Transcript: Innovations in Digital Trade and Infrastructure: Enablers and Barriers

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Featuring:

Panelists

- Deborah Elms, Executive Director, Asia Trade Center

- Warwick Powell, Adjunct Professor, Queensland University, Chair, Smart Trade Networks

Facilitators

- Dev Lewis, Program Lead, Digital Asia Hub

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Synopsis: Digital Asia Hub invites you to join our roundtable discussion where we will focus on enablers and barriers related to the platform economy, with a particular focus on digital trade, data localization, cross-border data flows, and other APAC-oriented harmonization efforts.

Video Link: https://youtu.be/wBW9duuPB0Q

Dev Lewis: So hello, everybody. Welcome joining from all across all across Asia and perhaps some from Europe as well. My name is Dev, I'm with the Digital Asia Hub. And we've convened this series, the Platform Futures Initiative, where we convene experts across across the region to have discourse and dialogue around platforms specifically to create dialogue for opportunities, challenges, and governance best practices across the Asia Pacific region. To stay abreast you should definitely check out our website, platformfutures.asia as well as subscribe to our Twitter & Newsletter. We've got all the recordings of our previous roundtables, video highlights, some commentaries and a lot more all on the website. So definitely urge you to check that out. Today is our fifth and final roundtable discussion of power platform future series. We hope to continue our programming over the course of the year. But this will be the last of our roundtable

series. And today we're delighted to bring attention to the topic of innovations in digital trade and infrastructure, looking at the enablers and the barriers, and we're really delighted to be joined by two speakers who are leading experts in that field and they come from the, they come to the question of trade from two very different lenses. With that, I'll introduce our first speaker will have a session where both our speakers will share short opening remarks. And then we'll move into a moderated discussion before we got some questions from the audience during the registration form. For those of you listening in if you have questions, feel free to jump them into the chat. We'd love to have time to for you to sort of virtually raise your hand and share the question if you like yourself towards the end of the session. So with that, I'm going to move to our first opening remarks phase. I'd like to introduce Deborah Elms, who is the Executive Director of Asia at the Asia Trade Center. The Asia Trade Center works with governments and companies to design better trade policies of the region. And Debrecen a number of government and multilateral committee committees and working groups on trade. Deborah, you've spoken in the past of a digital trade noodle bowl when speaking on digital trade negotiations in the Asia Pacific region, we'd love for you to unpack that for us especially what that means for digital platforms in areas such as E commerce, advertising and fintech.

Deborah Elms: That is a great set of questions. Thanks very much. I'm very happy to be here. I am not at my normal desk. So I want to thank Euro Cham Cambodia for giving me a space in their conference room to talk to you today. And hopefully, the technology will work. Always a risk when you're traveling and you're speaking at the same time. Okay. So the noodle bowl, the noodle bowl, I think is a very interesting idea. In the past when we talked about a noodle bowl in trade, what we meant was complicated rules for the movement of goods and especially we don't need to get into all the details with this audience. But we were talking especially about certain ways of treating trade in goods as they crossed the border and had to deal with customs authorities and that that was very complicated. That remains complicated, still an issue. But increasingly, I think we should be worried about a potential digital noodle bowl. And the digital noodle bowl in my view comes from a variety of challenges, one of which is that digital was born, and has grown up in a largely unregulated environment in which governments were fairly content to stand back and observe from

a distance, but they weren't actively regulating many of the aspects of digital trade. They were in some areas, but not others. And so there was an opportunity for lots of sort of, you know, innovation and new models to be tried out. Increasingly, however, we have governments that are in a stampede for regulation, as I'm sure most of you on the call are aware, different ways of regulating different kinds of services, product offerings, platforms around rules on data itself, or where data needs to be hosted, or who can use or access data. What are the rules around privacy, personal privacy protection, there are sector specific rules coming for health data, or for financial data, which is different from regular data, other kinds of data. And increasingly, governments are nervous about the cross border movement of information and the cross border movement of digital. This has created a whole host of new problems, one of which is inconsistent and incompatible regulations on all sorts of things that are related to digital, but also as maybe as a response or reaction to that some governments are increasingly trying to create digital trade rules to ensure alignment or consistency between members. And so not only do we have this sort of set of regulatory noodles, which are increasingly problematic for companies, but we are increasingly developing a bunch of actual rules in the digital space, that will also affect companies. So while we like to talk on the digital side about the possibility of a company being even a micro multinational, right, you and your living room could sell services globally, that is becoming harder to do because increasingly, the rules in each market or each jurisdiction can be different. What can you deliver? What kind of services can you deliver? How do you need to be registered to deliver those? Increasingly, well, you have to pay taxes on those digital delivery of services. We are now seeing taxes imposed on E-commerce, goods delivery, cross border, different rules on privacy, etc. So there it is becoming very complicated.

And before I finished my opening remarks, let me just flag for you a couple of areas where Asian governments are out in front in creating actual rules, or maybe you could call them actual noodles for managing digital trade. So we have a couple of different trade agreements that deal with this. Some of them are more comprehensive, and they've sort of slotted this chapter usually called E-commerce in and the E-commerce chapter is mostly about digital. How do we handle data flows? How do we handle data hosting, or data localization requirements, could be something on privacy, but it's a little early days for that. But a chapter in a larger trade deal on digital specifically. So that's one kind of approach. And we see that increasingly here in Asia. We also see a

different kind of noodle if you will being built, which are digital only agreements. So we have a couple of them. Singapore is at the forefront of this. Singapore has one with Australia, they have one with the UK, they have one with Korea, that are just about digital rules. And it could be everything, again, from that data flow concern to digital identity, digital documentation, electronic signatures, electronic authorization, etc. The goal of which is to try to create rules for the future that will be aligned between members. So there's a couple of different approaches going on here. But I think the big challenge for digitally developed companies is the rules are different. They're different anyways. And so our attempt to sort of harmonize or streamline or be consistent across this is also going to be a bit messy. And so you know, I like these kinds of conversations personally, which is why I participate in them because I think it's worth flagging for people, participants in the digital economy, that this is where we're at, and for thinking about what are the real obstacles and the real opportunities that can be either squashed or facilitated, depending on the way that we approach regulation and rulemaking in the digital space. So let me just stop there with my opening remarks, and I'm more than happy to have conversations with people about the things that particularly interest you.

Dev Lewis: Thanks so much, Deborah. I think that was a lot of great points, which we'll definitely dive deeper into in the discussion especially on how SMEs are affected, data localizatio, and these digital only agreements which would sound like something definitely we're discussing. Next, I'll move on to our second speaker, Warwick Powell. Warwick is a an adjunct professor at the Queensland University, at the University of Technology Design Lab, where he is leading a multidisciplinary research project and the design and applications of decentralized information systems and supply chains. He's also chairperson of the Smart Trade Networks: Blockchain Systems Design Development Group. And I think he'll give us a very sort of infrastructures perspective on what digital trade in the Asia Pacific looks like. Warwick, yeah, I'd love to bring you in to talk about your work on smart contracts in digital trade, maybe you can help by giving us a larger overview of what this landscape looks like, and what smart contracts digital trade looks like. And then we can dive deeper.

Warwick Powell: Thanks very much, Dev. And thanks very much, also, Deborah for that somewhat, in-my-face reminder of the challenges that we face when we seek to interface analog world with worlds of information systems, and worlds of governments and all those sorts of things. A lot of my work over the last few years in our multidisciplinary research team has focused on the intersection between the evolving regulatory landscape or the landscape of rules and protocols, and the needs of technologists, as well as the imperatives of finance and those who are interested in moving things and people and services from one place to the other. Often, when we think about the evolution of international trade, particularly from the point of view of digitalization, the conversation usually moves very, very quickly towards what's happening in payments. I'm not going to talk too much about that unless the conversation heads down that path, other than to say that within the Asia region alone, we're seeing significant developments in both domestic and cross border digitalization of payments that are opening up new possibilities. And they are only possibilities at this stage because a lot of the work remains at a test or an experimental level. And I think of two examples in particular one is the recent and progressive harmonization of multinational payments for consumers using QR codes between a number of ASEAN countries. And that will hopefully make life a little bit easier for people who spend a bit of time border hopping, if you will.

The one that I'm probably a little bit more focused on involves the wholesale payments side of things with projects such as mBridge. Now mBridge is a project that has been hosted or co sponsored by the Bank of International Settlements, Hong Kong division, if you will, working with the Central Bank of China, the PBOC, the Central Bank of Thailand, and the Central Bank of the UAE. And what mBridge has been developing is a cross border payments platform from a technical point of view using a purpose designed distributed ledger or blockchain that involves these central banks as as validator nodes. And last year, around October or there abouts from memory, about 20 banks participated in 150 Odd transactions worth 20 to 23 million US dollars trialing the platform and it worked quite fine. And it was quite successful. So we've got some very different approaches to facilitating, if you will digital payments. Our work, however, has focused a lot more on the other side of the transactions ledger, if you will. The flow of money is only half of what happens when we move things and people and services across borders because what's happening on the other side of the flow of money is the flow of information about the people, the places, and the products that we're interested

in. And it is the ability to address those and how we develop and implement functional and cross border valid information systems that will ultimately make payments through automated procedures like smart contracts possible because at the end of the day, smart contracts as input function machines need inputs that are valid. And unless we can get agreement around what those inputs are, we're not going to get very far on the input output machine to start with, let alone the outputs themselves.

China has been one of the leaders in the development of enterprise level blockchain solutions. And I'll just touch on a couple of interesting features about blockchains with Chinese characteristics, and then we can discuss this a little bit later on. And that is that, contrary to most blockchain designs within the, I guess, the non-Chinese world or the Western world that have emphasized resolving consensus in an environment where network participation is both anonymous or quasi anonymous, and permissionless, the Chinese environment has actually focused on key design principles, which are the reverse of that, that distributed ledger participants need to be identified, and that participation in these networks need to be commissioned. And what that drives towards is an ability to enable consensus to be achieved on these networks without the use of cryptocurrency enabled economic incentive mechanisms. Now, the reason why these networks are being promoted and develop so strongly, is because they address two fundamental problems in the flow of information and that is synchrony and symmetry. If we're going to make payments work well, we're going to need to make information about the people the processes and the places and the products actually work in a way that delivers synchronous and symmetrical information relationships between the key participants. And that's why distributed ledgers are being put center stage in the overall architecture of cross border information systems. Opens up a lot of cans of worms or noodles as we may call them. But look, I'll leave it at that there's a lot going on in this particular region, both on the payment side, but also on - let's call it - the digitalization of supply chain side as well. Over to you.

Dev Lewis: Thanks Warwick. That was really, that was really fascinating, especially to hear what's happening on the space for infrastructure and smart contracts. And we'll definitely go into the Chinese blockchain service network that you alluded to, and what that means. But going back to Deborah, and Deborah you've left us with many, many items to jump straight into maybe I want to go first into data localization and data flows,

given that such a hot topic and has been for a few years now. And I think it continues to evolve in terms of specificity, in terms of the kinds of rules that are coming out. I was wondering if you could maybe share where we are today, as far as, you know, the data localization sort of landscape, and what you would say, are the major frictions today for digital platforms? And do you see this as a sort of a necessary evil to protect perhaps privacy or protect, you know, people's, you know, rights, digital rights in certain countries? Or? Or do you think that's sort of used as a as a front perhaps for more needs to do control data for other reasons?

Deborah Elms: Well, that's an interesting question . And, you know, you've you've hit on what is one of the most contentious parts of the whole digital, especially digital trade landscape. So again, as I said, at the beginning of the digital revolution, we really didn't have focuses on a focus on data flow movements, the Internet was designed and born global from the beginning, and it had freedom of movement, essentially, across borders, but increasingly now governments are becoming nervous about what that means. And they're on behalf of their citizens, sometimes on behalf of the government itself, about what kind of information is flowing, about the ability of citizens to protect their information, there is a strong and very rapidly multiplying argument in some parts of the world about the the potential for the resource of data to be kept domestically so that in other words, data has a value. And whoever coined the "data is the new oil" phase, if I ever meet them, I'm going to strangle them. But that data is the new oil phase suggests to governments especially that you should own it, right if data is oil, that I should own it, and I should own my citizens data. And I should control who has access to that data. And so that creates this incentive that says it should say hope it should stay hosted locally, either in whole or in part. So either all data should be hosted locally or some parts of data so personal or financial or health or, but even that becomes I mean, anyone that you talk to who deals in anything digital will quickly raise the dispute. That doesn't even make any sense to me like, how am I supposed to... Let's just take health data; how am I supposed to ensure that health data remains locally hosted? What because health data can be almost anything I mean, health data could literally be, you know, like, I bought a bottle of water, maybe I'm dehydrated, that's health data, right? All of a sudden, wow, that's health it was that really what we meant by health data? So what is health data? And then how would you attach or

detach health data from any other kind of data? And then how would you ensure that it remained local and not somewhere else, especially given the way the internet is built? The way that it operates? You know, we have some real challenges here. And ultimately, part of this to me, is because we have different different ways of speaking different languages that are being used. And so when when when government regulators and trade officials and digital policy people talk about some of these issues, they use language that is quite different from when folks in the tech sector will talk about it. And so we have a sort of mismatch between what are we even talking about? And so that's a problem.

Dev Lewis: Can you give us some examples of this mismatch?

Deborah Elms: Well, my favorite example, but it doesn't, it doesn't reflect well on government officials, so I'm always a little nervous to give it but I think for this audience, you'll understand my problem. You know, we in Asia, developing this trade agreement that would cover 16 countries at the time in all of Asia. And they were negotiating over what should be the rules for digital trade. And one of them was this data flow issue. And, you know, I had chief trade officials, very smart people, but they're not digital, right? This is a completely new universe. So they would look in the conference room for a window. And then they would look out the window. And they would say, I don't understand where my data is in that cloud. Can you tell me how does the data go from that cloud to my phone? How does it know where I am? That cloud? Like what if I'm not here, and it's in that cloud, and I'm not here, like, so the, the level of understanding is, varies wildly. I mean, again, there's some officials who are awesome at this, but most of them are not, and they don't really talk to business. And so business when they talk to government, they tend to be 55 steps ahead of where government is, which creates a new challenge. And so I think we just have a lack of understanding of how technology works, and what are the challenges we're trying to address? And what are the actual possible ways to solve this, without defaulting to like broad sweeping rules, like you can't move data overseas, as if somehow keeping the data in my country makes it safer, or less risky or less subject to cyber hacking, or that somehow control of it gives me more money. There's all kinds of sort of confusion, I

would say about what this means. And that is creating some challenges around how we create policy and regulatory frameworks that are actually supportive of intention, and not themselves problematic or creating problematic outcomes.

Dev Lewis: Thanks, Deborah, that was a very hilarious example. And I think, I think I've definitely seen some some YouTube videos floating around sort of capturing some of these comical, comical fads. But this is this is, I think, fascinating: this divide between, you know, the sort of government and policymakers and the private sector and, you know, this Platform Futures Initiative exists also to bridge this gap and has tried to, and bring in, you know, government stakeholders alongside private sector and academia and civil society. But it's often a challenge, especially to even to speak the same language. You also talked about in your opening remarks about sort of digital only agreement, which you said Singapore is sort of at the forefront of, yeah, how does that sink in to the sort of existing, you know, multilateral trade negotiations that are happening, whether it's RCEP or others? And how is that sort of Yeah, sort of what the implications may be for some digital platforms in this digital only agreement?

Deborah Elms: Great question. I mean, I would say for, especially for the internet economy, the best case scenario would be global rules. One consistent set of global rules if you want to discuss data flows as an example, if you could make data flow rules in the global regime, the World Trade Organization, that applies to 164 members, that would be the best case scenario for anything internet enabled, right? Because then we would know what the rules are on data. Those are the rules for 164 countries, we don't have those rules. Now, in part because our global trading system hasn't really created any new rules since 1993 that came into force in 1995. And those of you in the digital space may recall that the World Wide Web became a public feature in 1995. So the global trade rules that we have actually predate are before the World Wide Web became a thing. And we haven't been able to make global rules since then. So there is effort to do so there is a group of countries that are really struggling to get an agreement done with a smaller subset of countries at the global level to discuss some of these issues. But in the absence of a global regime approach, what's happened is that governments have either decided to do it entirely on their own for domestic

reasons, like these are my rules or coordinate with others. And so this, this push to put digital rules in trade agreements is one response to a lack of global rules, we could just do it in regional contexts, we could do it bilaterally, we could do it, we could do it unilaterally. And so you know, trying to create these kinds of requirements, or the rules or the structure is a big focus for a lot of governments. When you create a digital only agreement, it's a bit challenging, because digital only it I understand the incentive, and I understand the imperative, the big problem, there are many, but one problem for me, is: explain to me the difference between digital trade, and trade. As we head forward into the universe, I think all trade is going to be digital or digital will be embedded in all trade, I have a hard time imagining a transaction of any kind these days that doesn't have some element that has digital in it, either it is a digital transaction, like what we're having right now. Or it's, you know, you're getting services, you're taking payments, you're taking orders, whatever it is, is digital. The point is that find the economy split from digital, I think is is difficult. So if we're making digital agreements, digital only agreements, then those have the potential to undermine our existing trade agreements. And then we end up with this weird, another noodle of trade agreements that cover the economy, but anything digital is over here. And then how do they hook together? I think, you know, we have some risks ahead. But I think what you see from this is governments that, that definitely understand the risk of fragmentation, incompatibility, the missed opportunities, the collateral damage from different kinds of rules, trying to find like, what is the sweet spot, the right platform, the right approach for managing some of these sometimes contentious, sometimes less contentious, but often contentious issues in a way that's consistent. And so they're basically trying everything, and they're gonna see what works, which is why I try to encourage as much as possible companies, academics, think tanks, etc, to please be part of that conversation. Because if you leave government officials to themselves to create various rules around digital, then we may end up with rules that are deeply problematic for all these other communities. So we have to, we have to join together, because we have to be able to create rules that work for all of us. But that process is, can be really challenging.

Dev Lewis: Thanks, Deborah, I think single, one noodle bowl was challenging enough. Two, three sounds like it's getting messy. But I think that's a great sort of sink into

Warwick, because I think so much of Warwick's work is looking at, you know, blockchain networks. And bringing the analog into digital, as you talked about the sort of difficulty that can be there. Warwick, maybe if, I want to jump into the, you know, the China's blockchain service network, which you've done a lot of work on, particularly around what this network really is, and how is it looking to improve cross border digital trade. And, this network is distinct from the E-RMB. The digital RMB, which is also another initiative, which perhaps sinks in with this network, but it's a separate initiative. Yeah, I'll throw that over to you.

Warwick Powell: Well, I mean, that's a tough act to follow. This is, this is all a little bit unfair, but I'll do my best. Such an amazing presentation, again, Deborah of some of those issues. I've written down a couple of notes. So if I look to the side it's because I'm cheating a little bit to help me walk my way through some of the things that your commentary I think, highlighted that it worth contemplating a little bit more. And this might not be in any particular order, actually. But one of the things that we've tried to do is actually go back to tours, and unpack what information is actually necessary to enable transactions to take place. And who are the actors involved? And why does it matter to them. And this goes back to those two fundamental pillars, if you will, of symmetry and synchrony. There are a network of actors within supply chain contexts for whom a valid body of information concerning the things that they're concerned about matter for that transaction to be successful. So the first thing we have done is gone back to tours on that and use the range of case studies from commodities and other things to try and understand what it is that we need to have information about, and who actually needs it, for what reason.

The second thing is, is that what we've discovered in doing all of that is that, in fact, there's actually a lot of information that is quite public domain, for the purposes of transactions, at least within a circle, if you will, of interested stakeholders, including customs officials, insurance companies, finances on both sides of the transaction, the buying and selling parties themselves, certificate issues, etc, etc. So that's the first thing is that, in fact, there is actually a body of information that is quite standardized in terms of how we can think about it structurally, to make a transaction workable. That said, of course, the issue often with data isn't these individual pieces, but the idea that there is something to be learned when we get lots of this information together. And that

could pose either a risk from a commercial point of view or from a security point of view, or whatever. And so we've actually sought to address these issues from a technical point of view. And I think this goes to this issue of the knowledge gap between regulatory officials and what is actually possible from a technical point of view. And the technical tools that we've mobilized to address this issue actually starts from the presupposition that no data can transmit at all, for a transaction to take place. And therefore, how do we make that happen? And what are the tools available. And fortunately, within my team of multidisciplinary experts, and very clever people, we have some cryptographers. And cryptography, of course, is basically the mathematics of secrets, and how to enable messages to move from a sender to a receiver in a way that is secure without anyone else discovering what that is, and have other rules wrapped around it. And one of the most interesting cryptographic tools that we have begun exploring is zero knowledge proofs, which is a way by which we can prove to a Counterparty that a particular set of required information satisfies the required conditions without actually handing any of that information over it all. So I think that there are some interesting opportunities for technical solutions to be brought to bear in the regulatory environment, which is concerned about the movement of data itself. The second element, I think, of interest here is how these information networks are actually established and created. And this, in some ways, goes to a, well, maybe this is too too much of a of a comment, if you will, but the redesign of the internet. And what we're seeing, particularly in the distributed ledger environment, or blockchain space is the emergence of discrete networks of computers, operated and controlled by discrete networks of actors that are purpose designed to enable the creation, the storage, and the dissemination of particular bodies of information that this group of actors needs in common. So that's the second thing I think that we need to start to think about is that in fact, we're starting to witness the emergence of a plethora of information networks, both in terms of the physical hardware itself, in the infrastructure that connects it telecommunications infrastructure, the cryptographic tools that actually make it possible for them to send messages amongst each other and to know that they're secure.

And also the actors are involved in deploying them and operating them and coming to agreements around them as to how this network of information tools are going to perform for the purposes of this group of kids. Like the requirements. So that raises our third challenge. And this starts to touch on some of the things I think Deborah touched

on, which is, how do we achieve interoperability in a world where we have a multiplicity of information networks on the one hand, and of course with that, the potential of a multiplicity of information architectures, and protocols and rules. And you can almost think of it as a tower of Babel problem, right? So at some point in the Western canons of human history, everyone one spoke the same language. And of course, as we build a tower and tried to reach the heavens, God decided that it wasn't on and smoked that tower and sent the human beings scattered across the earth, to speak their own separate languages. So there was not to be a single language that there was to be a multiplicity of languages. And of course, we experienced that daily, we are overcoming that through, you know, translation technology, of course. But in the, in this digital environment, we've got to think about how we achieve interoperability.

The blockchain services network is one of the initiatives aimed at enabling data that is transacted, stored, and all those things on discrete networks, to bridge from one network to another. And there are a range of protocols, that these discrete networks actually sign up to, at a technical level, to enable data on Network A to be transmitted to network B, in a way that the actors on both networks can be confident that that data has been transmitted successfully, number one, and when necessary, that a particular resource that was tracked on one network is no longer available on that network having been transferred to another. So I think that there's some very interesting technical and technical rules, technical standards, issues that I think could percolate up to inform the regulatory arrangements. So perhaps in this instance, the technology folk might actually be able to contribute to driving some of the ways in which the rules get written, I might just make one or two very quick additional remarks. And they're really by way of a response to the to some of the comments you made there, but one, and one is this idea of what data is itself. And you know, the idea of who owns it and all of that there are, I think, the emergence of some significant philosophical differences across the globe about what all of this means that. So you know, the idea that data was, you know, carefree and easy for the last 20 odd years, also accompanied the emergence of a data industry that was actually predominantly American, with a little bit of European thrown in. So whilst many people talk about these things as global things, there is also a perspective which sees them as very transatlantic things. So I think that that's a point that I wanted to make that there are emerging philosophical differences about what we're actually dealing with. In China, for example, data is now explicitly described as a factor of production. And it's being treated very much as a question of a

public good. It certainly has strong public dimensions. The last thing is, is this language issue, and I think it is an interesting one. And my little example goes to the word "trust". So in normal human talk, we talk about trust, as as something that's actually desirable and good. In technology, land, and in cryptography, land, information systems land trust is at best a five letter word. But at worst, it's actually something quite undesirable, because what trust points to is an information architecture where the integrity of that system is dependent on the whims of single or small numbers of actors. So the higher the trust, the system depends on means the higher the concentration of authority and single points of failure. So from a technical and security point of view, we actually want trustless systems rather than trust-based systems. Over to you.

Dev Lewis: Thanks Warwick. That was so many points there. And I think that was a good overview of regulatory versus the technology dance that often takes place, and how some of these innovations are coming in as response to the legal challenges. I know we have some great audience questions too. We will get to from Lynn and Maximilian and Andrew and I think both of them are on the call. But I think Malavika you had some follow up questions, which I'll let you raise and for those of you tuning in, if you have questions, you can drop them in the chat as well. And we'll get to them right after this.

Malavika Jayaram: Thank you both. Warwick, I think bringing you just to hear you say smart on a podcast, I don't think was was what the price of admission. So thank you for that. Deborah, when you were speaking about the noodle bowl, I was also thinking that another partnership we could wear this Saturday because it sounds like a lot of these agreements are throwing spaghetti on wall to see what sticks. But by actually serious question for you, as you know, the whole "data is the new oil" thing, and I will stand next to you ready to strangle the person that said that. I think a lot of what we forget in the space is when you talk about as a new oil, it reveals the fact that it is extractive; it is mining; it is exploitative, and it needs refining before it is of any use to anyone. As a resource, it's not of very much use. And I wonder in that sense, where's consumer interests? The people whose data is actually being exploited? How is the consumer interest represented in all of these trade agreements that cover their data

that, you know, affects their welfare? How is their interest represented in these conversations, when it's governments and companies that are the really key stakeholders? How do we find human interest coming in? So that was a question for you. And Warwick for you, and I'll leave you think about this, while Deb was responding is, you know, talk to the zero knowledge proofs. And when we talk about data, we also talk about using, you know, techniques like differential privacy where you can use value of the data with revealing senstive information about people. But the question is always around signal and noise and the relationship between, you know, not sharing information and keeping things private, versus the utility of time. And it's always a balancing act between signal and noise. And I wonder in the space of contracts, and the sort of smart contracts you do, how is that balance achieved? So, Deborah, if you'd like, thanks.

Deborah Elms: Sure. Okay, so let me talk about where consumers come in. So some governments have recognized obviously, that consumers matter, then when they pull together what they call stakeholder engagement sessions, that they have stick groups that are explicitly designed or run by or represented consumers be part of that agenda. So that could be consumer unions. It could be citizen groups, it could be NGO groups, whatever it is. So some governments are quite good at that. Others would say actually, as government officials, we are naturally representative of citizens, citizens/consumers. And so I would, I would guess, if I were to ask an audience of government officials, where is the consumer interest? Most of them would say we represent the consumer interest. That's what we're trying to do. We're trying to protect consumers with rules like data flow rules, data localization rules, personal privacy rules. It's all about protecting our citizens / consumers. Now we could we can have a very robust argument in at least another hour on what's the difference between a citizen and a consumer, but that's how government would see it, you know, business, I think themselves would say, depends on obviously, the business, but many of them would say, we actually would also like to have consumer interests represented in this dialogue, rather than have government claim that it knows what citizens want. Because sometimes those are at odds. Sometimes what government wants is, on behalf of citizens is actually not maybe what citizens want, or it's different. It's could be defined differently. So I think there is a, an important need to bring more stakeholders to this

agenda. And particularly for me, on behalf of consumers and or citizens, it would be great if we knew more about what they wanted. What are they why do they want, what are the issues? What do they want? What do they not want? Because sometimes I worry that some of these sweeping policies, especially by government, are being done in the name of consumer interests without actually thinking about what does this mean for consumers. And so I think that that is a real risk going forward.

And one thing that occurred to me, I mean, I think Warwick is a great speaker, I'd love to have you in front of some government audiences if you don't do this anyways, because you're taking very complicated ideas and you're making them in a language that I think most folks, most government folks especially could follow and they could begin to understand what you're talking about. A lot of them just flat out get scared, they hear blockchain and they're already diving under the desk, they're not interested in a blockchain discussion. But some of what you're talking about, I think is useful. But again, I think about like, where's the disconnect? Here's another disconnect. So I just did something with APEC, the Asia Pacific Economic Cooperation Group 21 member economies in Asia. And we were talking about digitizing trade. Okay, what does that mean? For many governments digitizing trade means we take this paper document, and we translate it into a computer approach, that is exactly the same. We're not rethinking what are we asking for? Why are we asking for it? Do we need it? Do we not need it, we're not, we're not rethinking processes, we're taking a paper form and we're making it a form that you can fill out on your computer, and we're counting it as done. And so I think, again, there's like, a misunderstanding of the potential for new opportunity, no new things to be unleashed are unlocked. And I think a big part of it. And in the meantime, while we are having that debate on the government side, you know, businesses enthusiastically coming up with all kinds of great solutions, some of which will be disasterous, some of which will be great. And there is no communication between them. So you know, the more dialogue we can have with the largest possible number of stakeholders who can hopefully speak similar kinds of language, the better in terms of making policies that that advance where we want to go and actually create a more flourishing but yet still safe, safe and sustainable internet economy.

Dev Lewis: Thanks, Deborah. Warwick, I'll turn to you.

Warwick Powell: Yeah, thankfully, I had advanced warning this time, so I've leveled up the playing field. I don't think it helped, though. Um, because I think that the question about privacy and utility is an incredibly tricky one. I'm going to come do a bit of a circle and try and come back to it with tackling it directly at the outset and then see where this where this little where this little walk lands. People often accused me of taking an idea for a walk without necessarily knowing where where I'm, where I'm walking to. So I'm going to have a go and see where we get to. Look, first things first, I think there is a very interesting observation that you've made that ever about the idea of the form, being essentially the the totem, if you will, of moving from paper to computer. And that's the end of the story. And over the past 10 years or so, we've worked with a lot of organizations, specifically around this idea that, you know, digital digitalising or computerizing a form is really not digitalization at all, I must say that I have been dragged back to market, if you will, as time has gone by where I now accept that perhaps this is a long journey. And there are many stepping stones. And the first stepping stone is to turn a handwritten written form into an app where somebody can carry their iPad around, tick some boxes and submit something. But once we've done that, it does open up incredible possibilities to have the next sets of conversations. And I think that that's been the experience of the journeys that my teams have been involved in is ambitious, originally bombed, way too ambitious, realize that the market, if you will, was really at the let's turn a form into an app, and then started the journey again. So we've had to restart some conversations. So that's the first thing.

Look, the second thing is the consumer perspective, if you will, and I mean, if we have time, I'd love to hear Deborah's views on the issue of consumers versus citizens. Because I think that that is also a very important distinction. Because philosophically, of course, the idea of consumers is very much an economic notion, whereas citizen is a much broader notion of who we are within our social context. But from a consumer point of view, some of the experiments and projects that we've been involved in over the last three years have really looked at how consumers can become drivers in supply chains by virtue of digitalization. So, in many traditional supply chain environments, it's very much downstream if you will production upstream. And the buyers at the other end just sort of get what they are provided with. And we are now exploring with smart contracts and and other kinds of technical instruments that will enable groups of people and groups of buyers, whether they're organizations or individuals or households or whatever, to aggregate their purchasing intent It's and their means of

payment to drive particular outcomes that they're looking for in supply chains. So this is really about saying, Can digitalization Empower groups of buyers to harness their collective aspirations and their collective resources to make impacts on the things that they care about, whether they're in the environmental footprint impacts of particular production systems, or the social impact processes or what have you. So we've done that through a number of projects, including ones in China, where and this was pre blockchain, by the way, when we delivered aggregated buying platform opportunities that were very much part of a broader family of collective buying, or group buying that emerged in China over the last 10 years or so off the back of digitalization. But what we did was that we didn't just deliver buying opportunities that enable people to participate in games, and game discounts, because that was the dominant benefit of group buying initiatives, but to also enable buyers to, in a sense, signal, their desires to the supply chains and supply ecosystem that says, Look, these are the things we want. And these are the conditions that we want satisfied. And if you can prove to us that you've sat, satisfied these conditions, then the funds that we have proven that we have, in this wallet, in this escrowed wallet, will automatically be released. And we ran experiments around that where we were able to collect data along supply chain processes that would trigger the conditions within smart contracts to enable the release of, in our case, the tokens that we had in our system. And there were experiments to explore one, the possibilities of activating this kind of thing, and to in exploring the possibilities also understanding what the challenges were.

And of course, the challenges all came back to how we define the ways in which we measured the desired outcomes, what the relevant data was, and what the valid validity rules were, that made a particular body of information valid insofar as the smart contracts were concerned. So it helped us flush out a lot of the issues. But what it did tell us was that we can go from filling in a form on a computer, to turning supply chains on their heads. So we were then able, and this is probably the last piece and then I'll touch on the privacy piece, we were then able to say, well, if it is possible to harness buying power, within a digitalized, escrowed smart contract, then it is also possible to harness what we would call investment power from the masses, if you will, to fundamentally drive transformations, and at the same time become co-owners of that transformation. So not only are we consumers, we buy things, pre-purchase things, but we can migrate from that function, or that particular posture to one that says actually, we're happy to finance the transformations to but in doing that, we are now going to be

co-owners within that ecosystem of what it is that we've co financed and created. Now that opens a can of worms about all sorts of things. How do you secure that, that new ownership? What are the instruments that make that possible and enforceable, and all that sort of stuff. But what we were able to do was open up meaningful, decentralized finance as something worthy of serious consideration. That's the research frontier we're on now, in terms of privacy and utility. For us. It's always been really two broad questions once again, a philosophical one, the extent to which we you know, we meaning a regulator, or whoever it happens to be, as a view about how important privacy is, under what conditions is privacy important, and what actually constitutes privacy and what information is relevant from a privacy point of view. And, and so so that's that's one thing, and there is actually no universal answer to that.

There are clearly some common points across different jurisdictions. Europeans, I think, have clearly taken a very strong position on all of this Interestingly, the Chinese stuff seems to us to follow behind that quite closely with one big difference. And that is that in the Chinese context, the state in a sense has a reserve power to access data, whereas in the European context, the state needs to have some reason and go through a court process to gain access to the data. But so for us, it really boils down to the distribution of authorities and permissions. It's not a very good answer to your question. I know. But from a design perspective, I guess we look at it from an architectural point of view, which is to say, what are the sliding buttons, if you will, on a dashboard that enables us to govern this question of privacy in a meaningful way? And what are the dimensions that the sliding buttons need to address? And, and so they go to the ways in which I can grant permissions for access to things and what the conditions of those permissions happen to be? I hope that that started to get down the question of privacy. But quite obviously, this question is a big one, number one. And it is also one that, you know, quite clearly is an intimidating one. Back to you, though.

Dev Lewis: Thanks Warwick. We're just nearing into the last few minutes of our session. So I want to jump straight into the audience questions we received. Perhaps I'll target a couple of to you, Deborah, the ones that are very digital trade oriented. We have one from Lynn Tong, who's asked what are the challenges with digital trade integration in ASEAN, which I know you touched on earlier in your remarks. Perhaps there's something you want to add there. And then we have one from Maximilian

Henning, who's a journalist with Tagesspiegel on the perspective, some Asian countries on the ongoing JSI e-commerce negotiation at the WTO?

Deborah Elms: Sure, so I'll try to make these brief. So there is, as I mentioned, this, this effort to try to create global trade rules. It's part of if like, get into the technical language is the joint statement initiative on electronic commerce. And some of the members of the World Trade Organization are in this but not all. And many of those who are in this are actually Asian markets. So I mean, I think that's good. It shows that governments in Asia, who are, I would argue, at the beginning edge, especially of the digital world, and understand and appreciate the importance of digital, want a seat at the table. So it ranges from our most advanced economies to some of our least advanced economies in the region, also part of this JSI initiative. It goes along, and their attitude is, you know, wouldn't it be great if that was done? So I think most again, it depends on how we define Asia, some some parts of Asia, if we go to South Asia, and we look at India's perspective, for example, India is not in favor and has been publicly against these kinds of initiatives in general, and in particular, against the e-commerce initiative. For reasons I don't have time to go into. But I would say for a lot of Asian governments as well, the JSI reinforce actions that they've already taken. So we have had an eight year long negotiation, now entering into force of an agreement here in this region, that covers 15 countries in the in the region that looks at e-commerce. Now the rules in that chapter, to be honest, are wretched, because at the end, there was very different views about where they should go and what they should do on crucially, data flows and data localization. So it's not great. But the point is that we had eight years of discussion about it, and started to set the context for what, what other kinds of things can you discuss? How could we discuss them, it provided a platform, I think that's very useful. So we see that in RCEP, and the Regional Comprehensive Economic Partnership, we see it in ASEAN, so 10 countries here in ASEAN, also have an e-commerce agreement between them, and are working now on a digital economy framework agreement that is supposed to upgrade that.

So I think I would say this. The short answer is that Asian governments understand the importance of digital understand the importance of digital trade, they are grappling with how to make this a reality and how to improve the outcomes. But they have varying levels of capacity themselves and varying understandings of what that looks like. And

they're having a hard time I think in this region, pulling together those stakeholder groups, because we have, in general across this region, differing enthusiasm for a diverse group of stakeholders to begin with. And in the digital space. You have to invite even more people in from more places that you might not normally, with people who you don't normally talk. So trying to get that going that ecosystem, the support structure that feedback, the responses, I think is, is important, but it's taking time. So again, I want to urge everybody, please, if you're asked to please be part of this process, because absent more information, especially from the ground, what are technology companies doing? What do consumers want? Why do they want them? What are they? What is the data, the actual data showing about the future, I think we're going to be stuck sometimes with policies that are overly broad, or non existent, or potentially actually too narrow to make a difference and things that we think are important. So all of this requires better integration of stakeholders in general, and a more sustained attempt to narrow the language gaps so that we're all talking about similar kinds of things. And we understand the approach and where we're trying to get to. And if we can possibly align in that process. That would be fantastic.

Dev Lewis: Thanks, Deborah. And I'll get to our last question, which is from Andrew Adams, who's the Deputy Director for the Center of Business Information ethics at ?? university. And he's also on our call. And he asked a question about how can we encourage a more diverse and competitive environment instead of one dominated by a number of small, hyperscalars who command significant vendor lock in? I'll leave this open to Warwic or Deborah if both of you have just a one minute comment before we close up.

Warwick Powell: Yeah, look, the simple answer to that is to have open standards, rather than proprietary systems. So you know, at an architectural level, and at the foundational level, you need to have open standards, open protocols that enable developers of all sorts to participate in, in developing tools and contributing to these tools and enabling people to migrate from one environment to another. It's as simple as that. Vendor lock in happens when you have proprietary systems.

Deborah Elms: I think I would just say, for me, it's important to remember that sometimes, what appears to be vendor lock in is simply the scale of effects of the digital economy. And so I think we need to be a bit careful, especially for government folks in assuming that we have some kind of nefarious purposes attached to this, that and the other. And, for example, try to put small businesses onto some newly created platform so that they can do whatever it is they do in a newly created platform, when that will, that platform is likely doomed to fail. And so now what you've done is you've actually killed off your small businesses. So I think a little bit better understanding of how the digital economy works in general would go a long ways towards solving some of these challenges. And then if we understood maybe how it works better, then it would be easier to create open standards, if we are going to regulate right so that we're thinking harder about what are we regulating for and to do, but and how, how can we approach that?

Dev Lewis: Great. Well, with that, I will have to put a close to this really riveting discussion. Thank you so much, Deborah and Warwick, I think that was really great. We have a lot of points dig into. And thank you to our audience joining us from from all over. We're really grateful for your support and participation. This will be the final roundtable, however, we will continue our sort of engagement on this question of platforms and regulations. We are going to be hosting a capacity building workshop in April, which will dive into a lot of the sort of challenges that both our speakers mentioned about different languages and the need to build capacity among certain stakeholders. So we'll have more information about that going forward. And hopefully, we'll bring in many of you into this workshop in different capacities. And yeah, and we'll definitely look towards doing a season three. So thank you so much for all of you for all your support. It's been it's been really great. And we'll be in touch with more information. Do check out the platform futures website, that's platformfutures.asia. You can catch all the recordings, you can catch articles, case studies, and a lot more content on this topic. Recording of the session will be up on YouTube and on the website in the next few days. So with that, thank you everyone. Goodbye.