# Summit for Space Sustainability

## Panel 4: Toward Norms of Behavior
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Panelists:
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Walt Everetts, Iridium Communications
Andre Rypl, Brazilian Ministry of Foreign Affairs
Kazuto Suzuki, Hokkaido University

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**Victoria Samson**:  Thank you for sticking around for the last panel [inaudible 0:04] summit for space sustainability. This one we're hoping will be able to consolidate the discussions of the past couple of days and come up with solutions. There's a lot to accomplish in 45 minutes. I feel confident we can get started.

There has been a lot of discussion about the need to develop norms of behavior of space to address space sustainability, but there's little agreement as to what those norms are or how they help. In light of these discussions, how would these norms help space sustainability?
More specific proposals for the commercial, civil, and national security space to be priorities with the space community. Since we were hoping we'd have some discussions about what are reasonable norms to establish in the short-term, and then again in the long-term, in order to get these wheels in motion. What processes or steps could be taken?

How could these norms be proliferated across different stakeholders? How do we incorporate viewpoints in concern to potential rivals whether they are economic or political into discussion points establishing norms, or even do we? Then one thing I would like to emphasize why I find this important.

I think often when we discuss norms of behavior, the assumption is that these are positive norms. These are doing things that we want to have happen. Frankly, that's not always what happens. In my opinion, we could argue -- sorry, Raji -- that with India's test, the ASAT test, we're a negative norm being established.

That it's considered not good, but acceptable, palatable, to test ASATs as long as they're done at the level of a recognized [inaudible 1:34] . That's why I think having a strategic, thoughtful discussions about what kind of norms we want to see, what kind of world we want to see are really important.

With that, I'm going to go straight into the discussion with our panelists. You have the bios on our website if you have any questions about their backgrounds. I'm going to start with Andre, because I was bugging you at the table at this.

First of all, congratulations on the long-term sustainability guidelines being passed on the Committee of Peaceful Uses of Outer Space, which Andre is chair of. Can you please talk a little bit about, where do we go from here?

How do use these guidelines as a building block for future forums, and how do we proliferate them?

**Andre Rypl**:  Thank you, Victoria, and good morning, everyone. It's a pleasure to be here. The nice thing about being involved in organizing is that you can ask a lot of questions that are very difficult to answer. I don't have a clear answer, but I know very specific, there are many things that we have to do and that we should be doing.

I think one of the most important to us is that we need to engage. We need to work together. We have to be wary of approaches that are represented as either/or. Either we work on a national or domestic level, either we work [inaudible 2:52]...The two things have to have been intended. They're interconnected. There will be no sustainability if we have only domestic initiatives.

It simply won't happen because, for example, if we do it here in the US or a group of like-minded countries, and you don't engage with all the international partners, we will have a situation in which the government is affected by the activities of those partners.

I will, of course not make any judgment, but they may perceive or misperceive this as an action of an another country's contract. The political environment is very important. Since [inaudible 3:37] mentioned this achievements that we had at the [inaudible 4:34] , it's not my merit, it's really the merit of a lot of people.

This only happened because people were engaged. That's why I re-framed this concept. We basically had different countries with very different views sitting together, drafting things together, and recognizing that this was absolutely essential -- that we had to develop something that was the product of agreement.

Each side, then they wrote the usual diplomatic process the way it should be. They had to converge. Right now, we have a forum that is looking at, OK, how can we move forward and push our thing more?

We had a list. Well, I don't think it was a matter of option, we had to work with all actors. This will be the next step.

Implementing, of course, we have 21 guidelines. When you, for example -- if you haven't been following the process -- when you look at that 21 guidelines, you should understand that there's a lot behind that. There are guidelines and proposals that never made their way into the law. There are proposals that are still standing and being discussed, and there will be new ideas. This engagement with state actors, with industry, with academia is essential to provide us with the input that we need back in [inaudible 5:09] . To bring this issue to the table and discuss and come up with new solutions.

As we see it, the sustainability process should be a legal process. It should be something that will evolve. One thing, since we are celebrating these 21 guidelines as a big thing, we should be careful not to forget that, just as important, perhaps more importantly so, we agreed on mechanisms to move forward, to continue the sessions and discussions on a very broad perspective.

They are not only on globalization. They are not only on what evolves. When we've established a mechanism that will allow us to address, it's going to be from a very, very broad perspective. Countries will be able to bring them to the table and say, "Well, we are worried about this. What can we do together to stop this?"

Domestically it will be important that those actors, or in many cases their governments, the ones that will be sitting with us back in Vienna what their concerns are, so that we can attempt solutions.

**Victoria**:  On the other end of the spectrum, David, you've been involved a lot in security space discussions [inaudible 6:20] on this. How are we doing on that? Is there progress? [laughter]… If there has not been, which we're aware there has not been, where do we go from here?

**David Edmondson**:  Thank you. [laughter]

**Dave**:  I haven't actually had to do the group of government experts negotiations in Geneva, quite fortunately, really. My colleagues do that. I thought it might be useful just to set up very quickly our approach to some bits.

In 2015, we had something called the "Strategic Defence and Security Agreement." That was refreshed in 2017 with a "National Security Capability Review." That gave us three purposes as a country to work under -- protecting our people, protecting our global influence, and promoting our prosperity.

Any of the norms that we look at, that we do in a multi-national setting, and some of this projecting on global inputs strand, both have to protect our people and promote our prosperity. When we talk about security norms, yes, there are forums in which we look at security norms, but they have to be linked with prosperity models.

My work on security norms really looks at how we can ensure space system support with terrestrial activity. That I think is the key to understanding the space security norms piece. For example, we've got a NATO Space Policy that's being brought up and in fact it will be launched to defense ministers in two days' time actually, at the end of this week. Because the security norms are not just trying to keep the space environment safe, as in a secure environment, they're trying to keep our people safe and our people prosperous.

The intellectual challenge that we have is to find something that sits on top of those committee Geneva discussions where we talk about weapons and we talk about all the nasty things we might be trying to do to each other in and on our space systems, whilst making sure that space, if you like, remains for the prosperity norms, for industry, for commerce, and so on.

Also cognizant of the fact that most systems are to use, in that pretty much any satellite is in itself a kinetic kill vehicle, so how do you split these? A more final thing is that one of the bits that came out of the discussions we've had during the week, or three days that I've been involved, thank you, has been this idea of, "What is a norm of behavior?"

We started talking about defining and normalizing behaviors. I think you can think of that in two sentences. You can think of behavior as performing against the rules, so, "Are you behaving yourself in a very legal sense?"

I think you can think of these as viewed and implied behaviors. Do I trust you? Do I like what you're going to do? I think those things tend to be quite different in the prosperity norms and in the security norms.

In the security norms, as Andre has just said, one side in the debate looks at rules and the other side in the debate tends to look at intent. It's closing that gap, which is proving incredibly difficult.

**Victoria**:  It isn't easy, but yeah, it's good to identify the problems before moving on with them. Walt, with changing minds or perspectives, we've heard from the international perspective. Can you talk from a commercial perspective as a commercial player, as we heard from Lars on more active satellites, what do you see the role of the commercial sector in establishing these norms? Are the norms different whether it's established players versus the emerging space actors, would you say?

**Walt Everetts**:  I'd like to do the second part first. There should be no difference in existing actors, new actors. My opinion is if you develop a norm of behavior whether that's intent or that's

law provided, whatever, I think it should apply to all space actors. By the way, I learned a very valuable lesson, "Never follow your boss at a conference."

[laughter]
**Walt**:  He took all your good stories, all the great knowledgeable things that I talked about this morning.
[laughter]
**Walt**:  You can tell him I said that. I think there are simple norms. You can look at specifics. You can look at a five-year de-orbiter. You can look at, "You should be actionable and maneuverable. You should know your neighborhood. You should share your ephemeris."

There's a billion different things you can do. I think what you really want to get to is a little higher level than that and that's trying to get that in your DNA. Trying to get the knowledge of being a good space actor part and parcel of your entire lifecycle --from the design of your satellite with constellation, or your launch vehicle, or your delivery mechanism, whatever that happens to be -- all the way to the end, or demise, or the disposal.

I think that's where you really want to focus your attention on the improvements to what your norms are. I'm not going to debate whether de-orbits should be within 5 years, 25 years, or 1 year, or 19 days, as my boss told you, it's more about, "Let's develop the right norm for all space actors and then implement that somehow." I think the challenge is the "somehow."

**Victoria**:  Just a general reminder. If you have Slido available, if you guys listening have questions of the panels for today, we'll definitely try to save some time at the end for that. Slido questions, we'll be keeping an eye on that if they come through.

As you know, we've had discussions here about norms-seeking here and even though we're delighted to have international perspectives here, this is a pretty Western-dominated group. When you have these discussions in Asia, are the norms different, are the priorities different? How do these considerations vary there versus here?

**Kazuto Suzuki**:  I think in just limiting a discussion on space, I think that the regional discussion of space alone doesn't necessarily have the difference between what we discuss in Geneva or Vienna. I think one of the issues is that there is a cultural element in it, which means that the people are more focused on the technicality rather than the strategic issues.

They are less coordination within the country. For example, in the case of Japan as well as in China, those people who are working on the policy issues are not examining good communication with the technical people.

In case of China, for example, the people who are working on space and the people working on strategic issues are not in the same line. The PLA, the People's Liberation Army, the Strategic Support Force and the Rocket Force are not talking to each other.

This lack of coherence within the country makes a mixed message to international community and that is perhaps, with some reflection of cultural differences of how to take this issue seriously and combining the do-it-yourself of the space.

My suggestion is that we need to get into these countries and try to understand how the norms within the country are made. Who are talking about it? Who are thinking about the influential wars and who are thinking about only for the sake of national interest?

We need to discuss and we need to create some forum for momentum to generate the national discussion on this subject. I think in Japan, for example, because of the change of the law in 2008, has made it possible to have such a forum and national coherent policy, but in many countries it doesn't exist. Particularly, China is the most big concern in that.

**Victoria**:  Across the board for the panel, if you guys were to pick, each one of you, one norm you think you'd like to see carried out and that could be carried out as both reasonable and feasible, and possible, what would that be? Really quickly starting with...
[crosstalk]
**Victoria:**  If you could pick one, what would it be?
**Kazuto:**  Number one to work on?
**Victoria**:  Yeah.
Dave:  Proximity of operations.
**Victoria**:  OK, why is that?
**Dave:**  I don't know if it's possible.
**Victoria**:  I said "feasible."
[laughter]
**Dave**:  Again I think it takes, so you have to do things in parallel. You have to have industry doing it as it is, getting together and talking about how to do it, so there's groups of capable operators can talk about it. You then need to have the internationalization of that group, you can do that in reasonable time.

Then you also need to be taking on the international work to look at the slightly more difficult things that sit in the hard security space. There's no reason you can't do all those three. It's feasible to have discussions. Whether the space can find a solution on a mass-focused purpose, I have no idea.
**Victoria**:  Thank you. Going down the line, Walt.

**Wal**t:  I have two. I have to break the rules. Sharing best practices, quite frankly -- I think that there's a lot of very, very good things that are going on. Speaking for Iridium for just a second, we're more than willing to share some of that progress with you. Whether that's in automation, awareness, ephemeris generation, whatever you want to do.

The second is my pet project and has been for the last few years and that's end-of-life disposal. I really think those are the two things that will improve space sustainability.

**Victoria**: Great. Thank you. Andre.

**Andre**: I'll share a little story, you know. The main point is the rules of the sharing of information. That standards have to be followed when providing information.

When I was working in my capital, I started in my ministry, Foreign Affairs, working in the Office for Outer Space. As it is, I received a call. As it usually happens it was Friday, 5:00 PM. [laughter]

**Andre**: It was from The Embassy of the United States in Brasilia. They said, "Well, we've been tracking an object that is going probably to fall over Brazilian territory.""Hmm, really? What do I do? "Then by the end, "I bet it's going to fall over one of those largely uninhabited areas." "No, I'm afraid it's going to fall over Rio."

[laughter]

**Andre**: [laughs] I said, "Wow, this is nice. On a Friday, of course." I went trying to call different people because I didn't know who to inform. That was some years ago. Today, apparently, there are some, but I'm not sure. I'm going to try calling them on Friday this week. See what happens.

Then we didn't have any standards for you to deal with it. Actually, that was my first contact with the issue. With the discussions then, when we start working in Vienna, that became very clear to me that are no standards for sharing information and what that relationship would be. From a very practical perspective, this has to be promoted. The other thing is that you have to bring other countries into the bargain in the sense that you have a lot of new and aspiring space actors. They have to learn how to do it right from the beginning. They don't need to make the same mistakes.

They can make new mistakes, but not the old ones. They should learn from the experience of established space-faring nations what the Best Practices are. In that sense, I borrowed what Walter just said.

**Kazuto**: From what I've said, the important thing is to make a distinction between the safety and security. One of the difficulties of creating an international norm is that other people are encroaching the issues of the safety, which is the benefit for everyone, all the space-faring nations and every satellite operators and the national security which is the benefit for the individual countries.

One of the reasons why there was not much discussion progressing in the Geneva front was because of the security concerns. That encroached into the Vienna discussion. I think that this

conclusion of long-term sustainability [inaudible 21:22] is extremely important because it clearly defines where the safety starts and where the security stops.

We need to have a distinction between what sort of rules and norms and behavior is necessary for the safety of the operation in orbit and what sort of domain that remains contentious for national security. This [inaudible 21:54] satellite has made one step ahead for making a distinction.

**Victoria**:  Thank you. Based on our panel, we have a commonality of the importance of sharing information, about sharing best practices, focusing on end-of- life, the proximity ops, and then looking at the LTS guidelines and using them as a building block.

**Walt**:  I think the term standard was in there as well, the standardization of sharing.

[crosstalk]

**Victoria**:  I appreciate you, Walt. Standardization of sharing. Those are all good things. Thank you for clarifying because my next question for you guys is, how do you actually implement those, any one of those just not the one that you came up with?

If you could say, OK, this is how we're going to implement sharing information, standardizing information, sharing, standardizing best practices, working on end-of-life.

Working on proximity operations? Working on LTS guidelines to continue conversation? How do we implement any of all of those? Bob? [inaudible 23:06] just made eye contact with me.

[laughter]

**Peter Martinez**:  National administration, I think at the end of the day, it is up to the responsibility of the states, launching state as well as those who are licensing. The licensing process is the key to make sure that those operations are done in a cohesive way and make sure that these are done in transparency.

I think that individual legislators and regulators have to think of what is the best practice for sitting on the national [inaudible 23:51] .

**Victoria**:  The follow-up to that is how do you make sure the capacity is there at the national level, especially a person with the newer actors, but, frankly, the established actors would have you.
[laughter]
**Victoria**:  That's a two-parter. What about the rest of the panel? What are your thoughts on implementation?

Andre: From our perspective, our focusing is that we have to make sure that the discussion is not related to a specific group or only to diplomats or only to operators or lawyers or whatever it is in a group.

When you're working, and I agree you need to work on a national level, you need to make sure that the discussion cuts across different groups and they get involved in the process with [inaudible 24:31] . When we were discussing altering the guidelines, we came up with this concept of sustainability as an enabler.

That is a foundational concept because if countries and operators understand that sustainability is something that will allow them to do more, to do it for a longer time and to derive more benefits, be it benefits to society -- economic benefits, return, investments -- you can approach it in any way you like.

You create conditions to convey this message to decision makers, to the stakeholders that we are pursuing sustainability because it is necessary, because it is important, but also because it will allow you to do things. We should make an analogy, and we have learned our lessons from history to learn.

When we think about the discussion of sustainability of Earth, we look at a historical process. If we could travel back in time, maybe not 30 years ago when we had [inaudible 26:35] but before, if we could go before 1950, and we went to a meeting and we said, "We need to develop sustainability norms for Earth. We cannot damage the environment."

People's reaction at that time was, "This is not even an issue." We have to bring into perspective or rather bring to the discussion as a historical perspective. People are not aware right now of how important this discussion of sustainability is. Within our community here, yes, but we need to make sure that our society at large is able to understand that.

That's what I mean when I refer to the fact that we need to mainstream sustainability in space just like we have done with sustainability on Earth. If we are able to do this, then we can get national policy makers, decision makers, stakeholders involved.

Then you need involvement, and for capacity you need to have information [inaudible 26:41] or you need to develop [inaudible 26:47] that allow countries and operators to exchange their ideas and best practices. They said new players cannot make the same mistakes.

They can make new ones, but they don't need to go through the same processes that the United States, Russia, and China, for example, went through decades ago.

**Victoria**: I'm hearing so far, it sounds like you really need leadership at the national level to make this a priority and focus on [inaudible 27:13] . That's interesting.

**Walt:** You also need commitment at a commercial management level. If you look at from our perspective, I'm a commercial [inaudible 27:29] , and I make money. It's in our best interest to

make sure that the team and the executive leadership all believe in the implementation of those norms.

There's national. There's international. There's policy, there's licensing, but from the commercial point of view it's all about putting it in your DNA, putting it in your thought process, not as an afterthought, not as a, "We should go do this because it's a good idea." It's just part and parcel of the operations from the top all the way down to the bottom.

**Victoria**:  It's not easy to incorporate it if the design base doesn't have this.
**Walt**:  Absolutely.
[crosstalk]
**David**:  You see it replicates itself internationally as well, where you find that there's a cultural barrier moment between what you think of as, I hate to use the word "mandatory," reporting, but this idea that at the moment of reporting is viewed as mandatory, and it's not viewed as a positive thing whereby you can say, "Actually, we're not very good at this, can you please come help me?"

One of the things we can do, and this was particularly important for the implementation phase of the guidelines, the 2021 LTS guidelines, is to encourage nations to see implementation reporting as a threat, but as an opportunity to say, "I haven't done this before. I haven't had to do this. Come help me."

Also, for the established actors to show leadership. You would show your commercial leadership by putting your data out there. The established actors need to show leadership by drafting annual reports against the LTS guidelines and holding themselves to account. You can't ask a developing nation, a new actor, to look like they're threatened unless you show that you're not perfect at this stuff.

**Walt**:  Yeah, or you share your best practices right off the top, "Here's the information. Here's what we do. You can choose to use it, you can choose not to use it, but it's working for us."
Kazuto:  I agree. I think that it's overly important that if the developing countries or new actors want to come in and ask for help, then they don't want to be told by the big guys, like United States, China, whatever.

I think you need to have some third person or a neutral person to provide the experience and information, what to do, how to manage things. I think commercial actors and a lot of international actors such as you and UN, also, will have this neutrality, in a sense that they can ask for and it's much easier to ask for the new country.

**Victoria**:  I think that also makes the argument for the need for [inaudible 30:38] leadership on these issues that against the big guns it has to be everyone has a stake in this matter. Another question based on what we're seeing coming in. There's some imbalance between consensus and creating buy-in, especially in the international arenas.

A lot of the UN processes are consensus-driven arrangements and that's considered important, because that ensures all the stakeholders get a voice and you get buy-in, and so these norms are actually international. Is that something you guys think should be a continued value, balance the needs to get people onboard versus getting any progress? Andre?

**Andre**:  I don't know if David will agree with me. Coming from a developing country we see consensus as essential, because Brazil were always opposed to any rules related to voting on all these matters, because we feel that everything in that society has to be a shared product. That's the only way you can ensure success, because you cannot impose such things.

Even if you did, how would you enforce it? They are not really enforceable from an international perspective. We see that there are a lot of problems with enforcement of specific things and norms around the world, precisely because they don't have mechanisms to enforce specific behaviors.
Our best bet is really to rely on commitment and commitment can only be ensured if you have consensus. Consensus is problematic. I understand that.

The temptation of adopting something that is not consensus-based is greater, because the faster you get a group of like-minded actors. They give out something and they say, "Here is what we have. That's the package deal. You sign each of you or not." That will not work, I'm afraid.
In this case we need to have people involved. Then there's one thing -- if sustainability is so important we should be able to find the right argument to convince people.

If they cannot be convinced, I need to listen to them. There has to be a reason. It's not just a simple belief or approach. It could be, you cannot ignore the political, but the key point is that sustainability is so important, so essential, for all countries to be able to attain the right path through space that you need to be able to find the right arguments.

You need to be able to listen to your partners when you're sitting around a table and trying to find solutions. Of course, we cannot be naïve, there are lots of interests there.
Still, summing it up, consensus is our best bet here. I don't see any other way. You can invest in these parallel discussions, but at the end of the day you have to come together around the table and say, "OK, what are we going to do together?" Otherwise, we will not succeed.

**Victoria**:  Peter, what do you think? Is the only way you get commitment is if you get consensus?

**Peter**:  I think one of the interesting fights we've been having, more generally, and you hear it playing out, is whether the structures are still right with the split work in Geneva from work in Vienna.

When you work in Vienna you're only working mostly on commercial disparities, sustainability norms that affect the globe directly and then all actors and they should absolutely be consensus-based. There's no question about it.

One of the interesting things for the Geneva question is when the actual number of active actors is very much more limited, whether despite the fact that the output and the outcome of conflict in space will affect everybody, you're not actually talking to the same vast number of nations as you are in Vienna for those who are playing an active role in that debate and activity.

There is definitely utility in splitting some work into Geneva, where it's pretty difficult, where the level of knowledge is not equal between nations, where you can't just share everything, hand it over and share, versus you're absolutely in Vienna in consensus.

**Victoria**: Kazuto, I see you're nodding your head. What's your take?

**Kazuto**: I agree with what Andre says. I think the commitment is important, but in order to bring all these countries onboard and try to make a consensus, we need to change the characters of those people who have doubts. We need to show that what is the merits, and change the incentive structure for those people who are not feeling convinced.

In that way, the behavior or, let's say, the best practice of the like-minded countries are important. Try to demonstrate what is good and what is bad.

It's not trying to set a fence between the like-minded and the not like-minded, but it is an open-ended framework to demonstrate, "This is the right way of doing things.

If you join, then you get the benefit of having the merit of having this safer operational environment." That is the important point of the logic of convincing the others. We need to build a common understanding of why we need to do this and what is the benefit of having the consensus and common practice for the norms of behavior.

**Victoria**: Walt, the commercial level, is this the same conversation about consensus that's relevant? Is there another driving factor that you think that had more punch?

**Walt**: I actually think consensus is the way to go. Some of the individuals in this room supported the GDF Best Practices document earlier in the year and last year, that was all about consensus. It's difficult. I'm not sure that it pleased all space actors. There was certainly some parts that were contentious.

At the end of the day, the document that was generated had some meat to it. That's what I don't see a lot of. It was all based upon consensus of - I don't know the number -- 15 owner-operators and designers, manufacturers-level teamwork.

**Victoria**: Is this at a documented level for people that aren't part of that conversation?

**Walt**: I would suspect yes, but I don't know. I haven't seen it. I [inaudible 38:14] . I just don't know anything about it at all.

**Victoria**: Going through the questions there's one really interesting one about how do you know when a norm has actually been established? Words can be written down; words can be visible. What evidence do you have? I had my colleagues walk up, brief advertisement, the Secure World handbook of [inaudible 38:33] actors in space.

This was our attempt at not creating a norm but putting in one place what standard best practices are in terms of responsible actors, but the handbook is not the only solution.

What do you guys think? How do you have evidence that a norm is created? How do you get agreement and get that out there? Thoughts?

**Walt**: That is actually a fairly good book.
[laughter]
**Victoria**: Write that down for the brag file, guys.
[laughter]
**Walt**: It's an excellent question. When is a norm established? I think it was Tim [inaudible 39:08] who said it the other day that if you're on an escalator, and the norm is to stand to the right and walk to the left, that's a norm that's established. Most people understand that norm. not everybody, but most people understand that norm?
[laughter]
**Walt**: The real question is, how is that norm established? Is it established over years of walking on sidewalks or escalators? In the space industry do you I think through what's a norm and is it published some place? I don't know the answer to that question. It's an exceptional question. I don't know the answer.
**Victoria**: Peter…?
**Peter**: If I mean social scientists, I would say when norms are established when you see someone is plying by not behaving accordingly. If someone's behavior is not following the norm, and everyone think that it is not aligned with the norm, that is when the norm is established because it's a shared understanding.

If everyone understands that everyone has to stand on the right and walk to the left, and then if someone stands on the left then people say, "Uh-oh. These guys are not doing the right thing." That's when the norm is established.

**Victoria**: You can tell there's a bunch of frustrated DC Metro riders in the audience.
[laughter]
**Victoria**: Going back to that, It seems like we need to have people criticizing the norm that's been violated. People are actors and need to be willing to speak up. Your thoughts.
**Andre**: The thing with norms, what is the right side of the road to drive on?
[laughter]
**Peter**: What's the right side, right?
**Andre**: It's just a joke, but I think this illustrates how it works. We have different approaches, and we have to adapt. I think the key relies on we recognize something as an acceptable wrong or

a deviation and what we can do about it. Then best practices come into play because they are the steppingstones in the process of establishing something as a norm.

We start doing things because they are better, because they [inaudible 41:46] , and then people start to follow suit because they understand this is more efficient or more effective, or it costs less, or it will deliver better results, whatever it is, or because there is a global understanding of this. Then, of course, we start criticizing the ones that do not meet the [inaudible 42:06], but it is a process.

You cannot really impose norms of this kind that are normally defining overnight. We need to have standards.

**Victoria**:  David.

**David**:  What we tend to do [inaudible 42:29] is see where you want to be in 10 years' time and then work your way backwards. What were the indicators that show you were getting towards there being a norm? What is the volume of behavior that you want to see every two years?
See certain numbers of actors doing certain things, and at some point, you get to a tipping point and you're viewing it. When we're thinking about the end result, work back from it.

**Victoria**:  I've been given the book sign because my boss would like to give a few words of thanks at the end. Please thank me during this panel which has been a fantastic cap to this conversation.
[applause]

**Victoria**:  I'd like to call Peter Martinez.
**Peter**:  You guys here.
[laughter]

**Peter:**  Thanks, Victoria. Thanks for another wonderful panel, very stimulating as were all the others. We've come to the end of our program for this first Secure World Foundation summit on space sustainability. We've had some very stimulating discussions and really fruitful exchange of ideas over the past two days.

We certainly have gathered a lot of valuable inputs and insights that will help us in our planning for the next triennium. We're busy developing our strategic plan for the next three years. This is certainly a very valuable input. I would like to thank all of you that have shared your insights and expertise with us and with each other over the past two days.

We hope that you also enjoyed participating in this conference as much as we've enjoyed organizing it. I would like to remind you of the point that Crystal made when she opened this summit, and that is that this is the first of what will hopefully be a series of similar events. We've already had some discussions with the folks who asked us if we were planning to do this again.

I don't know about next year but maybe. The idea is that, yes, we would like to do this again and possibly in other countries as well. We would really value your feedback on the topics that you might find useful if we organize another similar event in the future with the program structure -- whether you found this to be appropriate structure to discuss the topics that were under consideration.

Then any other feedback you may have on the logistics or event aspects as well. With that, I would like to thank you all for your participation in the event over the last two days. We had some fantastic presentations of our spotlight speakers. Thank you very much for setting the scene for our discussions.

I'd like to thank all the panelists for their thoughtful contributions and participation and starting all the discussions that we had following their initial interventions. I'd like to thank all of you for your active participation in this discussions, both through asking questions through Slido and many other ways. We appreciate that it's added considerably to the richness of the event.

Then, of course, a big thank you to all our sponsors with whom without their support we would not have been able to organize this event so thank you very much to all of our sponsors. Finally, I would like to thank our Secure World Foundation team which you see standing over here. Big round of applause.

[applause]

**Peter**:  I have the amazing privilege and pleasure of working with this fantastic team and they were under the leadership of Krystal Wilson. She championed the idea from the outset, worked extremely hard. I'm rather happy that I only participated in a few of Crystal's meetings because she really cracks the whip quite hard.
[laughter]

**Peter**:  I know who's in charge when it comes to the [inaudible 46:52] . I thank you so much and also thank you to our founder and president Cynda Collins-Arsenault, who founded Secure World Foundation.

[applause]

**Peter**:  Thank you very much.

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