

DIASCA Virtual Learning Series - Session 1 Data Islands-20260924_121546UTC-Meeting Recording

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JK John Keogh 11:15

Good morning, everyone. It's 3 minutes past the start time, and we know that we will have additional guests joining us as we go through that. We will enter them into the session. My name is John Keel. I'm a professor of practice at McGill University, the Center for the Convergence of Health and Economics.

And I'd like to welcome you all to the session today. Now I'd like to pass over to my co-facilitator, Brian King, and Brian will do the formal intro. Brian.

KB King, Brian (Alliance Bioversity-CIAT) 17:55

Welcome everybody to the next DIASCA Learning Series. Just a bit of housekeeping. So I believe you will have consented already to get into the meeting that's to be recorded. We will be recording the session, just to reinforce that. And we'll be running through several

presentations in sequence and then have a discussion at the end. So at any point during the presentation from facilitators or invited speakers, please feel free to put comments and questions into the chat and we'll be kind of summing these up and fold them into our dialogue.

at the end. We'd like to do a, can I introduce myself? Hello, I'm Brian King. I serve as a senior manager for technology integration with the Alliance of Bioversity

International and CIAT. Happy to be with you today. So we'd like to do a kind of icebreaker with these sessions. So the DIASCA network is very rich at its height. I think it may have had 400 organizations participating height so far. And very rich across public, private, nonprofit organizations, some research organizations.

and others. And it's a very transdisciplinary and cross-industry group, still kind of centered around this idea that supply chains are central to how do we make agriculture and food systems work better for humanity and the planet. And so by way of icebreaker, sometimes we like to know who we have in the room.

and by running a poll, if we have such a poll.

Here we are.

So yeah, take a moment to just select what's...

What is your type of organization? I'm with a research organization, so I will put that.
Let's see how are we doing on the results here.

Let's see, research.

We've got some technology providers, we've got some supply chain.

How many people do we have in the meeting right now? 22? 18 of them? Okay.

And they're still coming in. Okay, good. All right.

Non-profit, okay, interesting.

Good. We'd love to, we find it's really rich when we have especially kind of public and private sort of equivalent to, because there's a nice kind of juxtaposition, but then also when the commonalities emerge, they become that much stronger. And then of course, you know.

JK **John Keogh** 21:12
Okay.

KB **King, Brian (Alliance Bioversity-CIAT)** 21:23

All of us are stakeholders in food systems and as a result in agri-food supply chains.

You want to try the next one, if we've got it?

Let's see, do I close?

Oh yeah, sure.

What's your role in your organization?

Enough, I never, it took me a long time for me to consider myself a researcher. I've always kind of was a strategy and program manager kind of person, but I think nine years with CIAT, I think I can call myself a researcher now.

Technology, policy and strategy.

Research sustainability.

Goods.

Again, the diversity of view is really in for trend diversity of view, transdisciplinary nature. We found it's really enriched the.

the kind of products and learnings that come from this exercise. And in fact, that is, I will hand over to John. Actually, no, I won't hand over to John yet.

So, you know, this is, these meetings have been this forum where we can start to put some ideas into the world and juxtapose them with ideas that are sort of brought into this space. And the first of these, this is the third of the series, the first of these series resulted in this working paper, quite

quite dense working paper with a lot of theoretical depth and the beginnings of application. The second series kind of deepened those, but had the benefit of several country processes kind of serving as the in-country laboratory of some of the methods and approaches and even the theory.

some of which we'll hear about today and will kind of evolve and unpack over the course of this new series. And so you are all invited to be to participate in the DIASCA Brain Trust, and I'm certain will improve the both the kind of theoretical basis and the application

Of it in agri-food systems, and so...

This series that our new series is.

We're looking at, as I mentioned multiple times about the agri-food sector, we're looking at how can we build shared pre-competitive infrastructure and services for more trustworthy supply chains. This can be government-led through digital public infrastructure initiatives and efforts.

but it can also be through a range of public, private, and public private mechanisms that industries may leverage to realize this goal. The structure of the sessions is that we have a kind of central question to each, and the idea is that as we unpack and understand each of those questions,

it equips us to look at the next question. And so there will be five of these sessions following this one. And there will be 4 common threads that run through supply chain integrity that we'll hear a little bit more from John about what that means in our context.

mediation and co-design, how do we actually sort of channel that into design and use of shared infrastructures and services, and then how do we govern those solutions going forward? So with that, I will hand over to my co-facilitator, John.

JK **John Keogh** 25:39

Thank you, Brian. Can you go to the next slide? So welcome to those who just joined us. My name is John Kyeyune. As Brian mentioned, we have 5 sessions that are listed here. I'll go through those briefly in a moment and four themes that underline those. And one that I just wanted to call out is

supply chain integrity. So throughout these sessions, we'll always be referring back to supply chain integrity. And simply put, that means being able to trust that a product is what it claims to be, comes from where it claims to be from, and has been produced and handled as promised. So reliable information and

verifiable evidence help us establish that trust in a product and indeed in a supply chain itself. So the five sessions, they all build on one another. And as Brian showed in the previous slide, the output of the sessions is theory and practice. And we tried to blend all of that together. So we had a working paper that we came out with, which was the collection of the brain trust from the multiple sessions previously. And as Brian showed, the different projects. So how do we take that into practice? So we're not here just talking about theory. We're talking about practice as well and repeatability of what we're doing. So the first session today, of course,

We explore what motivates organizations to connect fragmented information and invest in shared infrastructure. So what makes cooperation worthwhile, including when regulation is not the main driver. Our speakers will cover this from different angles as well. So second, then we go from the mapping to the mandate, very much like we've done in the previous series.

We look at how participants identify shared interests and turn those into a clear purpose, a shared purpose, and a mandate for all the parties to act. So who needs to be involved and what can be agreed upon together. The third session is a reference architecture of

trust and this is, we focused heavily on an architecture for trust in our previous sessions. So, we'll consider how systems can support trustworthy supply chains and what common foundations allow for information to move between organizations and make it useful and credible. The 4th

is governing the Commons. And we will explain that in that fourth session, but it's a very fascinating area of work called governing the Commons. And maybe before the end of the session today, Brian or I will talk a little bit more about what we mean about the Commons. So that's around the shared infrastructure that needs agreed rules and responsibilities, and who makes the decisions, who pays, and how do we manage competing interests.

and as participation grows. And there's also power brokers involved in some of these discussions as well. So finally then, how do we get ecosystems to scale? So we'll explore what it takes to move beyond individual initiatives towards infrastructure and services that support a wider

sector. As we go through the session today, keep your own context in mind. What would bring organizations together and what would keep them committed? Next slide.

KB **King, Brian (Alliance Bioversity-CIAT)** 29:13

So a bit about how we'll be spending the time today. So we've talked a bit about, we'll unpack a little bit more about the data islands problem and what it means for supply chain integrity. Really happy to have Russell Southwood from Balancing Act News Update and Analysts and

a consulting firm, an analyst who's both covered and advised on telecommunications transformation in sub-Saharan Africa for over 20 years. We'll hear, we'll move on to a pharma example. We'll hear from Stu Stremmel and Megan Tune from the, among many things, the verification and traceability initiative, a pharma example, and some supporting

examples. We'll take a little bit about theory, but also our lived experience of applying theory, drawing on a pretty elegant game theoretic example. And Chipore Mapore from Spark Health Africa, this Chief Operating Officer, will moderate our question and answer session, and we'll take the dialogue up through the end of the session. And we'll close with an invitation to the next kind of preview of the next session.

So the data islands problem. So, you know, there's a lot of talk, at least in the development sector, of digital public infrastructure, and there's some very influential and impressive examples of digital public infrastructure. Sometimes I feel like digital public infrastructure suffers from an image problem.

in the sense that a number of actors assume that it always means government led.

And, you know, it's just the, it's just, I think, the perceptions of busy people in a complex world and nothing in terms of how the concept itself is framed, really. It's always been this idea of, you know, how industries can coordinate

at the level of whole sectors or value chains and not intended to be exclusive to government, and government-led models are not the only path, certainly. And so in this session, we'll look at a diversity of global contexts, and we'll look at telecommunications, pharma,

and a number of applied experiences with helping actors to get ready to comply with the EU Deforestation regulation. We'll try to surface some incentives, triggers, levers, regulatory and otherwise, that help industries move.

from fragmented data islands towards shared infrastructure in the service of the public interest.

Over to you, John.

JK **John Keogh** 32:14

Yeah, so for those who joined us late, feel free to post any questions or comments into the chat room and we will get to them. So the data islands problem, just a little bit on information asymmetry. I think we all know what that is, but in context of what we're doing,

Information asymmetry arises when one party knows more than another. So buyers, for example, may see only part of the picture because information may sit in disconnected systems. But also, it's not just about what goes into the systems.

Suppliers may leave information unrecorded.

and it deliberately withheld information from the system. So think of information asymmetry, not just about data that's in systems, and one party has it and the other party doesn't. We also have to think about what is missing, what is unrecorded, what should have been shared, but is deliberately not shared.

And we know that supplier signals, so how suppliers communicate, they can be cheap, but the buyer screening is difficult. And when we talk about supplier signaling, this is where the supplier takes the first step. Where when we talk about buyer screening, this is where the buyer takes the first step to do the verification.

And there are two very different theoretical frameworks and actually are the core of my recent global research on supplier integrity. So making a claim about quality or sustainability, for example, is quite easy, but checking it and verifying it, validating it requires time, expertise, and reliable access to evidence.

So shared infrastructure can make getting access to evidence easier and easier to verify. So reducing duplication checks, but it also needs incentives and honest disclosure and accountability for omissions. So together we believe that these supporting supply, these support supply chain integrity, confidence that products are what they claim and have been produced and handled as promised. So what would motivate organizations to build this shared capacity together, Brian?

So now what we do is we reflect on what Russell is going to tell us about the telecoms and the inflection points of what motivated them to move forward. So Russell, over to you.

Hey, you're unmute, Russel.

R **Russell** 34:57

There we go. Hello, everybody. My name is Russell Southwood from Balancing Act. I've worked for over 20 years doing telecoms and internet work in sub-Saharan Africa, a lot of it concerned with digital divide issues. I'm going to present two things today. One is a kind of overview of why the private sector chooses to work together. how that looks when it kind of combines with government, and then the kind of actual structures that are used to, in a sense, draw those things together. So if I can have the first slide.

The private sector builds cross-industry structures all the time, and it does it for a number of reasons. And it's useful to understand what those reasons are, because if you're seeking to motivate the public, both the public and private sectors, I think it's easy, it's important to understand the motivations. Government's motivations usually are fairly clear and transparent.

less so the private sector. So I'm just going to go through very quickly a series of motivations and examples. Often the private sector works together because it wants to mobilise funding that a single company would not be able to do so. So if you have an international fibre consortium, it may contain 10, 20, 30 companies.

all of whom draw up and draw together the money to invest in that international fiber cable. Something like Airbus, which is the international plane manufacturer, was drawn together because a single European country would not be able to build planes.

So a number of them chose to cooperate to do that. Banks come together in order to produce loans because they don't have enough money to do it themselves and they want to spread the risk. And you have the same thing with research consortia. I think a second motivation, and this is very important in the terms of what you're trying to do here, is that there is an open industry standard and protocols to speed implementation.

And examples that you might choose in the private sector at the moment is something called the Connected Vehicle Systems Alliance, which is all about car manufacturers wanting to have certain kinds of technology in cars. Something called the Paper Flex Consortium, which is about trying to lead large companies like Unilever away from using plastic at such a large level.

And these kind of open industry standards and protocol groupings can either be some players in the industry or all players. Obviously more impressive if it's all players, but sometimes it's just some of them. Key thing is really about competition, and it's possible to compete on different layers and different levels.

So oil companies that build energy pipelines are competitive in all sorts of other ways, but come together to build infrastructure. Shipping companies operate co-use amongst ships and capacity through things like the Ocean Alliance. So you share underlying physical assets whilst fiercely compete.

with retail pricing. You come together sometimes to create unified infrastructure for all players to interact with. And I think this is probably the one that is closest to what you're talking about today. The banks built a system called Swift for interchanging payments electronically. The travel and airline industry have three different systems, Amadeus, Sabre, and TravelPoint.

And these are all systems that allow the industry to connect to each other and to have trusted connection between each other, both for money and for other purposes like data. The final one also may have some relevance for today, which is that various industries collect data and they do it in such a way that they can trust that their information will not necessarily be seen by their competitor.

only in aggregate form. So to build industry credibility and verification, the publishing industry used to, in the UK, used to have something called ABC, which is the Audit Bureau of Circulation. This told you how many copies of a magazine were sold, which meant that when you were an advertiser, you could rely on that information in order to buy

at the correct price. Another one is RODRIGUEZ research, which is the equivalent for radio stations and so on and so forth. So those are kind of motivations for why the private sector come together. And I think they're important to understand if you're wanting to have them in the room and to build something that genuinely goes on beyond what Brian was talking about, this DPI

as a kind of government extension. And the next slide, please.

So when you do this, there are a number of competitive, a number of pressures from government and regulators. One of the biggest ones is competition issues, because do the big guys with the money benefit more from planned markets? In other words, is there going to be some group of people who are excluded

from participating in the benefits that come from working together. And in the fibre consortia, one of the fibre consortia, WIOC, that was built to connect the east coast of Africa, there was a special provision for the small guys in the fibre consortia, the ISPs, and it was quite difficult for them, and quite difficult for them to raise even the small sums of money that were involved.

but they were included in that consortia. In the event they didn't turn out to be very

influential in it, but they were included. I think another key thing in terms of government and regulatory pressures is the notion of a quid pro quo. In terms of the setting up of WIOC, there were public interest objectives.

They were, the World Bank was saying in particular, you get the funding and the African public gets lower wholesale prices, leading to lower retail prices. So in other words, you could buy the internet much more cheaply as a result of this cable getting built. And the arguments about that were obviously quite Theis.

The other regulatory pressure is standard setting abuse and lockouts. In other words, if you set a set of standards, are you excluding somebody by doing so? And there's a vacuum manufacturer in the UK called Dyson, and he argued the EU standards on vacuum cleaners did just that. And that was why he was a big supporter of Brexit. took against the EU on that basis. I make no judgments because vacuum cleaners are not my area of expertise.

I think another issue that comes up is who is actually responsible. You have a consortia, it may have 20, 30, 40 members, who actually at the end of the day is going to say yes. It's the problem that people always used to talk about in terms of Europe. If you want to ring Europe in terms of foreign policy, who do you pick up the phone to?

With consortia, you have very similar thing going on, which is there's a lot of people who is powerful within that, who is responsible in a formal sense. Are there conflict resolution processes? So if consortia member fall out, is there a way of doing that without too much happening that's going to hold things up?

And what happens in the event of failure? Are there divorce procedures? Can we all get out of this consortia if it goes horribly wrong? I don't think you should underestimate the sheer complexity of private sector government regulatory discussions. In the discussions about WIOC, this fibre consortium, before it was put together, there were three different categories of private sector players. There was government, there were regulators, there were investors. And if you've got all those people in a room, you probably were talking 50, 60 people. Maybe 10, 15 of them held more power than the rest of them. So actually,

Actually getting through that was quite complicated. Also, the governments were in a position where they were trying to protect the government-owned state telcos. And so you will find people have self-interests within it, which will make it hard for them to cross that threshold. And one of the points of doing this consortia was to get the

governments to give up certain things, to give permission to make certain things happen. Next slide, please. In practical terms, there are various structures that can be used for public interest structures with private operating skills. The most obvious one is a special purpose vehicle. This is a consortia of participating parties and it can include government or government bodies, but there's usually a lead body or a managing agent. In the case of one of the fiber consortia in Africa, SAT3, the managing agent was the South African Telco, Telcom, which was the former government Telco. You can have a joint agreement consortia, which outlines the joint agreement outlines the risks, rights and profit splits without a separate entity. But actually, there's no formal body in which that is vested. You can have a design, build, finance, operate, and sorry, design, build, finance and operate structure. So in other words, somebody agrees to build something on your behalf as a government, they operate it for five years, 10 years, 15 years, and then they give it back to you and they take care of the process. That's usually for things like physical assets. Many, many things are possible if there is a clear consensus on overall purposes. Part of my work has been dealing with farmer information services in the agricultural sector, which is why Brian and I have often been in conversation. I think one of the difficulties is if you talk to all of the people who did that and all of the suppliers and all of the people who've been involved in those discussions, is they say they want an ecosystem. They want everybody to be talking to everybody. They want to be able to kind of see what's happening in the market. But they haven't yet, and this discussion probably goes all the way back as far as 2005, they haven't yet come to the point where they can agree on which part of that ecosystem they would like to build together. Thank you very much.

JK John Keogh 45:27

Thank you, Russell, for that. That was amazing, fantastic examples. Brian, are you going to do the next intro?

KB King, Brian (Alliance Bioversity-CIAT) 45:35

Yeah, thank you, Russell. Yeah, that's very insightful and lucid as always. The our next speakers, so if I was, you know, displaying the screen, so I didn't see if questions and comments were coming in via chat, but please feel free and we'll be consolidating

these as we.

go forward. So we're going to shift industries now to public health and barma with the help from Stu Stremmel and Megan Tune of the Verification and Traceability Initiative, which is one of the examples they will help us to understand.

today. Let me get the slide into effect. Okay, over to you, Stu and Megan.

MT

Megan Toon 46:24

Excellent. Thanks so much, Brian. Thank you all and thank you everyone for having us join you today. So my name is Megan Toon and I'm the programme management unit lead for the Supply Chain Funders Forum, which has several initiatives sitting within it, including the verification traceability initiative. I'm going to tell you a little bit about the VTI and then I'm going to hand over to my colleague Stu to bring some of those case studies to life.

life, and then also to my colleague Chipppo to help facilitate the Q&A as well that will take us through. So our work with the VTI brings together major global health institutions around a single premise, that many of the hardest supply chain challenges cannot be solved by one institution, one programme, or one country acting alone.

Next slide, please.

So the VTI is intended to bring together countries, regulators, funders, manufacturers and solution providers to help make verification traceability of health products sustainable across Africa. We're going to talk to you about the role of DPI, so digital infrastructure within healthcare across Africa in going beyond just regulation.

Next slide, please.

So as I said, our ambition is an ambition I'm sure you also share, which is to help ensure that we have trusted product visibility across health supply chains, where every health product can be identified, verified and traced. We see four things as fundamental to that ambition.

Trust, visibility, interoperability and sustainability. Essentially for us, success is not just that a particular technology works, it's that the ecosystem around it can enable it and enable countries to adopt it and sustain it.

most importantly. Next slide, please.

So if we get this right, we ensure that the right product is in the right place at the right time at the right price and is available. This needs a health ecosystem with a range of products, multiple manufacturers, shared standards and public trust, and

shared infrastructure across that ecosystem that can connect those different institutions and different organisations.

The stakes for us in Africa are high. Up to 20% of products are falsified or substandard. So when a nurse scans a box in a district clinic, she is relying on an infrastructure that no single manufacturer, regulator or donor has built.

The question then becomes, how do we build it together? So like EUDR compliance in producer countries, medicine traceability usually starts as a compliance obligation. What becomes interesting is then how we move from a compliance cost into an incentive for shared infrastructure and sustained investment. So I'll hand over to Stu to give a few examples of where and how we have tackled this.

S

Stew Stremel - Lightwell LLC 49:39

Great. Thank you so much, Megan. You know, stay here on this slide for just a second. I've loved hearing from Russell and so many of the examples and seeing the parallels to our model inside of the health ecosystems and how we approach some of the similar challenges and issues that are there. When we start from a regulatory framework,

Compliance is a cost center. It's expensive on those things, and it takes a long time for it to come to root.

There's another way of looking at it, especially from DPI, is around how can these things become opportunities, opportunity generators for ways that competitive actors can gain value. When it moves out of being a cost center into an opportunity driver, the dynamics

shift. But the governance questions go up. They become more complicated. And we need the proper forms to make sure that equitable access is maintained. So this is one of the fun places for us to be thinking about as we drive through. One area that we have seen that

pulls all of our community together is certainly around fraud, theft, and diversion. It's an area that everybody's values aligns. And when John was opening up the session, he was talking about trust, right? This concept of understanding the trust of the product and the trust and the verification of the elements of it.

This is a common value that we can all align on, and competitors can say, I have the same problem, and we both should solve this together. That's a really important place for us to be able to start our driving from. Then we can work into the other areas to find out places of shared interest.

Go to the next slide, please.

Great. For us, never let a good crisis go to waste, right? For us, we started this out of a response to COVID and the crisis that happened around it. That was our big trigger.

We had

a necessity to get a lot of commodity out to the global South. This urgency lowered the traditional barriers that were in place. That meant that people were more open to interacting and working together than they had ever been before.

But the core design decision that came out of it was, look, we can't do this just for a pandemic response. And we can't do this just for vaccines. They're not the only thing that we go through these cycles on. So if we're going to invest this kind of money, how do we do this in a way that it

becomes an opener to other product lines, other elements. Again, that expansive opportunity space, and it allows it to be built outwards. One of the successes that I see when any system I build is when somebody can come and use it in a way I didn't originally anticipate.

That's a really exciting moment because then that's an innovation engine. And I encourage you when you think about DPIs, think about ways that innovation engines can be enabling rather than being locked down. And that's one of the big failure points that I see in some DPI implementations is they actually try to close down opportunities and lock it, and that means it's going to be bound in time. But if you can create something that's very opening and drawing people for usage, you've got something that's very powerful and potential. For us, that forum, the ability to create a space to equalize

voice. We have a huge set of power disparities that happen, and power is always present. It is never equal. So creating those opportunities to balance those things out, really, really important. I do want to brag about a couple of our players here when I think about the progress that's been made is

Botswana and Ghana certainly are big innovators on this. They're doing local innovation and creating opportunities around it built on common standards. They're not the only ones. We're up to like, I think just north of 30 countries now throughout Africa that are actively engaging inside of this. And that's it.

an immense level of progress for seven years of effort on this. There are limitations here that are worth mentioning. COVAX, the mechanism for bringing out these vaccines and onto the spaces, it was a real example of the limits of a crisis-only coalition.

Um...

when the market was so broken.

For high-profit, high-income countries.

The vaccine suppliers went to them first.

rather than to the low, their commitments to the low income countries. So when the dynamics of the market break, equity is one of the first things to be lost. It has the potential to be lost, I should say. That was a real painful point in knowing that we didn't have a structure

to ensure equitable access across those markets. When we start playing with private sector players and private commercial drivers, that equitable access is an important structure question that you need to start building into your models early in your process. I would also say there's a really interesting DPI parallel.

to India's CoWIN program, they were able to deliver a billion doses in nine months. A billion doses built on top of an identity platform that allowed them to capture it all. And they had just an amazing piece there.

An emergency, this was our driver, our trigger is not enough.

reuse beats emergency builds. So that ability to do something that is reusable, not just by co-win or a vaccine, but reusable in another supply chain, in another context, in another area, is what created their opportunity and that innovation cycle for growth.

growth. So that's a case one. Next slide, please.

The second case here was me thinking a little bit more about the regulatory question and how regulatory interacts with these elements. I'm going to borrow from the African context in this. The AU, the African Union Health Ministries, they've put forth a mandate. This came out in August of 2024. Now, I'm not familiar with the ag community and their constructions.

But in our space, it's fairly common that we get a mandate without technical substance.

And I will say that in our experience that those situations, those don't move a market.

Right, they don't shift the space, but they do help us create a floor to build from.

I don't expect the technical regulators to put forth technology. Actually, I really like it when they don't because it's not their area of expertise and there tends to be quite a bit of...

gamesmanship that happens with control of that regulatory framework. But when we get these elements and we can organize around and behind them, there's some

really interesting things that can happen. But you have to make, we, I should say, we have to try to make it easier for people to engage with it. Now, our area of traceability,

Most traceability advocacy stops with a strategy paper. We try to take it from the perspective of building in boilerplates, outline legal text, or code tools and guidelines that make it easier for somebody to do it this way.

then for them to go try to do it on their own and separate from it. So we're on-ramp to the element. So we want to lean into that idea that water, people are like water, they'll follow the path of least resistance. If we can present the path of least resistance, we can pull them in.

across it. It works pre-competitively because we're basing it on public standards rather than trying to redefine standards. That's really important about some of this is that it's easy to create something, but then you've got to convince somebody else to join in on it, especially in a wide ecosystem. So this idea of harmonization as a way to open market access.

and become a cost driver, a cost effectiveness driver is really powerful. If you go to next slide, please.

If I was thinking through, as I was thinking through for today.

of what are the polls that keep a competitor, pulls a competitor in to play and keeps them there. And those are two very important drivers. Certainly,

When I was listening to Russell talk, he was really touching on those infrastructural costs about when I can't afford to build it all myself. It's really powerful to get a community together and we can build that infrastructure together and we can share across those. It's really important to also understand that that organization that holds that core infrastructure, not only do they have to have the responsibility for dealing with it, they've also got to carry the legal risk. And that assignment of risk is now getting more and more complex as we move throughout these elements. I was also thrilled that he had SWIFT.

as one of his examples, because I pull a lot from Swift and Visa and their initial startup structures and what they do for their governance. So really worth looking at. Other area that I want to touch on here, though, is...

Regulation tells you what that you must, right? But the economics tell you why you want to, and then the governance structure tells you it's safe to. I see more projects fail, or DPI projects fail.

because the governance structure around it wasn't appropriate for the decisions that

needed to be made. That's the more complex part to unwind and tackle around.

If you go to the next slide, please.

So if those are some of the things that help pull us together, what are some of the things that drive us apart? And if you're not familiar with the phrase tragedy of the commons,

Take a few moments of your day and go search it up. Look at the tragedy of the commons, because this happens so much with our resources where we have a shared resource, but it's not maintained, or nobody has a direct oversight to it, and people draw from it too much, and it collapses.

and then everybody suffers. So that structure around that and how do you maintain a commons area is so critical. Captured by the strongest player.

Governance is one of the key elements. And like I said, power is always present and it's never equal. But the governance structure can't exist solely on the goodwill of the strongest participant.

That's such a huge sentence. And think about that a little bit about how your governance structures can balance and create equity.

This one, if I had done this question five years ago, this wouldn't have been here.

Data sovereignty and value capture. In this era of AI explosion that's going through, as all of our systems are generating auxiliary data, and I think Russell and John both mentioned an aspect of

data becoming visible on these elements. We now are at a place where we have to think about who owns the data and what secondary use rights are allowed. Who can profit?

from that data and get that set up up front. This is becoming an increasingly fraught area, and I'm spending a lot more of my time thinking about data sovereignty and value capture, because that's where I think some of the true value of DPI can be, and the sustainability

issues can be, but only if we can do it with the equitable rights back to the people that are generating the data and they have a say in it. Such a huge element. Certainly boom and bust funding for us. I don't know if that's true in agriculture, but how do we balance that and I think about the business models?

Bottom line for me as I go through this, what makes all of our systems durable isn't goodwill.

It's a structure where capture is hard, meaning that one player can't capture the whole market, and leaving is expensive, meaning that I can always get more value by

staying in it than I can by exiting. When you can get those balanced, you really have something exciting.

So I'm going to stop there. I think I'm at time and pass it over to our next speaker.

Thank you very much.

JK **John Keogh** 1:03:58

And before we move on to, thank you, Stu, for that. It was a fascinating and broad discussion. You captured on so many points. I do want to mention that it wasn't so long ago that in the pharmaceutical industries, you had six or seven barcodes on the same product because countries could not agree.

on how to identify products and admit it extraordinary complex. And of course, when you start doing silly things like that, it adds cost to the product. For those who have just joined us recently, please feel free to ask a question or comment.

In the chat session, one that came in from Krishna, I'll actually address that one.

Would the approach mentioned by Stu be usable for traceability of use of pesticides in crops if accompanied by testing for MRLs in crop produce?

as a traceability mechanism. So I'll just address it briefly and then Stu can comment or anybody else can comment on that as well. Traceability in the pharmaceutical sectors, we can learn a lot from that because of the specificity. Anything that has to do with products that go inside your body, especially medicines,

are very tightly controlled and the pharma industry does a great job. I often say that we need more pharma people in the food industry to help us mature the systems.

Now, food is also obviously goes into your body, but we don't have the same controls in place. So while basic traceability is transferable from the pharmaceutical sector to food, and a lot of food sectors do it really well,

by the way, when you're dealing with things like pesticides and MRLs, you're dealing with, first off, you're dealing with governments who have a testing agency, maybe at a border where they're testing for MRLs on a product. And it's only then if they find that the MRLs are exceeded at the border,

they will look for the traceability of that product back to its origin. In a lot of cases in my discussions and advisory with governments and industry, there is a lot of blockages in that system, and it may not go fully back to the source. It may go to an aggregator or a cooperative, but not directly back to the source. And this is what we want to try to achieve.

what Brian and Federico has achieved in some of the examples that were talked

about earlier. So we cannot include MRL information per se within traceability, but it can be added as a broader scheme, a broader set of data attributes that can be verified if something goes wrong. Think about that.

Traceability is tested when something goes wrong, when there's a need to recall a product. That's when it's very important to do that. And I'll finish on this and then I'll pass this to you. If we think about the data that needs to be captured at the source, let's say at the farm level, today we capture information about the product, a batch or a lot, and then we ship that to another

A party.

What we don't capture is in fact, to a level that we should, is the chemicals that were used and are those chemicals permitted within that country? Is the company that's supplying, normally it could be a third party that's coming in, is the third party qualified? Are they certified? Did they use the right dosage of it?

the laboratory that tested those products for domestic consumption or export, they used the right testing. So it's really, it's very complex. But I'm happy you asked the question because it brings in the criticality of linking into analytical science laboratories and hugging a scientist every now and again. Stuart, any further comments on that?

S

Stew Stremel - Lightwell LLC 1:07:57

Yeah, a couple. I mean, traceability data is incredibly valuable, but it's only valuable when it's put in context with the other systems around it. And so the core piece is how do I get that traceability event or use the traceability regulation to help create a little visibility? And then

create the linkage opportunity with everything that's around it, that's when all of a sudden value unlocks. That's at least what we're seeing as we're now driving to getting dispensing data, dispensing level data as a traceability event as opposed to just a supply chain event saying, I'm moving from warehouse A to warehouse B. The other place I'd say that's an interesting crossover

We saw here in the US, we have the screw worm that's traversing its way up. And we have a whole thing around vaccinating cows, cattle across the pieces. And that begins to have this really interesting crossover to the world that I understand more about vaccinations.

and knowing, hey, where was the vaccination from? What is its temperature controls and conditions that it was in? How many cattle was it induced into, and have then

those cattle gone into product?

That concept, it translates. One area that we differ that's important is in the pharma industry, we've standardized on the 2D barcode.

Whereas I think agriculture is moving very strongly to the QR code onto those structures. So we do see these interesting...

differences in approaches, but I'm so excited on the things. And as John, as you said, you'd love to have more farm. I'd love to have more ag in our community because I think you guys have done so many innovative stuff. So thank you for having us.

JK **John Keogh** 1:09:45

GT.

And before I pass to Brian to introduce the next speaker, I just want to point out if anyone is interested in understanding a decomposition of a food supply chain, let me know because I have a really good article that was done at a project at APEC, Asia Pacific Economic Collaboration, where they looked at a single product, grapes going to market in Chile, and there were 70, 70 different services involved. And one of those, of course, is the application of pesticides in a crop. And the question then is, how do you get visibility or transparency and traceability back not just to the product, but also to who touch that product and so on. So if anyone is interested in that, my e-mail is in the chat session here. And for those who just joined us, feel free to pose a comment or a question in the chat session. Brian, over to you. And thanks again, Stu. That was great.

KB **King, Brian (Alliance Bioversity-CIAT)** 1:10:47

Thank you both. Yeah, the presentation is very lucid, as very lucid as and as expected, and we'll be able to unpack a bit more in our in our cross-cutting question and answer session. I wanted to hand over to my colleague, Federico Ceballos.

for a really fantastic kind of animating principle, I think, of our work that this is, I think, the first time we've actually been able to sort of make it a bit more explicit and talk about it and examine together how relevant it might be, but kind of a really bridge between theory and practice.

But over to you, Federico. Here, let me put the deck back up here.

 **Sprecher1** 1:11:37

Thanks, Ryan. That sound while it loads, it's really good too. Well, it's really exciting to follow Stu and Russell from their talk. It's actually pretty informative to what we're going to be looking at, but I was also thinking like how to offer this after that very clear and practical.

those very clear and practical presentations that we just saw. But I guess it's also in line with some of the work that our group has been doing. And you can see John's work and signaling and screening as a game theoretic approach to integrity, but we're also very interested in looking at this.

from kind of this theoretical standpoint and trying to figure out what makes sense, or actually makes sense of what we were living as we were implementing our work, which started in Honduras, but this is true for all the other places that we have. So can you go to the next slide, please, Brian?

Well, when we started this, and I guess this is this is a point to ground this on the UDR, it was there was such a there was so much confusion and noise about collaboration and investment in digital assets, and we were just trying to get our wrap our heads around how this could be accomplished.

Essentially, people were already working heavily on getting their own data, putting together their own digital solutions for traceability, but there was obviously so many calls for avoiding duplication and improving collaboration and exchanging data, but so little moving towards actually doing that.

And the idea, and this is a kind of Stu mentioning it, some of it, a further development would be tragedy of the Commons, but it's bad.

Going back to a simple case, it's what's usually known as, say, the prisoner's dilemma. And the prisoner's dilemma is this very tricky situation where collaboration is what's socially desirable. So if we all cooperated or collaborated, we would all be.

better off. But just because of the different payoffs to different actors, it's actually more common than the equilibrium or dominant strategy would be for people to not collaborate. And the reason for that is, I'm citing my game theory professor, is nobody wants to be a chump.

So you might be want to be, you might want to collaborate, but you know, if you collaborate and the other person deviates or does not collaborate, then you're going to be worse off than if you didn't collaborate. So if you want to avoid that, and avoid what's also called the free rider problem, providing a good that somebody else benefits from without.

investing in it, then your strategy or your dominant strategy is going to be to stay

aside as outside. That's a pity because it's what's keeping a lot of these common goods to being provided. And this has been studied in the literature quite a lot. Starting from, but it's kind of a grim view to this collaboration initiatives, and it's good to come to this discussion after having heard of the cases by Russadyl and by Stu, because when we started, this seemed to be the the the kind of the dynamic that was ever present in the system, and nobody was willing to collaborate, and you can think about.

very simple digital assets that we were interested in streamlining their transfer and exchange like geolocations or even data maps or reference maps, and we were struggling to figure out a way

to move forward because we were pretty sure we were in a prisoner's dilemma.

However, after thinking on this, and maybe we can move on to the next slide.

and meeting as many people as possible through many interactions that we have across different countries. It's actually one of the nice things about, or one of the nice ways to think about this is this is not kind of a static game, which is everyone plays once. Actually, the games that we're playing are...

sequential plays, sequential games in which there are multiple interactions. And this new dynamic or dimension to games, it's a pretty interesting one. When we're thinking about streamlining pre-competitive collaboration that would enable for the provision of public goods or common goods. So when we moved into the Stackel Bird solution, as it is

as it is known, we kind of started to realize that there are, first of all, there are kind of tweaks to the system that can be made by the, by say, this outside funding that was mentioned by Stu, or very small things that make, that slightly tweak the pay of matrices of these games. And Stu brought up.

like the GS1 standards, everyone wanting to get into the same page or something, or have the same language to communicate between themselves and with other industries. That small tweak on payoffs can be, or potentially can be enough to change the payoff of 1 single actor, which in turn...

which in turn makes their dominant decision that of collaborating. So if we go into this kind of dynamic and I've singled out a couple of examples, but I would do much worse than what Stu has already done or what Russell have already enunciated, which are a lot of

good kind of kick start actions that have tweaked those payoff functions, we started seeing some of those within our own practices. So for instance, better market access

or first mover advantage were one of the initial incentives. And what that's that means and let me start to introduce some of the notation that that's in here. We could have a we could have a line of actors from A to B to C to D. Even for the first actor say actor A, this light tweak might mean that he's already willing to collaborate. So if that actor comes in, then we...

Then, not only that changes kind of the doing matrix for actors A and B, but as we are, we're gonna see in the next slide, please.

The next slide, it not only changes for A and B, but it also makes a change for the rest of the actors within the system. So say actor C is already seeing the cumulative pay of the contribution of actors A and B and see that reflected in its own pay of matrix or pay function, then therefore incentivizing him to join. And this can be repeated kind of ad infinitum, because it's just what you would kind of, what I would kind of characterize as the whole is larger than the sum of the parts, right? Like what we would

what we will look at as network effects. If you're thinking about it, let me bring this back to the case of, say, geolocations in a country such as Honduras, then when you start with the very first actor that says, okay, I'm willing to churn my data because it makes sense for me and it's going to provide me with better opportunities for market access,

then the next actor not only sees better opportunities for market access, but he sees also the opportunity to collaborate with actor A, similarly for actor B, C, D, and E, and so on and so forth. So this repeated game is kind of a was kind of a light at the end of the tunnel where we were looking at this, and as we went through conversations within

at the Honduran sector, you start noticing that. I can give you a couple of examples, but when we started, we might start it with around 2 private buyers of coffee who are willing to exchange information with them. But as we moved on, and I'm going to say communications has a lot to do with this, because it's also about creating the sensation of FOMO or missing out on those network effects. But as it was better known that people were collaborating, we started seeing the people interested in joining this data exchange schemes growing. And so organically, we've gone from about two organizations that we started with to about 49 organizations that are willing to come in

and say, I want to share data. The use of this type of models, and this might be the way into the 4th slide, please. Next slide. Is cooperation can become the best

individual strategy coming after those very good talks before. I think they make the point stronger than I could ever do.

We had, we as researchers have gone through the process of trying to, as I said, rub our hands around this and kind of putting it in this language has helped us before, but it also, but it also enables us to think about what different tweaks could be made so that a system like this works, and eventually it.

for sure expressed in economic terms or in mathematical terms, but useful in a way that we can start thinking about how can we tweak off those payoff functions? How can we capture, say, network effects? How can we capture kind of fear of missing out and all those things that were mentioned before? And I think

as a start or kind of as an encouragement, we do see this happening, as I've said, in some of the countries that we've worked. And as a closing point, we have seen that work pretty nicely in the pharma and the telecom sector. So yeah, I think this might be a good place for me to stop and hand it back to Brian.

KB King, Brian (Alliance Bioversity-CIAT) 1:21:48

Thank you, Federico. I saw there were some comments and questions coming through the chat, and there was a hand raised that went back down. Now is our time to sort of start to try to find the through line on these examples. We kind of came in through a game theoretic lens, but, you know, there's a direct line through that.

as an animating principle behind the work that we did where we showed some of the, you know, shipping containers of what we were looking at was Deforestation free coffee and cacao, verifiably Deforestation free through an array of traceability and data sharing and geospatial analytic interventions and tools.

So, and then we heard from Megan and Stu around this sort of evolution in the in pharma sector, and particularly particularly pharma, you know, drug distribution and counter anti-counterfeiting efforts and responding to

a shock, a supply chain shock, which it seems like supply chains are in the business of responding to shocks of various types, not just global pandemics, but also regulatory shocks, such as perhaps the EU Deforestation regulation that precipitated a lot of the Necessary data sharing and collaboration that were, you know, sort of behind the cases that that we heard a little bit about, and then at.

We heard from Russell describing these kind of inflection points in industries and then examples of cases where sort of in the incentives were pointing toward a

collaboration around standards, mobilizing capital.

shared infrastructures for shared infrastructures, just our mobilizing capital more broadly, and then a number of kind of cross-industry examples there as well. And so I want to hand off to, let me put the

Put the introductory slide up here. Let's see.

So, I'm really happy to welcome Chipu Mopuri. She's the Chief Operating Officer of Spark Health Africa and one of the technical advisors to the verification and

traceability initiative that we heard a little bit about from Megan earlier. And

I would like to hand over to Chipu to moderate our question and answer period of the session.

CM **Chipu Hedwick Mupure** 1:24:43

Great, thanks very much. And thank you to all the presenters, Russell, Stu and Federico, for such key insights from a practical and also from a theoretical point of view. I see there has been quite a movement in the chat and some of the questions have already been answered.

So as I allow people a minute or two to continue to gather their thoughts for more questions, I have a question for both Stu and Russell. If you could talk a bit about were there any signals in the examples that you shared? Both of you shared quite a number of examples.

So were there any signals in those examples that incentives for pre-competitive collaboration were already at play? So in other words, might it have happened organically? So Russell, would you like to take that first and then we'll also hear Stu's insight?

R **Russell** 1:25:48

Okay.

Hi, yeah, very good, interesting question. I think the one would have to be honest about the example I was giving of WIOC. It was considerably driven by the World Bank and European Funding Bank wanting to open up competition at the wholesale level and using that financial leverage to make certain things happen that wouldn't have happened or would only have happened in a much smaller register had that, if you like, leverage not been there.

So I think you sometimes have to ask, what is it that would push something forward? And it might be money, it might not be money, but there has to be some leverage in

the system that allows you to get a set of people to say, well, if we don't do this, what happens?

That's my best response.

S

Stew Stremel - Lightwell LLC 1:26:51

Yeah, it's a great question. I want to build on kind of what Russell was saying about that leverage piece. What immediately comes to mind is actually 2 examples. One was from the banking industry, which is Visa and the creation of Visa, and the other is from insurance industry, which is competitive quoting engines.

Both of those examples were small competitors, the small bank or the small insurance companies getting overwhelmed by the big players, the big banking industry, the big insurance players, and needing to change and find a competitive advantage.

What they did by grouping themselves together as a small unit then created an opportunity for them to compete with the bigger players. And it became so attractive that the big players then said, fine, we'll come in. But in both examples, in the early days when both of those got launched,

The big players actively tried to kill them as a competitor. And that's where investors stepping in and creating bridge funding and protection and time for the thing to establish themselves and become the new norm.

So there's definitely kind of an arc there. And I think this is where some of Federico stuff is really interesting about that first mover advantage, which can often be a penalty.

But if you can get enough incentives to get you through that initial hump and you get to a competitive advantage, then it launches, I think. I think. So over to other questions. Yeah, over.

Yes.

CM

Chipo Hedwick Mupure 1:28:34

Thanks, Russell and Stu. So 2 things that are coming out from there. So the financial leverage, the example, Russell, that you highlighted from the World Bank and the EU, and Stu, the need to compete with the big players is an incentive for the smaller guys to come together. So great points there. Any other thoughts or additions from anyone else on the floor? Please feel free to add.

R**Russell** 1:29:03

Can I just quickly add another point, which is that sometimes there's a difference between apples and oranges. In a lot of the contexts of, say, farmers, those farmers are individuals, and they're small plot farmers, and it's almost like they're making an individual decision.

And that's not the same as a small bank or a large bank, all of whom have structures and processes to go through, all of whom have corporate interests of some kind. So we're sometimes not comparing like with like, though all those people have to be involved.

CM**Chipo Hedwick Mupure** 1:29:42

Thanks. Christian, I think you also raised an important point. So it says here also about finding the small domino momentum that can topple a bigger one within the context as a trigger and then enable it to scale to the entire system. So the trick is to find that trigger.

Perhaps there are some common approaches or promising practices we can identify. So great point. Christian, I don't know if you want to add more on that or if there's anyone who wants to respond to that as well.

S**Stew Stremel - Lightwell LLC** 1:30:25

I'll hop on just because I want to actually call on Brian on this one. As I read that, I was thinking about the very first time I got to meet you and hear about some of your work, what you were doing with the coffee farmers, and being able to pull the small coffee farmers together and create that ecosystem where they can scan and then get a contribution back

to them. They have financial interest in being able to participate in the sequence. So I'd love to hear your perspective on that question.

KB**King, Brian (Alliance Bioversity-CIAT)** 1:31:02

I think the, I mean, the approach that was sort of the culmination of a bunch of definitional and research work.

that Federico and I and our colleague Jenny have been kind of developing this practice internal to our organization, where, you know, we tend to have a pretty good understanding of the ag industry ecosystem in the various countries where we

work.

Sometimes we, you know, intentionally do some mapping as a kind of bit of pre-work or desk work, but then doing, taking the advantage of the shock or the threat, you know, the crisis of the EU Deforestation Regulation and it requiring a level of data sharing that is, I think, pretty fair to say unprecedented in agri-food supply chains to basically do semi-structured interviews, ensuring that our sample included a cross-section of the value chain at a country level.

As a bit of definitional work and well, like with any shock, people had a lot to say about it, you know, and a lot of times I said the same things, you know, and so just going through that exercise of capturing all of that, consolidating it, and then actually running a mediation process where...

playing back what the industry says about itself and about the challenge it's facing to say, all right, we have enough incentives for some shared solutions. So what are we going to do about it? And then very modest steps towards a prototyping kind of process where

They need to kind of be accountable to each other. And this is where it's really helpful to work with open standards and open technologies because it neutralizes some of the competitive, some of the competitive pull and tug. So to then kind of go down that.

go down that path. And so, you know, we have our kind of capstone of, you know, a picture of 30 people in a shipping container and our kind of send-off ceremony for the shipping container. The real achievement there is that it's public, private, non-profit, small farmers, those who buy from small farmers, all kind of owning that milestone. And

And so that's kind of the, and then communicating about it widely in a very confused moment, you know, you know, I think served as a trigger. I don't know that that's exactly a recipe for having triggers, but I think it has served as. I would say, however, it's.

It's the signals, we talked about signals in terms of how good your product is or how trustworthy you are or your product are, fine. But there are industries send signals all the time to each other about and to markets and to industries like the space they're going to be claiming, the competitive space they're claiming, how great they are as a company or as a provider.

you know, actors in industries and markets send signals to each other all the time about how they position with each other. And so I think one underlying principle that

is applicable is that if you have enough of a cross-cutting group of actors, in an industry and they demonstrably have got on the same page about something, the rest of the industry can't not pay attention to it. And maybe they want to collaborate, maybe they want to compete, but they have to be paying attention to it. I think is probably the key abstracted lesson from that. Over.

JK John Keogh 1:34:41

Yep.

Chipso, before you go on, may I just ask if Carla Patterson, Carla, would you like to comment on this? If you're, I can see you're in the chat. Carla is a CEO or chairman of, chairwoman of the Canadian Sheep Federation, also the CEO of...

Prove It Technologies and has done some amazing work. Hi, Carla. Carla, just very, very briefly, in the past, I remember being in Alberta 15 years ago, and the premier came back from, there was 100 people in the room, one person representing each agricultural organization or association.

And the premier said, I've just been in Japan, South Korea. If we give them traceability, we get market access. And the consensus from 99 people in the room except me was that give us market access first and then we'll give you traceability. So in the pioneering work that you have done, can you talk about the triggers that have driven your success in just one or two minutes? And then we'll go back to Chipso.

CP Corlena Patterson 1:35:54

Yeah, so thank you for that, for the question, John, and a brief introduction. I do sort of wear 2 hats and work a lot at the intersect of representing farmers and building technologies to use in agriculture. So it's an interesting dynamic to manage on an ongoing basis. But in terms of triggers for traceability, we've

I would agree with your point, John. For years, we've said traceability brings market access and there's a lot more to market access than traceability. Traceability is more a sanitary, phytosanitary issue. Market access can be very bureaucratic and geopolitical. I'm Canadian, so I'm just going to leave that.

comment right there on geopolitics and policy and trade. But anyway, so triggers, the real triggers for us in traceability is not sold solely on its potential in market access.

That becomes important, an important part of it. There's a lot of other assurances that go into that market access piece, but

Absolutely, that's a trigger from a trade perspective. We do have sectors who don't

trade where the trigger is very different. And it could be about strengthening the supply chain, creating an advantage for our farmers, right, to demonstrate certain assurances around food production and like and traceability for us is largely on the animal side, largely around protecting populations of animals. And so that's a significant trigger. That one will vary based on who you talk to and how effective those systems are, because of course, the ability to respond to animal disease and traceability is about identifying you know, that system and knowing where your risks lie. But then on top of how quickly one can respond, there's additional resources that don't have anything to do with the data that if they're not in place, your response is varied and less successful. So that's why I suggest that traceability is about protecting populations. But It's not the sole, not the sole metric on which we can deliver on that, so it needs some backing up. But so there's a lot of triggers to a good trade system, a lot of people that need to be involved. I don't know if you asked this question, and then we're talking about ecosystems and people involved, but I think involving the farmer on a primary basis gets you to building a system that is effective for them, and then in turn effective for the rest of the supply chain.

JK **John Keogh** 1:38:39

Wonderful. Thank you so much, Carla, and sorry for pulling you out of the darkness there to comment on that, but I always admire the work that you're doing and the success that you've had. So back to Chipu.

CP **Corlena Patterson** 1:38:44

Good.

CM **Chipu Hedwick Mupure** 1:38:53

Thanks, John, for that direction. Brian, over to you.

KB **King, Brian (Alliance Bioversity-CIAT)** 1:38:57

So we're arriving at the end of our time and there's one burning question that I have that I hopefully we can address very briefly before we wrap up and kind of give you a bit of a teaser of the future editions of this series. It's really to all of you, what do you think, as succinctly as you can, what do you think characterizes an enabling regulatory environment?

for being effective along these lines around shared solutions in your industries.
Sorry, very complex question right at the end. In 5 words, no, no, no.

S **Stew Stremel - Lightwell LLC** 1:39:44

Yes, as simply as possible, enabling regulatory environment.

KB **King, Brian (Alliance Bioversity-CIAT)** 1:39:48

And just be enabling, yeah, OK. Uh, what, uh, yeah, what do you think? Yeah.

S **Stew Stremel - Lightwell LLC** 1:39:54

You know, I'll touch on this and I'll be curious to definitely hear from the others, but for me, I do like...

KB **King, Brian (Alliance Bioversity-CIAT)** 1:39:59

Yeah.

S **Stew Stremel - Lightwell LLC** 1:40:02

the soft regulatory environment where they don't presuppose the technical solution. When they presuppose the technical solution, it can, it locks the stuff in the regulatory environment. You know, technology moves way faster than regulatory environment. So you've got to get that right balance. So I like having that open. But what I don't like is when they create a regulatory environment that we just can't reach it, right? It's so far and the cost implications are so great that we just can't get there. So there's something about that for me. The other piece is where it contemplates cross borders. We have country A and country B and country C all have different conflicting regulatory constrictions. It locks us. And that is the other piece of it. I don't know if that's the flip side of the coin for me. of those two things, but that's what I look for. I'd love to hear from others, though.

JK **John Keogh** 1:41:10

Yeah.

Brian, if I can address that as well. Carla mentioned it briefly there with regard to what's happening in Canada and trade, but it wasn't so long ago, in fact, just three or four years ago, where somebody was caught for smuggling a case of beer from

Ottawa.

into Quebec because of the regulations within Canada and with the provinces. So there were significant regulatory barriers built up between the provinces within Canada. Now, most outsiders would not see that. They would just see Canada and regulation. But it was actually often said that it was easier for a province like Ontario to export to a third country in the Middle East or Asia than it was to trade with another province within Canada. The trigger for Mark Carney was the current trade situation and getting together with all of the parties to say, we have a shared incentive here to eat our own dog food and get our act together internally within Canada.

And that's a powerful, that was a powerful message. So the same problem when I was advising at APEC, this exact same problem exists in China with all of their provinces as well. So we can't just look at a country and say that regulation is fine. We have to look at the internal markets as well.

Right, Matthew.

KB

King, Brian (Alliance Bioversity-CIAT) 1:42:37

There are a couple of other observations on offer about this. Sorry to ask such a complex question, but there's some animus about it, too. Let's examine it.

JK

John Keogh 1:42:50

Carla, did you want to come together that?

KB

King, Brian (Alliance Bioversity-CIAT) 1:42:51

Briefly, yeah, yeah.

CP

Corlena Patterson 1:42:54

Yeah, just a quick comment to the enabling regulatory environments, because that's where we work in the Canadian context, and our trade system has just been approved to be sort of the regulated system that manages for our species across the country. In that, though, comes complex agreements, as you can well imagine, with the regulatory authorities, and that some of that data that we collect in our system is regulated data, right? So there's a law that says this data needs to be collected. We have to supply the system that collects it, and we do that, but there's limited, there's

limitations.

on how we can use that data. So when you start talking about public infrastructure, but you're also working with regulated commodities, I'll call them, so livestock are commodities, but when you work with regulated commodities then, and you have to collect information about that and fulfillment of the regulation, there's protection against the use of

privacy policy or protected B data we call it in data in Canada that we're collecting that cannot.

be openly shared. And so how do you, so if you want to create an enabling environment where everybody's, you know, sort of contributing data to that supply chain, that's something to keep in mind. How do we, how do we create an environment where we can protect people in that supply chain or protect people? businesses even further up the stream, while at the same time being able to move data back and forth. And I don't know if this issue exists elsewhere or if even a lot of people are familiar with it, but in food production for livestock, at least in the Canadian context, we have laws around

tracing animals and systems. And then we have laws and systems around tracing the food, which is when the animal stops being an animal and starts being the food, and those systems are disconnected. And so, and they fall under different laws around protections and centralized units and who oversees the data.

KB King, Brian (Alliance Bioversity-CIAT) 1:44:59
Sure.

JK John Keogh 1:45:00
Yeah.

CP Corlena Patterson 1:45:02
and the elements of data that are protected for the food and protected for the animals. So yeah, I would go back to Stu's comment. Make sure your regulations are broad when they're written, because once they make it into law, you're a decade getting them out. And we make them today based on the workflows that we have and the technologies we have in place.
That'll change in a year from now, but it will take 10 years from now to get any

specificity out of the regulation that allows innovation to take place in all those systems to be connected. So just a few thoughts on Rangle people.

JK John Keogh 1:45:33

Yeah. Thank you, Carla. Appreciate that.
Right.

KB King, Brian (Alliance Bioversity-CIAT) 1:45:39

I think we should, we should wrap up, not least because I'm already late for the next, the next, and two quite large substantive calls that ended landed back-to-back today. But I do want to give you a peek at the next, oops, the next series, the next edition in the series.

CM Chipu Hedwick Mupure 1:45:42

Is it?

KB King, Brian (Alliance Bioversity-CIAT) 1:46:01

Which, um, where is it?

We call it from, well, I'll just, I'll just tell you because I'm messing with, yeah, that's sort of what my brain is like too. So, the our next edition in our series is called Mapping to Mandate and we'll unpack a bit more.

S Stew Stremel - Lightwell LLC 1:46:08

That is quite the desktop.

KB King, Brian (Alliance Bioversity-CIAT) 1:46:25

The particular process that we've kind of, you know, found to be effective. And some level, actually inspired by some of this, you know, shared infrastructure work, particularly from the telecom sector, but anchored in agri-food research, you know, sort of how we, you know, an approach we've landed on that we feel we've found to be reasonably effective so far for getting from that point of getting industries to recognize and sort of their shared interest and kind of consolidate those shared interests.
sufficiently to then say, okay, so what are we going to do about it in terms of tangible shared services or solutions? And we'll follow that one with a session on

actually how do we design the systems themselves. We'll move.
from there into governance, how do we actually govern these things? And then
hopefully we'll have a brilliant capstone where we try to bring it all together, which is
sort of looking at the ecosystem level. So thank you so much for participating.
Welcome to the DIASCA Brain Trust. You're very welcome to participate in the shared
products that will come out of this.
particularly at some kind of working paper or hopefully much more. Thank you so
much, everybody. Really great to have you and hope to see you next time.

 **John Keogh** 1:47:46
Yep.

 **John Keogh** 1:47:48
Thanks everyone. Thanks to all the speakers and the participants and Carla. Thank
you all. Bye bye.

 **Sprecher1** 1:47:49
Thanks everyone, until next time.

 **Chipo Hedwick Mupure** 1:47:51
Thanks, everyone.

 **King, Brian (Alliance Bioversity-CIAT)** 1:47:51
I can.

 **Henzler, Carla Marie GIZ** 1:47:53
Thank you. Bye bye.

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