AI algorithm for neuropathy and this particular person presented an approach to making this happen through more resources set off and it is in a working model. This is a project number one and you can take a picture of this if you will so you'll get an

idea. The second project is about detection of arthritis. This is still in the proposal stage, if you will, it is not fully tested but this is another pitch that was made that few want to put it out for you. The third one, it is actually digital identity using AI and this has already been adopted in countries I understand and this is a particular one that has a cross-cutting applications, not just AI for health but other areas as well. This is another one that's working, this is also pitched, and this particular project number four is about the health portal in South Africa. This is an entity that wants to make sure there is an area of algorithm to look at devices that enable the decision maker to take a good decision based on the medical inputs from multiple devices.

Similarly, you have project number 5, which is AI powered infrastructure and in this context, integration of systems and assessment of systems and diagnosis is the approach we have taken and this is a project that's been pitched as well.

This is a project that's about messaging in terms of high volume messaging or hyper text advertising for Public Health messaging if you will, this is good use for Public Health and it was another project that was pitched followed by project number 7, an integrated epidemic modeling and mapping the risk factors, this is another interesting project that is being pitched by the collaboration between UNICEF and a couple of other partners within UNICEF. The next one is also UNICEF collaborated project with another partner here and the AI powered malnutrition detection taking pictures of the faces of children and analyzing them and giving them a prognosis, if you will.

The next one, it is about child growth monitoring based on AI in image analysis as well as is 3 dimensional modeling and this is another one that was being proposed followed by our tenth project, strengthening it and coordination of AI-related resources. Think about what our previous colleague proposed as project 0, this is similar in terms of bringing resources, bringing subject matter experts and providing a laboratory environment to test the AI based resources to make it happen and so forth. This is about improving predictabilities for physicians and others in using the real data by scanning the EMR, electronicking medical records along with texts that will be extracted to create around algorithm.

The last one, this is one about AI for Public Health in India about scaling of AI solutions in the health systems and it is still in the conceptual stage I would say. This one, it is about primary care with AI, this is a preprimary care, if you will. This particular proposal is about collecting data and then making sense of the data by giving -- provisioning for assistance, primary care assistance to the individuals. This

one is about snakebite and the detection of snakebite and responding to, this is an algorithm for snake identification followed by providing a tool for the first time responders, if you will, frontline responders for health workers to be able to take an advanced measure. The last one, 15th, the AI social media mining to track health trends and this is already in works and this is an Open Source as well. This is another model that was proposed. This is about tracking Public Health.

These are all the proposals as you see, there are 15 different ones. At the end of the discussion, what happened, people also proposed a mechanism for coordinating and the need for standards required and operationalizing the proposals so that the countries can begin to understand how best to observe based on the authority that can tell them these are standardized and the methodologies are concerned. For that, I invite any colleague Thomas to briefly go over the focus group and presentation.

Thank you.

>> We saw the large number of great proposals and they have all many common problems and they need discussion, they need coordination, there is a mechanism that we're aware of. It is a focus group. What's the focus group? It is an open platform for collaboration on new topics. You don't need to be a member of any organization, anybody can participate. It needs to be well described what it actually does and achieves. That's in this definition in terms of reference. It needs to be managed. We also need to deliver something so it is really -- they really want to the achieve project goals. There's a secretariat that supports it. That secretariat would be provided by ITU, and it would also provide website and mailing list, et cetera. The focus group can conduct its activities electronically, of course, we have the discussion, we have the email, other mechanisms that can meet physically and it is up to the group to figure it out. By the way, all of these things are up to the group, the terms of reference, whether it meets, when it meets, how it meets and conducts its work.

It is also self-funded. We are -- we would be needing -- in need of a sponsor for the focus group as well.

There are examples of ITU focus groups and maybe the one that's most relevant to this is the machine learning for future networks including 5G and that's a focus group that was funded about a half year ago, it is already 2 meetings now, it is about to meet next in Santa Clair and it is running very successfully and achieving the goal of bringing machine learning into 5G networks which would be very different from fraud networks with the different mechanisms and I urge you to look it up, you can find it on the ITU site. Terms of reference, how it is being

set up, how it is being ran. So the proposed focus group on AI, health, it is the following: We want to basically have strong support of those many pitches we saw, and we want to provide a structure that we can use to actually have a more effective way of managing all of the projects and supporting them most of all. Threshold also overlap between the projects so that they can basically empathize that aspect. The focus group would then in terms of reference have use case descriptions that would collect data models, quality, talking about the interfaces and the architecture, it could talk about service and business models and everything would be Open Source, everything would be open by the way or talk about the impact evaluation and we would need some degree of certification that the AI methods for help actually work and it needs standards when it comes to data and it needs standards for regularization. Assessment, validation of criteria, enhancements. So we made the proposal yesterday and the direct feedback was WHO supports the idea and of course we need to work off the terms of reference and we would want to converge the pictures we saw here in to actual deliverables in the next Summit and we need to worry about the sponsor and the funding model and we also want to go from ideas to realism men takings and deployment, and also to something that would be available all the time, not just pilots the. One of the other aspects was also to say that this is a great thing to validate proposal and to validate source code.

Thank you.

>> Thank you very much AI in health code, 15 project proposals and a framework for follow-up. I'm also seeing great questions and ideas and feedback coming through. Keep them coming up. After we go through all of the four tracks, we'll have about I think 25 minutes or so for continued discussion for people to ask those questions, for perhaps specific projects to be clarified as well to further put out either calls to action or clarify areas that you might still have questions for the audience to chew on. Without further ado, let's go on to AI and smart cities with Renato de Castro and Alexandre Cadain.

>> RENATO de CASTRO: Thank you. Good morning. Kenney, you were with us yesterday in the afternoon also as as Rapporteur for our session. We had finally 16 speakers in our track, second half of my presentation. Great. Thank you. The first -- our first part, first panel of our track, it was about the state-of-the-art in AI and smart cities. We have four speakers from Japan, Europe, United States, a special highlight for the project that ITU presented to us about the KPIs and they have developed and now implementing in some cities to measure smart cities, it has been implemented in Dubai and in Singapore, two big references in the smart cities and it is very clear after

the first track that one of the key points in making it happen, it is putting together all the stakeholders in the city to discuss the projects. It was more or less what we have done in the track, the second track has the stakeholders in the city, we discussed urban solutions and all the projects presented there, we got to find maybe a new trend that we yesterday called empowerment as a service, that can be useful for the U.N. agencies to promote new projects, promoting sustainability and now we're getting it through technology, through apps and using Artificial Intelligence. We have especially two interesting projects pictured, one about giving voice in order to cooperate with cities, better conditions, reporting problems and the second one regarding the app use, familiar app use. I have seen a lot of other projects like using powerment as a tool with technology.

The third panel, another stakeholder, it was very interesting to listen different pilot projects and cases from Brazil and Amsterdam and here important point, that we need to start in putting together all of the experiences in a global platform. We have discussed it with other agencies that were there with us, that there is important issue and what Amsterdam is doing now, it is not learning from the best practice but also with the failures, with what they call learned lessons. They have these in Amsterdam, repository of graveyard of ideas working in the past, maybe in the future we work and maybe it is time now to start putting together these in a global scale.

The last one, it is about citizens and basically it was the main topic during the whole day, how we give these voice to citizens. We listen to projects and to pitches, one from Barcelona with the perspective on how we should use AI to enhance or to foster or to empower people in the process but not to replace people and we have discussed a bit about some restrictions that we should be aware of when applying AI and we had an over view about the projects that are being done with the AI in Africa. There was a big call in the audience to discuss that smart city projects cannot be focusing on the main city of the region, but we should also be discussing smart region projects in order that we have a city that is the main one and the whole region can benefit from this. Of course, the citizens that are involved in the process, also they can benefit with the city that's highlighted as a smart city. I would invite Alex, Alex will be more precise on the projects and our findings.

Thank you.

>> Thank you. We have the amazing 16 is panelists and the audience, we had the impression during yesterday to go across different cities with so many examples. It is kind -- thank you for this. It was really fascinating.

What we went to, in the end, maybe having identifying 7 projects but the fact is, that with Renato de Castro's presentation, we told you yesterday we had four sub tracks and we got to this idea that maybe this different sub track present a project that would be connected to one another and we would likic to propose the ideas, some were presented last day, yesterday, and some were in the air and we tried to formulate that this morning.

Each time we have let's say three concepts and ideas that were exchanged and trying to formulate it in one project. The first one, it is about the idea that maybe the first concept let's say was about the idea that maybe we should ask ourselves what smart city means and what is smart in the end. What we want smart city to mean but also look like.

There was a real interest in the fact that we might converge into the kind of risk that all smart cities may look alike in the future. We don't want this to happen. We want the single model that's generalized and it comes the idea of tailored smart city to fight this problem and to avoid a single model and unique model. It was this very important idea that looking into the future of smart city, we don't want to forget the past and the history, the different cultural heritage of each city and the idea here was to make sure that we can through AI enhance the cultural heritage of each city to make sure we have as many different definition of smart cities as there are cities in the world. One of the challenges, specifically is about linguistic, different linguistic communities within the same city. One project was about enabling the understanding, expression of understanding communities because we have got to understand that at least 15 languages, only 15 languages were actually covering 50% of our world communities and so that the other 50% languages is about 6900 languages where to be understood and expressed maybe through AI. Including all communities into the global knowledge of society, it would be one specific project related to AI. The second concept that was really interesting to us regarding the citizen empowerments, it was giving the voice to the voiceless in the city. We talked a lot about AI technology for sure and also blockchain giving the opportunity to maybe get away from kind of a top-down approach within the city and that the city decision. A lot of times we understood that if tech can be a solution most of the time the question remained what is the problem we want to tackle and every time the idea was to say that citizen may be real problem owners, that could be the voice to basically help us with real practical needs from the city. That we should trust citizen as problem owners to define the specific mission that we want to target.

I will go briefly on this, we don't have much time.

Three interesting projects arised. What was really fascinating is that during the day we actually got connection between different sub tracks and different cities regarding an important subject towards fighting gender violence and abuse, a project came from Brazil with the city there that knew well this subject, working with women there on specific houses and then we had a solution proposed by another partner working in South Africa, building a chat bot that's a relationship assistance to talk and express this kind of problem.

There was also in the audience a project that was proposed to empower homeless people and to become entrepreneur to make sure we understand the pattern of homelessness and try to help them to get a job and match opportunities with their needs.

>> There was the idea mentioned already by Renato de Castro in the same idea of saying we have to find talents also in places that we don't talk much about in terms of smart city and especially we talked about Africa and the opportunity to identify leapfrog opportunities from the bottom billion people, we talked about the African Congo for instance that have major role to make this in AI for instance available. The last concept was really interesting during the session and that maybe connecting all of the different projects that could look like project 0 if we follow the institution, it is this concept of Internet of cities and during the day, what was really clear, it is that there was so many different tests, so many different projects implemented in different cities and it was the first time for a lot of this project that they could talk to each other and that they can share knowledge so for instance, Amsterdam, City of am center dabbing explained that 70% of what they tried basically and failed in in the LOST few years, they created this kind of great idea that could be really relevant to other cities that are trying the same thing at the same time and it led to an idea of trying to share best practices and lessons learned towards learning cities worldwide and if you had to break this in three little projects, not little, the first is to try to define a global repository to organization need city challenges and share practices and then there was an idea that AI from just helping small issues in the city may help us to simulate complete city environments as a safe room to test ideas and making sure that on a virtual world we'll say try to test idea that didn't hurt any physical decision in the end and they're the ones, the idea is to try to connect the environment powered by AI a more human approach, collection approach, intelligence with a model of city builder video games which would be able to maybe enable citizens, identify local problems and pin them on a map, for instance and obviously also be a part

of solving issues within the locality and also worldwide. I think this concept was really important from today to show that we go from let's say one wave of smart city to another one which we try to understand the connection between outages together. Thank you very much.

>> Thank you very much. Really great insights coming from each of these teams from project 0 to ways of moving forward with focus groups and then really looking at the fact that cities are leading the charge in terms of rapid, adaptive innovation, but they shouldn't be doing so alone. From smart cities, to kind of a smart global network, it should be pursued. Now on to our last and certainly not least of the teams, the trust in AI track that was led by Huw Price, Francesca Rossi and Stephen Cave. Come on up. .

Wet more questions and suggestions up there on pigeonhole.

>> HUW PRICE: Thank you very much. Good evening ladies and gentlemen. I would like to thank you by joining -- thank you for joining our track, we had over 100 people, the room was packed and people were standing in the back. For people that didn't join the track, I would like to tell you that you didn't miss anything but frankly you did. It was amazing. At least I can now give you a brief summary of what we talked about. On Tuesday when I stood here, introduced the track on trust in AI I said that I thought this forum, the U.N. AI for good global Summit was uniquely placed to address the challenges of the issue. I said we all know the -- historically, the development of the deployment and the debates around it have been dominated by one particular geographical group, ethnic group and gender and although this is starting to change, there is a huge amount of work to be done in addressing the enormous gender imbalance in AI or reaching marginalized communities, for example, or in addressing the structural inequalities that are the product of historical injustices that shape the lives of millions of people between countries and between regions and within countries, a project that on Tuesday I call decolonizing AI and that's a project that we, the CFI in cambridge will develop incoming years but all of that year, it requires building and earning trust among and in between the many, many different stakeholder communities that's impacted by the technology. That's, of course, a huge statistic. In our track on trust in AI we divided this idea of trust into three categories. The first, those developing the technology must earn not just when and build but earn the trust of the stakeholder communities that's affected by that technology. Secondly, we have to build trust between countries across borders, between companies, between those that are developing the technology so that they can work together to ensure AI really is for good.

Thirdly, the AI system themselves must be demonstrable trustworthy. I would say this forum is uniquely well placed to address the challenges and what happened yesterday in the track really showed that to be right. I feel we made progress in developing projects addressing the ideas, it was fantastic range of geographical representation and expertise in the room. On Tuesday I said also that we weren't going to solve the problems in the Summit but we would make a start. I think we did. Here are the three themes and we discussed three projects under each theme. I'll mention them very, very briefly.

The first one, AI in mental healthcare, as most of you know, one in four people in the world will be effected by mental health issues over the course of their lives. The potential impact of AI for good in this sphere is enormous, as I'm sure you also know is it is a sensitive area, a taboo in many parts of the world, in many communities, but building trust, it is going to be essential to reaping the benefits of that technology and we discussed some very practical ways of involving the different communities and developing apps making a difference to people's lives.

The second project, AI for African farmers looked at how to collaborate closely with communities in farmers in East Africa to develop apps that work with them. While what we discussed on one hand is very practical, very concrete, you could at the same time function as a template to develop apps like that that could be applicable across the world. Thirdly we discussed a very ambitious project, it says here in Developing Countries but the project, it is on mapping and assessing the impact of AI-driven automation on developing and transition economies with the particular focus on social stability. I said this project is ambitious because we want to also develop action plans with local and national governments for not only measuring but mitigating the impact of that automation.

Moving on to trust across boundaries, we looked at cross cultural notions of trust and we had excellent presentations and thoughts on how widely the idea of trust varies between cultures. When we talk about in a global forum like this, building trust, we have to understand and respect the differences. Then we looked at global AI narratives. As you know, Artificial Intelligence, it is an incredibly evoke active term, it drives us to imaginative terms of dystopia, and they vary from country to country and they impact the way that technology is developed and deployed and regulated. If we're going to cooperate across boundaries you have to understand the different stories we're telling about AI.

Thirdly, we looked at a specific case of cross cultural understanding looking at how different countries are looking at

automation of autonomous cars and there is trade-offs required to regulate these vehicles and understanding how the different countries and cultures are approaching the trade-offs is extremely revealing.

On to the third theme, trustworthy systems, we first looked at a project, it focused on people deciding what it means for a system to be trustworthy and how that's regulated, that's policymaker, we thought about the lack of technical knowledge in that group and what we can do to bridge it. Then we looked at trustworthy datasets, in particular we were looking at what I'm sure you're all aware of the problem of algorithmic bias and that comes from the datasets that come from the biases built in. We looked at how to build the repositoriys of the diverse datasets that avoids those problems. Finally, two people that come from the machine learning community, some of you will have heard of accountable, transparent machine learning, they have been working for many years on fairness in our decision making and had noticed that cross cultures it, the idea of fairness differs widely. If we're going to develop technology that's widely applicable, we need to understand the concept of fairness and how it varies and in ways that are concrete and can be implemented to improve the algorithms. Those are 9 projects we looked at, developed, discussed, I would like to thank those that presented and prepared them as well as those that joined in the discussion.

We then had a breakout session where we came up with even more concrete ideas on taking these projects forward and learning from them and developpic more projects. In those discussions, I think three strands came to the fore. The first, is that we need to interrogate this idea of trust and trustworthiness. It is so central to what we're doing. It is a useful concept and at the same time, it varies in what it means. You need to understand that variation. You develop a framework not imposing a single idea of trust and trustworthiness and one that enables us to talk to each other across boundaries about what we mean by it. That's the focus, one of the many focuses of the work over the next year, something to report back on in the next Summit.

Secondly, one of the themes you'll see, cross culture collaboration and understanding. All of these terms, fairness, bias, justice, trust, they're all valued and in different communities, they have different barriers and AI even means different things in cross cultures. To have the global conversation we want, really to understand the cultural differences, it will be crucial. Again, that's something we hope to make progress on over the next year. Finally, the importance for diversity, of reaching out to a truly diverse

range of groups and involving them in the work, it is a central theme. I'm sure it means a great deal to everyone in the room today. That's as quick summary of where we got to yesterday. I'll now hand it over but before I do so, first I want to thank them because they really have been the driving force of all of this work, they're the ones that pulled this together in recent months.

I particularly would like to thank Huw Price who is the visionary who setup the future intelligence in cambridge as well as the person whose really been driving a lot of this work.

He's not going to forgive me for this. Today is also a very special day, I'm not going to tell I how old he is. Suffice it to say, it is a round birthday. I would like you to join me in thanking him for the work he's done for the trust in AI track and wishing him happy birthday. Over to you here.

>> HUW PRICE: Thank you to all of you.

As we worked on the nine projects that Stephen Cave told you about, we had an experience that was exciting because the projects themselves were wonderful, so wide ranging and frustrating because it felt like we were looking through a narrow window into what must be a larger space of other projects of the same kind. These projects have been developed over 2, 3 months and developed from our networks of people that are already close to the networks. We began to imagine what could be done if there was a way of reaching out much more broadly than that. A way of encouraging people from all over the world who had ideas about building trust in AI to come to us and to come to similar partner organizations. And if there was a way of supporting knows people, do build projects like these, we came up with what we call -- can we have the next slide, please? We call trust factory AI, let me read it from here, I'll read right from the slides. The trust AI, it is -- here we are. You see the URL at the top, it is intended to be an organization whose function is to get ideas for beneficial -- getting trust for beneficial AI. The thought is that the more we can do now to build trust, the better the prospects are that the AI revolution we look forward to, the better the prospects are that it will go well. What we want to do in affect is to Open Source the challenge of engineering and earning trust for AI for good. I thought of trust factory AI, it is the first global incubator for new ways of engineering and earning trust in the AI arena. The idea is that it will provide competitive small grant funding for projects like this set of 9 projects that we have been working on with our partners over the last few weeks and were presented yesterday in day 2. We want it to be broadly based and too much fragmentation in this space already. Conception is that it will be a partnership of respected global organizations

led by an international advisory board and with the panel again, with respected experts from all over the world to decide how the grant should be allocated for these projects.

At this stage we have partners involved from a wide range of places in the world, as you see, there are huge gaps there and more partners are needed. We're grateful to the people that have joined so far. .

The next step, it is to use this meeting as an opportunity to launch the trust factory and Francesca Rossi will tell you something more about what you -- what we want you to do for us. Thank you.

>> FRANCESCA ROSSI: Thank you.

Yeah. We want you to join us, to make this happen, to expand the idea, to make it more concrete. You can join us in many ways as individuals you can participate in the discussion. We'll provide a discussion forum on the website -- trust factor.ai -- and you can join in all of the discussion forum to understand together with us and everybody else what trust means and what are the other dimensions we may have forgotten while thinking about the three dimensions that seem to add the most important ones and maybe as you say there are many others that are relevant and for other communities, other cultures because after all we come more or less from the same culture. You can also join us in spreading the words, the word about this idea through connections, to your network of connections to different stakeholders, different disciplines, because this project has to be something definitely multidisciplinary, multicultural, multistakeholder otherwise it wouldn't work as we want it. Finally, you can join us with your institutions by providing institutional partnership with the trust factories of AI in terms of expertise and in terms of possibilities of resources that can help the functioning, the flourishing of this initiative so we really would like to thank all of you, especially those that put together the projects, those in the discussion yesterday and all of you, I'm sure that we take this -- our proposal, we bring it everywhere to make it work in the best way.

Thank you.

>> Let's give another round of applause to all of the track leads over here as well as to yourselves for contributing to the projects and the scope of the work that's been put together here.

I see veerly overestimated the amount of time we would have for discussion. There is only 10 minutes. We'll go through this rapid fire and I'll start just by addressing a few of the pigeon hole questions, a couple of people pointed out aptly, you know, gender equality, SDG5, looking at the amount -- looking at

the ratio of gender representation within this Summit and looking inwardly at this. Somebody asked about the demographic breakdown of the event, somebody else answered that via pigeon hole, essentially saying that attendees come from 55 countries, 37% of women, 119 speakers from 29 countries so among the speakers, there are 34% women. Certainly still some ways to go to gender parody and we can further breakdown those kinds of things. Let's just continue to strive towards those ideals and goals.

Next I want to call out David Jenson with an interesting project proposal. David, can you raise your hand and turn on your mic? I want to let you pro pow -- propose it.

>> I was unable to attend yesterday's session, the pitch session. I would like to put this into the satellite image proposal pitch, and that is creating a planetary I can't dashboard for global water monitoring in collaboration with Google, GRC, NASA, the ESA, we would like to put this together over the next year where we can do realtime AI-based monitoring of global water providing that with all countries and making a contribution with the SDG on water. Thank you.

>> Do we have a response from --

>> Yes. Sounds like a great idea. We'll put that as project 44. I would also say an example of why we need project 0 because if we had project 0 doing project 4 would be straightforward, which is getting the AI people, the hydrologists, the meteorologistists together and think about the problem itself and not worry about the huge expense and engineering expertise required to turn it into a global service.

>> Thank you very much, David.

>> I want to address another group of questions between one -- where is it -- with votes, how to protect the global platform from political interference and engaging with the gotha of Google, amazon, Facebook, Apple, and of this world, this keeps on jumping around, where did it go? Anyway, how do you engage -- perfect. Thank you. You avoid their setting of defacto standards. Essentially this environment and ultimate ownership of influence over the way that this kind of global trajectory happens, do any of the panelists, track leads have thoughts on ways of ensuring that the way that this progresses, that it is open and fair and free of either private or sometimes, yeah, mall formed public influence.

>> These a good question.

However, everybody can do whatever they want, nevertheless, here there is a huge community, it is a big diversity, if we become proactive and do things the hope is that they'll also join in and participate and maybe come up with open standards that are good and that are fit with everybody. Not just a few

interests.

>> Excellent. Anyone from the trust in AI want to weigh?

>> What Thomas proposed about, you know, a Working Group -- sorry, a Study Group being administered out of ITU in collaboration with WHO and other partners, requires not just AI experts but also people that were referred to on this particular question about Facebook, Google, all of that, and also we need other social entrepreneurs, we need them on the work group to make sure that meaningful standardization process is taking place and global trust could be established through the practice. So that the standards, nothing is stopping from having them go forward, but I think for o doing o global good, it is important to establish a partnership with all parties interested in the process.

>> Does it work? Yeah. I think the only way, as I said, it is to be multistakeholder, multidisciplinary as I said before, and this company, I worked with them already and other initiatives and I see that there's the willingness to work together, to understand what trust is meant with different kinds of companies and different business models which is true because some of the companies are completely different business models, so probably trust means, is implemented, meaning something else, I really do think that they'll be happy to join the initiative and to understand how together we can understand what trust means for all the communities impacted by them but their kind of AI and business model. Again we have to provide support and I think we'll join.

>> In our case, in the last end of the planning of our track we had the idea to put it together, not only Gotha but all of the Artificial Intelligence nominated as a human, what's -- to put that on a panel to discuss about the role of the Artificial Intelligence about the real citizens. We didn't have time to do this for this year but it is really planned for the next events to try to create a panel with the Artificial Intelligence citizens and then discuss how they can make our cities better and our life better.

>> Absolutely. That's great.

Engaged, informed, empowered general public could be a very powerful kind of collective intelligence to hold such parties accountable to their trajectories. I'm afraid we're pretty much out of time. First I hope that there is exports that are being made of the pigeon hole content and that that can be shared. I had a thumbs up on that end. I also want to just acknowledge some of these additional high-vote ideas, first, Open Sourcing, crowdsourcing, all of the projects, which is I think a great idea and fits well into the data comments and other kinds of ground 0, project 0 platform ideas that people have shared.

Let's see.

This is a great question. The progress of proposed projects, how is this going to be reported. The ITU, the organizers, they probably have something in mind but that's not to say that additional ideas and proposals can't be made for continuing to add to the efficacy of how this is tracked and expressed and I want to go back to the way that pretty much all the teams have identified ways of ongoing development, and really the Summit is fantastic, it is only three out of 365 days of the year and there is a clear need for continued communication and Channels of information to be shared both within teams across geographies and across teams, at the moment, I only know of the AI for good linked in group which is great, but there has to be additional tracks of things and the trust in AI, trust factory, it has a platform and I think there is a focus group from the health in AI teams and I encourage everyone as well as the ITU leadership to continue equipping everyone with tools and means of following up on this conversation. It is -- okay, it is 10:15. It is time. Let me thank you again, both the track leads and everybody that contributed to this. You know, clues by saying that in everyone's efforts to change the world's progress is made with incremental steps by steps and I think I counted at least 35 projects here, 35 steps forward that we can take between now and the future. Thanks again.