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EMERGING TECHNOLOGY FOR CONNECTIVITY ACCELLERATING DIGITAL
TRANSFORMATION IN LDCS, LLDCS AND SIDS

JULY 5, 2021
BRAINCHAINS: THE RISE OF THE SLOW NETWORK

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     >> AMINATA AMADOU GARBA: Again, good morning,
everyone. We welcome you to this event on Emerging
technology for connectivity Accellerating digital
transformation in LDCs, LLDCs and SIDS, in LDCs, LLDCs and
SIDS. My name is Aminata Amadou Garba. I will be
moderating this session this morning. The programme of the
day, today we have a theme which is on trends in emerging
technology for connectivity and Digital Transformation. On
the different sessions we'll have today, we'll try to set
the scene for the next few days.
     We'll start with this spotlight session, breaking the
Brainchains, SLOW Internet, and then we have a session
right after on scalable eGovernment solutions, and then
we'll have an opening ceremony at 2:00 p.m. At 3:00 p.m.
we have a session on trends in emerging technology taken
we'll have some keynotes on emerging technology at 5:30
especially focused in certain areas.
     Let's go to this session, it is Breaking Brainchains:

The Rise of the SLOW Network. In this session, by highlighting the assumptions behind two transformative technology, the Internet and bitcoin protocols Preeti Sinha will illustrate how breaking Brainchains can accelerate the Digital Transformation in non-obvious ways. Will the Internet continue or will new IP protocol change it in time or is the Internet itself a Brainchain? This is what we'll explore in the talk.

Our speaker today is Mr. Preeti Sinha, who is the Chairman of VeriFi in Hong Kong based Internet financial infrastructure consultancy company. He is an Internet cofunded the first licensed provider in Hong Kong and leads in blockchain consortium. Previously he served on the Hong Kong government Committee on Innovation tech non-governmental and industrialization and he has held many, many other leadership positions.

I would stop here and give the floor to Preeti Sinha who will tell us about Brainchain.

The floor is yours.

>> PINDAR WONG: Thank you for this kind introduction. Thank you and apologize for being a few minutes late.

As mentioned, we have a very big task of us, to set the scene in some sense for a very eventful week ahead. Why don't we just get started.

I'll walk through and if I could have the starter advance the slide to the next slide by next, that would be great.

Next slide, please.

So with this spotlight keynote, I would like to thank Houlin Zhao, Secretary-General, obviously the staff and wonderful translators that we have for the week ahead which will be extremely interesting.

Could we have the previous slide before that? Yeah.

What I thought we would do, in the spotlight,s to set -- to think bigger thoughts in some sense to dream bigger dreams if only to just help the -- help set the tone for what will be the themes of not only today but for the rest of the week.

Next slide, please.

What I originally wanted to do is to talk about the great big debate over the last three, four years with what technical discussions within ITU, about the new Internet protocol as propagated via the ITU and also the QUIC protocol in some sense, the Internet engineering taskforce vision as originally proposed by Google. It is not clear to me that this is actually symptomatic of the Internet itself being disrupted. As you know, a lot of technique,

industries, they're moving on to the Internet, and the Internet itself was the big disrupter over the last 20 years.

There is interesting developments for example in the bitcoin, blockchain protocols with a fundamentally different architecture and it is not clear to me that the future is just a selection between these two protocols, new Internet IP or the QUIC protocol. In last month's keynote I gave at the African summit, there was a comment that actually disturbed me, it was a notion of an embedded assumption in your mind that you were not aware of. I want to talk about Brainchains today and not the difference between UIP and the QUIC protocol.

The reason it disturbed me, we're thinking about the Internet development in Africa in the last 20 years and next 20 years, there seems to be a set of assumptions that somehow invisibly limits or confine, restricts the freedom of you thinking. And that was a comment made in my session and it disturbed me.

To focus the spotlight, we'll try to unpack this, this Brainchain that was my term for the phenomenon, in some sense, the hidden assumptions. I'll use two example, the Internet of the first one and bitcoin as the second to illustrate really that we should be very sensitive to the Brainchains and surface them as soon as we can.

Next slide, please.

As you know, the chain is a series of links and to break a Brainchain you're trying to find the weakest link, in some sense the weakest part of the series of assumptions. Today, again, using the two examples let's try to surface what's a Brainchain by using some examples and seeing how to break them.

Next slide.

So as was mentioned, we have LDCs, LLDCs and SIDS and to be honest, I wasn't actually sure what these meant. Obviously I'm trying to go and lead into the poll next, if we can have the next slide, and what I would like to know is, you know, where are you from? That's what a name? You know, for these least developed economies, landlocked Developing Countries, small island, developing states, if you're from any one of these, choose in the poll, if you're from none of them, choose item number 4. Could we run the first poll?

>> I will. I have a small issue here. Sorry about that.

>> PINDAR WONG: No problem.

What I'm basically trying to find is that -- thank

you. The poll is not quite there.

What I'm trying to figure out is, we have 100 or so people on this video conference. The whole theme of the week, it is LDCs, LLDCs and SIDS. I want to try to figure out where everyone is from. When we get the poll running -- okay. Here we have where are you from.

Are you from a Least Developed Country, from a landlocked developing country, are you from a small island developing state or non-of the above? If you can just choose one of those and press the submit button, let's just see where everyone is from.

We'll bring the results up when the results come in.

The point I'm trying to illustrate though is in what's in a name , do you accept this framing? This framing for LDCs, LLDCs and SIDS, it will be persistent for the rest of the week. For me it is the first example of a potential Brainchain, primarily and I'll go through it, in a moment, there is some assumptions with the naming of this. I'm not sure given my experience with the African summit that I entirely agree with the terminology and all of the framing.

Next slide, please.

We can show the results from the poll whenever they're ready.

>> We have 54% that voted.

>> PINDAR WONG: We'll wait for a few more minutes.

The reason I don't accept this, is because of some of the words based on last month's discussion of the Internet development in Africa. These are words like small, least island, landlocked, they're implicit in the terms of the definitions but I would argue that we may not necessarily need to use this geographic, size-based framing.

Next slide, please.

In some sense I think we should really get rid of it.

What COVID-19 has taught us, it is this disease which has spread globally has in some sense divided us and conquered us and at the same time we have our own way of having the so-called lockdown to divide and conquer the disease itself.

More importantly, the ITU and the way that the conference has been framed is really from the ITU nation state viewpoint, the 193, all members of the ITU and members of the U.N., this is an assumption of nation state actor, if you were to be a member of the ITU, nation states as a treaty organization, you are then obviously welcome as a framework for 130 plus years. The last 20 years for infrastructures like the network that doesn't see border, there is an implicit tension between the nation state view

and I would say the global network view.

Next slide, please.

So COVID-19 talked in some sense about -- many of us who don't have to go to a factory, we can work from home. In other words, the importance of the network, it is now paramount, especially in the COVID-19 era. As I said earlier, I would like to use two examples of trying to surface brain trains between two famous networks.

The first is the raise of the stupid network, something I was involved with in the early 1990s, which was the rise of the Internet itself.

Next slide.

Here is an example of the Internet as it was in 1973, it has gone from this research network with a minimum small number of nodes to now this massive global network with 80,000 different networks which will persist and the current view, it is through evolution of protocols like QUIC, new AIP that this network of networks will continue to expand.

Next slide.

Time does not permit me to go into, we would highly recommend that you look at this wonderful essay called the rise of the stupid network by the AT&T senior researcher David Isenberg at the very beginning of the commercialization of the Internet. This was from the perspective of a person deeply involved with the phone network, an international voice, such as IDD and the domain of the ITU. In this essay, the famous us say of the rise of the stupid network, several assumptions of the phone network were completely upside down and he highlighted that and I will encourage you to read it when you can.

Next slide, please.

In the old days we have this voice switch, the network is very smart, we used to have these dumb black phones to the network, no computing power on the edge of the network, it was all inside of the core of the network with the very smart electronic voice switches.

As has been said elsewhere, the stone age didn't end as we run out of stones, we, in fact, had a different kind of architecture which was completely different, which is not a smart network. In fact, it was a stupid network.

Next slide, please.

The stupid network is very different. It didn't have any real intelligence in the core of the network. In fact, the intelligence was pushed out to the edge of the network. The network itself was stupid, it was a dumb network, and the edge devices that connected had all of the computing

power.

This, in fact, was perfect for the evolution of the silicon conductor boom and the change of the network attaching methodology and that this is the network that we know today.

This is kind of ironic that you would do something which is take the intelligence out of the network, to the edge of the network as in the case of the Internet and the different Internet architecture, the different set of assumptions, in fact, changed everything.

Next slide.

The change for the Internet, when you take the intelligence out to the edge of the network, you take it to the edge and you don't have to repel the call and upgrade the call and many of the famous Internet companies now, the social media companies, the platform companies exploited that. It was a great period of permissionless innovation, you didn't have to upgrade the whole network, just the applications and the edges as you saw fit.

Next slide.

The Internet is a global network, it is not an international network. What I mean by that, I want to go through. This is again in some sense the first Brainchain, if you can just think about what is different between what is a global network and what is an international network.

Next slide.

The key thing here is the notion that we're not talking between nations, between nation state actors, the ITU, it is framed in those terms and that's a chief concern today, it is again moving away from the international only viewpoint but yet a network that's still global.

Next slide, please.

If you look at the change in world view, the changing word from nation state actors and the genesis of where this Westphalia view came from in the 30 years of war from 1648, it seems to be an implicit assumption that's worked very well for the last few 100 years, the Internet, it is a global network not relying explicitly on nation stayed actors.

Next slide, please.

What the Internet taught us, it is geography, it is forever in a sense. You can't divorce your neighbors, countries are next to each other. When we have the Internet everyone now is your neighbor. That changes in some sense how we view things.

Next slide.

The potential as we know from the headlines with

Internet ransomware, hacking, hacking incidents and security incidents, now when everyone is potentially a neighbor on the Internet we have also the downside that potentially everywhere is a bad neighborhood.

Next slide, please.

Now, GeoffHuston this is no stranger to the ITU, there are two papers as part of the homework exercise I encourage you to read, that's a concern that the Internet as we know it today is potentially failing. Here is one view.

If we go to the next slide, please, here is another one, the Internet is rot, this is from a Harvard professor. We don't have time to go into it. There is a concern that the Internet itself is not -- that there is a question mark over the Internet that in some sense the connecting to the Internet, given the security issues, there is no -- there is a careful calculation that needs to be made, it is no longer connecting to the Internet is good, connecting to the Internet may have a bit of a downside. That leaves the opportunity for considering other forms.

Next slide, please.

We could also see that the network itself with the social platforms, the surveillance, it was not a foreseen forecast, but that's the way that things have evolved.

What I will do, I think we're running a little bit out of time. We really would like to get to the crux of the matter. I want to switch forward to -- let's leave them as they are here. Actually next slide is good.

With a nation state view, we have a rule of law within nation states and we also have the chief problem we have been dealing with with the Internet governance in the last 30 years, all laws have borders. The examples of Brainchains to go through, to highlight, it was that the Internet that was a fundamental assumption, that assumption, it was distance equals cost, and bold networks such as the international direct dial network, it had the settlement assumption and with that, that governed the rule of the telephone network. When we have a different architecture like the Internet architecture where distance did not equal cost. When you understand that's the first chain, that you didn't have to -- that you could break, that distance did not equal cost then you would have made a lot of money out of the Internet era.

There are other examples as we wrap up in the next few minutes. The second one is the bitcoin protocol. The bitcoin protocol, it is not -- it is not only -- it doesn't only run on this stupid network, the Internet, it coordinates every ten minutes with blocks produced. When

you have something stupid and slow, it is not normally a recipe for success but does lead to very, very interesting properties.

In the later slides you can go through after the call, I would go through two examples, this SLOW network, the SLOW network itself, you have in some sense the assumption here, it is that time is money and bitcoin is an example of that data equals money.

More importantly, by relaxing some constraints, of dsentralized system, we have massive replication from not only just replicating a few tens of nodes along the bitcoin network for example, about 100,000 nodes.

The summary here, it is that the small island that I see or the landlocked island I see, it is in fact between my ears. What I mean by that, I think there is a third way. I think there is not necessarily a binary choice between new IP or the QUIC protocols. If you accept the terms of being least developed or small island or landlocked, it doesn't really resonate with the challenges ahead which is the opportunity to lead. What I would like to encourage us all is to listen carefully over the next few days about the developments in space, the development of 5G, the development in decentralized identifiers and try to surface what are the hidden assumptions, what are the Brainchains, if any, because I think the risk here, it is to accept the discussions as presented and they're not necessarily maybe relevant to the local context.

Thank you very much.

>> AMINATA AMADOU GARBA: Can we show the results of the polls? We have 81% who voted.

>> PINDAR WONG: Let's see. Wonderful. Many were from again -- if you accept this definition of least developed country, developing country, then again that is -- (audio issue).

If there is a change in assumption, the accepting the argument as given, that's the biggest mistake you can make.

Thank you very much.

>> AMINATA AMADOU GARBA: Thank you very much, Pindar, for this presentation.

We're running out of time. Maybe I can allow one question if we do have in the audience quickly beforehanding over to the next moderator. Otherwise, the slides are uploaded on the website so you can download them. They're shared in chat here.

I don't see any hand, so I will hand over to the next session. We're late a little bit, I apologize to the moderator.

I will hand over to Mr. Sherman Kong who is senior advisor, Digital Impact Alliance, for the next session which is Scalable e-Government solutions for developing countries. After that at 2:00 p.m. we'll have the opening ceremony, and I welcome you all for the sessions. Thank you, again, if we have questions in the chat I'll forward them to you. Thank you.

Sherman, the floor is yours.

>> SHERMAN KONG: Hello, everybody.

Thank you very much. I would like to pass to the head of the European office at ITU, Mr. Jaroslaw Ponder, for the opening.

>> JAROSLAW PONDER: Thank you very much.

Good morning, ladies and gentlemen.

This is a great starting of the week with this event. Good morning, good afternoon, good evening depending on the part of the world you're connecting from. I'm pleased to welcome you to this special session on the scalable eGovernment solutions for developing countries that's held within the framework of the emerging technology for connectivity event.

Digital government services are vital for developing and digital economy and it benefits all its citizens by expanding access to critical services such as health, education, social protection. Countries are seeking to achieve the SDGs in the next ten years and they're increasingly looking to national digital strategies and agendas to transform the way that they do the business and to improve the lives of the citizens. More importantly, however, looking for concrete solutions, solutions that may address their needs and so the example here, this is one, welcome to this special session providing more details on the offering.

This has never been gone through during the times -- more true than during the time of COVID putting several constraints to traditional offline government services and there is a need to act particularly in the LDCs, LLDCs and SIDS that face challenges in terms of infrastructure and the capacity to implement such services.

ITU estimates that 430 billion U.S. dollars are needed over the next ten years to bridge the gap and to get everyone in the world connected and we have still over 3.7 billion people offline. A part of this much needed investment, it must be aimed at engaging citizens online and offer meaningful ways to connect and the benefit of the government services.

Ladies and gentlemen, the initiative, we seek to

tackle barriers and to implementation and to scale up the
government services within the countries. Current
challenges to digital government includes lack of
coordination, working that silos, the funding constraints,
absence of scalable solutions and all are posing
significant constraints to the Digital Transformation in
eGovernment. Increasing cost, inefficient, often leading
to inaction. A whole government platform approach to
developing government services through the reuse and
customization of QUIC and easy to adapt building blocks is
at the heart of the success of digital governance services
projects. Opensource models for the government platform
that's built from modular and reusable and complements a
leveraging secure and standards-base aid approach, they're
an optimal solution to solving these issues in a
cost-efficient and scalable manner.
        This is what we consider as an emerging technology and
emerging new paradigm which many best practices across the
world that can be replicated in Developing Countries as
well as LDCs, LLDCs, and SIDS.
        Ladies and gentlemen, today, you will hear more about
the initiative and the concrete next steps that are on the
horizon. I'm very pleased to recognize that the
partnership forged by two countries in Europe, Estonia,
Germany, that joined forces in October of last year have
brought this project to light. As we proceed to the
implementation over the next two, three years we can expect
the significant impact for beneficiary countries and the
outcomes of today's discussions will be an important step
forwards and let me also remind that this initiative is
originated by the European countries within the framework
of the -- working as part of the Europe for Europe approach
as well as the Europe for the other regions. This is a
significant contribution to our ITU regional initiative for
Europe focusing on the citizens-centric approach to
building services for national administrations that seeks
to facilitate the development of transformative and
paperless citizen-centric services that are accessible and
available to all members of societies.
        Ladies and gentlemen, before I conclude, let me thank
Estonia, Minister of Foreign Affairs, German federal
Ministry of Economic administration and development and the
digital -- the impact alliance for the work it has carried
out so far and for the continued support for the
initiative.
        Let me also thank the European Commission that's
taking a closer look and potential for scaling up across

the world.

ITU stands ready to contribute and to support the important process. With that said, I would like to thank once again to all those with us today and wish you a great session and the event throughout the week.

Without further ado I would introduce our distinguished speaker, including Mr. Sherman Kong, senior advisor at the Digital Impact Alliance, and at the U.N. Foundation who will be moderator of the session.

I have also a great pleasure to introduce my colleague Hani Eskandar, senior advisor, digital services at the Telecommunication Development Bureau of the ITU and a consultant from the dutch international and another from Germany, as well as Marten Kaevats, national digital advisor of the Government of Estonia. This session, it will take a look at the following proceedings: We'll provide the brief introductions and to opening statements by the speakers who will have the panel discussion and then as well as we'll have more interactive parts with the polls and Q&As. Without you further ado, let me hand over to Sherman Kong to Chair this session and before doing so I invite our moderator to provide a few announcements to know how to proceed with the session.

Thank you.

>> Hello, thank you so much.

Just a second.

Dear participants, thank you for joining. Before starting -- okay. You don't see me? We don't see me!.

Here we go.

Dear participants, thank you for joining. Before starting the meeting I would like to give you some instructions on the Zoom platform and the meeting it self.

This meeting is entirely remote. The auditor report I don't evens is kindly asked to keep their camera and microphones switched off to minimize bandwidth apart from taking the floor. Rename yourself as and add the sector member, represented Member State or academia by your name. Right click your name on the list of participants.

The moderator of each session will recognize speakers and give you the floor when the turn comes. Everybody are invited to use the chat for any questions or comments. Moderators will be monitoring and any comment may be read out if time allows. You can view and activate captioning by clicking on live transcript at the bottom bar of the Zoom interface. The meeting benefits six U.N. languages interpretation, please select your preferred language from the bottom bar of the Zoom interface. Dear participants,

note that when using headphone was bluetooth and interpreters, they're not able to hear properly. Kindly use headsets with connection.

The meeting is being recorded and the recording will be used for report writing and participation efforts.

Every effort is being done to maintain the smooth flow of the meeting thank you for your cooperation and I wish you a good meeting.

>> SHERMAN KONG: Is that a queue for me to intervene now.

Officials, partner, colleagues and friends, as Jaroslaw Ponder introduced, we're going to talk about scalability in eGovernment solutions for countries, especially this context and newly established partnership across the four agencies that are represented by the speakers here today. This is in the context of the emerging theme of the week, we would like to introduce basically a practice, a model that we have observed in advance digital governance context and we will introduce this concept to you and the work we're embarking on since the end of 2020 and how we would like for you all to engage and to see that there is continued effort and technical support provided to Member States represented here today in the audience.

Thank you, please.

Next, please.

What we have been noticing in terms of countries that have been recognized for advanced digital governance, it is this model that's been converging and we have seen this in our review and in the discussions with countries, and it is recognizing government as a single platform for citizens and you may have seen this diagram in literature, in other context, in other debates and discussions, it may vary, but the notion behind is that there is a shared digital service infrastructure in place that is facilitated and offered by government in a more cross-sectorial whole of government approach.

However you divide it, there is some fundamental elements we have seen that leading countries are practicing and it is around developing and maintaining and operating the foundational elements within the infrastructural contexts of the government services.

In some countries you have seen generic components being stirred up to facilitate the services and the needs of cross different agencies and other government branches at large such as digital ID, authentication, unified payment, interfaces, over rates and then common

applications built on top of it, contextualized for different agency needs.

It moves away from the traditional sense of despaired solutions that have been deployed by different agencies or as siloed or limited by, you know, lack of funding or lack of demands or needs and a move towards a more centralized, shared approach where agencies describe and express digital needs that are common across and ting a great and to build together in this more centralized way.

Next, please.

You have seen cases like this. You will hear today representation from Estonia in terms of how they have done this kind of work or approach and in a sense, there are illustrative examples that we have seen in the context of Estonia, in other countries as well. This just happens geographically -- across the variants of geographic boundaries of countries recognizing, governments recognizing the generic components that need to be deployed to facilitate the sectorial needs and using a more shared approach. In the case of he is Tony, you see the notion of building blocks around the singular identity, interoperable service layers that can connect different components or agency in a context, so to speak, and some other digital components that underline the digital service infrastructure service itself.

Next.

Similarly with the case of India, we have heard of the success of the digital ID there around Aadhaar and moving to the notion of the digital stack, the digital ID component in place connected with other generic digital building blocks around unified payment schemes and around eSignificants and so on that had V. helped to build this fundamental working layer where you have different sectorial services that are built on top of it and this fully facilitates a lot of digital government needs and it makes for easier scalability and in the case of India especially looking into the financial inclusion context that this had really kind of accelerated the delivery of services in that regard.

You can see that there is a list of generic elements that are in the agile India architectural approach in the documents.

Next.

In the case of Singapore as well. They have also had a stack approach wrinkles are fundamental, generic layers that have built underneath servicing different sectorial components and connecting with citizens in more of a one

government, a one platform approach.

Next.

Across the different leading examples we have empirically abstracted the core elements that are technologically informing the design of this. This is really as you have seen the term already a generic reusable set of building blocks that formed this underlying layer where the different high-impact cases can be built on top and multiple SDGs can rapidly be effectively impacted or delivered and it leads to more efficient scalability, leads to more cost optimization as well as what you will see in a few minutes.

Next.

In this partnership as mentioned, we have started to look into this fundamental building blocks, if you will, that forms the underlying digital services platform and the characteristics of them, it is that they're reusable, that they are cross-sectorial, that they serve fundamental generic processes. There is no kind of sectorial only focus in this because if you look on the right, a Library of Building block sets we have identified so far, payments identity, security, information mediation and all of the other components that we have identified and in leading country examples, including digital governance, these are fundamental blocks, that they have developed and retained and in combination facilitate the delivery of the services, much more rapidly.

Thank you.

As I mentioned, there are -- it is not just good practice in terms of efficiency and scalability in the context of what we're talking about today in terms of scalable eGovernment solutions but it has good business sense as well. We have seen real demonstrable economic values or cost savings that countries have enjoyed. We have seen research done by GSMA on the case of India, Australia, where there is tangible cost saving in terms of providing shared infrastructures to different agency services and real economic values if there is a more government approach in terms of providing government services and cost optimization as well in our discussions with Saudi Arabia.

Both in terms of providing shared services in order to optimize costs or in terms of facilitating a faster delivery of services in order to generate real economic growth has been observed by our studies as well so far.

Next.

Touching on the initiative that was touched on in the

beginning, next, what GovStack is aiming to do as a partnership and initiative, to help empirically abstract and demystify these kinds of approaches, we have seen commonalities across the cases of Estonia, India, Singapore, so on, on what's generic digital components that they're focus is on developing as part of the foundational core element that drives the services. As a partnership, an initiative, we aim to do, to compact the technical approach and to make the case for more reusable comprehensible references for countries and represented by the audience today as well as other advanced Member States to model against, to learn from this, and to be able to start moving their digital government services portfolios towards an approach like this so that they can accelerate their own eGovernment services or eGovernment implementations.

The model itself, it really is an extrapolation of what's proven to have worked already in countries and this is something that we have served as an emerging trend, that advanced government states have converged towards, and it is a little bit of background, ITU and the digital impact had worked on this initially and had a logical model behind this, an SDG digital investment framework. So this GovStack, it is an extension of forming that technical notions behind this.

You will see an output we're looking to achieve, it is really informing the technical design of these important points I have touched on earlier. As I mentioned, it was brought on by four founding partners, ITU, DIAL, Government of Estonia, Germany as well and we aim to work on this in a very collaborative manner.

With that, next, I would like to kind of call on different agencies represented by the speaking panel here today now to talk about their rationalization, the motivation behind why we are part of this GovStack initiative and taking a step back on the challenges, the opportunities and leading examples in terms of how eGovernment solutions have been scaled and to that extend I would like to kind of frame our opening statement around the three key themes here, so I would like to first call on ITU representative Mr. Hani Eskandar around how we have aimed to accelerate the national government services in the context of the model.

The floor is yours.

>> HANI ESKANDAR: (Poor audio quality). -- this leads to increasing the difficulty to manage your digital resources and assets. This is what we have seen

previously, that a lot of siloing, so we have felt that we need to adopt business as usual and continue and we have to adopt a slightly different approach in terms of managing that investment. That's why a few years back, indeed, the ITU work was dialed to think through how can we have an approach to make a digital investment that can be done once, but so many different sectors, so many different use cases. This will have huge implication in terms of, you know, increasing the efficiency, improving that and accelerating and increasing the speed of delivering the new services.

This is the basis for which we have developed this digital investment framework, which is really based on a number of the concept of reusable building blocks. Now from ITU perspective it is extremely important now that we work with countries on how we can adopt or call those architectural approaches and how they can really put in place what you can consider as a digital public infrastructure. Actually this concept, digital public infrastructure, it is an emerging concept and I think that's why we're bringing that logic to the technology. It has now been used by so many different organizations to explain a little bit on while we usually tended to think of infrastructure in terms of Cape Breton and in terms of, you know, Internet, all of that, when you look at the service layer, there is also the concept of what they call a digital service infrastructure, meaning there is some components, some capabilities, there are some shared services that they need to be so ubiquitous, so present, they can sit on top of Internet and they are available to all the government and as mentioned, this can have huge implication.

For rich countries, you know, like European countries, some of the Asian countries, but also if you look at it from the LDC, SIDS perspective, you cannot afford to have this type of thing, and that's happening so far.

This concept of digital public infrastructure, this service kind of platform, it is not an option any more. You cannot adopt the business as usual. From the ITU perspective, we're focused now on building country capacities so that countries can on their own lead this establishment of these types of infrastructure and really being able to make those investments, make some good decisions in terms of investments and put in place those types of foundations that will enable the usability and also the interoperability and they're secured by design and they can really accelerate all digitalization. So in an

ITU perspective, how we facilitate, bridge this knowledge transfer. Countries are looking, you know, some countries like India, Singapore, Estonia, so many other countries (poor audio quality).

They're really looking on how they can start from where the other ended actually instead of repeating the same mistakes, reinventing the wheel. The objective of this joint initiative, which we call GovStack, it is to bridge this knowledge gap. How to make available what you can call digital public goods, meaning how can we make some digital resources available and open and accessible to everyone on how you can go about building digital government platform and put in place the foundations that we're talking about.

Of course, we all know that there are different approaches for capacity development, you know, the classical, traditional training, whether it is face-to-face, et cetera, we all know that while this is extremely important, it is not enough.

You need to go one, two, even three steps ahead really in order to bridge this gap.

One of the things, we have adopted and this is why ITU is really part of this, it is to say let's adopt different types of approaches by learning, by do, by learning by example. In that approach, it is to say, (poor audio quality).

Meaning an open digital platform that's implemented as a model, as an example, you can call it a reference implementation of a digital government platform. You can think about it more or less as a mini digital government platform of Estonia, India, other types of countries and how you can apply all the principles and concepts of standard-based approaches secured by design design, protecting privacy, ensuring the citizen, you know, consent, enabling the interoperability, how we create and use open API as and adopt new trends in scaling up digital services such as adopting micro service, et cetera, there are a lot of things that we would like to bring and to make available as demo platform where country cans come, learn, play with it, learn, experiment, build services on top of it and see how those types of principles would be implemented in reality.

The way we approach that, it is to say, okay, let's make available those new digital public goods, let's really make sure that the model platform, the example platform is built based on best practices from a number of countries and we use this as a resource for knowledge transfer and

making sure that we give more and more ownership for governments to see themselves and to implement similar types of platforms in their own countries.

An idea, it is that this type of -- of open, accessible resources will help countries first of all -- (poor audio quality) -- in a way or the other, in the country, how can -- (poor audio quality).

Procurement is a challenge in order to how you procure, you know, those types of solutions that goes beyond the one specific solution scope or beyond even one department or one agency. You make these types of whole of government type infrastructure available so we do hope that those types of digital public goods, they'll really accelerate the process of knowledge transfer and give more ownership and to give the leadership for countries so that they can take ownership and really lead the development of their own digital foundation and really enable their governments to be forward-looking, to be ready, you know, for the future.

Thank you.

>> SHERMAN KONG: Thank you.

As Hani rightfully mentioned, this is to support country capacity in one way that we're trying to do so in terms of the partnership we have established here today, it is to really align the notion this could be a way forward and it requires not only us developing these kinds of references and help inform the model but it also requires a level of ecosystem alignment. In terms of building partnerships for others to come along the ride, I would like to now invite Sarah Fischer for her opening statement.

>> SARAH FISCHER: You're waiting for the presentation, right.

>> HANI ESKANDAR: I think we have to unmute Sarah.

>> SARAH FISCHER: I couldn't unmute myself, I think that has to be done by the host. I'm hopeful everybody can hear me now.

Thank you very much.

It is an honor to join this panel on Scalable e-Government solutions for developing countries and our partners. I'm happy to be here.

From our GIZ side, from the German development side, digitalization, the Digital Transformation is a key priority over the last years because you really see it as a useful tool and helpful tool to address global challenges to promote Sustainable Development and that's hopefully creating better access to services and solutions for all of us.

As Sherman and Hani pointed out, especially the last year, and COVID has shown us yet again what tremendous growth digital technologies play with the global pandemic and in keeping communications flowing and keeping services accessible and rarely have we made aware of how much digital and science and digital innovation reliance we have had since the last year. Sips the start of the pandemic, we also have been facing an increased amount of our partners to support the national Digital Transformation on strategies and also on responsible use of data.

I think countries across the globe have recognized the potential that digitalization holds. Rather the disruption that the pandemic held forward and also to inform and to better build government services and infrastructures and thereby keep access for citizens open in that sense.

What we see at the moment, numerous citizen services and processes, contract awards, patient files, agricultural market systems, also the health systems causes an's enormous volume of IT work and in order for these processes to work smoothly, I think that we highly depend on the reliant IT system, on reliant solutions to process this kind of information also in efficient manner. And this GovStack initiative will power the ideas and give governments a chance to deploy these applications in a cost efficient, accelerated, also integrated manner.

The GovStack approach, the building blocks, digital building blocks, they can help governments to they can help governments get their own -- (poor audio quality).

For building blocks at the moment such as payment, ID, also giving an overview earlier on what concrete building blocks we're engaging in but there is great progress being made moment in and this is a great initiative to contribute to not only the smart Development Goals as well as in the end but also to make government actions more transparent, more participatory and offer citizens really the administrative services that they need in their context.

Over the last year, we also have witness that had more and more donors, as pointed out as well, supported the development of infrastructure and there is a greying interest in investing in this field and we also see that these investments are still often duplicated, fragmented, and they're not really often scalable, sustainable in the end. I think this is where we see a great chance at the moment to align efforts, I think it is a great time to rethink a little bit also the funding structures behind the digital infrastructures and to align efforts and to work jointly on the ambitious agenda for international

cooperation on good digital public infrastructures, because this is also the time we can decide and influence what kind of digital public goods we're going to build and to make them good, meaning secure and as resilient as possible.

Yeah. I think that has been mentioned as well, already, but we're often operating when it comes to investment into digital public goods still in silos and in different sectors and especially now, it is really important to address these parts of digitalization jointly bus there are overarching mechanisms that can be used also in different sectors and give us a chance to basically maximize the return of invest also when it comes to that.

I'm pretty sure that a coordinating investments and DPIs, DPG, that gives us an opportunity to overcome the silos and there are major interests and upgrading work done also by other partners in the field, for example, the Bill and Melinda Gates foundation are gathering around similar efforts, there is a group of donors also at the moment establishing or discussing the idea of establishing a Global Fund to support partner governments, talking about KFW, so there is a lot going on at the moment, there are a lot of discussions. I think we're at a crucial moment at the lining this around digital public goods.

COVID showed us now, yeah, it is important for us to collaborate on this manner, important for to us cooperate on the developing of good digital government solutions that help us in the end also build solutions that are inclusive and secure and that protect privacy and in the end also support Human Rights when it comes to that.

Yeah. We're very happy to be part of the initiative and I can say from the German side I think it is great and will further develop the global community that we already had started and I invite everyone to invite us on this journey. I think we're always welcoming technical expertise in our Working Groups and, yeah, we really want to say this is also a global approach. I'm glad to be here today.

Thank you so far.

Back to Sherman I guess.

>> SHERMAN KONG: Thank you, Sarah.

I hi what others are realizing as well, we're really providing a generic model of collaboration and alignment can happen, in the context of what Sarah mentioned, the GovStack model, what we're trying to extrapolate from the leading country examples, it is not really favoring or exclusively looking at one specific sectorial need or one specific set of products or goods available but also a more

generic approach, framework where there's an understanding that the building blocks or foundational pieces tie into the scalability of a more national focused digital governance strategy. In countries we have seen or supported both LDCs, LLDCs and SIDS in this regard as well.

Going back to the perspective of Hani, in terms of, you know, accelerating country capacity, knowledge transfer, one very good way to do this, it is to connect to countries and to other ministries and government examples, they have done this. We're very pleased to have the representation from Estonia, Marten Kaevats to speak to this from the Estonia experience, perspective of how their journey was.

The floor is yours for the opening statement.

>> MARTEN KAEVATS:

I hope you can hear me. (Poor audio quality).

Four, five years ago, our government is not adaptable enough. One of the reasons of taking a whole of government, the building block approach is about building adaptiveness within governments. The reason for this, the problem that we're trying to solve with the building blocks, with the whole of government approach is actually not technological problem, but digital government, transition, it is always more about the change in mindset, culture, starting from the public sector and the Estonia story, starting to build the digital society, a core lesson learned, it is that in order to change the mindset and the culture within a society, within a public sector context in specific, it is smart to change the tools people use on an every day basis. One of those issues I think not only Estonia, in many other governments as well, the building the monolithic architecture, building the huge monster of infrastructure, it is really hard to change under that and as we also got stuck in legacy, in certain parts, in certain services, we realize that it is wiser, smarter to do this micro service approach which basically allows adaptability, and again lessons learned knowing that the tools we use change the way we think. Our goal, in piloting, testing that micro services, it is actually much longer than just technological, it is more about the organizational culture around it and how we can build adaptive, organizational governance architecture among governments.

One of the things we also see it is that in Estonia we actually kind of have seen that we have already solved easy questions with regards to Digital Transformation meaning that, yes, we have a strong working digital identity, we

have a secure data exchange there, we have data integrity
all across the ecosystem, the problems and challenges we
face, it is basically much harder to solve than some of the
very basic components. In order to solve the harder
problems, we also have realized that we're still a very
version small country and the future of government
services, they're cross-border, basically it is a very
important thing to try to do these things in a
collaborative way across the borders, because the micro
services approach, it only starts to work where there is
enough community of developers around it, enough of the
different public sector governments, entity, authorities
utilizing and using this toolbox and basically from
Estonia's perspective this is essential to build our own
digital governance in an advanced way as well, and in order
to do that, we need to do it collaboratively because
otherwise we couldn't reach the critical mass of those
participating countries, the developer, so on and this kind
of an ambitious only works at -- ambition only works at
scale. We're really, really happy to work together with
Germany and ITU on this building blocks because it is not
only the low resource, the middle resource of things, but
it is also about the digital advanced countries. I'm
pretty sure that many of the different governments that are
considered to be somewhat advanced in digital tools and
many of them are actually thinking about the same lines
when they talk about Singapore, Australia, New Zealand,
many other governmental -- Finland, that are deploying the
whole of government approach based on micro services. We
also need to acknowledge that this is a road that takes a
long time and it is more about building trust within the
community and all of these different kind of micro services
and the collaborations around the different domains may be
healthcare, social welfare, unconventional cash transfer,
any of the other things that could be implemented and
deployed.
      Then, of course, one other key aspect, while Estonia
is very, very invested in this effort, it is that
fundamentally the next 10 to 15 years, about the pending
government services, it is much more about the cross-border
assets. For example, in Estonia, we have managed -- we
haven't stood in the line of the DMV, to register the car,
something like that, we can do all of those things online
for already ten years but if we could do those things for
other countries as well then this would significantly boost
the economy and make our lives better.
      The future is in cross-border interoperability, it is

still the key here and in order to achieve those things we need to build trust between different stakeholders and GovStack, it is a very, very good example of moving these different bits and pieces together, finding a common language and APIs that all of the different applications could potentially talk to each other and build trust step by step starting from the small spaces and then collaboratively we are going into bigger, other ones.

I hope that my message was heard, meaning that we're not in big technical difficulties, but back to you.

>> SHERMAN KONG: Thank you, Marten.

Good to have you to join.

I know there is some video trouble your end, I apologize on behalf of Estonia for the audience.

We usually see Marten walking around and just connecting us to this notion of this theme in terms of connectivity in Estonia. It is a great example, if you meet Marten, those of us that know him, he can connect and speak from anywhere, he's basically in the woods somewhere! Thank you for having the time, the connectivity to join us today.

I think I would like to bring back all of the speakers now on to the same stage virtually to speak and to have an interactive engagement and just to get your perspective, views a bit more. Starting with the questions, going back, in terms of accelerating the country capacity, what's really been observable in terms of traditional challenges, you know, each of have yous seen in digital government where countries are trying to engage in terms of -- move toward that path of digitalization of the government services but there are some challenges and barriers in terms of addressing it in a real scalable manner and context of scalability that we're talking today.

So what are some really core challenges that you have observed so far. Maybe from the ITU perspective, Han., having the vantage point of all of the Member States and seeing the incoming needs and requests, what can you share with us?

>> HANI ESKANDAR: Thank you.

I think there are some commonalities in terms of the type of challenges that many countries are facing and they are probably known by now.

I think it is important to kind of revisit them just to understand what is the problem that we're trying to solve. This is, as you can see, when you go to any government department to get the service and you will see that each government agency is trying to build their own

systems and the systems, they're, of course, very different and it is very difficult to make sure that data can move from one department to the other which ends up having a difficult type of experience for the end user and in many cases they need to go to more than one department and more than one agency to get the service from end-to-end.

The problem of having uncoordinated investments, it is not by any means a trigger problem, from one side it has implication indeed on having a kind of non-optimum user experience and it has huge implications in terms of the ability to scale and the ability to mainstream the digitalization in all different circumstances. There are hundreds and hundreds of digital services that need to be digitalized in a government and there is no way that to digitalize each service you have to build the service from scratch. The way that the investments are happening now as Marten was saying is developing this monolithic type of application, its a big chunk of code, it is a big system, everything is bundled in the system and there is no way to reuse the small parts, small capabilities or even to access the data that's kind of captured within the application.

That's why -- each agency has to duplicate its own investment and then there is, of course, no consistency, each agency has a slightly different approach of doing things and then it wastes a lot of time.

To give you a simple example, think of a simple thing like consent management. Consent management, it is something emerging again in line with the emerging week kind of theme because of all of the raised concern about, you know, privacy, data protection, et cetera.

Currently, there are so many different ways of understanding what's consent and how you manage the consent, how you get the citizen to kind of control his own data and to be able to give his approval for, you know, using his own data. He needs to know who has access to his data and he can even revoke this access if he or she wants.

So consent management, it is a very, very, very critical, small piece that's now needed to be integrated in all government services. Unless you deal with this small piece as a shared service, what will happen, each department will reinvent the wheel and they'll try to rethink consent from scratch, particularly that it is an emerging area, it it is not one clear cut, what is consent and how you manage it. Then you have huge waste of time, huge duplication not a mainstream experience for the citizen, they give the consent in a different manner than digital services and maybe services that do not have

consent.

If you have the small piece, as a shared service, as part of your service infrastructure, accessible through APIs, it makes life easy for any new service to be used.

If you take this and multiply it by 20 or 40 different services, you can imagine that each building block can have huge implication in terms of impact. High pressure is part of the challenge that the way we're approaching the investment, we're approaching it not by breaking down, you know, the big, big thing that we're trying to build into small pieces and we're trying to create, you know, the small pieces that will really enable paperless, cashless, resultless and consent-based type of services. Identity is another thing. If you don't have a way to identify people, you will not have the opportunity to give the people the services that are invitable. You cannot deal with this issue of identity several times.

Same for registration, registration, huge. All governments need to run some sort of a registration service and what they're doing now, if you're registering a vehicle, registering a kind of a farm, a farmer, you're duplicating. The whole idea, how can we think of this registration as a generic service that can serve all of those types of services that has to do somehow with the registration with some sort of an approval workflow, et cetera, in a way. So this part of the current challenges in building digital government services, it is easy to build one, two, five services but difficult to build 500 and to scale them and to -- and critical to maintain them, to be able to update them, et cetera.

The challenge or part of this kind of fragmentation, the duplication that prevents us from providing a seamless end-to-end experience for the citizen, to really think of the citizen as one citizen, one government, and I'm the same citizen, I don't need to put my data, the data, it needs to flow on the back end and then I need to get the service as if it is one government.

One of the challenges that now citizens are very much used to receive these value added services in the online environment, you know, and now you can do a lot of things online and you have more and more expectations that governments also need to be that responsive and provide the digital government services in the same manner to which has huge implications in terms of improving quality of life and also cost saving, combating corruption and all of those kinds of things.

It is this kind of uncoordinated type of investments

that make it very difficult for governments also to
mainstream digital into the whole economy because it is
difficult to manage, the level of management we need
without the types of approaches.

This is very -- it becomes -- even for government who
is have already digitized a number of service, they still
have a huge number of services that still needs to be
digitized and even the services that are digitized today,
they are not digitized end-to-end. What see in many
countries, you see an online form that you can download and
you can fill it manually, it is not -- this is not like a
full digitization of services, or that you have to, you
know, do part of the service online and then the rest of
the service, physically, you have to -- it is not really
the full impact, the full value proposition that that
digitization can bring.

Now I think that the governments have done their
strategies in many, many cases and there are Digital
Transformation, there are digital governments already for
related and developed a challenge to say how can I
implement these types of strategies in a way that's cost
efficient and that doesn't create a mess later on.

How can I also govern my digital government
investments and the digital government services, this is a
challenge that's currently being faced. The challenge is
not any more about raising awareness or the understanding
of the importance, the critical need for those types of
things. It is more implementing, putting in place those
types of services and scalable. What happens so far, it is
having this inability, also a lack of understanding of how
I can govern these types of investments in a way that I can
enable and reuse across different agencies. Still a
challenge actually is in the governance as well. You see
that while there is in some cases some central CIOs in
governments, those CIO, they don't have necessity enough
mandate or enough capabilities to coordinate the work with
the other ministry ICOs. There is still some improvements,
challenges that need to be tackled within the governance of
digital governance in the government space to a-- CIO,
chief information officer, in some countries, there is no
chief architect, for example, this position doesn't even
exist. There is no central unit that's managing in all of
the standardization how to agree on similar APIs that every
one should use for example to kind of enable the
interoperability. If you don't have those types of
mechanisms in the country then you never will be able to
put in place those types of architecture and those types of

infrastructure, et cetera.

I think it is also about having the right coordinating agencies who have the right skills and capacities to be able to enable the whole of government approach which is, of course, not very easy to do but as we tried to explain, to scale up, you cannot avoid having -- it is not a luxury, it is not an option. You need to really think of how you can rationalize on the investment and create these types of shared service infrastructure.

>> SHERMAN KONG: Thank you. That's a great overview in terms of challenges that countries face. Maybe enlightening the audience here, we have Estonia representing governments and we may have moved towards resolving the challenges.

Marten, any intervention, if you can shed light on how maybe a particular challenge you faced in Estonia in an early stage of transforming digital government and the country itself moves past about a particular barrier issue.

>> MARTEN KAEVATS: Thank you. I think that the early days of building the digital society in Estonia were very much different from those countries that may be starting the journey now because it was in the 90s, the beginning of 2000. For example, in Estonia, making the digital identity happen, making secure data exchange actually work, actually these were not mainstreamed questions at that time.

One of the examples that I would like to bring out, as an example, two, three years ago, we started testing the micro service based architecture and one of the services, one of the first ones, it was in Estonia when you become a father, a mother, you can have one and a half years full salary maternity, paternity leave and in order for usually newborn mothers of newborn kids to get it, before this particular service basically needed filling out different forms and pages. Now, with this micro service architecture, because the government already knows that you have just given birth and basically you login to one site for once, just confirm to whose bank account the money should go and basically you get the whole one and a half years of maternity leave really easily.

The key here, it is that this process, it is not fully optimized, not all routines have been automatizationed.

But the micro service architecture, it provides us with that we can automate those and different routines and different processes also in a later phase.

For example, if one of the processes currently seems too complicated, there were two other things before. So we have the gradual growth because the architecture by itself

allows another good example from Estonia that's just been applied 2, 3, 4 months ago, and we're building a digital 3D -- (audio issue).

>> SHERMAN KONG: I believe we have lost you.

>> There seems to be a.

>> SHERMAN KONG: Are you with us, Marten.

We'll come back to this in a moment when we're reconnected.

Moving on, given that other countries are looking along this journey of digital governance transformation and us as a partnership looking into broadening the impact and the acceleration of other country's progress, maybe calling on speakers here, countries, regions, what kind of impact would a model approach, the whole of government strategy, model would have and what is the rationalization of that. Sarah, maybe you can start us off in terms of, you know, where you are focused on and why there is a realization of this model that's impacted.

>> I think Marten is back if you wanted to allow him to chose on the previous question.

>> SHERMAN KONG: Sure. Sure.

>> MARTEN KAEVATS:

Sorry. There were connection, a supervisory meet place here.

I'm on an island on holiday.

Basically the whole goal, it is that in Estonia we have set our agenda so that our goal could ultimately, 90% of the routines, they're within the next 10 years, it is these types of examples, it is the maternity leave salary, they are very good case studies for our countries to know that we can build technologies, this new kind of way, which will help us to become more invested as an organization --

>> SHERMAN KONG: I think we lost Marten again.

Let's move on then, in the interest of time, we're a little bit behind.

Marten, while you're trying to reconnect, maybe finding the nearest connectivity towers on the middle of an island, Sarah, maybe moving on then to the question earlier that I posted around where you always see this model, this kind of approach being mostly impactful in terms of other countries seeking to be on this journey of Digital Transformation.

>> Before looking in the countries, the regions to implement, it is important to emphasize again that I think what was spoken about a little bit in the sense of trying to create the global solution and the global approach and basically to provide an approach that can be used in Berlin

as much as others and that's from a German perspective interesting because let's be honest, Germany is not at the forefront when it comes to the digitization of the government services. I think it is really a global approach that we're looking at here and one that we as well could still learn a lot from and I think when we look a little bit on where can we look on the GovStack initiative and building blocks to be implemented, it is of course very important to ensure that we leave no one behind that the digital infrastructure we talk about here needs to be equitably accessible for all in the end. I think the situation that we're currently facing, it is that access to digital solutions, it is still often limited through copyright regimes and assistance and when we look at the development of the building blocks at the moment it is crucial, of course, to ensure that the solutions provided to also work in recess settings in the end. I think that's an important point that opensource solutions and scalable solutions can then play a major role in making government services more accessible in the end.

I think one of the biggest chances, of course, that the digital public goods hold, it is that they allow countries to cost efficiently build that publicly built infrastructure to avoid the large fund of spend and solutions and actually to make use of blueprints, best practices, to develop your own digital government applications that are all localized to the local needs and the end.

When it comes to implementation, I think that it is also what Sherman was hinting on more, what regions we're going to be active in right away because I think that this is also from a German development agency perspective, the point that you can contribute, when it comes to the digital capacity building, to technical assistance and to basically closing off the knowledge and the capacity gaps in that sense and we are looking at three core partners that we'll work with first throughout the cooperation with the Smart Africa, with Smart Africa which is a very important strategic partnerships that helps us to link to local partners, but also, yeah, to promote the harmonization of standards for the most important ICT building blocks and advanced -- yeah, applicability.

Second, we're working closely (poor audio quality) the digital centres there, they hold a close contact to the local ICT ministries and the local digital ecosystems as well. There by, provider was a great framework for capacity building and technical assistance in the countries

when it comes to eGovernment solutions and the development of and, of course, the capacity building mechanisms surrounding them.

Last but not least, under the one Africa initiative, we brought over 100 key representatives with governments, partner countries, and really tried to develop their regional approach to again ensure that, yeah, it could be benefited from the best practices and to assure a maximized return on investment there as well.

I think what will be especially helpful for us when it comes to also more of the implementation part of this initiative, it is the sandbox environment, the reference platform that's to be built which creates a great framework for governments to try out a little bit, to make it a little bit more of what we're dealing with here to basically build their own use cases because in the end it is of course really about making it work for the very specific context and not blueprints that can be used identically in all settings in the end. Maybe just a little side note there, we're currently in the process of, yeah, building the platform or on the procurement process as well and we're having a request for interest out there and we're also looking a bit for what the market looks like to get an idea of what the system integrators may be able and willing to build that platform and I'm going to happily share the link also later on. We're also looking for interested parties.

A last note, when it comes to the whole implementing part, I guess we're well aware, in a lot of cases digital government solutions or services are already in place and we're not starting here from agreeing to the playing field but what we often witness when it comes to digitization of government services and what we often see and as I said, Germany is not exceptional when it comes to that, it is operated in silos definitely, and I think we can break up the silos and follow the government approaches and make sure that the investments are spent in a multipurpose, cross sector digital solutions.

Yeah.

That's all for now I would say. Thank you.

>> SHERMAN KONG: Thank you. One specific point you alluded to, you may call on the reflection from the panel here again, it is when we talk about Digital Transformation, digital government service, enablement, by the partnerships that are represented here, this model itself, it is not solely -- it is not the solution itself, it cannot be implemented in isolation of other enabling

factors in terms of the overall strategy required by Member States, by country governments to really provide holistic-centric services and educational means.

Any questions to the overall panel here? What are other enabling components or enabling environment looking like in order to have successful digital governance, especially the context of the country audience that we have here, maybe drawing on insights and experiences and learnings that you have seen on other elements that need to be placed institutionally, in principles, and this is a more whole of government approach that can be actually realized.

Anybody wanting to provide an intervention on this?

>> HANI ESKANDAR: Let me kickoff.

I think we have already mentioned a few of them. Indeed, we all know that it is not only about technology, it is about so many other things. It is about the people capacity, you need to have smart workforce, a smart government, you can't just have a smart government but you have the workforce itself that could be ready in order to adopt and use and create those types of services.

I would like to from the ITU perspective really remind us all again for the connectivity issues and now in particular in the LLDCs, SIDS, et cetera, the connection issues may be an issue in geographic area where you don't necessarily have the full access to broadband and I think the approaches trying to be able to take in the GovStack, how do we enable the government services across different channels, I mean, it is not only about, you know, being able -- being available online, I think that you need to make some of the services also available whether through the mobile channels, like, you know, USSD type of an approach, even IBRs and things like that.

Also think of, you know, enabling those types of government services already on the tools or through the tools that people are already using. This can count a little bit to the issue of digital literacy, we still see that there is -- still a kind of a gap in terms of citizens, capacity to use those types of services and we all know that social media now is one of the tools that's being up taken by a lot of people. It is important that we leverage those types of challenges to make sure that anyone can access the government services. The use of chat bots for example, all government services could be or should be available through chat bots, particularly if they're also AI enabled where people can use natural language processing and even sometimes their voice, et cetera, to be able to

find the types of service instead of them being -- having
to browse hundreds of services this will they find what
they need.

I think that the governments need to think of how to
make those accessible, even in areas of infrastructure
that's still not developed and compared to digital literacy
issues. Those are two examples of other enabling elements
that will have huge impacts on the update, it is not enough
to have a service available, it is important that people
use it, you saw in some countries, services are available
online and people are not using it, at least at large
scale.

I think having this kind of thinking in terms of all
of the other -- all of the other enabling environment
actors and we'll address them, there are other things,
maybe others would try to comment on that as well.

>> SHERMAN KONG: Thank you.

>> SARAH FISCHER: I'm not sure if Marten is back with
us, I want to underline one thing mentioned earlier. It is
often about not only the change of infrastructure, the
provision of technology, the infrastructure, really it is
about a change of mind set when it comes to digitization.
It is just very important to take the steps to see clearly
I guess the chaps and the risks of course that some
infrastructures hold, yeah, but also to overcome a
skepticism that often overcomes with the use of new
technology and in the end, of course, one of the key
aspects, it is to really focus on citizen-centric solutions
on the key and focused firstly on really understanding the
key challenges and the citizen challenges that are faced
when it comes to the access of government services.

>> MARTEN KAEVATS: I hope I'm heard. Can somebody
confirm? I can comment as well.

Basically one of the components is really to develop
it, the actual practice of it, meaning that actually the
first use cases that could be deployed, these can be fairly
simple and easy, what's critical about that, we need to
celebrate this practice. When there is a good success
story, even if it is a small digital service we need to
celebrate and talk about it as well. Why is this
important, it is that for example in Estonia, we have this
way of getting the society in Digital Transformation on
this positive feedback cycle and it is kind of the way that
every once in a while, I don't know, once a year, twice a
year, that some sort of a new digital service and society
finds it useful and it is practical, but you need to keep
this positive experiences on a regular basis but this also

builds the technical, community of domain experts around
the different services so it is important to survey the
practice and also to start small. It is not important to
start with the most difficult, biggest services, it
is -- it can be done in a very, very subtle, easy way and
then start with the more difficult ones.

Thank you.

>> SHERMAN KONG: Great. Thank you. Certainly as I
mentioned, you know, Estonia is a great example of seeing
how digital governments can actually really advance. I
think some other complementary components or elements in
the enabling environment, it is the setup of good holistic
policies and regulations, placement, of course, of the
underlying infrastructure as well and learning from a
unique model or other intergovernance setting there is a
vibrant connections between the private and public sectors
and to make these services fully digitized and available
and it is something that we were observing and seeing how
we can broaden that learning and experience into countries
that are looking into establishing a similar structure or
model assumption.

In the interest of time, we will probably move on to
wrapping up and also opening up the floor to the audience
here if there are any questions to our panel here.

Over to ITU, as a moderating agency to help us funnel
through questions.

>> HANI ESKANDAR: I see a question from the floor, I
send my regards by the way.

>> Good morning. I'm connecting from Senegal. Yes,
please, go ahead. I had put in the original chat.

So firstly, thank you so much for the initiative and
for the quality of today's discussions from the various
experts, I would just like to draw your attention to the
phenomenon which is affected especially through COVID but
was absolutely essential to the development of our
countries which is the eCommerce aspect and other countries
across Africa, we have developed the strategies on
eCommerce, but three trade exchanges, through common
markets reaching millions and millions of people, because
today technology has found the ideal solution for the
development, the uptake the eCommerce throughout Africa.
Please, seriously take into account this aspect of
eCommerce to take into account interoperability, financial
inclusion, different aspects of payment online.

Really paying particular focus to this issue and
potential challenges and also just would like to say thank
you to Hani who has done excellent work and thank you very

much for the work that you are putting into the development of the African region.

Thank you very much, sir.

>> HANI ESKANDAR: Thank you very much.

Perhaps I can give some answers to your questions. I think we have worked together in Senegal on many issues, and perhaps this initiative perhaps meets some of the challenges that we have found that the first project that we undertook together, certainly we are all in agreement on the fact that eCommerce is more and more important these days, in particular with the closing of traditional markets due to COVID which meant that the people had to quickly move towards eCommerce activities.

In the GovStack context what, we're calling the building blocks, there is a model on eCommerce platforms and how we can integrate this with other modules, for example, ePayment, digital identity as well.

Of course, all of the security aspects as well, and of course eCommerce is linked more and more to other aspects. We can't just have a platform for just eCommerce, one has to have the full supply chain, transport, for example, there are many factors which are critical to the success and also one has to really think about regulatory aspects which are really linked to eCommerce between countries as well. These factors will be studied and also included in the work undertaken in order to help and assist governments to set up these kinds of digital platform solutions which should be available across all sectors who need it to have these kind of digital platform solutions.

Furthermore, I think we're also working very closely with the U.N. agencies who specialize in trade and commerce, for example, international trade centre, who also is part of the group and part of the partners with whom we work.

Indeed, I hope that I have been able to address your concern and once again I would like to send you my warmest regards and hopefully we get to see each other in the near future.

Thank you.

>> SHERMAN KONG: Thank you for the question posted by Senegal delegates. I believe there's a question from the Kuwait delegate.

>> KUWAIT: Thank you. I would like to thank you at the outset for this very important event for us all as Member States in the ITU and even for those outside of the ITU.

We know that modern technology, Digital

Transformations are among the most important topics that are presented today in the field of communications. I have a very simple question to ask. I have noticed that the website does not include any Arabic translation. I had mentioned this during -- in the chat. Why do we not have any Arabic translation for such an event? We find translations for all other languages, except Arabic and we have been very interested in this topic and in the Working Group and that works on declarations and the thematic priorities.

     We as an Arab Group have requested that attention be paid to modern technologies and declaration.

     Please, I hope you can solve this from them so that the Arab region can fully benefit from such an event.

     Thank you.

     >> HANI ESKANDAR: Thank you to the Kuwaiti delegate. You mentioned translation. You mean the emerging technologies here. I would like the organizers of the event to take into consideration the request made by the delegate of Kuwait.

     Thank you.

     >> SHERMAN KONG: We hope that the translation and interpretation can be resolved for the rest of the week.

     Is there any other questions from the audience? I believe there is a follow-up comment from Senegal.

     >> SENEGAL: I wrote on the chat rather. Thank you. You can read it on the chat. Thank you.

     >> SHERMAN KONG: Much appreciate it.

     I think there was an earlier question before, I'm not sure from which country it is, but there was a comment or a question was raised on how can interoperability work for priceless management in national disasters or others and by building blocks on top of administrative layers, how physical is it to deploy on the demand to serve decision makers on the ground under critical conditions when there is an urgency and every minute matters. Is there any reflection from the panel in terms of how responsive and agile deployment of services from the country's perspective to manage crisis, particularly in the context of the pandemic recently, what could be learned from an experience like this.

     >> HANI ESKANDAR: I think the whole concept of powering governments was the right service infrastructure, it is key, particularly that if you have these types of infrastructure it becomes very quick and very responsive from deploying circumstances, in particularly in cases of emergencies and not only for measures but obviously in

terms of emergencies. However, establishing these types of
infrastructure takes time. It is a significant investment
and I don't think that we can do this quickly, it takes
years to establish this kind of infrastructure. When the
infrastructure is there, then adding new services creating,
you know, some sort of alerts, some sorts of campaigns,
citizens to inform them about the disaster, having the
infrastructure in place that you can use for natural
disaster, this is exactly the type of readiness that we
would like to have governments power by having and being
ready to deploy services in a very short period of time and
with little investments as well.

However, establishing infrastructure itself, it is
extremely -- it is something that is costly and would take
time.

However, if you have the infrastructure, you could
launch services that are also interoperable because they're
based on a foundation that is interoperable and enables the
interoperability. That's an additional reason why
governments need to consider investing in having in those
kinds of building blocks that are standing, ready to be
used and consumed depending on that.

>> SARAH FISCHER: To follow on what was just said, it
is not that the building blocks provide super agile measure
to directly adjust government services but I think the
situations of the global pandemic for the last year had
shown quite intensely and what sectors and areas, good
governance services and what can be provided in terms of
providing education as well as in making social welfare
payments maybe, et cetera, et cetera.

It was a portrait again, that for price preparedness,
it is essential to have good digital governance services in
place and if this is happening it makes things easier in
moments of crisis as well.

>> SHERMAN KONG: Thank you, Sarah.

I believe we are coming to close. Thank you very much
for our panel today and engaging with the delegations,
talking about scalability and services. Reflecting on
Sarah's earlier comment and leaving no one behind, if there
is one message we leave with the audience today, it is what
really resonated with me recently in the Mobile World
Congress, it was Doreen Bogdan-Martin, Director of the
Digital Development Bureau, talking about leaving no one
behind, leaving meaning no one offline n the context of
that, as we think about deploying government service,
moving to Hani's point point, we would like to make sure
that countries continue to seek forthwith coverage and to

create better equitable access for all of the populations in terms of engaging government services in that regard.

On that note, thank you very much for coming today and enjoy the rest of the emerging week.

Back to ITU.

>> JAROSLAW PONDER: Thank you very much for this great session. Also thank you very much for our panelists for running this session as well as the captioners and all interpreters. I'm calling for our facilitator of the event to takeover and to now lead us towards the next building blocks of the event.

If she's not with us, she will be soon with the following session.

Ladies and gentlemen, all colleague, on behalf of all organizers of the session we would like to thank you for being with us. We'll see you in the next session and the opening ceremony of the event.

Thank you very much. See you soon.

Thank you. The session is closed.