UNOFFICIAL TRANSCRIPT OF e-POLICY CIRCLE 9
July 1st, 2020

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Raghida Dergham: Good morning New York, and good afternoon London, Paris, Amman and Beirut. Welcome to Beirut Institute Summit e-Policy Circle 9. Now is this is the cast of Beirut Institute Summit in Abu Dhabi in its edition, its third edition. Hopefully we will see you again in the fourth edition of the Summit in Abu Dhabi in March, God willing. As you know you were all coming back in, what is it, June 13 and 14 and we know the reason why this has been postponed but it's wonderful seeing you again. You have honored me, and you have made it such a beautiful session the last time and I'm happy to welcome again in Fadi Ghandour, Malak Al Akiely, André Pietri, Sumit Jamuar and Cassandra Kelly. Welcome to Beirut Institute e-Policy Circle number 9. I will start as usual giving each of the speakers maximum of four minutes and then we'll engage in a conversation in which this time I shall be mostly a facilitator and a very curious one because the expertise that this panel has is beyond my knowledge but I would be a very good student. I'll start with Fadi Ghandour, four minutes to you.

Fadi Ghandour: Thank you very much Raghida, it's such a pleasure to be here with you and with such an incredible panel again. We had great fun in Abu Dhabi. Look, I, let me, let me set the scene as I as I see it. I mostly see it from the region that I live in, which is the Arab world, and which is the focus of the Beirut Institute, but it's also a global issue. So, what has happened to us in this COVID time is, in terms of Technology, in terms of the changes that are happening, it is brought the 21st century economy straight into our lap. It accelerated everything. Everything that we've been talking about that is going to happen in the next ten to fifteen years, everything that was talked, being talked about as 'the futuristic thing' is here. You know, this experiment of locking people up for today for two months at home has put to test the digital economy and it came through with flying colors I need to say, it came through with flying colors. Yes, there was a lot of pain, yes the digital, the bricks and mortar world is having and will continue to have a lot of pain but what is happening now as we are transitioning to the 21st century economy and super-fast, just as an anecdote here you know in the United States of America 10 to 15 percent of the retail was online. The crisis brought it up to 25 and even above 25 percent. In the Arab world it was less than 5%, it has more than doubled and probably quadrupled. So, what we were saying was going to happen in 10 or 15 years is suddenly here. We have to face the music, everybody, government regulators, educators, businesses who thought they were continuing to think about the digital strategy, it is already, it's already glaring in their face. Don't think about the strategy because the digital is here. My experience with a lot of traditional businesses in the region is that you know they'll bring the consultant and that there will be a long discussion, "we will do digital, do we not do digital? Are we online? Are we offline?" That debate is done, we're finished, we are online, the global world is

online, the digital world is happening. Now what did we learn in COVID? We learned that the Internet is robust the infrastructure of the internet when everyone moved online, what happened? The Internet stayed with us; it was a backbone. Yes there were problem, a little bit of problems here and there but the internet was robust it allowed us to move en masse, and it stayed with us, it did not fail us which means we can do so much more on it and the original promise of what the internet does is actually starting to show. So, here are the five or six things that that everyone is reviewing. So, education, right. Everybody moved online. Will we go back to a previous world? I don't think so. Healthcare. We got access to people who gave advice and Sumit will tell us much more about that but suddenly people were able to access knowledge on healthcare straight online. There were a lot of startups, you know, this is the startup world. Everybody that was questioning the early-stage companies, no longer, no longer! You know these were the visionaries, this is the next generation, in the region, in the world that were being questioned sometimes, is it "will we have online education?" "will we have online healthcare?" No! It's already there and the heroes, other than the frontline heroes of the healthcare system, the heroes of this world are the people that kept us eating, entertaining, learning, educating, accessing health knowledge and doing everything that we want while we were sitting in probably one room from our home. So I see a silver lining here Raghida and I see that this, I'm not going to undermine the challenges but I also see that this next generation that everybody is worried about in this crisis, I think they are the generation that are going to have the opportunities to build the next economy which is already here in front of us.

Raghida Dergham: This is really wonderful Fadi. I mean I am one of those people who've been very scared and worried about the next generation. So, you think that because they are more educated than my generation that they will do fine or that they became stronger because of the shock they got because of COVID 19?

Fadi Ghandour: Because they are digitally native Raghida. They were born with a mobile phone, they were born with Apple, they were born learning, connecting, doing everything digitally. So for you and I, we had to relearn and unlearn and adapt. For them this is how the world is, it's just us the older people, sorry to say that, that we are saying, you know, "what is going to happen?". These guys are there, you know, I am talking about twenty years old, imagine the ten years old, so this world is their world and they are going to take us to it. We're going to have to follow.

Raghida Dergham: So worry less at least, that's great because a lot of parents are probably as worried as I am, so thank you for the up-note. We will go on to Malak Al Akiely, one of the younger ones so that we learn from you in the next four minutes, what is it that you would like to bring to the table beyond what Fadi Ghandour said. So please, Malak Al Akiely.

Malak Al Akiely: Good afternoon everyone. Thank you Madam Raghida for having me to share my knowledge and expertise. Under the theme of next year's summit 'Stability Redefined' by now, I truly believe that we should be definitely having our post pandemic mindset to continue finding these solutions using digitalization, harnessing information, and risk management for the purpose of what I called SST concept which is essentially 'surviving, sustaining, and thriving'. Making this difficult year is our defining year actually for rethinking, redesigning and reorienting technology for the very best of human health wellbeing prosperity. COVID 19, I totally agree with Fadi has definitely pushed technology adaptation especially within SMEs, so companies that were reluctant to adopt technological solutions are now more open to utilizing in new technologies and investing in these technologies. Talking about the fields I work on, petroleum products and grains, where I have seen technology become the backbone for these industries and no longer just limited to tech companies. And in my space of commodity trading, one of the top sustainability trends is agriculture which now amid COVID 19 is just

increasingly under scrutiny for Health and Safety to accommodate this growing, you know market health concerns. We work with companies that have been using blockchain to track wheat and make the whole supply chain efficient, safe, tracking products from farm to table, local sourcing and also the demand for fresh products which are organic non-GMO, and now adding non-COVID-19 3 free. And also, payments in the digital currencies, e-solutions for new sources for trade finance and recently we have been introduced by one company to having the first world wireless quality for monitoring the grain silos and storage, which is fascinating. The daunting question for me is, "was this capacity of technology enough?" No, we have all this data but what's next? I mean looking ahead to exit this year, I think we definitely need agility, proactive strategies to adapting to the New World Order's since it's becoming just necessary to navigate what will happen in such uncertain times. We have to ensure smooth integration into our national policies, into our structure, into our business models and you know because we have to overcome the glitches, sometimes some of the glitches we cannot afford when realizing that it has its implications on our public health or education or socio-economic stability and cyber-security. Thank you.

Raghida Dergham: Malak, glitches, glitches sometimes stick. Which glitch worries you really? What type of glitches really scare you?

Malak Al Akiely: To start with, is the privacy, and the technology, and we have to define what is the morality of technology and we have to agree at least on universal laws on what is there, you know, just to avoid any private companies or governmental breaches on our own lives, you know, the privacy of our lives. I think that is what worries me the most.

Raghida Dergham: Thank You Malak Al Akiely, I'm going to go to somebody who might have more of a, you know, sort of a darker look at the situation and that is André Pietri who probably is going to tell us if technology has disappointed us or disappointed you André, and if so, did we dream that there was going to be a miracle thread, or there was never one to begin with? André Pietri, four minutes to you.

André Loesekrug-Pietri: Thank you Raghida to invite me and hello, to see all these friendly faces again. Well and let's not forget I am engaged in a mission which is how technology can be used to solve societal challenges so I'm a big, I'm a big fan of technology but I don't see that as an end I see the societal issues behind it as the most important. And indeed, let me start with the scary part, indeed, I mean you know this famous expression "when the water recedes you can see who is swimming with a with a suit or not" and we are currently seeing that this whole belief that technology would save us, well what did we see? We had to go back to methods which actually were used in previous pandemics which is strict confinement to get out of this or and with very simple masks of which most of the world was at the moment in a desperate need which are very simple to use but which production was concentrated. So, this is the first recognition that this this techno frenzy that sometimes make us think that everything can be sold with our mobile phone, well we just realized that that's not the case. And I think the big platforms maybe except the big e-commerce platforms were very silent actually during this crisis. The second thing is, and this is a scary part from a Liberal Democrat like I am, that actually we were ready, very, very quickly to give up our most fundamental rights I mean let's not forget the freedom of movement is the most fundamental right in most European countries where we thought this would be impossible, people confined themselves to the strictest level at least in France and Germany as I know, and this is both scary and maybe also optimistic about the capacity to act as a society. The third thing is, and I fully agree with Fadi Ghandour on this, I would call that.. it has been…people call it 'the great lockdown' I would also call it 'the great acceleration' and the acceleration bears with it a big divide. I had the luck to have my six-year-old having a fantastic teacher that actually switched immediately to teams or zoom and used digital tools but I also know from other parents that some of them did not have a teacher for three months so there has been probably.. and France has said that approximately six

percent of the population actually did not go to school for four months and so the divide in this in elementary school is very difficult to catch up. We will also see that some businesses which were not digital are completely lost I mean and some of the traditional Giants, probably you heard that Airbus, Airbus which was at the fate of its glory six months ago just laid off the biggest number of people in history just this morning, 15,000 people which for Europeans is scary. And last and that's probably like Fadi would say, that is a bit more I can feel that I'm not a millennial completely anymore, the world as we knew it, the world of traveling, the world which made us meet other people, this is probably…we all hope it's going to come back, but we all have this feeling that it won't come back to what it used to be before. The freedom of going through true borders, we can see how blocks are being set up. So, I think we're really entering a new area. Just maybe to finish on a few positive notes. First the concept of exponential, which is so key and which, me leading an organization which is doing a disruptive innovation is so key, we have understood that the linear thinking is always the wrong approach. We need to think about the next big thing, this is going to, this anticipation need is absolutely critical and it's scary to see how pandemics were actually planned. We all know about the TED talk off of Bill Gates 2015, it was all written down, but we just didn't see. And the other thing which is a fact that we need to take into account, the technology is not anymore just technology, it's intimately, like Malak just said, linked with our values, tracing apps, face-recognition which will be key to come out of this pandemic, is linked with values so we need if we want to support our values, we need to be on top of these things, otherwise others will impose their values.

Raghida Dergham: Thank you very much. I am not going to follow up with you because you were over four minutes. I am going to go to Sumit Jumuar right away, to you, four minutes.

Sumit Jumuar: Well first of all, thank you Raghida for inviting me, and again it's wonderful to see our friends again. It's a cast united, it's a bit like Avengers Disassembled. Now, the thing which is, you know, if I look at the perspective, I always look at things in terms of, in my view you know having built a business and when you look at businesses being built, it's typically over a cycle, which is a seven year period. And when you look at what's happened to us right now, I think it's like a hundred-year event, which has happened right now. So, if you think about the crisis it is once in a hundred-year crisis, it's going to define what we are going to do over the next hundred years. And my thesis is that the, whatever the panelists have said, I agreed agree with them in terms of you know technology is going to fundamentally is an integral part of it, when we look at every aspect of what we do, and it is going to be even more integrated in the way we operate. And whether we call it the digital world, whether we call it, you know, AI driven world, whether we call it a technology assisted world, it's all about technology is going to be and remains a fundamental part of our lives and it's that acceleration, that great acceleration has happened right now. The second thing is, you know closer to home, in terms of the work that we do which is when I look at the 21st century, I look at this as the century which belongs to biology, to genetics and AI combined and that frontier is when we are true, if you look at what has happened over the last three months it's all been about understanding ourselves so that we can understand the disease and the threat in a better way so that we can respond to it. And the amount of acceleration which has happened right now, you know if six months ago, when you talked about genetics people would say "oh tell me what, you know tell me the details", right now there are my friends, and you know the average person in the street knows a lot about what's happening in terms of advances and things that are happening, so that great education which has happened right now is driving that and I think everyone, at the top of their head, the attention is about health right and health is which we always took for granted, is now top priority. So and I think genomics and AI, the tools to interpret that will define, you know, this 21st century belongs to us just the way that the latter half of the, you know of the 20th century belonged to the Internet, and establish the tools to allow us to do this. And the third thing is, I think the question which is linked in to what André said, is a question about you

know, which I think we need to ponder is 'how do we create a fair and inclusive world together?' right, we have some really distinguished people who are attending this and people are from different parts of the world you know and the question which keeps us busy and which is been our mission over the past few years is about, you know, 'how do we deliver and leapfrog to the health care of the future for everyone everywhere?', and one of the things that this crisis has done, for example, is ensured that the link to technology, to the best of health care, and the individual all comes together. So those are my three points in the opening remarks, and I'd very happy to elaborate as we go through the conversation.

Raghida Dergham: Yeah absolutely, thank you very much. Listen your TEDx Talk was about the future of healthcare and it was broadcasted in what, five languages? It's been seen by what, 40 million people? Why? What did you say to get the attention of so many people Sumit?

Sumit Jumuar: Well I think part of this is you just have to be blessed. Someone up there likes the work that we do, right, there's a lot of serendipity in anything that happens. But I think what is fundamentally, what we find is that the work we do impacts people and you know it ties up to their personal mission. So what we do at Global Gene Corp is we've realized that genetics is fundamentally changing the world but it's still quite restricted because eighty percent of all the world's data comes from people of European ancestry. So if we don't have a reference, we can't understand and engage and say what is good for Sumit or not, so you know the DNA is like the code. I have my code, but I may not be able to interpret it and compare it with something. The same thing happens for diseases, you know I do not have a comprehensive set of instructions understanding around those diseases. And that's why the work that we are doing is mapping and organizing the world genomic diversity, so that we can create that foundation for everyone, everywhere.

Raghida Dergham: Thank you very much. Cassandra Kelly, so four minutes to you and I'm very anxious and eager to hear what you have to say. You are in New York, my city and that I miss that I worry about, so I want to hear all about your take, please, to you.

Cassandra Kelly: Yes, and thanks Raghida, I'm happy to talk about New York if we have time. Look always a pleasure to follow Sumit, and as they've already made some very good points and the gang is back together and Sumit and I have even been able to collaborate and do some great things since. So, thank you Raghida for bringing us together. I do want to make a special note to everyone that's joining us virtually, some new friends and some old, and as much as these forums are great, as we all know, I miss the opportunity to reach out to you personally and meet new friends, so do you know that I'm thinking of you, enormously grateful that you're joining and I do miss you. So of course, talking about this topic for me, that problem with stability, as I've been thinking about it Raghida, is not everyone wants it. People say "what do you mean not everyone wants stability?" and they look at me oddly and I say well it is with sadness that I hold this view, that the peace and harmony that we here are talking about presenters and participants on this call, we may wish for a vision but it's not shared by all and particularly not by all the world leaders. It doesn't mean however that we shouldn't be looking to create the stability where we can and a better future for many and that's of course why we're here today. We must play a part on behalf of those who deserve the peaceful opportunity, on behalf of people that don't have a voice. And in doing so of course, what we will discuss today is that there are great opportunities but are indeed there are hurdles. And the other thing, I've been listening to my panelists talk about uncertainty, and as you know I think that uncertainty isn't the new normal, it's always been present, and in fact uncertainty creates opportunity. There is a great degree of turmoil and for many of us who have lived over the decades this is a different kind of turmoil than many of us are used to. But let's not confuse ourselves that uncertainty is ever-present. But I want to talk about, sort of back to the technology specifically, for me technology is a great leveler. It has the ability to unlock simply eye-

watering opportunities, but at the same time if left unchecked, unregulated, there are unintended or intended consequences that are not good that may arise, meaning that instead of this wonderful aspiration that we have a sharing prosperity, that in fact the wealth polarization that we already see may increase and the access to opportunity narrows and is reserved for an increasingly smaller percentage of the world's population and that worries me. And as much as me we may hear about thriving, and Malak referred to it before, there are many corners of the world, expanses where thriving isn't the goal, simply surviving is. And so, when I'm thinking about well 'how do we shift from surviving to thriving?' and for some people surviving is what we also need to focus on, but if I'm moving from the surviving through to thriving paradigm then there are several pillars that are sort of foundations of the survival which is the access to food, health, and education, and they, and obviously the ability to rely on safety and security. But if we want to move to thriving, we actually need to create the access for all so that people can get on with creating the opportunities for them to not just have to leave their homes to find better opportunities, but to be able to stay. And so, if we have this as a solid platform we can think about 'what are the springboards?' 'what do we need to build and invest in?' that yield outcomes that are not about getting through every day, they're not just about this survival, and that really, for me, comes back to the education and to access to opportunity. One that is immune to the differences based on race, gender, and background, but please, as someone said to me the other day "it's almost so basic. it needs to be said". All of this dreaming about a better world is simply a pipe dream if people aren't connected. If there is an access to free and open Internet, and so people talk about getting the next billion online but at the EU global tech panel where I spend a lot of time and consideration, we're worried about the last billion, that they're already most marginalized and we need to think bigger and we need to make a priority use our influence political, corporate and civil to make the change because the last billion matter.

Raghida Dergham: I want to follow up with you quickly but with a question that somebody asked, David Simon, he is asking, he's saying, "trust is central to change and adaptation", 'trust' is the word, "what does it, he says, do to build trust? Individuals? Is it the corporate approach? Government levels? go ahead Cassandra, take that question for me if you don't mind as you follow up.

Cassandra Kelly: Thank you, it's a brilliant question. What is it to build trust, and I guess it depends whether we're talking at a, are we talking at a family level? A societal level? Globally? I think the foundation of trust is consistency and also, I believe that there is the vision, so I think in order to create trust there needs to be a vision that is set, a vision that is then shared and communicated. So, and then there needs to be the consistency behind that. I think what we're seeing a lot in the world is that you know people are talking about this concept of 'trust' but they're not being fed correct information, the people that are feeding them information are not even well informed themselves. So, I think we need the dissemination of accurate information, and assumption that the population is not stupid which is one of my bugbears. You're actually talking to people that can think and are asking you to think with them and for them but not without them, so that for me is fundamental to trust.

Raghida Dergham: You know I want to take a point that Cassandra touched upon that's the word 'surviving' and 'thriving'. Moving from surviving to thriving and who can afford that journey and most of them, I would think, in most of the world that it's about survival mostly not thriving. In the aftermath of COVID 19, the economies have been hit worldwide, the global economy has been, it's in a bit of a shambles right now. Fadi Ghandour, from this part of the world, do you see any light for people to really, actually, practically, think 'thriving' rather than 'surviving'?

Fadi Ghandour: It's a tough question and I'm going to be an optimist today because I am in your city and I need to be optimist. Look in response to what Cassandra said and what André said and I am a believer

in that story and in being careful and about the 'trust' part of it and the 'thriving'. What the crisis showed us in my view as the deficiencies of what we have, the transition from the bricks and mortar world, from the analog world to the digital world was not happening. When André says, you know, look what we did when the pandemic hit, we used 20th century and earlier 20th century also methods, we locked down, we put a mask but here's where the opportunity is. You know, it showed us you know, when the water went down and we saw all of these deficiencies and all of these things, at least we are seeing them now, so the entrepreneurial mind in me, and I am blessed to have an entrepreneurial mind and I think the big challenge now because it is a challenge, it's an opportunity but it's also a challenge for everyone to think about as now that we see all these challenges, now that we see all these gaps now that we see that the teacher that is not digitally connected is not going to be able to teach the kids and some kids even in France or in Europe are going to be completely out of schooling for four months, while a good teacher in downtown Mumbai is going to be able to be, if he is digitally connected, is going to be giving these kids the digital learning that required and it actually it's not only giving them what a continuation of what they had, but actually takes them to the next level. So again, the leveler element of the discussion, you know, the ultimate, the great leveler, you know, it's an equalizer, so it's how we use it. So think, let's think a couple of things here. I promise you you're going to hear Rashida, from the United Nations and from the World Bank that digital connectivity for every human being is a human right now. It is going to become a fad, yes "let's go celebrate everyone, let's get connected", because it showed us. So my point here is, we know now and this massive, massive, massive experiment that could have never happened otherwise has showed us everything that needs to be done and here lies the opportunity because we are suffering on the short-term, because the next economy is going to be built. So, and we won't drop but then our responsibility is the people, who is going to be left behind? And how are we going to be helping these two people to go and move to the digital economy, that is promised?

Raghida Dergham: Fascinating, fascinating. You know what, I want to go to André with this. André Pietri, take it from here, from where Fadi Ghandour left it, whether you agree with it or not and combine it with the question that I got from when Benedetta Oddo she says, "what about accountability to build trust and social justice?" André Pietri, and then I want to engage the rest of you on the same discussion before we go to another axis. Go ahead André.

André Loesekrug-Pietri: Yes, thank you. Listening to Fadi, I was just thinking, who are the leaders in the world who actually had this kind of attitude towards their own population? Because we saw a lot, maybe I'm speaking with a Europe-centric view, where we saw a lot leaders saying "we're going to protect you, we're going to take, I mean we're going to make – and from an economic point of view, it makes sense – we're going to cover your salaries and over", but that was important during the crisis, but now indeed Fadi, you're completely right, it's a quick, actually I combine that with the question of 'trust', the real leaders will be those who will say "ok we had this crisis, it showed everybody, the most well-off to the ones who have been in the past world the less privileged, that there is an opportunity to reshuffle the cards and so conclusion number one, the states and international organizations should focus even more on building the infrastructure, but at the same time probably leave a lot of opportunities, so give, and I take education as an infrastructure and I come back to the 'trust' point and I leave a lot of trust to the individuals to actually realize their own path. Giving them what they need, but also giving them the trust. My feeling is, I see some societies oriented towards you know, somebody is going to take care of everything for you, and I don't think we are making grown up societies to that. We're actually making societies which are backward from an intellectual and a trust perspective. So, I think I would also compliment what I heard about trust on this. And last but not least we should now also forget that this massive experiment as Fadi mentioned, has shown us once again that we are extremely connected with all each other. I mean the fact that today borders are opening or not opening shows that actually when you reopen, what happens in the United States could have immediately an impact on the Middle East,

or in Europe. And here, I don't see a lot of political leadership that is actually insisting on this. I see in Asia very lonesome ways, you know I spent 10 years in China, it's a country I like, but I must say I am less and less comfortable with this very lone attitude that has taken, we saw that in Hong Kong yesterday, and also we see from a political leadership in the US where these one-way streets where people go their own way are probably dead ends, but that takes a lot of political courage. So, it's also a time for political leadership, I must say for the moment I have not been so impressed by what I saw, but you know, it's probably an opportunity for this young generation to take charge.

Raghida Dergham: Just one question to everybody, has anybody seen a leader in the sense that André is talking about to be impressed by? Just say yes, if not, don't elaborate.

Cassandra Kelly: Yes.

Raghida Dergham: Yes, you have, a leader in mind, everyone? You know actually a leader who is up to the challenge now? Who said yes? Well go ahead Malak.

Malak Al Akiely: I'll pass this one.

Raghida Dergham: Oh I thought you said 'yes', it was Cassandra, I see, sorry Malak I didn't mean that. Cassandra.

Cassandra Kelly: I feel Malak's good energy behind my answer, so I think in short…

Raghida Dergham: Just, do you have a name?

Cassandra Kelly: Yes! The Prime Minister of New Zealand.

Raghida Dergham: Oh that's good, it's true, it's true. She performed well, anybody else? Anyone else?

Malak Al Akiely: Our King, the King of Jordan.

Raghida Dergham: Okay, that's good. You guys did a good job as well. Listen Malak, while I have you, you have been speaking a lot about the morality of that what we need to be doing now, and you have also been talking about the region's strategic plan for you know properly aligning the public opinion with the resources and effort, let me not speak on your behalf of you. Take it from here and explain what you have in mind because I have been familiarized with what you have in mind.

Malak Al Akiely: Yeah, the first thing is that I agree that like the data is, that we've been hearing that it is the new ultimate energy into the, in today's technology, but I would, however I wouldn't call it the 'green energy' because I am always thinking about what the footprint on our lives, on our privacy and security, so cyber security should grow hand by hand with all the technological development that is happening and again, human beings we should agree on universal laws and regulations or code of conduct. Call it the way you want, just to product the privacy of this technology, we as technology users from both private and governmental breaches. The other thing, okay we move to where this technological adaptational is, but we will have more risks where we rise, we have cyber security, privacy and then it will become more prominent, so this is where we would raise the question of morality in technology context and this is where actually the role of governments is, and to put all the resources or the investment to protect us, maybe if at their benefit, but to protect us to fix our rights at least because this is, this is a human right. The other thing that I am concerned about is, again, the accessibility of,

again the concept of SST which is surviving, sustainability and thriving, so I think it is the best time now to re-design technology for the best of us, it's the best time now.

Raghida Dergham: I have a question from Alistair Burt, the Rt Hon Alistair Burt, but I want to combine it with, actually I want to go back to it in a bit because I really need to hear from Sumit about the health part of this debate before I go into cybersecurity, and risks, and what have you. I'm going to give you Sumit the floor to explain to us where, this sector, the health sector has suffered a lot. We have, there was no silver bullet there, we are suffering because of a virus, a virus that we have not even found, we don't even know when we will find the cure for, or vaccine for. So, this technology here, I don't know you're celebrating it as if it's the answer, it's everything and yet here we are being brought back in a very fundamental way backwards by a virus, and that's not the first time in history obviously, but I thought we were better prepared. I thought our hospitals were better prepared. The healthcare community has been amazing throughout the world and they've suffered so much, and they got, you know, the applause from balconies which is nice, but they really paid a huge price. Go ahead Sumit, take it from here on this one.

Sumit Jumuar: Thank You Raghida. I think the first thing I would say is, I think we all need to applaud the healthcare system and the participants in that. You know, the healthcare workers, the nurses, the doctors, who actually put their lives on the line and gone over and beyond what you know would be normally expected of them.

Raghida Dergham: Absolutely.

Sumit Jumuar: And I think when we think of it, look, we didn't even know what this virus was about a few months ago. Think about this way. The first we heard of it was, you know, just after the end of January, late January, when we started saying, there's something not normal which is happening, do we, you know, we probably need to be worried about it. So, if you think from that time, to the point where we are, we are struggling with a pathogen we don't understand. We are struggling with how it mutates, how it infects, we do not have enough information. What I've been really encouraged by is the cross border, it is something I think that André had mentioned, which is the cross-border collaboration which we have seen across countries where seriously the borders have broken down in the way the science has been done. Right, you have a company based in one part of the world engaging with the country, in company, or scientific research in other part of the world, and together they are looking at manufacturing in other part of the world to solve this, from everything, from a science to execution, to actually manufacturing and delivery point of view. So that's something which pre-crisis would have happened in the background but not at this scale. There's a lot of scientific scrutiny which is happening, and of course, you know, with science what happens is you have a certain hypothesis, you have certain data, you test it, and then there's robustness around what works, what doesn't work. But what has been exceptionally encouraging and what gives me hope is the fact that, essentially, by March we had, you know and more recently there are about 180 candidates which are out there either as vaccines or treatments for COVID19. Okay now, let me give a perspective of what, why that is so important. Typically, to deliver a vaccine or a treatment will take you ten to twelve years on a minimum, because by the time you go through the trials, what works, you know whether it's a an antibody, whether it's you know live vaccine whether it's you know mRNA structures which is a novel vaccine which is coming in, when you look at all these things it would have taken us at least ten to twelve years by putting into human trials and everything else and getting something out there. The fact that on this base people are expecting something in the next, you know, from the start to, or maybe something even as early as the fourth quarter of this year onwards, is absolutely remarkable and that is what the Marvel of the science in terms of genetics and what AI has allowed us to do, it is to say 'where does it act?' 'what does it do?'

and then AI again as a tool, and the data sciences are a tool to look and test those hypotheses, to push that forward. And so that's just one thing which is impacting us and is enabling us at this point of time. The second thing is about you know, the protocols which need to be followed around the spread of the virus because one of the key thing is if you don't understand how you can cure it, the thing is 'how do we prevent the spread?'. And some of this goes back to methodology around this factor called R0 which we have heard a lot about, about the infectious, you know, 'how many people do you infect?', each person's infecting, and there are various measures, and there are some dramatic measures which have been taken, never before seen in our lifetimes, which are things like social distancing, so keeping people away from infecting, cutting down the size of you know the gatherings, even things like contact tracing, which André and some of the other colleagues had mentioned where there's a trade-off between privacy to being able to track people on who may have been infected, because once you do that, countries which have done better which is either Taiwan, or South Korea, or others, is people where they found the contact and then cut it out there. So I would say that there's a dramatic, just summarizing, I would say that there's a dramatic transformation which is taking place, which has actually become more front and center, and the encouraging thing for me is that we are actually talking about not just vaccines or treatment at the, in a western country or in a rich country. But we are looking at solutions, prepared participants are saying 'how do we get it to some of the more far-flung than the poorest parts of the world, in an accelerated way?' and I think that is a really encouraging sign. So I'm an optimist, and I like those dialogues, that discussion, collaborations.

Raghida Dergham: Great, I just want to ask you a question that I'm personally intrigued by. I don't know why, I mean why the United States, I may have some answers, but if you could summarize it as much as possible. Why would a country like the United States, which is supposed to be incredibly equipped to face such outrageous developments in the world, allegedly, all of a sudden, it's a country that is failing is a surprise. Is it the failure of the system? Is it the failure of politics? Is it the failure of the human nature? Is it the size of this country, 350 million? Is it because the president doesn't believe in masks? I mean, tell me, in a nutshell so that, I'd like others to come in on, Cassandra will be next. Go ahead Sumit, quickly.

Sumit Jumuar: I don't, I don't know the answer. But what I do know is that there is some of the most remarkable science that is happening in the United States. Some of the colleagues, you know, we have colleagues there and people we work with, I think they're at the forefront of whatever and the intent is absolutely correct. But you know, Casandra and I think Fadi wanted to add something. Feel free to...

Raghida Dergham: Cassandra first, and then André, and then I am going to move to the next. Go ahead Cassandra.

Cassandra Kelly: Yes, just very quickly. So many things I want to discuss, but in terms of the United States question, I think leadership fair-and-square, not just the President, but other governors, other leaders in general who have not disseminated correct information have flagrantly laughed in the face of science. I think that's a lot. And also, I believe fundamentally some of the belief of the American people around Liberty and what is their right to freedom and their right to self-expression, there are other countries where people are more compliant, some of the Scandinavian countries included. So, when you tell them not to do something, they don't do it. And so, I think mixing the leadership with this inherent belief that you just got the right to go and do what you like whether it's, and you know, guns is one example, but frankly not wearing a mask, apparently you also have the right to kill people by not wearing a mask, which is tragic.

Raghida Dergham: André quickly on this one before we move on.

André Loesekrug-Pietri: I mean, one of the big reckoning of this crisis is that time speed is suddenly appearing as a key factor for either success or failure. And if leadership has anticipation and is very agile to react, it cut this famous exponential curve. And we've had exactly the opposite, we had in the US, where despite the sign was alerting, I mean John Hopkins don't forget are still the main source for infection all over the world, so they're in the US, but the leadership somewhat delayed by just a couple of weeks and these are dramatic weeks today. So, and the other thing I would say is the role of science, if you have scientists within the political leadership, and not just as a committee, this is another recognition. I think it should be important in the way we choose our leaders that they have a basic understanding of science, if we just have like ad-hoc committees, the risk is also that we delegitimate the leadership because then it will be an obscure committee that will take very heavy political decisions. And this is what makes me worry about authoritarian states because some of these states have the signs inside their system.

Raghida Dergham: But they're succeeding, I mean they're taken advantage.

André Loesekrug-Pietri: For the bad reason, I personally think, but it's succeeding absolutely.

Raghida Dergham: Anything to stop it? Can we, and can technology be used to stop it instead of being used to accelerate it, Malak?

Malak Al Akiely: Yes, definitely. We talked, we talked also in the last year in the summit about the data literacy, how it's important for every mother, everyone, policymakers, business leaders, as important as entrepreneur, entrepreneur who understands that the sciences should be as equal to sitting people, to the leaders, and policymakers, and not only just encouraging that core STEM fields with everyone talking about also critical reasoning and data science.

Raghida Dergham: Fadi Ghandour, I will put to the question that was put, to everybody it seems, by Alistair Burt, "if digital connection is our savior, to which we must all have access, how vulnerable are we to those who could close down such connection at a time of crises or war? are we at the greater risk now?" this will be a continuation practically of what André was talking about. To you, Fadi Ghandour.

Fadi Ghandour: Look, I mean there's no perfection in the world so we are, yes when the world is connected, when everything is connected, when somebody, when either the state actors, or the non-state actors can disrupt that connectivity, we need to be careful. Cybersecurity is a big issue. Cyber responsibility is a big issue. The role of the state is a story to be asked, okay so when we talk about human rights and digital connectivity as a human right, then the state becomes responsible, right so if those, if the state has its hands on the cap, and whether it opens it and closes it, or whether there are the cyber, the cyber criminals, let's call them or the cyber disruptors, we need to watch out for this. There needs to be a new definition of how we actually conduct ourselves in the new world that has come straight into our lap. We were talking about, cybersecurity, everybody was talking about cybersecurity and whether, what strategy do we have for it, the banks were worried about it, the governments were worried about it, but now everybody has to worry about it, and so it has accelerated everything. You know, my frame of mind Raghida, as we talk about problems, my frame of mind is: we are seeing these problems now much more magnified, and so you will have people coming out and finding solutions, you will also find people who are evil, and will do evil things to our connectivity. But the issue here is, everything is floating now, everything is visible.

Raghida Dergham: But Fadi because it's floating and because that's not always visible, and because such technology can fall into the hands of not only, you know governmental thugs, but non-governmental thugs as well, so then I mean, I can't be comforted with cybersecurity being in the hands of people who really serve different references. Why am I not supposed to be very scared?

Fadi Ghandour: You should be scared, but you also should feel that there are people that are, that mean to collaborate and find ways and find solutions, just like there are evil people, that want to do evil things that scare you, there are also people that are going to solve it. The key here is that we need to go back and find a new dialogue and a new discussion of how we are going to address these issues because they are magnified, there are no longer small issues or issues of certain sectors in society and certain cohorts. It is everybody's issue, it has become a story of governance and a story of delivering solutions to the population, that's what it is at the end of the day.

Raghida Dergham: So I'm going to go now, because we have just about eight minutes left and I want to ask each of you to take a minute, a minute and a half max and to lead me, to leave us with your thoughts and I would start the opposite way of where I started, I will start with Cassandra Kelly, and Cassandra you have, you know, you have been trying to highlight the opportunities and the positive as elements in unlocking human potential but you and I have had conversations and I feel that you've been burdened by worries, that you've been hunted down by something. Pass by that thought as you're concluding with your own remarks.

Cassandra Kelly: I have goosebumps with that offer and that opportunity, certainly Raghida, I think you sort of pose the question to us you know you're all very positive and you didn't say it this way, but 'is tech really the answer?' and I guess the answer is: 'no, humans are'. It's human intent, human endeavor, human invention, and at the end of the day, human inventions are driven by humans. What we look to solve is imagined by humans, and where the weapon, or the person, where the invention isn't autonomous, then there's often a person sitting behind it and driving it and commanding, whatever the technology is. So, I think that's something we must all bear in mind, and I think one of the participants also asked, "was access enough?" So no, and neither is courage. Education and daring to launch a business will certainly take you along the way. But without a supportive ecosystem and the remove barriers and restrictions, frustration sets in and scale is impossible. Some of us took for granted pre-COVID access to foreign exchange permission to trade across borders, the ability to travel, but that's not a given in some countries either. So yes, I have my eyes wide open to the dark sides, you know, that I have spoken with you and at the summit in the past about lethal autonomous weapons. I'm fully aware and I talked to NATO and others about bad actors and I encourage and urge people to think about policy settings for the dark side. I equally am talking about what can we do for harmony and peace that we seek? How do we embrace this wonderful leveler? And enhance the best of human spirit? And so, I come back to the fact that each of us need to use our networks and our influence to do that. I'm sitting here as you know, and it's my time to come to an end but I live in between the US and Australia and I am living in Harlem at the moment and I'm grounded here and seeing what has happened to this African American population is just devastating in a short six months, so much progress has been wound back, so much harmony has through tragedy, death, a population that is disproportionately hit by COVID. We are seeing violence on my phone just whilst being here, I've had five alerts of gunshots, people being hurt with machetes just in the neighboring environment, so really it's the humans that we need to work on and for humans we can create amazing things to be better humans.

Raghida Dergham: Thank you very much I'm very sorry to cut you off at such a profound moment but this way I'm going to have one minute for each person, and I will go to Sumit please. Thank you, I'm sorry to cut you, thank you Cassandra Kelly. Sumit Jumuar.

Cassandra Kelly: Thank you Raghida.

Sumit Jumuar: I think, look it's very poignant what Cassandra said. So let, me let me state, you know when I was growing up, we grew up on Star Trek, right and Star Trek, there was, you know, the doctor when he went on a planet or when someone was caught hurt, what he did was he scanned something and the person was cured. And I hope that what we are doing through this technology acceleration and the work that we are doing and others are doing in healthcare, we create that world where when we look back and my son looks back, he turns around and says "you guys were so barbaric, you used to cut people up, give them toxic chemicals, which may or may not have worked, look how advanced healthcare is, and it's available to every person in the planet, everywhere, who's enjoying a great quality of life and also having the longevity benefits" and I think that's the vision of the world that we're looking to create which should emerge out of this crisis, and that is what I'm personally very excited by.

Raghida Dergham: Thank you very much, Sumit Jumuar, it's always great to hear you, you get me excited about something, and that we will learn from you because you guys are way ahead of my knowledge in this field. Thank you, I will go to you André Pietri with one minute please, and the reason why I am going fast is because we're going to have electricity cut off and then you are going to lose me, so you better just listen to me because I know what I am doing.

André Loesekrug-Pietri: Look, I mean just to build on what Fadi said about the collaboration potential, I mean never before we had so many zoom meetings, I mean there is some kind of a zoom fatigue, but on the other side I mean we are communicating with each other and probably at the level like never before and so this this makes me very optimistic about our capacity collectively, to have this collective intelligence, to find the, to find solutions. The other thing is civil society's role, we talked about political leadership, clearly civil society has emerged foundations, NGOs, etc., as a big, big player but with this role comes responsibility, so for example, when you see that Facebook, and I know we are, we are live on Facebook right now, just says "I don't want to be responsible for any hate speech", no that kind of attitude is not possible anymore. We will need to have technology players take sides, and I think Twitter or Instagram did it much better than Facebook, and last point, let's not waste this crisis, this crisis is an opportunity to reshuffle the cards. I mean you talked about healthcare Sumit, if we don't do it others, be it in cyberspace or other, or in other spaces, will use it against our values. Si it's really a moment for action.

Raghida Dergham: Thank you very much André Pietri, and Malak Al Akiely, please one minute to you.

Malak Al Akiely: Okay I have to say that on a positive note, our true treasure is actually, in this Arab region, is the next generation so and their energy, so the right talents and skills are necessary to be developed, AI data management skills are in short supply, the digital transformation is the first step toward a more ICT centric society. We as a society should aim to empower this new generation in that a data driven technology, as well as data science. This shift will only be the solution for to come, to solve and fill the employment gap and since it's all the researchers, they are saying that it's the 60th job of the 21st century so I think it is to focus our efforts to position ourselves in this region to take advantage of such a gap, we should turn this region to an ICT and data science hub.

Raghida Dergham: Thank you very much Malak Al Akiely, Fadi Ghandour, one minute to you please, and then I am going to …

Fadi Ghandour: I have to agree with André completely, so I'll repeat what he said without saying it, but I will also finish in less than a minute. This crisis got us to know, we now we know, nobody can hide we know exactly the deficiencies we know the gaps, there are no excuses, let's see how and who is going to come up with the solutions. Civil society, government, Supra-state institutions…we have to address we know there is nothing to be hidden anymore.

Raghida Dergham: Thank you very much Fadi Ghandour. Let me tell you who's going to be with us at the Beirut Institute e-Policy Circle 10 next Wednesday, July 8 but I am going to say the names first before we get out of, in case we do. We have their Excellencies John Sawyers, Brett McGurk, Rania Al-Mashat and Yue Xiao Yong and quickly I'll tell you who they are. HE John Sawers is Former Chief of the Secret Intelligence Service, former Permanent Representative of the United Kingdom to the United Nations. Currently, independent non-executive director of BP Global and Executive Chairman of Newbridge Advisory. HE Brett Mcgurk is Former Special Assistant to President Bush and Senior Director for Iraq and Afghanistan, Former Deputy Assistant Secretary of State for Iraq and Iran and he was also Special Presidential Envoy for the U.S. campaign against the Islamic State under Obama. Currently, Payne Distinguished Lecturer Stanford University. We have HE Rania Al-Mashat, she is Egypt's Minister of International Cooperation, she is former Minister of Tourism and previously Advisor to the Chief Economist of the IMF. I am very happy to have her Excellency Rania Al-Mashat with us, and finally we have HE Amb. Yue Xiao Yong, and he is a China Forum Expert, former Ambassador to Qatar, Jordan and Ireland, Director and Senior Fellow at Center for Global Studies of Renmin University of China.
I want to thank you, you have enlightened me, you have taught me a lot, you have honored me. I thank you all and I look forward to seeing you at our next summit, I hope, but in the meantime, we will continue with the e-Policy Circles until we meet in Abu Dhabi, hopefully in March. But, thank you again for this wonderful opportunity. Goodbye.