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What next on the road to smart digital societies for all.

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(standing by).

>> I guess we can start, with good afternoon. There is, you know there is the famous saying that don't organise session after the lunch, but this we have another challenge, when we organise session during the lunch, and I particular appreciate those of you who decided to listen to us today, instead of having lunch or having early lunch, whatever was the way of doing that.

It puts additional responsibility on our panelists to make sure that we deliver on expectations, and difficult choice that you made in coming to today's session. To move you from watching your screens on your notebooks and mobiles to listening to us, that would be small achievement that we make during the session.

My name is Jovan Kurbalija, Director of DiploFoundation head of Geneva Internet platform, which is based here in Geneva, and we are particularly honored and pleased to cooperate with the International Telecommunication Union, we are very young institution, and we cooperate with one of the oldest international institutions in terms of the years but as you can see from this room and from this event, very young in terms of the spirit. Therefore we have that interplay of innovation and it's really great pleasure to be today here.

We have for the next hour and 15 minutes tasks to basically outline what are the major challenges and how we can develop for the smart digital society.

As you can see it is umbrella concept, it is umbrella question. We can move into the various direction, as you can see later on during the session, we will be guided also by your questions and comments. I have a bad reputation during this WSIS Forum of not managing to keep the session within the time limits. This time I'll have to do it. I'll have to do it because otherwise I'll become persona non grata with conference organizers at the ITU. I would like to invite Mr. Malcolm Johnson deputy secretaries general of the ITU to deliver his introductory remarks, thank you. Malcolm.

>> MALCOLM JOHNSON: Thank you very much. I'm pleased to have very good collaboration with DiploFoundation and thanks for your leading this session, and thanks to everybody for coming along, 1:30 start is not a very good time. But thanks very much for being here.

Anyway, I hope everybody is enjoying WSIS Forum, finding it beneficial, and will enjoy the rest of the week. This gives us a chance to look at technology issues related to the policy issues, and to look at the different roles of stakeholders in ensuring that we can move forward on sustainable development.

You have heard the statistics before, no doubt. But let's just put this discussion in context. It's estimated that there is only, well, less than 1 out of 2 persons in the world are currently connected. But when

you look at the developing countries, it's much less and in the least developed countries it's estimated that it's just one in every 7 people connected, some say one in every 8.

Clearly there is a lot of work to be done in connecting everybody. But an interesting statistic is that estimated 85 percent of the world's population has at least 3G coverage. So even though we have 85 percent of the world's population able to connect, only less than 50 percent do connect.

It's clearly not just an issue of connectivity. If people can't afford to connect, or they don't understand the technology, they don't see the benefits of spending money on connecting, then they won't connect. So there has to be incentives and there has to be some subsidizing for the poorer people to be able to connect. We need to educate people about the benefits and have to, the critical thing is, I believe, is that you need the local content in the local language. If you haven't got that, then people won't see any benefit.

So of course, we have got these U.N. Sustainable Development Goals, and the U.N. produces statistics each year on where we are at in the context of the Sustainable Development Goals. If you look at some of the statistics that the U.N. came out with last July, you can see the extent of the challenge, because I'll just read out some of these statistics. 60 million children primary school age are not attending school.

38 million deaths annually from noncommunicable diseases. Six million children under the age of 5 die every year from easily preventable causes. 30 percent of urban populations are living in slum-like conditions. 950 million people globally have no means of sanitation.

The U.N. Sustainable Development Goals are clearly somewhat ambitious, and they are to end poverty and hunger, provide quality education for all, and bring clean water and sanitation to everyone by 2030. Currently, there are no countries that meet the Sustainable Development Goals, whether they are developed or developing or least developed. There are no countries currently meeting these goals. So it's a really big challenge. But if you look at the targets that have been set to achieve these goals, it's clear that ICTs are going to play a really significant role. There is a target that we should halve the number of deaths and injuries on roads by 2030. Clearly, smart transport management will play a vital role, ubiquitous autonomous vehicles, collision of origin schemes will play a big role.

Doubling the rate of energy efficiency is another target. That is going to require the widespread use of smart meters and innovative energy saving solutions. And substantially increasing water use efficiency, that is going to require the use of ICTs to identify water leaks and ensure that irrigation systems are efficient.

There are many challenges, ITU is committed to connecting the world but clearly this is not something it can do on its own. We need to work with many different organisations. This is something that is really coming out of a lot of the discussions, is because ICTs is prevalent across all sectors that many organisations need to work together now that previously had no connection with each other. That is true at the not just at the international level but at the regional and the national level. You see now that many ministries need to work much more closely together, because of the require, the need to rely on ICTs, and bring in the private sector in is going to be very important. If you look at the action lines 2 and 5, clearly bringing the infrastructure and ensure a secure and robustness is very much the role of the private sector.

But for the private sector to be able to do this, then you need to have the regulatory environment to encourage them to invest, and that is the action line 6. So we need a regulatory environment which will encourage investment with business, you can see a good return on investment, and really these regulatory frameworks need to be common as well, if they are different from one country to another, it's a real challenge for industry.

ITU works with the Jessie foundation that produced a very interesting report recently done by Accenture, which looked at the business opportunity for industry to contribute to the implementation of the Sustainable Development Goals, and the Accenture came out with a estimate that providing we have this enabling environment, industry is encouraged to contribute, then the turnover in the ICT sector will increase by $2.2 trillion a year by 2030. It's a tremendous business opportunity, and something that ITU is always advocating, because we have 550 companies are members of ITU, is to get this message across to industry that it's a very good business opportunity, and we really need them to contribute.

So the technical and the policy roles need to be really brought together and that is why this panel is a interesting composition, because we got people that can speak to both of those issues. I'm sure we are going to have a interesting discussion. Thank you.

>> JOVAN KURBALIJA: Thank you, Malcolm. I hope that we can put some oil in our mechanism, because as you outlined, there are a real challenge to coordinate technology, economic, legal, societal, human rights aspects. What we have been facing on the global, regional and national level is the need to coordinate or, famously said, frequently said, move beyond silos. That is real challenging in covering the digital policy issues.

Thank you for your introductory remark, setting the stage for our discussion. Now today the panel we have two colleagues from India, and in our preparatory discussion I told them, you invented the number zero, of at least according to finding 16, 17 centuries ago, and number 0 move

via Tunis and to Europe. And basically this is the basis of the digital society, basis of the economy and modern development. I thought without making the big historical tour of asking them, okay, what we can now hear from India after the 15, sixteen centuries and what is going to happen in the future, are you thinking of inventing something similar? Or we will have to deal first with 0s and 1s and digital lead up. Today with us we have Mr. Sanjay Kumar Rakesh, joints secretary Minister of electronics and IT of government of India, and it was just introduction, don't worry. We don't expect the sort of crystal ball exercise about the future after digital.

>> SANJAY KUMAR RAKESH: Thank you, my fellow panelists, ladies and gentlemen here. It's true it was invented 15, 16 centuries back, so now we are trying to use the zero elements to the maximum extent for our own population rather than inventing a fresh. This next ten, 15 years we will use the 0s to the maximum extent rather than inventing more. Then we will go for more invention (chuckles).

So nice of you, having put the things in perspective. We want, in fact I wanted to say that if as goals are to be achieved and if to be achieved by poor and developing nations like India, digital is the way to go. We have no other option, because our experience shows that the kind of resources which are at our disposal, the delivery mechanism that we have and the population that we deal with, if we approach through the traditional methods we will not be able to achieve.

The digital would be the way, and we have found our recent experiences in handling this, that population is very receptive. If we can come to well designed mechanism, it helps. It helps a lot. It saves resources. It targets the delivery and also reduces the cost. I will share two experiences, one in which I was directly involved in implementations. Other, I was looking at the policy level.

You may be aware that we have a public dissolution system in which subsidized food grain is given to 67 percent of our population, that is about 800 million persons and rate is 3 cents for wheat and five cents for a KG of rice and per person is given 5KG food grains. Public distribution system, those who are from India or who know India is known for its corruption. There was estimate that 40 percent of food grain are diverted. There are many stories I can tell you. In fact there was issue when contract was given for transporting the food grain, the contractors were willing to give the money to the warehouse and agency for carrying the food, because they would make it up from leakages.

When we went for digitization, we went for digitization, used our unique I.D. and 20, 15 percent of cards were eliminated, they turned out to be bogus and duplicate. I was implementing in a small state where 960,000 Russian cards were there when this process was completed, it came down to 810,000. When this report was presented, there was silence in the

hall, because all this 150,000 Russian cards were used for wrong delivery. But there were no upheaval, in that public accepted, we have reduced and savings is huge in billions of dollars.

Now this moves are going on, there are certain groups who say it has reduced but debates will continue.

Other example I can give you is, the government of India in the last three years have taken a massive drive to target the subsidies that government gives or benefits that government gives, and today 340 million persons are being given cash subsidy directly to their bank accounts for various schemes, may be scholarship, maybe LPD subsidy and similar things.

It's estimated that savings have been more than 7 billion in last three years. This much of resources have been saved. Corruption is reduced. Public satisfaction has gone up. In fact, one of the region being cited, where poor families are given LPG connections free of cost, which comes out of savings from other scheme where subsidies is targeted.

With the success of these schemes and realizing that fact that we have the poor people, countries have huge land mass, difficult terrain in that places and large population, we find that digital is the way to go. We are pushing for that. As of today, 90 percent of area have the mobile connectivity, but not more than 80, 70 percent of population has mobile. There is still 30 percent population which has to get mobile. We have worked out in the government to work on providing the facility to all. The issue is, first, to provide the infrastructure, both for mobile and for Internet. In fact, it will be good to mention here that we have 250,000 rural villages, we have a plan to connect each village the elected body head quarter with dedicated optical fiber networks, about 600,000-kilometer optical fiber cables will be laid out out of which 200,000 have already been laid out. 90,000 villages have already connected. 50,000 plus villages have facilities already out.

Through that, we are trying to reach, then we are also coming to making the -- when people are not literate, how do you make them digital literate. We found that mobile has done a good job. It has made people number literate and surprisingly even illiterate people when they require, I've seen many mothers who have not had any formal communication, to communicate with her children, she has learned to type on the mobile phones. We have worked out which is letter you type, which words comes, that was learned without assistance from that. So the requirement comes, learning is not an issue, the government has taken plan for digital literacy, about 8 million people have been trained. We have a plan to train 600 -- 60 million people in next three years for the digital literacy to use the computer or operate the mobiles. That we are working. We are expanding the scope to have the content both in the local language and those who are useful, the digital

in the programme and other places have already informed, we have several apps, several facility which are worked out. I was discussing just before that we have the e sign as substitute to the dongle based signature where you just register and get signing any document that you want. We have digital certificate that can be given. Anybody can access.

We have e tickets, e passport, E healths, lot of things coming up with a good response, reducing the transaction time and at the same time expanding the reach. We are not there, where SDG want us to do but we are confident that with the time line and the effort, that it's going on, we will be able to reach there. So with this optimistic hope, I hope I close this. Thank you.

(applause).

>> JOVAN KURBALIJA: Thank you, for this is always for all of us involved in digital policy, is always humbling to hear what major achievements country like India has been making in this field and numbers are really fascinating, you are speaking about hundred of millions of people, and saving through these measures. Congratulations. Thank you for this optimistic note.

We now are shifting from the government perspective to the private sector perspective. We have with us Mr. Robert Hanser who will bring us the views from the corporate sector about the future of smart digital society. Robert, please.

>> For anyone not familiar Huawei is a Chinese company, we build the infrastructure, the ICT infrastructure, that connects us all together. By our own calculations we believe something like third of the world's population are connected through Huawei networks and equipment.

We describe this as the pipe, and our business strategy is to simply build the pipe. We recognize that through this pipe, solutions can be provided with e-health solutions, public safety, education, new jobs, economic growth, etcetera.

Just to follow up on the point I think Malcolm made earlier, when he quoted from the Jessie report that $2.2 trillion a year represents I think a 60 percent increase on current revenues for the ICT sector. So the incentive is very clear for Huawei and its peers in the private sector. Our investment follows good policy. That opens a pathway for us to continue building that pipe.

We recognized for many years the relationship between the infrastructure and the economic opportunity, and Huawei for several years has been publishing some analysis which makes the connection between ICT infrastructure and services and the abilities for countries to grow economically.

Last year, we wanted to expand that analysis to begin thinking a little beyond economic analysis or economic development and consider the broader Sustainable Development Agenda, with consideration to the 17 SDGs.

We simply ask that question, what is the pipe for, what does it actually deliver? And how strong is that relationship between infrastructure and these positive social environmental, socioeconomic outcomes.

Tomorrow we have, and I would invite everyone to join us, and I can speak more fully about a report that we are going to publish tomorrow, which we refer to as the ICT sustainable development benchmark. Mr. Johnson will join us for that session. I hope everyone else can join us as well. But essentially what we did was we looked at 15 countries of developing, developed countries across each continent. Then we looked at a number of U.N. development indicators related to several SDGs, health, education, gender, climate action, sustainable cities.

And then we looked at whether there is any correlation between those development indicators and the existence of ICT infrastructure. We were very glad to find that there was a positive correlation, and we recognize the correlation around 90 percent, a very positive correlation.

When we put that, those two scores those SDG and ICT scores together we created this benchmark where we looked at the 15 countries in a type of ranking. That ranking didn't simply reflect GDP levels, GDP per capita levels. It's more interesting than that. The countries at the top were not necessarily the countries that had the highest SDG levels and the countries at the bottom weren't necessarily the countries at the lowest GDP levels.

We find this interesting because it suggests that ICT can provide that acceleration, it can provide that infrastructure, through which governments and companies and businesses can provide services which accelerate a nation's ability to achieve those 17 goals.

We think this is very important. We looked at it further. We also compared that with the U.N. DP's human development index which is a very holistic measure of the maturity of a country's economy, not just thinking about GDP but thinking about life expectancy, educational outcomes, healthcare outcomes. We find an even more positive correlation between our research, our index and that human development index of I think 96 percent. They tracked each other almost identically.

We think this is very positive. We think this a very positive signal that the future digital society is very potentially sustainable one, a society where the delivery of services, with transportation services,

with public safety, whether it's economic development, healthcare or environmental protection, are able to be delivered in more efficient way, that reaches more people than ever before, in the absence of pure or where there is pure ICT infrastructure.

We think that relationship is extremely positive. And for us, this makes a connection between the investment that, and the policy that government lays out to prioritize the opportunities that we refer to for ICT and also for other solution providers as an important opportunity, not just a business opportunity but societal opportunity for us I think to provide better outcomes, better quality of life for people. So our view of the digital societies is a very positive one.

>> JOVAN KURBALIJA: Thank you, Robert. One tweet that could summarize the findings of the report is that while geography may be a destiny, connectivity is definitely destiny today, destiny for society's individuals and countries worldwide. Without connectivity there is no, as you indicated, society growth, economic growth and other things. We can later come to the questions on how to ensure the balance growth throughout the society and to have nobody left behind, that could be an interesting topic for discussion, which was already raised.

I'm now turning to my good friend and who was patiently waiting for his intervention, he is also from India. Mr. Pavan Duggal is the President of cyber law.net. We heard that we will have to wait for next innovation after 01 for some time until it's exploited its possibilities. What can we hear from India on the legal and societal side? Could you let us know.

>> PAVAN DUGGAL: Thank you. I think India is already beginning to demonstrate its thought leadership, thought leadership not just in the IT space, India has been known to be the back office of the world, but more significantly, India is now making huge strides in the direction of cyber law, Cybercrime regulation and specifically on Cybersecurity. In fact, the kind of quiet work that is happening in India is indeed very remarkable to actually observe, because when a country of a billion plus moves, it is like a big elephant. It is moving, it's moving very slowly. But if you are watching carefully, each small nuanced movement of the elephant brings across new perspectives.

I believe India is well poised to provide thought leadership to the world, because when you have a country of a billion plus people, when you have one of the biggest commerce and E markets of the world and where 70 percent of the total on-line population in the country is only accessing the Internet using mobile phones, you quickly have to understand that this is a country that has a hand of destiny behind it. This is a country that's recognizing its historical significance and also its strategic importance as it goes forward.

When I was listening to the interventions, I was looking keenly at this map, this illustration that has been put forward to us for the digital society. I was wondering that there are loopholes in all place, these are different components, but I was missing one big component in this entire illustration. That was the component of Cybersecurity. In fact, if you take the Cybersecurity out of this illustration, you quickly start realizing the different components start falling on their own feet like a pack of cards. Why? When we talk about a digital society, the promise of being a digital society is that the digital legal system must be safe, must be secure, resilient, and reliable. From that it's imperative that as we build towards the digital society, we have to quickly start working on the legal policy and regulatory issues pertaining to Cybersecurity.

That is something that is not necessarily a big priority today, but clearly if I look at this illustration once again, and if I was to mine Cybersecurity from each of the components, I will realize that there is something amiss. When we move towards the digital society, the addressing the legalities pertaining to Cybersecurity become more critical.

I was listening to other panelists, I quickly went to Twitter. I did a random search on Cybersecurity. And lo and behold, what are the three top results that I find? I want to take it as a sample to let you know how we are moving towards the digital society. The first heading of the tweet that came across told me that IoT, Internet of Things and Cybersecurity are friends forever, with inverted commas with a explanation mark. The second tweet said U.S. blames a particular country, North Korea in this case for hacking, more attacks are likely to follow. The third tweet talks from CNBC and asking a question, could your smart home be the target of a hack attack?

These three tweets taken randomly demonstrate to us that quickly the world has to come out of its slumber. The fact that we think that it's digital paradigm is here for granted is a fact that must be instantaneously contained, why, because while we are busy in our respective worlds, cyber criminals have been up to fascinating speed and consequently with massive advances of technologies like encryption and the dark net coming in, realizing that the gap is going on. The cyber criminals are only five to ten steps ahead of law enforcement, today have already gone 30 steps out of law enforcement.

Addressing the cyber legal parameters concerning Cybersecurity assume far more significance for a successful digital society. But the question is who will do that? Who will build the cat, when I look around, I find that there is complete darkness on the international arena, I don't find any one international cyber law regime in place. There is no international Cybersecurity law. Okay. So what is

countries doing? It is not that the countries are sleeping. But the countries are saying, I'm not waiting on for global developments, I'm quietly doing my work. Let's take an example of some of the countries like Russia, Germany, China. These three countries in their own respective wisdom have come up with domestic legislations that have far-reaching ramifications upon various parameters of Cybersecurity. It all began with the Russia, who decided to go into a no hack agreement with China, and thereafter came up with a law on data localization that was potentially the first time we were hearing this noise, which was you want to come and do work with Russia or Russian citizens, please ensure that the Russian data is only to Russia. You see the development of a national security law in China in July, 2015, that expanded the scope of national security to such a large extent to include Cybersecurity as a component of national security. Then came Germany, mid-July 2015, and Germany said, I'm not even bothered about anything. I want to concentrate on protection and preservation of critical information infrastructure. They went ahead and came across with a detailed legal framework in that regard.

While all this was happening last November China passed out a new law on Cybersecurity which came into effect on first of June, 2017, one of the most expansive pieces of legislation on Cybersecurity. I think this law is kind of a trailblazer. This law is actually telling a template model for various nations to follow. Come up with your Cybersecurity laws in such broad terms which can be so broad and generic and futuristic in their wordings, so that you don't have to revisit them again, and number 2, keep it as broad as possible, so that tomorrow, when the bridge comes for us to interpret it we will interpret it at that time. The Chinese law has come across with a new concept of cyber sovereignty, in the context of the digital societies I believe that it becomes important because in a digital society, digital nation, which is digitally connected, having digital citizens, would obviously want to have digital and cyber sovereignty as a integral part of its sovereign functions. How do you do that? How do you define what is cyber citizenship. I can be citizen of India but can I be a cyber citizen of another country? Are we talking a global digital society or about a fractured fragmented picture of small digital societies interconnected by the Internet.

It's a very kind of disturbing situation that comes in, because now with the advent of artificial intelligence and with more Internet of Things getting more closer than we earlier thought, the paradigm is changing rapidly. Mind you two years back the figure was 50 billion devices to be connected to the Internet by 2025. Earlier this year, the figure stood realized. Now 50 billion devices expected to be connected to the Internet by 2020. With artificial intelligence coming in such a massive space it's high time that we start coming up with the rules of the road, of what will be applicable in the context of the digital society.

Now is it that national sovereignty is going to actually be so supreme, that the Internet as a whole can play a subservient role, that is a bigger question we have to answer. Currently countries are saying my national sovereignty is more important. But as we go forward towards the direction of a digital society, I'm very clear that countries have to realize that we are now, we already have Internet as a global heritage of human mankind. It's the responsibility of each stakeholder to ensure that this global heritage does not get impacted, fractured or in any case affected in any manner whatsoever.

I think a lot of rules of the road have to be gone about doing so, fortunately some work is happening. India is trying to do its thought leadership, coming up with, it has come up with a international commission on Cybersecurity law. We are trying to get all the experts of the world on Cybersecurity law to find out what are the common minimum denominators of what countries need to get started with, as they go forward. India already hosts international convention at the international conference on cyber law, Cybercrime and Cybersecurity which is emerged as a distinctive conference which is looking at the intersection of cyber law, Cybercrime and Cybersecurity. This year India is hosting the GESC in 2017 November. India while it's doing its part believes in the nations and broader good of the larger numbers. Everybody has to start working together to start addressing issues pertaining to the legal policy and regulatory aspects of Cybersecurity and more significantly, everybody has to contribute.

One person, one stakeholder, one organisation, one nation is not going to be the rule. It has to be each one together, because the security and stability of the digital society is right in our own hands. We have to have the roadmap going very very clearly. Mind you, we mess up on the roadmap, we do not actually examine and put in place the right legal parameters, we are going to have facing practical problems and ramifications as these digital societies go ahead and mature. With new technologies coming in, it is getting more difficult, with robotics coming in, the question that is coming up, should we give so much of power to these robos that humans may be subservient to them? Scholars have started thinking about what kind of ethical rules and legal rules need to be made applicable in the context of robotics. Ensure that robos are good as servants but bad as, masters. It's a interesting time in human history. A road is being built as we go forward. It is a fascinating time for all stakeholders to get together.

>> JOVAN KURBALIJA: Thank you for bringing that aspect, we heard from the first two or three speakers a lot about opportunities, about possibilities, but you also brought the aspect of the question of risks, including Cybersecurity, artificial intelligence and other developments.

We did a study on bilateral agreements. You indicated there is a lack of Cybersecurity agreements, cyber norms. Apparently India is the most active country when it comes to bilateral agreements. Here is the map. You can search how different countries conclude bilateral agreements. We observed over the last three years, since there is no global framework, there are regional framework, more and more countries are concluding bilateral agreements related predominantly to Cybersecurity, establishing the exchange of information, cyber dialogues and other activities.

With Pavan Duggal's intervention, we put now the question of the future of digital society in balance, mainly opportunities, but also some risks and challenges that we have to address. Now our transition to the last phase of our session is, will be through the small game. I know that you have a computers in front of you, or your mobile phones. What I will ask you now is to type the URL and to join us in answering the question that, which will basically inform the rest of our discussion, what is the key for success for a digital smart society? You should type the address, WWW.menti.com and write user code 783498.

Then you can indicate what in your view is the key for the success of the smart digital society. Possibility of investment, creativity, dealing with the risk and the threats. How is it going? Let us see. Has anyone managed to log? Okay, we have it. Trust investment creativity, okay, open source. We haven't heard today anything on open source. Trust, pavan, it seems your presentation, your intervention was really, put a lot of persuasion that we have to develop a lot of trust in society. Creativity. We are getting back to the balance. Sustainability, fairnesses, okay. This is another issue, how to make more fair digital society. Creativity, investment, ton of you okay, trust is still leading. Civil society. It seems that we have quite a few civil society people in the room. Collaboration, security, oh, Pavan, you are leading the discussion with security focuses, see? Civil society. Trust disappeared. What happened with trust? Collaboration is moving in. Connectivity. Need to program. Let me see some of those in small font, incentives, awareness, trustworthy, again with trust, social innovation. Great. Your major concerns or hopes about developing smart digital society. With that, we can first invite our panelists to comment on this dynamics in the room, and this word cloud, and different interplays which was mentioned during the presentation, and invite you for your comments and questions. Please, Pavan.

>> PAVAN DUGGAL: Thank you. I think this particular picture actually is demonstrating one common thread, hacking, security, innovation, innovation again connected back to Cybersecurity. Everybody in the room is increasingly very clear that should they want their digital homes to be connected or should they want to live or start the next morning in a digital society, they do not want to be hacked. They want to be secure.

They want their personal data not to go into wrong hands. And more significantly when this happens, trust and creativity will give rise to more collaboration and innovation.

In a nutshell, the picture that is coming out on the wall is very clear. Before we start doing anything, we have to start understanding well how do we move forward in ensuring that we don't get hacked and we don't get, we get secure. The U.S. gave the warning which has been reported on Reuters saying more attacks to follow.

The fundamental realization is that we are all insecure, security does not exist. We should inculcate a basic presumption that we will all be hacked, we will all be attacked. We shouldn't get panicky or unpleasantly surprised by that. The bigger issue should be how quickly can we be more cyber resilient, can we be more prepared, come back to a state of normalcy after being hacked and of a our security being breached. This hacked and security words in the word cloud tells us this is a Utopian wish, this is not actually happening even today. And will definitely not happen even on the digital society.

>> JOVAN KURBALIJA: What is Utopian?

>> PAVAN DUGGAL: That is something that doesn't exist. The Utopian portion is the expectation that we will not be hacked or security will not take place, or rather look at it from the other side of the picture, that should we want to have a digital society, make sure no hacking takes place, security is paramount. For that, the important thing is let's start by making, start taking baby steps. The baby steps can be that let's start at least collating the common principles on which stakeholders are acceptable on, because at this juncture if you want countries to negotiate a big international treaty, that is going to be some time away. I've always been advocating that there is a need for having in place an international convention on cyber law and Cybersecurity so that the common minimum denominators of basic principles that countries agree should become starting point of a journey moving forward. For journey to move forward we still don't know what is the common starting point. Country A is talking in one direction, country B in another direction. Get all of them together. This is help in terms of clarifying this regard.

>> JOVAN KURBALIJA: It seems that you are in agreement with Microsoft who proposed recently adoption of the digital Geneva convention. Let me bring the balance to a more optimistic way, I think we sometimes overlook that we live in a unique time of huge changes in the health, the length of the life, treatments, social economics and cultural. It is easy to focus on problems, and that is the key balance in the public discourse and public discussion to keep things in the perspective. Hacking, security, are a huge challenge. They have to be addressed. Society has to be developed but also there is a great story which we are

taking for granted, the great achievement, Sanjay mentioned in India, solving societal problem, what would be your comments, the panelists, on our word cloud?

>> SANJAY KUMAR RAKESH: From what Jovan has said, the way our experience has gone, in the coming years innovation has to lead, the more innovation coming only require further success of digital smart society, more it comes in place it will gather momentum. Second issue, security and hacking and all, I feel and we have seen that it's a more of that fear of unknown which is taking over than the actual extent of damages caused by all these acts, issues. If we are right now taking up the largest scale on the digital, when we meet different people they say will my money be not reaching there, will my money be lost, but when you do the data, the money lost through digital transactions even if you do the proportionate part of it is much less than your money which is lost through pickpocket.

Similarly, the computers came in India, the whole society stuck up saying how will we take the computers, electricity is not there, we don't know typing and all. Today the condition is that if computer is not there, Internet is not there, people are willing to wait rather than go back to manual system. Once we adopt the system, we get acclimated to it, its, its failures and deficiencies are not much registered. But when we bring in a new system our fear of unknown which is common to human mind, that takes over. We look at the deficiencies, losses that would occur, and then we say no, we don't accept that. If we can overcome that, objectively analyze which has wider dimension, probably that would give the real reason whether to adopt or not adopt.

In my view, the knowledge society, smart society would be one which overcomes its fear of unknown, evaluates new technology, new innovation and new mechanism, purely on merits, data and actual ground situation and then take the decision. That would be the right way.

>> JOVAN KURBALIJA: Smart society would need smart decision-making which is not always the case because we are humans and we have fears, we have biases and whatever you --

>> SANJAY KUMAR RAKESH: Change has to come in.

>> JOVAN KURBALIJA: It's coming slower than technology. Malcolm.

>> MALCOLM JOHNSON: Looking at the four largest words there, the ones in red are the ones that people are concerned about, and the ones in green are the answers to the first two.

So hacked and security is a concern with everyone, every country. And it's through innovation that hopefully we can address these challenges, and I think what's happened in India is a good example of innovation, with the other digital identity, the rollout has been incredible. I'm

very pleased, you know, in ITU we have been doing work on digital financial inclusion.

We had a focus group where we had the Telecom operators but also the financial digital service providers, central banks, everybody participating, coming up with recommendations on how to make mobile banking and the like more secure, because we know there is statistics that show there is two billion people in the world that don't have a bank account. Out of those two billion, 1.6 billion have a mobile phone. This isn't going to be essential for inclusion in the digital economy.

We are pleased India will be hosting a event on this ITU organizing together with the World Bank. So this is an example where innovation can help. Last week I believe you were here for the artificial intelligence for good, AI for good summit, which also identified a lot of potential for overcoming some of the challenges we are faced. Turning to the second word, this is something I always emphasize, is collaboration, because there are so many different organisations and players, public sector, private sector, all need to collaborate together to pool our resources and avoid duplication, bring our own specific competencies to bear, to ensure that we do move forward on sustainable global development.

This is an issue, I believe, that is a challenge, because there are so many different organisations doing their own thing without awareness of what others are doing, and to try and get some collaboration, cooperation and coordination, I would say, is the big challenge.

>> JOVAN KURBALIJA: Thank you, Malcolm. One of the frequent sayings, everybody is for coordination but nobody wants to be coordinated (chuckles).

That probably summarizes that. What is particularly important is this question of inclusion, and that no one should be left behind. We are finding it both tradition in the developing but also in developed societies. There are some arguments that the recent political developments in the few leading countries are related to the fact that digital society basically didn't move the whole society, within that there is a saying, paraphrasing the old saying from rock and roll, too old for digital world and too young to die. There are generations and stratas of society which are left behind, both in developing and developed countries. I heard for example statistics that approximately 30 percent, only 30 percent of small businesses in Geneva, in the capital, are fully on the Internet in terms of Facebook, on-line support payments systems and other things.

There are some counterintuitive findings, but that question of inclusion on all levels, financial, access, is probably crucial relevance in order to preserve social stability and sustainable growth.

Robert, I guess your key words are more on the greener side. You take care of the red ones.

>> There is linkage between these words. I was impressed, I like this experiment. When we think about security, it was interesting that trust came up there first, and then was replaced by hacked and security. I think it's often the same thing. If you have any insecure networks, then trust starts to degrade, you can't have one without the other, I think.

Thinking of this from the Huawei private sector perspective, the networks can't be built, can't be optimized, participation can't be optimized if there is a absence of trust in those networks, in the absence of trust and how that data is handled. Essentially the cloud is a race for data, and people who are going to be providing these services for society are racing to obtain data and use it in the best way and people have to be able to provide that data and feel comfortable to provide that data.

I share the concerns of the panel. These opportunities can't be realized, if there are these problems, if we don't resolve these problems. When we think about the SDGs, we think of the agenda which gives us a time line of 2030, then that starts to disappear over the horizon, if those targets move further and further away, if we can't address them with, I think many of the ICT solutions I think we hope to address them with.

So this is I think an area where I see the other words here, collaboration and innovation and transparency are very important, the ecosystem, government, regulators, private sector, has to come together and find that roadmap and create that roadmap. So these issues are resolved, so the legal innovation stays ahead of the illegal innovation, and we will benefit from this digital society.

>> JOVAN KURBALIJA: Thank you, Robert. It seems that I keep my status of accepted person for moderation because we have the time 15 minutes. We have a question from our friend from Bangladesh and then from Norway, please.

>> Thanks very much, very enlightening debate and discussion. I'm from the Prime Minister office, access information programme in Bangladesh. Often we influence thinking and we influence behavior. When we talk about hacking and Internet security too much, I think we may create what is known as fear, uncertainty and doubt, the FUD factor in adopting change sometimes. Think about when you are building a house. It is not the, the first thing doesn't come to mind of what locks you are going to

put on your doors. This is a given. We would have the right kind of security depending on which neighborhood you live in.

It's a given, you don't really talk about it. Builder puts it in. You think about the features that will benefit you, right? You want to think about kinds of rooms you want, maybe air-conditioning, where the bathrooms should be stored, how you entertain guests, whether there will be a social dimension to the house. I think those are the things that need to be discussed more.

The security issues, I fully agree that it has to be addressed, but I think we create, as I said, that FUD factor, fear, uncertainty, doubt, by discussing it too much. When we discuss it too much, they will appear in front, they will appear in large red, just like it has appeared in recent elections in many countries.

Again not intending to be very political, but I think that collaboration is very important. Need to adopt change, somebody mentioned that technologies is moving faster than our behavior. But it's exactly the way we stifle our behavior by introducing threatening words that we are not able to move in our behavior as fast as technology is moving. In fact, we should be able to move faster than technology and we are human beings still. We have not reached the world of 2030, or the world of 2050 when AI will rule everything. We are still dominated by human beings.

I think again the words we choose, that we influence each other, that really matters. Thank you.

>> JOVAN KURBALIJA: Thank you very much, for those of you who didn't attend yesterday's session , our friend from Bangladesh informed us that the government of Bangladesh has a special training on empathy, and I think your comments today you have introduced a similar line in words of discussion, bringing behavioral aspect and importance in dealing with technological issues, yesterday discussion on the question of empathy, and that's probably one of the topics that we should rely more and more in the future discussion, how society perceived the technology.

We have a question from Norbert.

>> Thank you, my question to the government of India, I have been very impressed by your points about smart decision-making taking into account the local and social realities. My question is about how do you apply that with emerging trends, emerging technologies, like artificial intelligence revolution, how do you decide whether and to what extent this should and shall be adopted and perhaps more importantly, how India is going to shape it, so that it will actually be for good.

>> SANJAY KUMAR RAKESH: Artificial intelligence growth and localization of innovation and requirement these are part of the same process.

In India, part of localization, first thing we must speak in the language in which the target group speaks. We have different languages. But we also are approaching them, the technology has enabled us to talk in different languages, work in different languages, much easier, than it was ten years back.

When contents are now coming in local languages, in fact in India there is a stipulation that mobile should have to be multilingual. It will have to carry at least three India languages and more, many mobiles in India have 12, 14 languages. That way when there is communication to them, then local innovation will take care of the local requirements. Many apps, many systems are coming up which suits the local requirements, like we said in the digital space, we realize with unique I.D., digital I.D. we have created, we realize that 400 million people do not have mobile or anything. So the innovation came up that for those people, why not let their finger be the instrument of payments.

Now finger based payment mechanism has been innovated, further targeted section of population who do not own anything. That is the degree of localization or that we have going on, the motto is that there should be something in the digital world for everybody, not as per requirement of somebody else.

>> JOVAN KURBALIJA: Thank you. Do we have any other comments? Please.

>> Hi, my question is related to financial inclusion. When we talk about technology, we need to give access to finance, and I was wondering because last year we did blockchain between Thailand and Myanmar and we reduce the cost, now we are moving to microfinance to drastically drop the interest rate. However, for us last year it was difficult to talk to governments and to do pilot projects. I was wondering how governments in emerging markets would facilitate new technologies, because there is not only blockchain. We also put AI for microfinance, and to facilitate pilot projects.

>> MALCOLM JOHNSON: It's a challenge to make sure that we have a platform where all the relevant stakeholders can participate on an equal basis. But this is something we tried to do in ITU, and we did it in the region, in the area of digital financial inclusion, because we created a focus group to address that, and ITU focus groups are open to anybody to participate and on an equal basis without having to be an ITU member even.

So you don't even have to pay your membership fee to ITU to participate in the focus group. That focus group attracted a lot of interests and came out with a very, was very productive. The reports from that focus group are all available free of charge on the ITU website. But we need to take that forward to develop some more standards, technical standards

but also standards on quality of service, such like, and possibly regulatory framework.

So now we have established together with the World Bank what we call a financial inclusion global initiative. We want that to be as inclusive as possible for people to participate, and this was the event that I was saying that India is kindly going to be hosting the first event for this FIGI in India. We haven't got the date yet but we hope it is going to be around before the end of this year, maybe November time. We certainly welcome all interested parties to participate in that work.

>> JOVAN KURBALIJA: Thank you, Malcolm. We have a question over there, please.

>> Thank you. I'm from guinea. I have a question for India. I've heard that you were trying to, because we talk a lot about local content, and in Africa we have a high level of illiteracy, I'd like to know how do you adapt the local content knowing that people, majority of people can't read. Is it more visual content? Based on image or what are the solution that actually you are using to overcome the fact that, to have a smart society you need to have more to include people who can't read or understand what is going on. Thank you.

>> SANJAY KUMAR RAKESH: For those who are illiterate, other than the letters, photographs, images, and video are the way with each, as I said mobile taught us at least one literacy, that the number literacy has gone to those who are formally illiterate. To reach those people we are going to nonconventional ways and then it is so happening that those who are formally on nonliterate they have started learning those alphabet and punching letters to convey those things. Now smart phones have emojis so they are also writing up. The content holder that isn't rooted in the local system, he works with that. And those who do not have ability to do those, read that, there is a mechanism of assisted education, or assisted transaction that we are doing that.

And in the rural area and remote areas, where illiteracy is a little high, we have also worked out there are 250,000 banking correspondents, who help them in banking transactions and all to come through. They go there. As I said through our digital identity methods we have also developed mechanism to verify their identity very securely, easily and cheaply.

That way it's a working for those formal things, for leisure, pleasure and social activities, it's almost whichever who likes, that is how it's followed. Thank you.

>> JOVAN KURBALIJA: Thank you, Sanjay. We started with lunch discussion, moved with the post lunch and bring really some dynamism in the exchanges with almost 39 of you making comments and suggesting key words. Very very pertinent question that were asked. We navigated

through history from 17th century since India gave us 0 and 1. And create the base for the society, we heard that some will wait for innovation for some time. Then we have here in the room with us Mr. Louis passan who built on this great innovation and he got the idea to divide electronic flow into the packets and led to the way to the TCP/IP and further developments. Therefore he is quite a bit of history, and here we are today discussing the future. Discussing in the words of famous U.S. statement known unknowns, the problems that we know, known unknowns, and also trying to scratch what could be known unknowns, in artificial intelligence, and ethics and other issues. The underlying conclusion, we should deploy the common sense resilience for society. We cannot predict earthquakes, but we can prepare to deal with consequences, and I'm particularly thankful to our panelists for making such important lively comments, to all of you who put in efforts to join us, and I would like to invite you to thank our panelists for great discussion. Thank you.

(applause).

(end of session)

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