U.S. Chamber of Commerce Artificial Intelligence Commission On Competitiveness, Inclusion and Innovation Field Hearing London, England

June 13, 20

Introduction [Jonathan Kewley and Lizzie Greenhalgh remarks are unintelligible].

FERGUSON: Opening comments from John Delaney, our distinguished Co chair…

DELANEY: We're getting a little Echo, maybe

Thank you in advance for that and I wanna, thank my fellow… this is important…

For Having a very nice conversation Thank you for the intelligent conversation. Um, um.

DELANEY: Is it working now? I think it is. He's mostly voice works. Yeah. So anyway, as I was saying, uh, I'm grateful for everyone who's here. Um, Jonathan I don't have a great conversation again. Thank you for that. Intelligent conversation, Jonathan.

I learned a lot …and I think we were in strong agreement that innovation

Has historically improved the condition of humanity.

By almost any measure, which doesn't mean it improves the condition for every single person

But on balance, innovation has been extraordinary

As we all know, in terms of advancing the condition of humanity, which is our ultimate aim.

And I think we're also in strong agreement that artificial intelligence machine learning and related terminology has similar potential.

Um, but it also comes with very significant pitfalls.

And our job is to think about these issues.

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National security implications, uh, implications around weapon systems, which is something we touched on.

Uh, privacy implications, ensuring that biases that we've worked so hard as a society to begin to overcome.

Don't get hard wired into these systems… competitiveness implications,

Implications as it relates to the workforce, a whole portfolio.

Of challenges and opportunities that we have an opportunity and will have many opportunities to shape the outcome

For how these technologies unfold as it relates to each of them.

And if we look back, historically, we see a good collaboration between the

Public sector, and the private sector has improved these outcomes.

Having a transparent open discussion about these issues has improved these outcomes.

And that has to be the spirit that we approach this next wave of innovation.

Because it's happening very quickly in some instances too quickly.

And we're behind the curve in many areas.

So, the work of this commission together with works of similar bodies, all over the world is incredibly important to ensure that we have the right conversation.

And that we start thinking about the right policies in both government, private sector.

Uh, and we embrace the opportunities

That, uh, these technologies present, but also being clear and realistic and honest about the challenges. So I'm grateful to be part of this commission,

And I look forward to FERGUSON: thanks, John. I'll just make a couple of opening remarks, and we'll get to our.

Our our hearing today.

Thanks again to the folks at Clifford Chance. Its great to be here. Um, it's just great to be in London. What an exciting city, historic city. Um, so central to so much.

So many important things that have happened in, sort of, the history of the world. So it's, um, it's marvelous to be here again. I love coming to.

Uh, many of you aware of this, uh, this commission, a creature of the United States Chamber of commerce.

We've been busy traveling all across the United States, having hearings ...we've been in Austin, Texas. We've been Cleveland, Ohio, within, in Palo Alto, California. We've had some

Very, very interesting and helpful conversations. Um, and it's important for us to sort of take this to the next step. Uh, which is

The sort of humility and the understanding that what happens in the United States doesn't happen doesn't stay in the United States and that decisions by

Folks in the United States can have an impact all around the world and

Just, as decisions that are made here on Monday will have an impact all around the world and it's important for us to

Coordinate it and have conversations um, that's why we're here in London.

It's important to bring that dialogue that we've been having in the U.S to bring that abroad.

Um, we have a very long and and.

Proud history with the UK. Um, we have a great understanding of one another. We have agreed we have many.

Uh, common Western values, um.

They're not shared by all around the world so it's important for us to be in coordination and conversation as we try to. Um.

Promote these values, uh, particularly when it comes to something s powerful.

As artificial intelligence.

Jonathan, I was struck by your comment, um.

How it can be I forget. Exactly. I should. How, how you said it? It can be.

But, tell us again, a, I could be recording some of the, : the best or worst thing...

Steven Hawking...FERGUSON: Yes, I was struck, because when when we were expecting my wife and I were expecting our 1st child, someone said to me, parenthood is the best thing

And the hardest thing you'll ever do in your life and I talked to myself How on Earth and Can it be both?

And it is! it has been.. right? um.

Our eldest is getting married at the end of the week now, and it has been the best thing and the hardest thing we've ever done.

And I'm, I'm hopeful that artificial intelligence doesn't

Somehow become both of those things.. we need to work so hard and make sure that you're doing everything we can.

To make it in service of humanity.

And not a disrupter, right? And that is a big part of what we're doing here today. So.

Um, with that, we are going to get to our 1st, a panel.

I will introduce our 1st panel and then John, and I will.

Bounce back and forth. We're gonna we're gonna switch. Yeah, we're just going to have the personnel come down. Okay.

So, if you're on the 1st panel on, on down there, interesting, if you would.

Thank you.

We're just going to go with me order a piece of paper in front of it.

Panel One

First we'll hear from Marit Eldor, the director of strategy at Elsevier.

I'll give you a brief background and then jump in… So ive been with Elsevier for the last 7 years.

We are an information company working across various professional weekly sectors.

Before I had strategy before that I worked with Thomson Reuters also an information.

And before that at McKinsey.. So over the last 20 years, I've worked in media and information sector is always hard, but fascinating to see how these have been impacted by of course AI

So it's a great privilege to be here today. So, let me start by setting the obvious

I do believe that AI just like other investments is

It can be force for good and can help with that society.

It's important decision making you pretty much

Every field that I've worked in, um, it allows us to process huge amounts of data very effectively and accurately, and it works across many use cases.

From process automation to medical triage to risk prediction.

..just a few examples.

In my experience AI helped us make great progress both internally within companies by deploying better operational methodologies and efficiencies.

And externally by the different products.

If you're an expert in your field, you know what an optimal decision flow looks like --what data you need, what you done.

What analysis you're applying and what considerations or contacts we need to bring in to the

 decision making AI really helps quantify that so we can make better decisions,

Accuracy, and better speed. it also leads to be less waste and failure, especially in

Experiments in innovation in pharma, developing drugs

And the medical field.

And diagnosis. And where I've seen some

I mean, medical for me, I should have said in my introduction and worked in the medical sector in number of years.

And it's been a really great way to reduce the unintended flexibility of care and deliver higher quality

Medical diagnosis or treatments, especially in developing markets where access to expertise

Is incredibly add tools like other computers before them helps you out the human, right? They take over some of the ultimate information that can be done

And if we add people to do (?) So all of these are great advantages.

And I think that governments and the following us should internally how

How to protect public interest with new technologies? So I really welcome. You

Holding this session and inviting today and this, uh.

This I think is not the only right politically, but it's also right.

That are better economy and better for completion because we all need the.

The right environment to operate it. So potential policy problems associated with AI are well documented.

We're probably speaking about 5 main problems.

Number 1, transparency and explainability. Does the user know they're interacting with an AI system and really understand how it works.

The latter can be when things go wrong. Is there a clear line to a person?

Right?

Number 3 bias... you mentioned that Mr. Delaney.

I mean, what we say is that the decision is made using our systems must not be based on data, which contains historic biases. But what data doesn't?

And that's really a quite a substantial area of focus.

For us.

Privacy: how can individuals ensure the continued legal protection of their personal data within AI systems.

And finally how to AI systems impact IP.

AI affects Intellectual property in 3 ways: 1 is the input, the data content,

2nd, is the algorithm insert is the output.

And while I know some think we should relax so that a ai tools can progress

We actually feel the opposite is true. Without.

Without robust data with high level accuracy is a ai systems will not produce

Safe...So we do believe that.

Corporate systems are necessary

To provide incentives for assurance of data quality. These are I feel the main issuesto address with safeguards. Some already have legislation that pertains to them like the AI act in Europe or the

Privacy or other areas, but the sheer complexity and diversity.

Of AI usage means that there are a lot of cost cutting areas as well.

And we need to be quite careful in thinking about what legislative environment would be conducive for innovation.

I would also ask them for global approach. Um

Is very important, for certainly a company like us

That works across the….

Many companies, both those developing, and he was using AI tools have

Already put in place in policies to ensure

Responsible a AI, but as I said, I mean, we welcome.

I feel the companies should welcome the interventional policy makersIn

For free competition and guardrails for development.

Cutting edge technology areas, companies are often are have been better positioned to think ahead of the implications of the technologies they're developing. Um, and to people that don't make changes moving stuff needed.

So, I think, I mean, I think collaboration

Between, uh, as you said, collaboration between companies and regulators

would be a great way forward. In some cases there are apps that we can learn from where companies have

Change their approach to accommodate.

So, let's say a few words about how we approach responsible address responsible Ai:

We have a large board of professionals in data science technology AI work on various AI initiatives both internally and externally pretty much every product we have now incorporates AI

And we've defined a wide set of principles that we apply in different ways in our units.

There are 5 main principals addressing the concerns I mentioned earlier around

Transparency accountability, bias and privacy. Number 1 is we consider that we will impact of our solutions of people.

2, we take action to prevent the creation or reinforcement of our fair bias.

3, we can explain how our features work.

4, we create accountability for human oversight and 5, we respect privacy and champion robust data governance.

How these principles have been implemented varies by the 2nd thing, which we operate

It also means we're taking both the top down and a bottom up approach.

We have a responsible tAI eam whose role it is to review our algorithms and tools and, uh.

And identify if anything may produce bias

In the work (?)

We've set up an AI ethics board with stakeholders across the business and we have different fields and partition groups in data science.

And I would like to finish it a couple minutes with 1 example of an AI bias issue that I have been involved with:

So our responsible AI team that I just mentioned, raised a concern

About an AI tool, which we call the review of the recommender.

This helps Elsevier

Publisher, we have a journal.

They're role of editors is to review article submissions from authors.

With the role of peer reviewers, every article needs to be reviewed by 2 or 3 experts.

And it's very difficult to find that it needs to be a very big expertise in the area of AI

And just to give you a sense of scale that you would have more than 2 and a half Million article submissions.

Each 1 needs to be reviewed by 2 or 3 people, and usually you need to approach at least 10…

So, tens of millions of people, classic case for AI tool, right? Because we have a database, conflicts with all the articles published

And you could interrogate this dataset to find the exact people with the expertise you need right?

So, we develop these tools editors who started using it and told us how

How how much it made their life better really solved the…

But then when we look at the results of the tools

Recommendations versus just editor choices with their own devices.

We found that the tool emphasizes bias… and it amplifies bias because.

When you have underrepresented groups in the dataset.

Um, and that could underrepresented recommendations,,, and this.

We saw our analysis, showed that it could be protected there

Women of researchers from global South and.

Pretty open for career searches, and all our groups that (untelligible)

And it's just more than just keep device outside it.

Why, because when you were an editor and you have your list of 10, you see that is not diverse you have to balance it,

 right? It's it's what most of ours just do.

So so we had to fix it. We took actually this issue to our external ID board to seek their advice. We put a disclaimer to let people know this is happening and we're fixing it. We asked editors

To fix it themselves while we're working on it. Um.

And we've actually used the AI to build stem rewriting into the tool.

Um, we're now rolling it out and we've incorporated advice assessment, every state of the process now, to ensure that... (?)

So, with the governance we created, we continue to audit and monitor our AI tools and algorithms across our company to ensure that we use AI responsibly.

That is the end of my testimony thank you. Thank you so much. FERGUSON: That was perfectly 10 minutes. Oh, wow. That's right. As our 1st, witness of the whole day setting the bar. Awesome. Perfect.

Because we've done a number of these hearings.

It's very hard to stay on time. So thank you very much. And 1 of the reasons that's important is because we have this very distinguished panel of experts and the Q and a, it's frequently

Really really important. So leave in time for this is super important. Thank you so much.

Next we'll hear from Rupak Ghose I'm hoping I pronounce that close to properly? The next 8 to 10 minutes. Are yours? GHOSE: Okay no pressure. Thank you for the Chamber of commerce. Inviting me today. Who am I?

Um, I've got 20 years experience in financial services. financial services

I've worked with a large exchange groups, large investment banks.

And financial market, infrastructure, fund and fintechs.

I recently led a 1 year review of for a Bank of England-backed industry body.

Whether it's in the biggest banks, but in the front office and the middle office.

And attorneys, 2 regulators in the UK and so forth.

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Today I work in fintech land I work for a smart analytics company called Galytix.

We are 140 professionals, but all of them are data engineers, data, scientists, and technologists.

1 of the products I lead is productivity, early warning signals for AI (?)

We're a data analytics and software company, but we scan hundreds of documents, public and private and we look for signals of credit distress.

There's 3, real major points I wanted to discuss with you. You tell you a little bit about how I see a financial services given my

wide experience in different segments of the industry. Secondly, uh, ideally coming in from a financier/economist background what we think about-

AI versus humans, when they say I'm better than humans, where is it worse? Because it's always very bad or it's gonna add value… and third and probably most difficult is AI policy.

And ill refer financial services stories/

sketch stories from the financial crisis about what we've got right in financial services, what we didnt and what does that mean for AI.

So, let me start with AI and financial services… it's still very embryonic in financial services.

Financial services needs AI, this is the industry that has a lot of technology. It's more the tech sector, but many banks here, as you will hear telling you, it's telling you.

We've got thousands of software engineers. We're a tech company…but there's lots and lots of legacy legacy tech. There's lots and lots of manual data processes,

Compliance regulation, post financial crisis…. Let's just increase that massively.

I politics, we solve a lot of that, but if I look at my work, I did working for Bank of England and the industry a couple of years ago…I'll give you examples like.

Financial markets, surveillance, anti money laundering, very, very manual process. Regulations and requirements are not massively.

Technology can make a difference. software is used in many of these areas, but rules like algos often for lots and lots of false positives.

That's a big big issue. The 2nd point. I'd like to highlight it.

Link between technical debt in the banking sector is really AI vs China.

And as we talk about Western democracies, coordinating globally.

Uh, financial services, I think more than any other industry, China is ahead on AI

We've read a little about the political backlash around the nuances and privacy and so forth.

But they are way way ahead on AI in mass consumption, and a financial services.

Forget the fintech sector, there is massive consumption of AI.

Finally Ill look at the banking sector, where AI is probably a technologies probably my old stomping ground, the trading floor. when I started with mid late 90 s I used to work on a trading floor, hundreds of guys, shouting on the phone.

That's all automated. It's all 1, but still very, very.

Dominated by rules, based algos in a piecemeal fashion.

SO banks very, very careful. You can find regulation everything that's happened about using AI.

So, let's not exactly right. How far is 1 within.

Financial services we sort of brings me to where I got (?), which is the fintech sector.

I would say fintech sectors worked.

Work within Western democracies in the U. S. in Europe.

Lets encourage the lesson that's been taught to the financial sector.

Well, that's what we can talk about AI

Financial services, which will talk about our trade reporting data by open source, software lots and lots of things we can talk about later. But let's encourage the fintech sector. I guess it takes our whole product is.

We digitized processes we take date, we discover the data.

It's hundreds and hundreds of data sources. We ingest data, structured, unstructured data. It can be handled. What's from the SEC,

Uh, thousands of pages long, and we can analyze it or admit, you know, our customers say that they say 30 40% of their costs. What's the manual process to be expected there? Certainly, there are lots and lots of hundreds of.

Be the MBC (?) company's doing it. We're not unique. Let's really protect the, uh, the fintech sector.

So, that's really AI is in financial services, or at least where I see it.

Which brings me to my next point about AI.. and ill relate to the model risk because scenario I've worked with with lots of lots of senior members of large banks over the last couple of years.

When I was at an industry standard body, and I always think very simplistically as an economist or financier, an AI has to be better than where can it add value.

And, you know, it's a really, really complex and multidimensional topic.

But in financial services, it's not unique to financial services, but.

Whether you're a trader, you're a portfolio manager, a hedge fund, or an asset manager or buying.

You wake up that there were some lines that we sort of used to all our career.

1 is possible, which is for the future.

Relevant very, very relevant here, but that's so Holy grail talked about in financial services.

The 2nd is the discussion, the correlation.

You know, the manual world that I grew up in, we set set up a desk and discuss that over time. Obviously there's relevance to that.

The 3rd is really thinking out of the box. I recently wrote a piece for financial times about this time

And I related the story of Abraham Wald (?) during World War, 2, professor and planes coming back from war, and I can talk about that later but

 but it's really about looking for black swans. Don't just look for the bullet hole, look for where the bullet holes haven't gone.

So my overall point is that more risk has to be regulation so flexible and allow humans in the loop, extend to which AI models.

Our security requirements. which brings me to a couple of examples. I would like to highlight around model relevance and use cases.

So, when I did this study with the bank of England, and I worked with very, very experience for data scientists and worked with the very large banks

Would say - well, we were looking for the you read about good and bad AI, conspiracy theory and so forth.

The conclusion was actually about moral relevance… is there moral relevance for this? Actually, the primary area is I was.

The financial markets is arbitrary, but my side on the South Side of the room is.

A real estate target has been around for 20, 30 years and driving guess is the, every day and so forth. But how is AI

in effect that and really, it's really, you know, what's the business case.

Uh, what part of the firms have been using it and is it relevant at that time? And that's a model relevance we found was an overwhelming driver despite all the scares stories you read about read about credit scoring and all these things.

And I'm not saying there's not evil out there, but moral relevance was

Particularly financial services was very nuanced in an algorithm on trading desk is very nuanced. That's very component. Parts are very different than an algo

Somewhere else. Which brings me to the story about politics, study and use cases.

1 of the things we always talked about is data accuracy and model accuracy.

But I assume there's a chief data engineering analytics about this a weekend. So distinguish panel on presenting to.

He's like, well, it depends on what, what are you trying to get.

It takes off proactively utilizing manual processes, hundreds of documents how those.

The device even it's a pretty good. It's pretty good at reading building, Excel, spreadsheets and so forth. But I know it seems.(?)

So, we have to give our bank clients, all our sophisticated insurance points, failing the new accuracy, which may/may not be 100% accurate. But we also have to give them at scale.

I was speaking to a friend of mine who runs a very large hedge fund about coming here the weekend. He's like, well, I don't need to get 100% accuracy. My AI program needs to be better than

the other guy who did half the time, so the best time manager in the world might slightly more introduce the time.

So, it really goes back to use cases and more relevance.

And use cases, what are you using for? Um.

And, and really transparency around that. The other thing that's really, I think specific specific financial services. I can be very, very relevant in financial services.

It's a marketplace, so I grew up in financial markets and the trading floor.

Speaking of by side, (? In the marketplace, but even in.

In other areas, like, we're providing people for London, the overall securitization.

Generally that marketplace interplay to agents some good and bad.

You had bad agents, financial servicesf from beginning of history. They've been humans N, read about the rules based algos, they ger crazy there… And.

And AI models and complexity of AI models and teams play our models field area and I did a lot of work with on this. I just feel.

Hasn't been research enough? it's, it's still a model risk within that specific.

…but how do the models stay together and gain theory and so forth.

I'm not going to be directly, but it can be indirectly. as a recent member of crypto. I've seen Elon Musk effect new markets with so little as a tweet.

Very few people have that scale. That'd be 1 one's. But anyone wants to.

Just think about AI bots with Twitter manipulate social media. I watch all congressional text into politics and culture and social media companies.

Just think about financial markets that I grew up on, and social media AI bots can do--

whether it's collusion together on social media at the same time, on a central, the middle of book(?) on our platform, I can go into that detail later.

But I think that into models, uh, if there is sometimes unlivable.

At least in my humble opinion. So, what does this all mean for AI policies? We obviously want to make the world more productive, but again, I come back to, you.

You get my answer to economists my background and thinking about

Improving productivity, I'll give you some humble pie: you're 1 lesson.

Noone wants too much red tape, right? Hey, we all want to.

Regulation that looks forward, we don't want too much regulation arbitrage. We all want a level playing field.

And we all want it to be released properly. That's all. Obviously obvious to everyone in this room.

It all sounds simple, but it's very, very complex. I'll just give some stories from my financial service experience, rather than a ai experience. So, couch that, as you guys think about this sort of, kind of kind of thinks about

AI Guidelines Id start really with, um, looking forward.

A lot of the financial services regulations coming out in the U. S. and Europe, post financial crisis

Looked in the back in the rear window. That's all good and well, some of it was fantastic. I'm not like yeah, we can debate that later, but really look forward …1 area that I focused along with the work. I did on model risk was model risk impacts.

So those are several pieces more risk work by the deadline in the New York Fed that in 2010 I think..

11 7, it looked at liquidity, it looked at capital…

That's like 12 years old now… and the NY Fed guidance drives the world because they meet with that face the fan of the to try.

Western democracies, regulation area. Now, do we have model risk guidance ready ? We're looking at that.

Which leads me on to how much regulation is needed, FERGUSON: I'm just going to ask you to take 60 seconds to wrap up.

GHOSE: Okay how much regulation is needed we all seem the regulation we've all seen you know, it's all good having a pilot's license and so forth.

Uh, but as someone from the commercial side of the class I, I do think that the balancing rules having standards

And transparency, I think is a key thing. Particularly when we switched (?) it with very sophisticated clients.

We are thinking about BBC consumers and I see it every day to the crypto w

We'll have the stable point is it will happen for today and.

Real focus on transparency and that's what I believe the US Chamber of commerce, a unique institution,

And talking about the regulatory arbitrage and the arbitrage between private and public.

U. S. labor commerce as a segment that goes across that segment and create those guidelines and and talk about later.

My final point I really wanted to make is rules are really only as good as

The cost that we have in that those rules.

What do I mean by that? That is fantastic. Economist central banks it's fantastic security. They did a fantastic job.

Theyre all trying to get tech savvy. They're all hanging out with with the tallest academics in AI.

But have they seen the real world and what do I mean, by the real world? the SEC has whistle blowers.

So the best risk managers and best compliance officer, and the 2nd, line of defense and financial institutions are actually former traders.

It's the movie catch me if I can. Has anyone seen that? Yeah DiCaprio, he's a

fraudster and then he works for the FBI... and, you know, so the last question I sort of leave this

Distinguished panel is-- do you have the right people in place in the private sector and the government?

Cause that's really important FERGUSON: thank you very much.

I know you were talking super fast and appreciate that and you got a lot in.

So, thank you, and we're hopefully get to revisit some of those points in the questions.

Next is Kenneth Cukier?

I say that. Okay, it is. All right. Thank you. Very much. Kenneth is the deputy executive director and host of the Babbage Podcast at the Economist.

CUKIER: For sure. Okay Thank you very much. Honor to be here.4To this discuss this incredibly interesting and important issue. So as I'm the deputy executive editor of the.

Economist focusing on data, artificial intelligence.

I'm also for director of China House, which is the royal Institute for international affairs.

This seems to give me a lot of credibility geography classes a 4th meeting.

But you might tell from my accent, I'm not rich but Im American.

Okay.

So, um, let me start with just the context very briefly.

It's 2 very basic points and the 1st, is about polarization.

We are in a world of polarization.

We're seeing it everywhere pulling apart economic.

Certainly social wars and what we're missing is the reasonable, the middle.

And so I raised the promise is doing because you.

For decades, the voice of centrism.

And, uh, my perspectives are going to try to.

Bring together who are the polarization.

To one in which you can try to find some common accord put in some counter intuitive ways.

The 2nd point is about the importance of exponential technologies.

We sort of think we know what exponentials are, we use the term

mentioned in remarks, I just want to focus on mind on what it means in terms of the speed.

If I was to take 30 paces in each case, a year along, after 30 paces, I would be 30 meters away.

Both of my paces were exponential … one and two and four…or 30 paces

I would have gone to the moon and back. Okay. So, in a world of exponential technology's things are happening a lot faster than we can imagine. And, of course that's happening with AI as well.

So, thirdly, is general AI is not just one technology.

it's not just 1 technology that goes into 1 domain, but like, printing or electricity or computing themselves

It's going to be the platform for all other subsequent innovations so it's so important that we get it Right

So the 3 areas that they are almost curses that we have to deal with.

Our explainability, privacy and inequality.

Let me explain what I mean, by each dimension.

Cause I think it can actually shift into a way that is either.

uncomfortable not obvious: Explainability.

As we said earlier, um, actually by both panelist, um, the models that we get.

Give us, give us correlation. They don't give us causation and it's hard to define some form of reason to have.It arrived at an outcome.

The result is going to be that there's going to be at the higher end of ai algorithms

Some degree of fuzz in which we have to trust the algorithm.

Rather than the decision of a human being.

Choose to do in fact, when it comes to detecting diseases through the retina scan,

when you validate the performance of an algorithm by human ophthalmologist.

The performance of the algorithm goes down, because the AI system can identify things, but human ophthalmologist just cannot.

So, what do we do as a society if we have an algorithm at certain domains- Because we can test it against ground truth.

I got this or not for predictively find out later if that's the case or not but at the time.

Diagnosis happens all just doesn't see it because it's not an visible to the human eye, its artificial intelligence.(?

We accept that we're going to actually only trust things that we have a reasonable answer to and where

We can run the experiment together and get the same output.

Or are we going to accept that There is a higher performance with some degree of fuzz?

We can't know for certain, but we have to put some trust that it's going to work better than the alternatives

Well, I think a, why society is 1, which you trust.

The mathematics and the statistics in the system.

Rather than sort of try to bring it back down.

To what is cognitive, cognitively acceptable to the human, but still the.

As good as if we trusted the machine.I can talk more about that in the Q&A.

The 2nd example is privacy.

We all Understand that there's a value intimacy/

Privacy, however.

The way that artificial intelligence systems work and work very well is it needs *all of the data, all of the raw data.

Full disclosure, raw data, it's not literally wrong. There's a human being in certain form or another.

But the point is that it is as almost an curated by the touch of the human as possible.

What does it actually mean in practice? Well there is a research University of Michigan who has come up with an algorithm to determine the hospital readmission rates as well as sepsis -

The likelihood of getting an infection in a hospital. And if you look at the ways in which you combine causality and come up with a model, maybe 15 different features its 75% accurate.

But if you take *all of the information 10,000 outcomes

Including the billing record, you'll actually get it like, 95%.

Or 85%...it could be considerably better.

But why would that be the case? Well, I can answer that we can sort of our mind can actually reach a causal conclusion by a viable one.

Which is the billing record would include the issuer of the credit card.

And we also know that some credit card issues, those low income families, rather than higher income familes. So, in fact, there's a

It's a variable here that we're identifying which is economic....(?)

Well, feeding of the personal patient, and there's, we all know from class is very determinate on health outcomes.

The point here is that status comprehensive. We know that right but of course, if you have 10,000 variables.

There's a lot of other things that we didn't know about – our causal connections that we didn't have, but you would not have known

Wouldn't have as good a accurate algorithm to predict likelihood of hospital readmissions for it.

Such as if you didn't use those 10,000 data points, including ones that people think

Incredibly personal, and therefore, maybe they're uncomfortable with.

How do we square the circle? Well, there is a potential way,

By understanding there's a difference between input privacy and output privacy.

The input privacy is the data that goes into the model the output is how the data is used.

As an example, in the terminology of law collection and gifts.

Often in privacy, lower or regulating the collection of the data

Because its easier to do this, slap someone's fingers when they're doing something wrong,

Wrong, but at least a little bit trickier. How do you define it? The law there's gonna be.

It will also forced all innovation. We can see how that might play out in practice.

When do you think in terms of all of the photographs that are on social media that are apparently publicly accessible in some ways we sort of like, that want to keep that.

But at the same time, there's clear view AI, which is using our photographs and in ways that probably are uncomfortable with.

We can talk about it in the Q&A, but it's basically used by law enforcement

to basically a record of almost the face of the face part of almost every 1 of Earth, or

certainly on the Internet. And so in ways that we might feel uncomfortable with and maybe we should regulate that.

As an output privacy future, not input privacy.

The 3rd point is inequality.

Here.

Here, it is difficult for a lot of people who've grown up and seen the huge evolution of computers to reframe how they match artificial intelligence.

Because the story of technology, and most technologies for the last several centuries has been democratizing force.

Right. We remember that a large computer was something that you walked into and then you have a super computer in your phone cause at the time

the price decreased and it flourished.

You know, 4, people have super computers in their pockets. Who could've imagined 50 years ago.

The problem with AI is it seems at least so far today to be very hierarchical and not democratized, but actually requiring

Increasing levels of scale and resources

To be extremely good at it; and so it forced us to rethink:

How do we imagine interacting with AI

Regulating it to flourish for human betterment.

The 1st, area of gonna is gonna be corporate concentration. We're already seeing that with meta.

Google and deep my personal request, we're seeing that in terms of the 20th century development model of

Economies: poor countries versus rich countries and how they interact and whether

poor countries using this manufacturing development model can move up

Into the world economic enfranchisement might be forestalled from that. We're seeing that in terms of automation for these workers. That's classicly how we think of inequality.

And lastly, in terms of what we call the best versus the rest.

Those companies that have adopted a AI, are outperforming not by, like, 10 or 20 or 30%.

But 5 times, 10 times, 20 times the baseline in their industry.

So, did we pull down the winners? That would be I think our why society would do what we would do is let the winners

flourish, but help people, not the firms.

I think public policy should focus on that.

I know probably out of time, let me make 1 final remark, which is probably going to be the biggest elephant in the room.

I just want to talk about. 5Okay so what is the great sanction? How do we clobber over the head

the companies is that we think for some reason, maybe because they're just big and successful in particular doing something wrong.

See, how do we sanction them in the role of AO?

Well, there's, there's this really alerting idea.

We'll take away their data, right? we'll for some form of sort of disclosure of their data or data portability.

This really works on many grounds. Okay. So the 1st, 1 is, let's just.

Play this in sort of practical steps.

We think Amazon is too big, and we want to share my buying patterns

With another online bookstore, it is completely blind to the fact that I might be sharing my buying patterns of books, which are intimate

with Amazon, because I trust Amazon, so, like, actually would not want that data is shared with someone else.

And if it is by, which is Chinese, I'm reading books about how to overthrow our government.

The vitriolic capitalist, and we wouldnt want to have a communist government.

I think Id be very wary of sharing that data with

1st, a 3rd party, a different company, but secondly, a foreign company.

or from company that has different balance. That's just 1 example. The 2nd, thing maybe more important is.

Collecting data is hard. It's not the same data. amazon's really smart not because you went to.

To the webpage, because they know the better signal is that you stayed on the webpage this time, whether you revisited the web.

Or, let your mouse move to some sort of fashion versus never that predicted that you were intrigued

in the page, versus just sort of leaving the computer while youre making something at dinner.

Really smart companies are investing in the data.

So that they choose the right signals if they have to sort of disproportionate data. 1st, it's going to be meaningless. It's just some sort of

Blanket generic data, but secondly, it's going to be really valuable data. It shouldn't be (?)

Through trial and error invested, it's really good data to know what was

What was relevant to what it wasn't. So, although we, maybe to sanction large companies if they run afoul of the law,

I'd be really wary if

Reaching for what I think is very facile, mentally facile

Solution which is to ask them to, to disgorge their data into some sort of comments.

That's me is quite unthoughtful and as a solution.

The final conclusion is that, um.

But you see how this is going to play out we're going to have

Spheres of influence of similar to how we had in international relations.

And we're going to have a Western flavor of AI with Western

Values… it's going to make the balance between America and Europe over GDPR

seem like like a small trifold.

There's our more there's so much more that brings us together that separates us.

Versus totalitarian countries, China, Russia

And *their flavor of AI… and it's going to be a battle. This can be positive.

because it's going to be played out in overseas markets like Latin America, Asia and Africa.

So the stakes are really high, and the Chamber of Commerce has a great role to ensure that Western values are part of the AI conversation.

FERGUSON: Thank you very much. Great panel. Thank you. Going to give the 1st question to Congressman Delaney.

It was really great, Thank you.DELANEY:Uh, so so you teed up, um.

At the end, there's some very interesting topics so I'll start there. 1st of all. I'm a big admirer of your publication.

So, how would you sanction them,

Should we decide to sanction them? because data disgorgement

doesn't seem in your mind, practical.

That seems to be the correct line of thinking, actually... Um, that's my 1st question. And my 2nd question is, how do you think if you view the battle between

The United States and Europe, interstate China and Russia, but really China

With our advantage being only the great innovators convived?) in a liberal democracy

And their advantage being if they have no

Privacy limitations, and therefore can use their whole country as a giant database to advance

Their Technologies who's got a better hand to play? 2 questions: How would you sanction them and whos got a better hand to play, your judgment.

CUKIER: I would really like to be forward - So, I have the answers to that, so I'm working them out...

DELANEY: So you just posed the question.

CUKIER: So that it takes a long time for a question to be ripe so, I can sort of crystalize it.

In the way that we express it now that we're sort of thinking about it in this way.

Let's 1st remember that just because you can use your whole-

Americans uses the whole country has a great big database as well...theres very little.

Privacy law that prevents that from happening? Yes it gets miners in healthcare, but otherwise the credit bureaus as well as the federal government is a great consumer of the data credit bureaus.

So, um, so I'm not worried about that. The.

You you do have an advantage in the consumer Internet space.

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For AI companies like, ANT Financial.

Offer financial services to the way that.

American tech companies or American banks havenot yet to do what you just, for example, down their act together, they

Probably could do it with it just terms and conditions.

If they wanted to the eventually will.

So, I think that the bigger Stakes.

To focus on, it's really about the misuse of data. My final point is that China has a fairly good private set of privacy rules that govern the use of data. This is the.

Between the consumer and the company, but it still gives the country access. Right rights to it... So but then again, America has

Largely the same access rights as well. We have a layer of of.

Legal protection around that price of course, et cetera, but it's still gives national security interest to have it. So, I think that that's a little bit of a...

It's not realistic.

The, so I'll leave it at that to see that the advantage China has versus America and Europe.

It's more a ephemeral although the European privacy law is definitely going to.

Hobble players, and because it has a lot more of a block that it's going to come up with American students.

Let's go to liberal democracies, leads to innovation, because you get sort of.

A liberalism or liberty, intellectually.

As a consumer as well as a citizen a free choice of your politics a free choice of your future.

Your, your your economy therefore leads to a form of liberalism and freedom of thought that is more innovative... the freedom

In, uh, in technology in the sciences and business.

That has been what we've been telling ourselves as the country its probably not true.

I think it actually, it's it's, it's somewhat true around the edges. I think at the higher advanced science, where you have single authority,

And you have a system that is geared towards respecting that single authority.

Versus you have authority to science, and you have a system that is inherently adversarial*

To authority, and Western liberal tradition.

I do think that actually I sort of was still put my money on

liberalism for innovation, but for the hear and now, in terms of pragmatic,

Practical products I wouldn't rely simply on the liberal-

Democratic egos being more innovative.. so when we do that...

FERGUSON: I do want to get some questions. Yeah. Okay.

CUKIER: I think I've filibustered long enough that I don't know how .

FERGUSON: we're going to try to do any questions on this panel and I'm going to try to spread them out a little.

So, you go just introduce yourself

THIERIER: Adam Thierier, George Mason University. Uh, so all 3 of you, that's something to say about explainability and transcripts.

And in the abstract its possible to be against these things, but everyone loves them. But if you tell us a little bit more about concretely how they can translate into policy restrictions.

Because to to really 1st of all kinda making a point about how there is, there's some degree of fuzz surrounding a lot of models that we're talking about inherent ambiguity or.

inability to understand exactly how everything works in them.

How does that translate if we have a mandate for.

Explainability? for transparency will be bombed? Secondly.

How, and when will mandatory explainability or transparency come into conflict with other values we care about?

Privacy system security, intellectual property and so on?

Hello.

GHOSE: Yeah, that's a long question. Um, I mean, it.I think it goes back to the risk for me, explain to explainability, you know, where there's a balance sheet, I think about financial services balance sheet automatically using.

Use the explainability level has to be different and has to be explainable who to – a regulator? does it know where where it's analytics provided for example? And you don't have to actually map this even in the loop. explainability doesn't have to be as high.

So, I think it varies, depending on the, on the on the use case.

Massively… I am not an AI

Academic, but I do think there's a golden that goes on so we can look at it as going on. And I've read thousands of papers about this. There isn't one.

I do think that with the broad consumer there is something about transparency.

And that transparency, it's not going to be a rigid formula. And I, I, I've dealt with Dodd Frank, and with financial services regulation to be dealt with. And there's always a loophole theres always.

AndI think it goes back to, I think, flexibility, uh, within that.

I get back to this to read it about Abraham Wald(?) story. Yeah, she's thinking.

I think if you go back to rigid formula what financial services taught is that there's always a loophole somewhere.

ELDOR: So, I would ..I will just add and say, I agree. It varies by the and to some degree, you can always explain how it works.

But then, depending on the area, you have to think about that.

Right. So how can you go that varies.

KATURI(?): I was trying to show that I will call myself a researcher that most of the applications.

Um, the question I have is the primary goals.

Can you maybe extemporaneously talk about how the may be relevant? A useful for security markets/ managed markets.

(unintelligible)Do you talk about he said she had useful.

And it feels like asking you where we think about is driven display (unintelligible)

The comments you made

A game theory Yeah we have multiple days late

I've been thinking about it, what you need to escalate to, so.

Formalize that think about how we can use models into.(fades off)

GHOSE: Yeah, so I think it goes back to again, at least simplicity I think about it is, where's AI better than humans and where can it add value to humans? Um, when I looked at what we do at Galytix, the core product digitization for our.

You know, a little that humans have high accuracy, but AI adds value there. Similarly, in a lot of infrastructure functions in financial services, like, give anti money laundering, for example, and, um.

Financial model sruviellance, rules based algorithms, because they picked up buzz words and so forth. And I can talk about that...but

They just haven't well, you know, there's a high priority, then paperless, false positives out of this. Well, lots of good with as a result but, you know, that.

..a self learning program has the evidence that self learning as well. So I've seen some of those Labs.

By it's still very, very early and both of those areas.

But I can see it's an area of rules-based (?).. So kind of

He's like, did you guys talk to you the final point about the, uh, the game theory angle….

I just feel it's somewhere where we need to study and I haven't seen a study on, I remember 2 years ago and I started like, in the back labeling.

Sat in the bank of England, and then a professor was talking about it. They, they'd run game theory on it. You basically was looking at manufacturing products. Nothing to do with…

Uh, and they found that actors watched…is what it was almost like, we think about financial services, in chat groups in Bloomberg and road traders and poker games and all that. And the algorithms of what the heck.(?)

Do that I haven't seen as much academic research that the man on the streets can read uh, yeah, actually lab work on that. Yeah. Um.

Some something in the lab is fine, but take it out right?

See, it in the real world interact, social media, and I think about it every day as we see it almost wait =you got all these, AI in the box and all that going on at the moment.

Into play of that, because you have a financial services perspective, you know, what is bad stuff?

It's yeah, we would say theres market abuse, theres illegal trading and all that and there's more flexibility.

Uh, and I think about a particular market stability perspective.

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In China, the Chinese government steps in home team steps in and does whatever they want to do whatever.

But I think about further down the track.

Because if it's it can scale really quick. We've seen some rules based algos - we've seen it with the flash crashes and stuff like that.

And we see how financial market ..is a little bit.

The tail the tail of in the sense that, you know, the financial markets are having a real economy.

So it's a little bit of time.

KATURI: Clarification that, um, is you talking about a flash crash and somebody talk about it in the talk about maybe be progress. Probably be a technical product.

Um, in the market is working, if you have situations where you have more office, make sure your marketing working in the markets.

It shouldn't be helpful? (unintelligible)

GHOSE: No, It hasn't. And again, the market's very odd. I grew up in cash equities, highly liquid, uh, work in f*** exchange. Cmd were highly liquid.

Now, I get the corporate lens and it's, it's a across the liquidity spectrum, but.

There isn't an AI bot stabilizing… um, maybe that's the opposite of utopian China, the Chinese government stream instead of the home teamcoming in and bind the market when it's down

the AI bots manage the market. Um, sorry. FERGUSON: Thank you. This has been a fabulous panel. Thank you all very much. Great way to kick off our hearing today. Uh, Congressman Delaney is going to take us through the next panel.**Panel Two**

DELANEY: Great. Okay. Okay. I think we want to probably move on to.

Panelists down the table, if that's okay. Thanks. So much by the way. Yeah. Yeah.

And so we've got 4, uh, panelists in our next section so maybe I might guide people towards more like a 7 minute presentation.

So we have time for Q and A, and Philip Lockwood who's the deputy head of innovation from NATO?

Is joining us virtually and I think is going to

Kick us off so, Phillip, are you with us?

LOCKWOOD: Yes, I am. Can you hear me? All right? Uh, yeah, we.

DELANEY: We can hear you, we'll hear you better. Once we put the volume up.

Okay, that's not your issue. Perfect. Well, um, with that, then I'm going to kick off if you're having sound issues, just to interrupt me.

LOCKWOOD: Um, but, yes, thank you very much for, for having me virtually to present, uh, before you, these are issues that are very much geared towards 3rd,

DELANEY: we need to put the volume up a little bit here. here

DELANEY: So, how much time do we have with you?

LOCKWOOD: That's a good question. My team is going to run and grab me when I've got my next meeting. So I think I've got about 20, 30 minutes.6DELANEY: you mind if we let someone else start before you because we're working on the sound issue here and because we really can't hear you.

So, uh, Zita McMillan.

Okay, yeah, yeah. Who's that? You're the CEO and Co, founder of Predictive Black thanks for joining us. So if you would give us some 7 minutes and remarks, and then we'll get Phillip's

volume up and we'll keep moving.

McMillan: Thank you. Okay, so the previous time I'm going to bring you guys into the nitty gritty reality of what it's like to be a small business owner. So I am a small business owner.

And my entire client base are small business owners.. and so I spend.

All of my working life talking to people who are basically not really tech objectives, but they're not really kind of in the adoption space either

So, I think about SMBs

With that survivable 1st mentality, they're really just looking to what can technology do for me to help me to keep my business in business growing thriving whatever that looks like for them.

So, I encounter on a daily basis challenges. My business is an AI- based cash management tool. If I start by saying, my business worth uses artificial intelligenceto help forecast your cash flow better?

I always literally can feeling that- Well, I don't trust that. Thank you very much. How are you better than my Excel spreadsheet? You're not also, you know, context about my wealth, actually, myself, I don't have context.

But what I learned from when I was very 1st and my very 1st client meeting, which was disastrous.

Disastrous because I went in, hey, look what we built. It's clever. It's got all this other stuff and no idea why, but it's brilliant.

And literally, handoff, I mean, I could not have had a worse encounter,In fact, it was the most so destroying moment because we spent 2 years building this thing and I was super excited.

So, what I've reflected on is the reality of the world that my clients living on my own world, and I go through this loophole...

They are aware of artificial intelligence and what are they aware of.

They're aware of self driving cars, which crashing and kill crash test dummies...whatever they think, this is their

Framework maybe chat bots some good, some bad, today. Obviously in UK we've got the Google story with test (?).

So, that will kill my week now because all I've get in client meetings is issue radar. Whoever is your AI clever? Does it literally send to you? What should I worry about? No, it's not, you know so so all these things they've got this.

Basic level of awareness, then they've got an attitude, and by attitude I mean, negative.

So, I get trust issues thrown at me a lot.

Your "my Excel spreadsheet is very clever and I control it and I control the cell data. I mean, this is sophisticated. cfo's and finance directors. I'm not talking to.

Not clever people/not smart people, but they still have this trust issue. So, their attitude towards it is.

Yeah, but it's not really that if I can get through that.

to some form of acceptance I honestly want to crack open the gin at that point, but I don't.. I wait Wait wait because then I've got to sell the application of the software. How will it

Do better for their business than their Excel spreadsheets? What is it It can give them.

And occasionally I run into situations where they say, well, it'll get so smart, you know, that actually start running the world.

The challenge is that actually, the machines are not smart enough to run the world and that's a good thing. And we have to worry about bias and being built by us and what we built. So, there's a bit of reassurance. We'll know. It's not going to put you out to the job. I'm still miss CFO.

You know, it's not going to do that. Then I'm got to take you through this adoption journey where they throw all sorts of other reasons that they shouldn't be adopted at me. And assuming I get there,

I reach this pinnacle, this sort of hierarchies my own version of ?

It's hierarchy where they become advocates for what we've done.

I mean, I've got quite a few that I can't even I mean, I could probably can bring them in and say hi to them.

Because it's a really, really long process in general. What I'm working with the inherent bias, self, sufficient intelligence.

Which, actually, all of the high falutent tech stories don't help me with.

so all of the great things that can do cause me problems, because I then find myself talking to people.

We don't understand it. They've got a basic awareness and their attitude is, it's not going to be great for me.

So, I kind of have a recurring challenge.

So, if I think about, you know, what do I think is the opportunity.

I brought it down my world into my reality working with my clients. What are the possibilities for them More broadly?

And how ready all day to accep? and I think those 3 buckets, you know.

The, the reality of their world and that comprehension the possibilities not just from my product, but from other products,

But then how, how do they do it? And for an SMB then they, you know, the UK is very similar to the U. S.

99.9% of our turnover comes from SMBs.

Yes, absolutely. volume's a smaller and you've got 61Million we've got 5.5 or whatever so.

You know, we have very similar dynamics within our economies.

And I'm talking to these guys on a regular basis and the reality

For them post pandemic, which is why survival is crucial is declining revenue maybe decline demand.

Supply chain logistics issues have got more and more challenging.

Um, they're alter ? work is maybe gone down cash flow, you know, like goodness, cash flow got more complex where I feel like, when maybe.

On some of those conversations more than previously and demand for customers data.

So, there's so many great tools out there already and I think.

If we as a community who serve SMBs than the can focus on what's in it for them rather than how clever we are for creating it

And maybe take some of the fear out of it, we will see a lot more developments in.

Demand forecasting ,process improvement and operation and efficient efficiencies are kind of where is that currently. And I, I got 3 emails this morning and telling me how fabulous.

These companies could be to make my data more efficient for me.

Not ready for me, but, you know, fair enough.

What I'm (?) is organizational readiness is a barrier to adoption. So, even if I get through awareness and attitude.

Getting into practical implementation. How easy is it before you even get into the issues around trust and transparency and the data understanding whether data still, we get there tools (?) they'll talk about.

I don't have enough people,

I can't do a change program right now, It's going to be super extensive,. You know, my suppliers aren't ready, Your business is unlikely how can you understand me?

So, we encounter enormous issues

All the time, and I think my, my excitement to be invited here to talk to you guys is because it's brilliant to see that you are interested in how we can make that world more accessible and more

beneficial to SMBs.

So, from my perspective, I'd like to turn the focus around and think: not just can we do it because we can do it or exciting but can we do it for a good reason? And do people need it, want it? Will it make their lives better?

DELANEY: Your timing was perfect Thank you.

Philip, I think we now have, uh, volume for you.

Okay, let's give this a shot, right? Thank you. Sorry about that.

LOCKWOOD: Okay, perfect. Hi. Everyone um, greetings from Brussels and Belgium. I'm here at NATO headquarters, and I work in the NATO innovation unit. Uh, in fact, I've been the acting head of the unit since September.

Um, this unit is a strategic policy shop.

And our whole purpose in state of being is to look at how the alliance interacts with what we call emerging and disruptive technologies. these are critical technologies that are vital to what we call our technological edge, which is, um,

a major component of our deterrence and defensive posture to safeguard the nearly 1Billion citizens across NATO. Um. um

The focus of these EDTs really interesting. We have a whole list of particular technologies of interest. AI is 1 of them. Um.

And we are looking in particular at 2 issues: 1st, of all how we can foster, uh, these particular technologies in all respects.

Uh, we are looking at how they are developed, how they are being adopted, procurement issues, uh, the general state of, of their characteristics, and how they're being produced and then also, uh, protecting them.

We are concerned about our adversaries and competitors. We're concerned about the general state of their pace of development and adoption, and we're also very much concerned about how these sorts of technologies might be used against us in this particular domain.

The other element that I think is unique about EDTs that most of these technologies that are cutting edge are not being developed primarily by the government anymore. And so if you think about it

Sometime between the mid 90 s, and the early 2000 s government, and in particular defense and security stopped being the primary driver behind innovation and cutting edge technology for a whole host of reasons.

And if you look at the list of technologies, uh, on our EDT list, a AI, quantum autonomy, biotech, human enhancement, these sorts of things, the vast majority of the spend on this is actually coming from the private sector.

And most of these technologies have incredibly broad commercial uses. Which is why I'm speaking before the US Chamber of commerce today, and not a group of 4 star General's for example.

And so, because of these particular characteristics that they're no longer funded by the government and in most cases, most of the development isnt really being driven by defense and security needs.

It means that we, at NATO needs to be much more aware about the wide variety of stakeholders holders involved in these technologies and their development. In particular,

We focus on entrepreneurs and startup founders. We are looking at the private sector investors and providers of risk capital, uh, behind this innovation. Uh, we are looking at large industry, uh, not only traditional defense contractors and primes

Uh, but also big tech companies.

And then, of course, we've got academia and government that have roles to play in this. Um, but when we look at government, I think there's more stake holders than we have seen, uh, traditionally within just the military and the defense and security landscape.

Um, I should note that many of these technologies are dual use technologies, but dual use as a concept that we at NATO, or now rethinking a little bit.

It's no longer the area of cold war, dual use where you have technologies that are developed for military purposes.

That also have some sort of a commercial application; instead now we're looking at technologies that have very broad commercial applications, and also can have a critical impact on defense and security.

Um, and that has a significant impact. just touching for a brief secondon regulation.

You can look at, for example, the EU draft regulation for a AI that exempts defense and security or military use from the scope of its regulation, which is all fine and fair. But if

Most AI development is really being driven for commercial purposes… Most of the AI that we're interested in at a fundamental level is actually in scope of the regulation. And so it has a very significant impact and I think this was touched on by the previous panel

When we talked about China, for example, in competition in that strategic threshold.

So one of the other elements that I wanted to talk about today was the NATO AI strategy.

So, I led the development in the agreement of this strategy, which was endorsed by our defense ministers back in October.

Of last year. At the very core of this strategy are our ethical principles and our commitment to democratic norms and values.

And so this strategy has something called principles of responsible use or actually principles of responsible development

and use, because we believe that accelerating responsible innovation is critical to ensure that we're building trust,

and we're building accountability, uh, in these areas, and that's on the basis of our shared democratic principles.

We don't want to have repeats of things like project Maven with Google where we have an inability to be able to gain the trust of our society and the trust of our innovators to produce technologies that are really critical. And so we have to be able to demonstrate

That we are taking concrete steps and actions to be able to bridge that gap and to demonstrate

That we are different, in fact, from other adversaries and competitors in this space.

And so these AI principles are available on the NATO Web site. If you'd like to look the strategy itself is a restricted document. Uh, but there is a public version that I encourage all of you to take a look at that.

And so the particular allies have committed to 6 principles in AI, and just to go through them, they are lawfulness.

Which is basically noting that we'll develop and use

AI in accordance with these democratic values, and in under our commitment to the rule of law, they are responsibility and accountability, which goes into how we develop in use AI, with appropriate levels of judgment and care-

That there is a clear human responsibility and accountability to the use of particular AI systems. Explainability and traceability that I think.

The panel can understand in general, but it goes back to being able to trace how decisions were made, or explain how decisions were made and to be able to apply that.

Uh, then we have reliability, to basically demonstrate that we are taking into account the safety, the robustness, the security of these systems, to ensure that they can be relied on. It requires a significant amount of testing and insurance.

Across the lifecycle of AI systems; and then the last 2 are governed ability,

Which goes into intended verses unintended use how and when we have human beings in the loop with regards to systems.

And, of course, last, but not least bias mitigation.

Bias, of course, in the sense of things like diversity and looking at how ai considers things such as

Uh, gender, gender and

Sexuality and sexual orientation and so on and so forth.

But also bias in terms of natural biases or biases that might emerge from the use of these systems themselves.

So, we have these 6 principles, we have a descriptions of them.

But these are still at high level, these have been agreed by all 30 allied nations that they have agreed to commit behind these principals for defense and security.

But now it's time to put these principles into practice and that is going to take some significant time and various steps.

Um, and in that way, NATO is somewhat at the fore,

Uh, forefront of trying to execute these. only 1 other.

Uh, NATO ally in particular had published principles of responsible use for defense and security- That was the United States and there is still very much a rolling out effort

To try and determine how we can operationalize these principles. that said we want to build on what we believe are very robust frameworks and we have these frameworks in defense and security and we've had them for decades.

And quite a significant amount of experience using them and these are things like adherence to legal obligations,

Uh, making use of our advanced testing and evaluation machines, uh, especially for safety, critical systems, and then also looking at risk management systems that can account for

All sorts of risks across the use of AI from security risks, but also to human rights related risks.

Um, so how are we taking such? Go ahead.

DELANEY: I know we don't have you for that long. Uh, and I want to give the commission and opportunity issue.

At least 1 question before you have to peel off. So we should go for it. I don't want to. So, if you would just wrap up and quickly and then I'll open it up for a question. And then, uh, cause again, I don't wanna I know we're gonna lose you pretty soon, so.

LOCKWOOD: I got I've got 1 more bullet, actually. Yeah. Um, I just want to know that 1 of the steps that NATO is taking to operationalize these principles of responsible use is to actually create something that we're calling.

The data and AI review board, this will be the world's 1st, international review board to evaluate and to mitigate ethical risks. What we are doing is creating a board here at NAT

That will have national representatives from all allies from a wide variety of stake holders.

Engineers, ethicists, lawyers, policy makers, end, user operators and this board is gonna be responsible for actually taking and making tangible pathways

So that we can adhere to these principles and to develop them beyond just a word and a few sentences of description, and to actually look at how we can integrate those into systems themselves. So, with that.

I am finished Thank you very much.

DELANEY: Thank you. Bill. Does anyone have a question for Philip? Before? We lose them? We'll open up from 1 question.

MONTGOMERY: Well, yeah, just on the responsible when you talk about the review board, the data and report. Are you also considering that with respect to.

This is you have started out talking about emerging technologies generally.

So things like quantum and biotech and the, like, is that board you envision that having purview over.

No?

LOCKWOOD: it's just our data principles and it's our principles.

DELANEY: Well, thank you, Philip, thank you for calling in from Brussels and we appreciate your service. Thank you very much.

LOCKWOOD:Thanks guys take care. Bye. Bye. Okay.

DELANEY: So, next up, uh, let me make sure.

Miri Zilka? That's your name, right?

Miri is the research fellow in machine learning and associate fellow at the University of Cambridge thanks for joining us.

ZILKA:

Unintelligible…….This witness is very difficult to hear on the recording so the below may not be clear

How can we go away machine learning? And I.

…those 6 principles We're really starting from.

Um, because what's the goal is to try to think, how can we go froma high level

To be able to make sure that those practice. So the main thing I want to do today, is talk about accountability.

So, people refer to that firewall.

And how important is to make sure that accountability.

But if practice is going to be pretty quick, so, if we think, for example, about case where we have AI

That is getting that is.

You've seen where someone's going to fall from a 3rd party.

So, we have the customer.

Is coming to the lack of work and we can consider

The rights and responsibilities of the departments.

So, we can imagine that nothing will go wrong, and that it will all work

And this will work, but as you can tell, I'm using the

Technology reality.. And the question is,

What happens with some of the AI goes wrong, and

Does prove to be discriminatory?

Whos in charge? It is the lender?

Is it a supplier that has been given this tool?

Or nobody>So.

If we decide that the lender is responsible .

They need to find a way to screw size system in order for them to be able to take responsibility for.

That flashes within 5 years.?

If we looked the other way sand its suppliers responsibility to make sure to.

That clashes with how licensing works to software at home.

So most of our software, so their responsibility is very limited.

There's a bigger impression how the results . Now we canconsider the customer side.

I know, and I did my, um, tell me if I can get.

Do they have to tell me that AI can use it for also making a decision?

So, I have the right tool.

Do I have a right to be explained? How does it work?

Yeah, so.

We can also think about is

And that is how it's made in the process, because those kinds of might have different answers, depending on that.?

So, we can provide training for products.. so fully automated.

For example, I got to a website, put my details in it

straight away, that's the system.

We can also consider human in the room.. system where most of the decisions are not automatically, but if it see AI and then it will pop up in Spanish as we grow. Please call branch.

Can you master and then it goes.

I don't know go to the 3rd, 1 is to use AI as a decision-maker.

That a human decision makers, ultimately make the decision, but they have.

subtools, for example. (unintelligible): is 50% of them.

Most of my work, I focused on just the main.

And that's the way we talking about this.

So, in human decision maker, sort of the system.

And this is probably very practical in most cases where you want profiling,

Which means you have a person coming in giving the information, and you make a decision on that.

In most cases you want a human decision maker involved that document I told you (?)

Uh, but we can still don't about eligibility in that form.

Because if I don't know how , how AI works.

How can judge whether to take.

And that's the case all I have to go for.

Is my own opinion about AI? and this can be very, very, very personal and often almost emotional and irrational

And so you can end up with the situation and whether or not people take.

Their advise by this tool solely.. depends on the revenue on all safety.

So.

This goes back to pretty much.

And again, we have a proprietary stuff. We have potentially things that can do people.

How can we give the right people the right explanations

while preserving selection quantity while preserving operational capacity?

And I think that goes back to design human AI teams in the most

efficient way, so you don't have to tell people exactly how to

That's looking fo..r in many cases that's also not helpful.

In many cases, Safety okay, we have 10,000 rules. We're going to go through 1 by 1. I'm going to tell you exactly how much weight the system gets going very well. By the time you get to 201 is going to be.. (?)

So, the question is, how can we

 give.

The person the ability to know whether the system

Reliable is this specific case. no. In general, but in this.

So, there's a few differences. 1 of them is called factual premise.

So, for example, if you are looking, if you're looking at the decision making right.

A bit worried, I think the, maybe the system..

Then you can say to the system: okay give me a result for the exact same person, but now I want you to…in the mail.

How, as a result changed? So if I can have this discourse in AI.

Yeah, I I can convince myself that my concerns are valid or even not valid. for normal rapidly.

I feel like I made a good job.

About whether or not to take that advice.

So, I think what where we think about our relation,

Go backwards we need to see.

It's not just about what is the high level principles we want to make sure happen And have it.

But we want to make sure that.

The parties involved have the ability

To do what we want them to do.

If you talk about accountability, small companies are very unlikely to take the chance of being sued.

Because it was found (?) AI was discriminatory

So, they either decide not to play that game. They, they've copy as competitive.

Coordinating the rest us so how can we help them? 1 thing to consider is to have standards

Okay, so real quick. I was just make sure she's going to say something to consider is sufficient standards and official bodies that can

Have some seal of approval that can ensure trust.

DELANEY: Thank you for your testimony I appreciate that very much. So next up is Alex Cresswell

who's the vice president of public policy of Graphcore. Alex, thank you. Thank you. Very much. Thanks for being patient. Well, thank you to speak to you today.

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CRESSWELL: So, my name's Alex Cresswell. I'm working for a company called Graphgore, a UK company.

And we make systems for artificial intelligence- AI

Powered by our specialist processor, which we call the intelligence.

Graphcore was founded in 2016 by a couple of British citizen, uh, industry veterans.

And it was based on the insights that AI was going to be the most significant technology innovation of the 21st century.

Perhaps ever, and yet it's highly unusual. It isa Socratic form of processing. Who's being run on processes?

Created the different types of computing all together.

The ones that we call and our GPU

And what does every major shift contributing previously in the state of the new approach?

New such thing.

Existed at that time, the lawyers background is that I work for, uh, UK foreign service for 30 years at Dusty places where I never

Cracked the cloud of Washington. Um, but, uh, I did do a number of national security roles. I was a director of..as much as you might.

Um, so I added the T, mobile is another 10 that do the UK.

I spent debriefing, I look at, um, national security assessment.

And so so spent my career horizon scanning to identify what's coming away with us a threat or a transformative bit of

Technology, I, to prepare a.

Then you pick up accordingly . and if someone wants to you today, about is something that is, is a threat if you don't equip properly for it. But it's also an opportunity.

I'm talking about national computing infrastructure.

And the importance of encouraging diversity of supplying hardware on AI

So the face of artificial intelligence, and it's kind of for, like, direction of travel.

Mean that our appetite for compute is

Voracious if not,insatiable. let's consider the growth inside of the largest AI walls.

They become known as foundation models that are, you looked

To the economist newspaper magazine, uh, this week they have, uh.

A really good article which I commend.

But foundational models, train, boss, ways of a B**.?

And I can comprehend and even generate text speech and images.

And the size of the size of the day/model can be defined by the number of parameters. It has.. the variables.

Status alerts from data. Generally speaking the larger the model.

The more desirable because they can represent a broader range of.

Learning twice modalities and they tend to be more accurate.

So, 5 years ago, the largest bubbles were measured in hundreds of millions of parameters.

Today you have single models that are above1Trillion parameters and, and we're just getting started.

However, as they grow in size

The compute power and the associated cost the training is spiraling

I take the GPT3 language model AI created a couple of years ago.

It has been a relatively modest 175Billion parameters. Estimated cost of training for GPT3 is between 10 and

 20 Million dollars and Open AI, the organization that created it

Started as a non profit AI research organization to ultimately turned to Corporate

Patronage to help it's work-- so in 2019, Microsoft.

A native 1Billion dollars to AI.

More recently, even larger models.

Primarily be created by big tech companies, such as Microsoft and Huawei.

Innovating innovation in AI shouldn't reside entirely inside private corporations. It should be a joint effort between governments.

Including national security and, uh, tech...and in U. S.

You have significant infrastructure for the national labs.

For the most 10 most powerful supercomputers residing in such institutions.

But what happens is when we move up an order of magnitude or

To 10 or 100 trillion parameters and models?

Towards when training AI consumed an entire dataset for the machine. So we saw that it costs more than putting a satellite into space.

Because that's the problem and it feels untenable.

And it's the reason we need to talk about the hardware.

Uh, we need to talk about how commercial innovation jointly with governance.

I can preserve U. S and Western advantage in and make that more tenable. for the most part.

Today, I can just carry out on the GPUs

Graphic processors that were originally designed for gaming,

likely modified to accommodate the development of artificial intelligence. and until now, the response to ai putting in computers need to add more, GPUs.

More max, more data centers more power it can consume. And this is just about work in the same way. It's just about work. If you ask the person in this space to dig up a field instead of using a plow.

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But I think this, um, we can't keep on going like this.

And in order to solve this crunching capability.

We need to achieve diversity of supply and to evolve from the basic picks and shovels of AI that we have today with the cpu's and GPUs

To push processors.

That's the reason the graph was created was designed around the emerging needs of AI,

principally to deliver more efficient compute technique.

amongst many that we focus on is called conditional sparsity.

And the best analogy of that is.

It's like, I would like to develop a specific neuro pathway in your brain when smell something or you take something.

Rather than every single neuro in your brain going at once.

That kind of approach is actually a pause with the fundamental architecture today's GPUs.

And the fact that such

Capabilities are needed this new capability is needed to

Help AI practitioners who are very conscious of the restrictions placed on them

Um, is.

Is because today's AI work work is tending to.

Time towards the capability of the available tools of today.

Um, GPUS, all sort of domains tools.

So most of those coming to this realization are many involved in your U. S public computing infrastructure.

You recognize simply adding more of the same legacy technologies is not the way to compute.

So, we are today, um.

Uh, installing our technologies in US Department of Energy Labs, (unintelligible)

DELANEY: Um, and I might ask you that.

Proceed to the wrap up phase. CRESSWELL: Okay so so to cut to the quick on this.

What I would say is that, um, you know, when we.

So, we commit to you 1st, of all the, um.

The national, AI resources task force, um.

report, which makes this point.. I would also say that.

Yeah, I suppose if you will know the story of part of ARM (?)the UK based company, designing processes for the test for computers.

Their great innovation with the compact low risk.

Process the design that will ship architecture.

The right tools, the job launched a 1Billion smart phones today that helps us maintain our edge.

DELANEY: Great Thank you for that. Alex. So now, uh.

We want to have about, uh, 10 to 15 minutes of questions. My, uh, CO chair Congressman Ferguson has kindly deferred

For his questions to ask your words for the commissioners who ask better questions. Um, so who who wants to start- Rachel?

GILLUM: First of all Thank you so much. This is also interesting. Um, my question I wanted to direct to Miri feel free to chime in you and, uh.

By mentioning, um, you know, related to some of the working during the translating these high level principles into what does it mean tactically, especially for

Small businesses that just want to do the work. You mentioned official bodies that could help

Sort of make some of these nuanced decisions and guidelines. Can you say more about what that might look like in practice?

The body of the screen by the government is run by the industry.

How do you see this?

Zilka: So I can give you some context about where a lot of my work is in acriminal justice.

Oh.

Um, that use consultancies for bio software.

But essentially, in that case, they're very much possible, because they're public service. If something goes wrong.

But really see that they have the knowledge for the resources

to double check that this is actually doing 1 of the students properly. Um, and what happens is try to don't ignore these benefits and it's kind of a problem they just don't want.

They don't wanna they don't want focus. And I think in that case, it's very easy to imagine that they will end up recruiting enough high level machine,learning scientists.

That would be able to investigate software even if it works.

Uh, so I think it's very much needed definitely also for a law of premise in the same situation.

There is some horrible standards

Then You can say, okay, this has been through these types of checks, for example, for Fed is for, for accuracy.

It can be defined in many ways.

Actually, I'm trying to explain to.

unintelligible next few lines

So, curious to find comments on that 2 weeks ago.

Giving the floor to have this here is the specific and then.

You're shifting accountability it's not just a whole person anymore. It's not just.

McMILLAN: If I could add, so my company is regulated by the domestic regulated, pretty much conduct authority. So it acts as a proxy for standards to nearest point.

So, clients who engage with us know that my company is regulated. I, as a director, they're both a personal and potentially criminal risk If we fail our clients, I could personally go to prison.

That's the sort of extent of the regulation every day That bothers me.

I don't know why, but it's just 1 of those things kind of thing but I use* that not as not as a sort of, you know, stamp of approval if you like, but as a reassurance in the absence

Of other things, it means that we, as an organization.

Don't want to be a bad actor within the regulation perimeter.

So, we will take decisions about all of the elements of our service.

That means that I can sleep better at night, which means that, you know, we may not take some higher risk

Changes we may just play inside our own sandbox, or during their sandbox if we want to test something. So I think there are places you can go to

But that's just 1 sector, you know, so, I, I take comfort from it and I know and my clients do

Well, I agree with you if there is something that enabled sort of almost a stamp up that we all signed up to, that would be a really interesting way of getting through this acceptance issue that, that we encounter.

CRESSWELL: my sense is the insurance sector, will be a real driver in this, just as they have proven standards in, for instance, cyber security and visibility makes sense to kind of grow into the people.

Uh, it's a really good tool for the underwriting…

DELANEY: The don't have to underwrite It so they don't care about it. Chris?

MESEROLE: Thank you for for a great, uh, panel I said, 1 question for Alex on the

Uh, semiconductor side, um, the.

You did a great job, I think laying out the kind of economic and business imperative for.

Why we need to move away from the effectively, like the volume and architecture from the 50s – on…uh, we've now got the is a new we need to kind of move beyond that.

I have a scaling loss, uh, with AI.

You did a great job, kind of laying out that kind of research and, uh, business imperatives. There. I wanted to just see

If you have any thoughts on the strategic imperative yeah.

Strategic competitiveness with this with respect to, in particular to

Say China or others who might view this as this is

Kind of the 1st time we've seen a break and the kind of prevailing paradigm of computing. Uh.

Semiconductors effectively, and there's an opportunity to to see this as kind of a leapfrog.. like a potential thing.

Um, I'm just curious if that's something that can you.

Are concerned about, or thinking about it as well?

CRESSWELL: Yeah, I think it is.

You see a competition between the western China and with technology, et cetera, theres an overarching parallel.

I would say that there are some similarities here with.

Situation we find ourselves on 5 g where there was a.

And there was not sufficient diversity supply.

Uh, you had Huawei and ZTE for instance, where we're providing switch gear the routers for

52% of the world's Internet instruction.

And you want to get into a place where you have that diversity supply, and you do not have 1 or

2 companies such that everyone trains up using the gear or

You get a distortion.

And I think the way to do that is that the US is doing it is to promote it at a.

Um, a national accelerator innovation accelerator level, but it

There are other policy tools that you need to use that in Europe It's really.

Um, noteworthy that there are cross core is the only AI

Hardware company puts this company in Europe. There are no.

You know, Nokias where it seems to.

Is there a cognitive reason? Why that.

DELANEY: Other questions,

KATURI(?): Follow up: Um, but when you talk about it, I get this. I was talking about diversity of different types.

And I guess I'm wondering about just how do you.

And sure about the 1st, with boss source of compete for the Webex.

1, but making sure if it disrupted.

People small business it's like AI

Have you, do you think about it in those terms, like, focusing on.

acrotypes because there's only..(unintelligible)CRESSWELL: if I'm giving youre question right -

This is where I think there is something here about.

Allowing, 1st of all, big time providers to.

List the real diversity of different computes..so

making that happen at the moment is quite concentrated, but also there might be something in there about, um.

Diversify or expanding the amount of specialist cloud providers that are available to companies and to searches and to just people in the space you want to.

We may come through with this much background. This is if you want to access to AI compute…

McMILLAN: Uh, I just want to just a point on that so, as a, as a business that builds its tech on one of the big boys of state, because that's how it works.

If they fall over for any reason, we fall over…we have no fail safe. There is no backup generator. Um, you know, and so my, my current issue is, I will look to.

Mitigate my business risk by going hybrid between 2 or possibly even 3 if I could bear that level of complexity

Of the big providers.. my data team are going to have a little cry in a corner when they realize.

But my risk is too high, because I can't do my business and serve my clients, if there's an issue, there's not been an issue, but I can't live in a world where I don't plan for there being an issue.

So, I think increasingly, if we are able as to find our way to a hybrid supply chain

That would be a really powerful way forward, but it increases my.

Company complexity on the data side

KATURI: you know, the customer complexity at the moment, trying to manage.

McMILLAN: Complexity yes cost.

I'm gonna go hard in negotiating how much they must what my type of business.

DELANEY: I think you'll do. Okay, so I want to thank each of the early and Alex for your customer. Thank you very much. I think I'll turn it over to my Co chair for our next.**Panel Three**FERGUSON: So, while our panelists in the room change seats, we will begin the next panel with our

Virtual participant Laura Galinda Romero is the API and privacy policy manager, AI & Governance, Meta.

Can you hear us? Yeah. Can you hear me great the next 7 or 8 minutes are all yours.

ROMERO: Great, thank you thank you for everyone and thank you to the organizers at the U. S, Chamber of Commerce technology center for these invitation, and the honor to join this conversation.

My name is Laura Galinda Romera, and I'm an AI policy manager for Meta, and unfortunately, my colleague Dr. Farzana Dudhwala is sick and couldn't be in person today in London. So I hope to do my best efforts to share with you. What

We have been doing at meta, particularly through 1, innovative and proactive initiative, the open loop program as well as other initiatives for promoting inclusiveness And AI ethics across different regions.

It is my pleasure to introduce you an experimental and evidence based initiative that aims to contribute to informing the debate around AI governance- The, the open loop program.

What is open loop? open loop is that global program that connects policy makers and technology companies to help develop effective and evidence based policies around a AI and other emergent technologies.

The program supported by Matthew perfectly Facebook builds in the collaboration and contributions of a consortium.

Composed of regulators, governments, tech businesses, academics and civil society organizations.

Through experimental governance methods, open loop members prototypes.

And 2 different approaches to laws and regulations before they are enacted

Improving the quality of rule making processes in the field of tech policy.

Also reviewing and revisiting existing regulations to see

Room for improvement and iteration. so regarding policy prototyping.

Open loop approaches, posing making in a similar way to how technology is built

Through an experimental and interactive way, for example, the alpha phases.

Research experimentation to test different regulatory pathways and better phases where we iterate and refine these frameworks before releasing them broadly.

I will spend a little bit on the idea of policy prototyping for those of you are not familiarized with with these methodology.

We believe that the idea for policyprototyping and will lead to more effective and evidence based policy making while avoiding the social cycle costs associated with bad policy.

These costs can be of an economic nature, for instance, high compliance cost, high enforcement costs or loss of opportunity.

Which, of course, inhibit competitiveness.

Policy prototyping may be, especially useful in areas where the piece of technological development and innovation is high, and where formal legislation tends to struggle to keep up.

Prior to rolling out and new governance framework, a proposed law codes of conduct or standards guidelines, et cetera policy prototyping can be a shift-

An agile way -to understand the framework affects strengths and limitations.

So, what we believe is that through policy

Prototyping we can help policy makers and users

And all the stakeholders appreciate it with the development deployment of air systems to better understand

The context, and an extent which future policies would need to be clear, relevant and effective before they turning into robots,

a version that that might come and that might inhibit competitiveness innovation. And so.

So, how do we do this? What is the methodology?

A typical prototyping program follows a couple of fundamental, main steps in rolling out these programs. as I mentioned, we are construction, so we gather a group of tech companies in this case,

provisioning products or services powered by AI technologies we call them participants.

2nd, we Co- create normative frameworks or leverage existing one-s policy prototyping- on a specific topics related to emerging technologies, including we call these policy prototypes.

For example, and just to give you some sense of what we have done, what we're doing and what we plan to do in Europe, we partner with 10 European AI businesses toco create a test and a risk assessment framework.

Into GDPR, impact in the assessments.

On different AI applications, the results and recommendations of this program are being published in our publishing, the open loop website,

which I invite you all to visit open loop.org and these gave many insights on on what could work and not with regards to, for example, regulatory sandboxes,

this has already informed and shaped thinking and policies associated with with, with regulatory time because, as we're seeing now, in different proposals of the EU Act in Asia and Latin,

we're currently partnering with Singapore and Infocom media development authority.

And the data protection commission in Mexico to test different artificial intelligence, explainable regulatory frameworks. They're similarly

 in Asia, where we incorporate into the specific concepts

Processes and guidance on explainability and transparency based on an already existing framework.

The Singapore model, AI governance framework, and its companion guide.. and in Mexico, we launched a prototyping program in collaboration with our regional partner team minds under the inter, American development group(?) and.

Which parts of the Mexican DPA(?) to test prototype completely from scratch

And how companies will see these, these prototype that already embedded some of the current regulatory efforts around the world, particularly in matters related to risk management and mitigating different risk of AI

particularly for explainability.

So, 2 things important to note about this program is how.

How these approach and how how this proposal is very flexible and versatile- it's inclusive,

Versatile and flexible because because we.

We incorporated, we adopt other system, legal frameworks.

Or common legal frameworks.

But also, it promotes inclusivity by providing access to findings in a, in a way that.

Well, the reports that are published, come under freely available.

Under Creative Comments licenses that anybody can leverage and build on this methodology to co-create and to.

To think about how to do more prototyping when it comes to

And to different frameworks to govern emerging technologies.

What do we plan to do right now with the perhaps you will be very interested in very topical.

We are now starting a 2nd policy prototype in program in Europe and where we plan to test selected provisions of the EU AI act.

Together with a ai companies and our partners, we have already over 40 companies that have confirmed their participation from all over the world that will have operations in Europe to test

With them key provisions, such as AI after (?).

Notions of high risk operationalization of risk management frameworks, technical documentation, requirements, regulatory sandboxes and more.

With these, we plan to produce different policy recommendations reports.

On what needs to be looked again,

What is working what are a company's understanding what they are not understanding and how they are implementing or even planning to comply.

With these requirements= these insights will be extremely valuable

To improve again, governing emergent technologies and rethink what needs to be adjusted in upcoming regulation.

We're also working on an open loop program in India and Japan.

Dedicated to the across utilization of our principles.

Taking the local and regional contacts into account and this is.

One that, that, that, that that is very interesting, because here.

We will look at specifically of competitive issues when it comes to different jurisdictions.

When it comes to take cultural aspects into account in different set of understanding

And legal frameworks. So why we're doing this perhaps this is the main question you have right now or if you can hear me if I can just ask you to.

Take a moment to wrap up. Thank you so much. It sounds like you are.

Yes, thank you so much, so we believe that there isn't tap potential for policy legal and design experimentation,

that has not been sufficiently leveraged and utilized.. in addition to and as a way to compliment regulatory sandboxes we believe that through experimental governance methods, such as policy prototyping programs we'll be able to obtain more anticipatory,

Stakeholder-inclusive and holistic, experimental governance platform to X amount and it has different regulatory and non regulatory instruments.

We believe that while working with policy makers on the stakeholders and the policy is one part of the puzzle.

To find inclusive and innovative ways to govern trustworthy AI.

Another important mission is to empower people and build capacity so that no one is left behind and we're doing that by promoting several research programs and calls for for papers on ethics across the globe including India

AIPAC region. Latam and others, thank you very much for the opportunity to join us and I'm happy to answer your questions regarding the open loop program. Thanks.

FERGUSON: Thank you. Very much. Laura, thank you. For for pinch hitting for colleague. We hope she's feeling better.

That are very soon, and we hope he'll stay with us as we hear from our other panelists and be available for questions.

Next we are going to go to Tonya Duarte.

Tonya is the Co- founder of We and AI.

DUARTE: Hello Hi, thank you. Very much for inviting me. Um, yeah, sometime as well say, I'm co- founder of, We and AI, which is a UK nonprofit.

Focusing on advertising diverse to make it work for everyone.

Programs based around 2, pretty genuine levels. They are interesting.

Reach participate participation in developmental discourse related to.

And most of the times, when I just want to go for the spring AI and Ethics Journal and advisor to testing software company on AI.

I need protect the disability working group of tech ones and actors.

I remember the 7015 session, I literacy skills, readiness, working group.

And before this had, a career in consultancy, commercial management roles across various industries and textiles.

So, we and I are going to be working since the beginning of

2020 to increase the awareness of an understanding of AI among the general UK population.

So, enable participation in individual, organizational or democratic means of Securing trustworthy AI.

We do this by engaging people with potential risks and rewards and signpost 2 different ways, which.

In which they can have their voice represented in decisions about issues.

So, what we found is that the boss around artificial intelligence has increased some of the issues around trust. And that's I'm here is to talk about.

The excitement over the transformational efficiencies and life enhancing applications, our freedoms are being overshadowed by concerns about the hidden changes of AI

Device embedded in the code, the exclusion, marginalization, and displacement caused by the transmission. Financial services obviously had

Many high profile cases, or discriminatory lending algorithms, hiring, using by software, et cetera.

Business is an organization is remote economy based on trust between stake holders for each party is actually in good faith.

I without enough information, transparency and dialogue between stakeholders, particularly those currently most underrepresented in the area data sets, the workforce and decision making.

The trust it or more important trust with AI is possible.

Lack of trust is huge barrier to successful innovation consumer adoption.

The lack of inclusion and stakeholder input into AI design development and deployment risk management products, which are not robust, competitive and harmful, and carry about societal risk.

However, so this you probably all know, but I'm going to take a slightly different approach now: rather than engaging and educating the public from the reality providing potential AI enabling products and services.

Tech organizations, politicians and major outlets.

They're often responsible for actually misrepresenting technology misleading is to his current capabilities

And cloaking the human agency behind it. This can be seen in the use of language, which often States in press releases and news articles that can think and understand and implies that it has sentience.

It does not.

And if anyone currently watching the debate who's going on on social media and in the press about the current transcripts.

Transcripts interpretation being circulated by an ex Google engineer

Claiming that Lambda is sentient- it's not just the public that needs reminding that AI is not sentient,

Professor Jonah Bryson this morning asked me to convey in preparation while preparing for this session The GameBook.

We clarifying that the statistic that, um, doctors, Emily vendor.

To make up for new market, Mitchell, um, have identified, um, large scale language models, for example, as being.

normal patients, the same can be said for the. *^^^^^Three lines above unintelligible.

Created for those 2 sections I'm Open AI's DALLE

And image equals image. So I started to talk about images because what we found we and WI were engaging people in learning is that they already have a little picture in their head of what AI was, gathered from major business communications.

Popular culture and news headlines. the images which comes to mind when people think of AI they are influenced by the Terminator, but also the predominant phrase making grown circuit boards, computer code, cascading, cascading events.

Whites over from all sides, robots looking pensive and doing a range of human jobs.

Against the blue background image search for AI, artificial intelligence.

The key reveals striking patterns the striking prevalence of these images,

often accompanied by white men in this business suits. And yet research has been published, which shows the unrealistic / distorted analysis mystery for public about the scale and scope of current use and impact.

They sow fear and create barriers to understand your engagement with.

There was a like, historical assumptions about gender ethnicity and religion.

The prevalence clearly, images, for instance, is an unhealthy echo of your idea that The computer science is a male subjects.

Well, the robots, these images and they always white and masculine.

Don't really trait to illustrate in human centered is based Michaelangelo's fresca-

With white, robot, white human hand touches your space

Often swapped round to get AI god-like, quantities.

Many of these images showing the machines is being sentient,

Creating unrealistic realistic expectations and lastly, accountability of humans in find the AI is making

Decisions we need to remind ourselves that is very much human endeavor - researchers and developers need to be mentally thoughtful, transparent.

So, general population is get more or less about how AI is used their lives and kind of actually manifest there won't be able to participate in the critical thinking or dialogue

Which also the decision on what technology they do what if their trust.

To tackle this issue, We and AI put together a wide range of individuals organizations because there is a real lack of images. We show real life applications,

Settings and impacts of AI and of the people involved.

We are reimagining how to communicate AI through the better images of AI programs, which we can find some better images on ai.org.

We are exploring creating a commissioning new ways to visually represent and the launch gallery of images that can be downloaded for free under Creative Commons license.

Image is downloadable for the better images sites, have descriptions, which helped to explain include detail, including detailed descriptions of a

The specific technology applications, metaphors.

Concepts all elements depicted defining better, requires an an event appreciation of technical and cultural nuances.

And the process of identifying explaining images, which specific, relevant, realistic, inclusive, different people and industries.

Isn't an example, which is global amongst disciplinary input.

And I should say, which also helps many people explore their own organizations for up to….

The project is actually an open collaboration between many global volunteer research as technologies,

And other risk experts, the stakeholders is under pinged by the collaboration with BBC. R&D.

Believe that makes sense for future intelligence at the University of Cambridge.

And next level, both garbage can stay in the University of Art and Design in Germany.

Founding supporters include the UK Engineering Institute.

(?)new tech is human and very simple.

We're very much like to invite you US Chamber members to engage with this non profit program and help us to develop more helpful and responsible ways for communicating AI.

Console changes to indicate engage include participation in the UK also to humanities research council-funded projects, which Dr (?)comes to the whole leading academic and global AI narratives.

Its research uses of these images, including those from commercial organizations.

Need from visual communication, and evaluate to the

Effectiveness of the new images we've identified.

Advise on the design, briefs and approaches and competition is to create new.

Art(?) all 16 residency programs to help companies develop better ways to engage their workforce and the public in their enabling products and services.

Which is also part of building that trust and understanding need for mutual understanding

If I choose to flourish, then through people, AI must be trusted.

to increase trust, we need transparency and accuracy in how is represented.

As we build our gallery, we need to support so please get in touch if you have ideas

For more funding to help commission architects and develop guidance.

And at the very least, I hope it will now conduct all this visual representations.

That people used to portray untrustworthy tropes,

Consider more inclusive in realistic ways of communicating.

And avoid AI hype in the United States.

FERUGSON: Thank you very much. Uh, next we will hear from Rohit Israni.

Chairman of INCITS/Artificial Intelligence.

ISRANI: Thank you co-chair and the distinguished members of the commission. I am the Chair of INCITS/AI

And the chair that we should be explain what that is.

I'm also in my day job, director of the cloud AI ecosystem at Intel.

And also a liaison for OECD on international standards, being developed called (?)

So my previous speakers have actually motivated to.

The topic that I'm going to speak on

And I requested Michael to allow me to come in advance because I expected, uh, some of these issues and topics would come up. So I don't repeat them.

But essentially, I'm going to give you a testimony on how internationally AI standards.

Could be a tool for policy makers and regulators.

And mitigate risks while enabling worldwide innovation.

1 of my Co panelists and in the product panels.

Elequently put the need that is there for the AI standards.

There is a need.

For international AI standards.

That will have an ecosystem approach.

Consider emerging requirements from a comprehensive range of perspectives, such as regulation

Business sector, specific, societal and ethics.

There's a need for assimilating these requirements

In the context of the use of these technologies, translating them to technical requirements and developing

Horizontal deliverables that can enable responsible adoption of AI across industries sectors.

And there's also a need for this effort to be international in nature.

That is what internationally AI standards it's been developed/what we are trying to do

So the 1 is the.

SC 42.

Some subcommittee developing international standards.

Currently, 50 countries are engaged in the development of international AI standards.

And this includes all the major countries that are involved in developing the technology.

Also, it was pointed out that there are multiple sets of frameworks and many stakeholders who are developing various

perspectives around governance around risk for AI.

Uh, this coming switch, the 40 new committee.(?)

Has liaisons with 45 such entities.

Which include the organization of economy, cooperation and development, which I am a liaison.

The European Commission, European credit union configuration in the European context and several others.

Now, the question is, how does U.S participate in the development of.

National standards? Participation standards in the U. S. is voluntary and the International Committee for information technology standards.

Is the central US forum dedicated to create technology standards for the next generation of innovation.

INCITS/AI of which I am the chair,

Is the body that's actually a contributing

US positions for international standards development.

You can think of it as the mirror committee for the U. S. for the international SC42(?)

Uh, participation in this committee includes the.

Several of the major technology companies, uh, Intel, Google, Microsoft.

Ibm, I can certainly give you the roster of companies participating on request.

It also includes government bodies such as the Department of Defense Department of commerce., NIST…

This includes research institutions and universities.

Now, the question is, this is a very holistic, uh, piece of work that needs to be done and has many things that need to be organized and put

Together in a systematic manner, and that's where the program of the work of SC42 addresses these areas. There are 9 key areas:

The 1st thing that the commission that started and many other regulators is what is the definition of AI. There's a lot of policy discussions on that. And those are the foundational standards. Experts from

35 countries celebrated and came up with the definition of what is A I, the entire sets of firms

Off of various, uh, concepts using the AI defined the foundational standards.

Then there are aggregation guidelines of use cases, which actually you require them to develop horizontal deliverables.

Then there are computational aspects which deal with hardware, just heterogeneous to nature.

CPUs, GPUs-

A whole set of software stacks then there is the data ecosystem.

In which there was already standards work, going on big data ISO level, which was brought SC42.

In addition of 5 part series of data quality, which is very relevant to AI -was added.

And that very important areas, perhaps, uh, interest to the commission - trustworthiness.

The ethical aspects in society concerns, the testing of AI system

Management Systems standards in governance.

These 9 areas are what

The SC program..(?). I will briefly talk about

3 or 4 of these that are perhaps of most interest, uh, in this context here.

Starting with trustworthiness. AI is often viewed as a black box. It is the general lack of understanding of how AI makes decisions.

And as we heard from some of our colleagues in finance, trust is the currency.

At the very 1st level there is a need for defining the various stones that are used in this

Context and have a congruent vocabulary and congruent understanding of what they've….

This is the 1st piece of work that was done by SC42.

In addition to this developing technical standards to address these aspects include applications and existing

ISO risk management frameworks to AI,

The quality model for react systems, quality evaluation guidelines.

And then, as we heard, explainability controllable, the transparency taxonomy.

The functional safety of AI and also very importantly the assessment of neural networks and the treatment of unwanted bias.

This is the body of work on trustworthiness that is ongoing.

with the publish, uh, technical report, as I mentioned, on trustworthiness and multiple.

Reports in various stages of development. Ethical aspects of is the 2nd area that I was just highlight.

And that was embedded in the entire body of SC42.

FERGUSON: You can just take 1 more minute to wrap up your.

Your comments, uh, the use cases, for example, use ethical aspects uh, and they are actually defining the context.

To wrap up as we look at policyand regulation.

We're seeing the move and the commission points out in the audit that there's a consensus that building between regulatory authorities in the US around risk based approaches.

There's a similar to the OECD and the NIST (?) approach.

The approach, and that's where, you know, you have different sets of requirements, depending on the risk of the application.

But there is a need for having a standard that can perform

What could be certified? What would be Auditable? And that's where management system standards,

Which I developed by SC42 are most useful.

The 2nd thing being at the board level, being able to ask the right questions.

Of AI, get the right answers, which are the governments implications, which are the other 2 parts.

Which perhaps could be a road for policy makers to get around

You know, putting forth innovation and, uh, regulation at the same time.

FERGUSON: Perfect, thank you very much last on this panel we'll hear from Nathan Benaich, founder of Air Street Capital.

BENAICH: Well, thanks so much for taking the time to listen to some of my remarks, um, Im the founder of Air Street Capital, which is a venture fund,

investing in early stage AI companies, technology and life sciences, in Europe and United States.

I'm also Co-author of the State of AI the report, which is about 160 slides or so tends to grow with inflation every year.

And it covers research, industry geopolitics and talents(?)

Uh, I'm also trustee of a nonprofit that works on AI education and AI events and the open source. AI fellowships and funds fellowships.

And my background is in computational bio… undergrad in UK and the U. S.

So, they don't want to touch on 3 topics. So, number 1 is spinouts, which is, um, basically the formation of companies that have academic research and why that's a really high policy lever.

2nd, is AI for science,

Particularly in biology and why it's a critical aspect of industry that we should be.

supported for decades to come, and the 3rd is this topic that we heard a little bit about.

A representative from, which is trying to normalize the chasm between industry and academia, in terms of compute resources and time.

On spinouts, um, so these are basically start ups that are essentially the vehicle to commercialize academic research.

And as we know that AI is deeply scientific, uh, discipline where a lot of new inventions emerged from academia.

Or, by researchers who are trained in academia, and now work in other places.

The U. S is a long history of supporting these kinds of spin outs. If you look at recent examples in AI including data bricks, which is almost a 40Billion dollar company or any scale from a 1Billion dollar company both from from Berkeley.

Or, send it over and smartflow from Stanford. These are all pretty amazing companies that tackle real areas of the economy.

And they also have federal arms so they sort of the U. S government too. but while there is a ton of academic research that's published every year

Spin outs and the proportion of overall startups in the economy are very, very small, very tiny fraction.

And so that's not super intuitive. And I think the process or the reason is that the process for forming a company out of academic research is

Part too cumbersome. It's okay. And generally comes with pretty unfriendly terms, which.

At 1st, the ability of the company actually build over the long term.

I know it was because over the last couple of months, we've been running a crowdsourcing project that we just released today.

And the effort was essentially to create a sort of glass door for spin outs.

So, asking founders to submit their deal terms in a lot of granular detail.

So, we could draw some geographical trends as to what universities have great policies and which ones have illustrated policies.

And so far to receive about 140 responses from 71 institutions around the world.

If we focus on the U. S. data points, we can see from the data that it takes an average 9 months for

The idea that PhD student wants the form a company,

But then being able to actually walk out of the university with a company in hand and start doing business.

Actually, 2/3 of companies take over 6 months, and half of them take over a year. Some of them take 24 months.

You can cast that against a normal start up where.

A contract can raise money in 3 months. This is extremely problematic, but it feels like AI, because of their open source nature,

If you don't move fast as well they'll eat your lunch. The 2nd feature that's problematic Is equity. There's very large range that's taken by universities on different grounds

so, there's no standard. Can either be 0% or north of 20%.

Founders overall rate the process about 4.4 out of 10.

So, if this, for a software company, it wouldnt be anywhere close to a product market fit.

And probably the most, um, most I saddening to me is that actually 2/3 of students wouldn't donate back to the University.

So, aside from a few laptops universities that are amazing, on spinouts like Stanford and MIT, and the rest are largely more of a hindrance than a help.

And this is something that we can fix quite easily, because there are examples of the University of pivoting to being more entrepreneurial

Like, Cal Tech, which traditionally said that the only way to be successful at the institute was to become a nobel laureate.

And now, for the last 10-15 years is actually cool to become the founder and accepted to do that.

And so, you know, the modern generation sees the most ambitious academic talent actually wants to see their inventions through into the real world. Not just write papers.

So, if we are to remove the drag coefficient around the formation of spinouts,

Then, I think the universities that do that to become the most effective in the world.

Because if I didn't was actually having a choice, they were happily move somewhere that enterpreneural, so, I think theres a big opportunity here.

The 2nd thing I want to talk about is after science, I've had numerous examples of AI being used in finance, advertising, online, commerce, et cetera.

But I think now there's many more examples that he has actually being used to model climates,

manage supply and demand on the energy grid the tech disease design drugs, you can control nuclear fusion reactor.

So, it's pretty clear that AI is one of the most important leader more broadly.

I think 1 of the new areas that we should be investing in the next few decades is biotechnology, which is basically the engine of creating new medicines and diagnostics and things of that nature.

So, traditional, um, status quo is a drug costs over a 1Billion dollars and take the decades to develop and

We all know that most of academic research and biology are produced.

But it's not only about drug development.

Also about generating new materials from, um, from nature, reducing the reliance from petra chemicals.

Detecting the faster reaction patients in the emergency room, et cetera.

But actually, in my job is if you see when I speak to different investors in ecosystem

I haven't seen a topic that's as polarizing as investing in the new

Breed of technology companies. Most of the things that software really won't make that much of a difference, but it's just a little bit of automation sprinkled on

You know, computational chemistry of yesteryear.. but I think what we're talking about is a much more fundamental rethink of how experiments are run and how we can industrialize the business of biology and discovery.

So really, we should be thinking about it as moving from a local maximum where we believe that what we have today is best in class and using computers to get us to a far bigger one.

So, this, as we discussed a little bit today, requires from the infrastructure and new data,

Perhaps rethink some of the approval processes of the FDA different that a lot of these systems are continually updating over time and are not static.

And so given that a lot of consumer technology that we enjoyed today was funded by the government and by the defence many, many years ago, should have a similar focus. Now, going forward on biology.

The last point I want to cover is this topic of industry versus academia and the real

drivers there: one is research and the other one is talent.

Consider that today about 88% of the top AI faculty

Received money from big technology companies Google, Amazon, et cetera.

So, you can take that the big technology companies have the ability to influence the direction of research, advanced decisions and agendas that actually follow. This might…

Consider also that the percentage of large scale AI results from academia fell from 90% in 1960 to 60% in 2010, and over the last decade has dropped to basically zero.

Consider also that we have this feature of working with the elites(?), which is basically driving this process of team, democratization and research.

Which is to say that if youre at a top university, you work with a top technology companies.

Top tech companies don't work with bottom tier universities, and we've seen multiple accounts of academics having to use their own personal credit card to buy access to computers because

Some of the reasons why the grants actually reject the use of funds on computing,

Which for a topic, like computer science is is almost impossible to imagine.

On the talent side, we've seen a massive depletion of academic college and university as a result the far more compelling opportunities and industry.

This is because of higher salaries access to compute and less administrative burden.

And also seeing a great

brain drain. So, 2019, for example, there are about 33 faculty that are in CMU, Georgia Tech, Washington Berkeley. They went to places like Google, Amazon,

That's notable about 85% of those people were professors, which are highly talented individuals.

And perhaps, lastly to close consider that China is actually outpacing US in terms of STEM PhD growth.

I actually projected to reach double the number of STEM PhD students by

2025, meanwhile, in the Western world, you see numerous examples of depleting STEM budgets in academia, and its driving this, uh, exodus in the industry.

And so I think, I think I'm just wrap up here. Um, I hope this topic of spinouts has been an interesting kind of window into how we can

Um, you know, build better and bigger AI companies domestically and drive tech sovereignty.

That add for science, and especially biology, the new frontier that we should be

Doubling down on, and this chasm between industry and academia is flexible short term to avoid problems long term.FERGUSON: Thank you very much. Thank you. Very much. A great panel. We're going to take some time for questions. I'd love to prioritize.

Folks who have had a chance to ask a question good questions for this panel.

TUCKER: so this is for for, um.

All the speakers thanks once again for the insightful input.

From the innovation perspective.

Given that these AI models do train from diverse data sets How would you attribute.

Credit for innovations that result from

These models? um.

And how does that integrate with the startup ecosystem and the innovation?

BENAICH: Is it just a question if I have consumers in my data to a company that then uses the data to train the model and.

Have some value out of it how do I get value back?

TUCKER: Yeah, there's some breakthrough. Medical innovation.

BENAICH: Yeah Yeah. Yeah. I mean, I think this is a great opportunity to explore some of these, uh, you know, this idea of AI comments.

Which is perhaps this technology is just so ubiquitous and so important to everybody that there should be some sort of

You know, extra structure there that maybe sits aside from government type of companies and.

And that creates these sort of foundation-style models that everybody can benefit from it at a different way

there's some technical innovations that might

Enable that...like federate learning where you don't necessarily need to see your private data.

Um, but I don't think this is solved in an opportunity for the kind of a new framework.

ISRANI: I could speak to perhaps an example in use case that is very commonly used something like face recognition.

Innovation in face recognition happens multiple areas.

1 example of that, and how it could relate to policy and the governance.

My job, at Intel I came across this use case.

Where, uh, innovator in Brazil.

Well, is that in New York, or he was a graduate student from the US University returning home.

And at the airport, he thought this young girl whose paralyzed net down, and she couldn't move her wheelchair.

And she was having a really hard time, navigating this wheelchair.

And he taught of an idea. She had a very beautiful smile and you thought what if a smile could drive this wheelchair.

So that's a place where, uh.

Facial expression and database on that.

Created innovation and it's the actual good uses.

And thinking about like a policy perspective, or or or.

Governance perspective, in such cases, the consumer would be most interested in functional safety aspects of the.

Of a facial recognition use cases.. if you translate that.

To something like in the back of cab, if there happens to be a camera that's looking at you and it's.

Actually putting for advertisements, right? And it's.

Based on your mood, if it's giving you a different ads.

It's not as much of functional safety issue its Perhaps a privacy issue.

And there is perhaps, uh, let us say, science being able to give you ads based on.

You know what your expression was, or what? What what you look like.

It also did something like, uh, you know, based on imagery.

1 could diagnose perhaps a stroke in advance.

Or somebody seems so 2nd district that, you know, they would be needing some medical help.

So, it has that element, then it's a trade off between good versus, you know.

Giving up some privacy and that's where the management system standards of the policy frameworks. We evolve.

You can move that to one more extreme.

Facial recognition that based on training data, creating innovation and actually giving you the drugs.

Saying that you're depressed and you need to take X Y, Z, drugs.

And that will require completely different set of policies, a different set of standards and governments.

FERGUSON: Any other questions? Yes. Go ahead.

MONTGOMERY: So so thanks everybody and thanks Laura. Um, my question is probably for Laura and Rohit. Both of you like I'm curious about

How you see the inner relationship between standards development and these risk assessment frameworks, because there's so many different conversations happening around the globe truly on the risk assessments.

And one has to ultimately inform the other I would think will settle on something somewhere. So how do you do you see it playing out that way and how?

ISRANI: Yes, actually, if you see the risk assessment frameworks, then both in the U. S and and in Europe.

In Europe OECD was one of the organizations that came up with the risk assessment, and I turned in contribution to them.

Tying that risk assessment framework to standards.

Similarly, NIST which is participating in AI standards

Now, the question and the risk assessment framework comes up, is that.

Based on the level of risk, you have a level of things.

And based on that, you have a policy recommendation. the question that happens is, what do you do with that policy recommendation.

And that's where you need something like a management risk assesement

Standard which is used in different other industries and just to explain that in a second

A standard that goes to processes. for example, in a company that's doing, like a hiring application.

They would have a system standard that doesn't just justify the application. Perhaps it would be something to that effect.

What it looks at the due process data for bias, you look at the model for bias percentage..you know, checkmarks.

And at a higher level, at a governance aspect of it, right?

And that's where these management systems standards and governance standards to play with risk assessment frameworks together

and would have the certification

FERGUSON: can we give Laura on the last word on that? Laura could you hear the question?

ROMERO: And, yes, the relationship between risk assessment and and senders if I'm not wrong, right?

Yes, thank you for that question.

And I'll just echo what my previous panel has mentioned before joining Meta I actually work as part of the policy observatory where I closely followed these development and evolution from ai principles to,

to developing different policy frameworks and understanding of classification of our systems and the national. Let's say the natural evolution of that is going to risk management and standards.

1 thing to have to think about is that in the catalog of tools that policy makers are having at their disposal in addition to the spectrum up from soft law instruments to HeartFlow instruments.

And all in between, considering also policy experimentation, I think there is a unique opportunity

To harness the latest developments and thinking on on how to approach governing emerging tech,

and particularly a AI and the challenges that poses through through policy prototyping methodology and

And other experimentation tools, of course, policy prototyping is not only the only tool. It is one of the set of tools that policymakers have at the disposal, but it's worth considering

Given how much known unknowns and unknowns there are with regards to these technologies and potentially new emerging technologies. So so with regards to centers, of course, as new risks

And as new, let's say it challenges that could be measured That could be classified that we can

Find a specific approaches to the burden. Of course, the role of the centers is going to be very important and of course, having standards are interoperable. It's key for, for industry is key for businesses.

So that they can follow and and predict and have a.

A consistent legal framework. So so I think that that will

In a nutshell, I think it's very positive to see all these constellation of tools playing a big part in into the question of how we govern emerging technologies and we have emerged, look forward to, to follow different stand organizations worked, including, OECD, ISO and others.

FERGUSON: Thanks Laura, thank you very much. Thank you to all of our panelists on this, uh, this panel. This was excellent.

We are almost back on time so we're going to pivot to our, uh, our 4th panel Laura and Nathan and Rohit and Tania. Thank you very much for your testimony. Congressman Delaney is going to kick off the 4th panel.**Panel Four**

DELANEY: I think Carissa is joining us virtually. Carissa are you with us?

I may have you start Carissa is the associate professor (faculty of philosophy and the institute for ethics in AI) and tutorial fellow at the University of Oxford.15

So we're going to maybe do about 7 minutes per testimony. Would you mind kicking us off here? Well, I'm going to get settled out here.

VELIZ: Thank you so much for the invitation. Can I start? Sorry I yeah..Thank you. Perfect. Thank you so much for the invitation. It's such a pleasure to be here. So

in addition to being a professor at Oxford, I wrote a book called Privacy is Power.

And I'm an author, so I would like to share with you 3 ideas today.

One is to consider how incredible it is that today as things stand.

Almost anyone can design an algorithm to do almost anything they want it to do.

And let it loose onto the world into the world without any kind of supervision.

And that is incredible. if we compare that to how we deal with drugs.

We would never allow a medicine to go into the market before being thoroughly tested. Not even in an emergency, like the coronavirus pandemic.

We are absolutely adamant that drugs have to go through a procedure of a randomized controlled trials and peer review.

And, of course algorithms can be just as powerful and just as.

harmful as any powerful drug, so that should make us think twice.

One of the things I would like to propose is that we should have something like the, the FDA.

for algorithms, especially certain kinds of algorithms either those that reach a huge amount of people

And or those that deal with very sensitive issues in life, like, whether people get access to health care, or get alone, or get a job, or get an apartment

And those algorithms should be scrutinized and subjected to randomized control trials. Just like we do with drugs.

And if you want to know more about this idea, I wrote a piece in the Harvard Business Review in which I think about it.

A bit more. A second idea that I wanted to share with you today.

Is that to invite you to.

To think together, more closely about the distribution of risk in society.. A lot of the talk around a AI is veering towards talk of risk in different ways whether it's.

Assessing how much risky an AI is to

To using a AI, in general to minimize these risk, especially for institutions.

Within this idea.

I would like us to ask ourselves 2 questions. One is

What is the nature of risk? and very often in these conversations It seems like treating risks. It's something very objective.

But risk is not objective. The idea of risk always has a lot of assumptions.

And then other assumptions, there is

A question of risky for whom?

Its n ootbjectively, risky, eve.r so 1 of the things I worry about is that the way we're deploying AI is changing the distribution of risk in society.

In problematic ways, especially in the financial sector so.

This might have an effect similar to the kind of the fact that we have during the financial crisis in 2008.

And that effect was that previously.

It was banks that shouldered most of the risk when it came to loans.

Individual banks, they knew who they were lending money to.

And then things Went wrong and the person couldn't pay back the loan the bank was in trouble.

Now, when we design these very complex financial instruments, such that you could.

Sell them and people other banks could buy them and not know what they were buying and then sell them on.

And there was a disconnect between

The, the people that made the risky decision

And the people who are going to pay the price for when things went wrong. And what we saw was that.

Suddenly, the risk got pushed on to the shoulders of individuals.

Who couldn't bear that risk and when things went south.

That has internal, systemic effect on our society.

And I think we might be facing a similar kind of risk in which we use an, AI to minimize risk for an institution. Whether it's a bank

Or whatever other institution, and it's like, this is a good thing, because it's minimizing risk, but it's actually just pushing risk on the shoulders of individuals

Rather than shouldering risks as a community and, and as a group of people who have many more resources to shoulder risk. The 3rd idea that I would like to share with you a today is the idea

That privacy is really something fundamental

In how we think about how we regulate AI and in particular how we regulate AI

To support democracy, so if you want to know more about these ideas.

You can find them in my book privacy is power, but the gist of it is

What we're doing right now in selling them buying personal data is incredibly reckless, for the same reasons that we don't buy or sell votes in democracies we shouldn't buy or sell personal data because at the end of the day, it gets used much the same effect.

It's not only going against ? because we are not being treated as equal citizens anymore and we're not being treated.

On the basis of what we put on the basis of who we are, and what our data says about us.

Yeah, it's eroding democracy in all the way that we're seeing, including Cambridge Analytica ? type effects, but also polarizing society.

And so on and.

Sorry, is that this system of surveillance will be catastrophic in the hands of an authoritarian Regime

Democracy it's not in his best moment we have international rivals are very good at hacking

And we don't respect for democracy and surveillance is not a neutral tool.

Surveillance always leads to control, and control inevitably erodes freedom.

So, instead of moving away from a system like China's techno- authoritarian style, we're actually trying to compete with them. And I think that this is a mistake.

This is a time to defend our liberal values and for democracies of the world to come together.

China is exporting surveillance to 150 countries.

This is incredibly risky. It's not only that they have access to incredible sensitive data that they can use to export public officials to find out military, secret secrets and so on.

But it's also the case that by having access to these smart cities, they kind of turn them off.

And that we're giving access to such an important rival is incredibly reckless. So, given that China is exporting surveillance, our job as liberal democracies is to support democracy.

Political standards the culture.

And especially through technology that supports democracy, and doesn't erode democracy.

DELANEY: So, Clarissa, I'm not asking you to start wrapping up so that was the end. Thank you so much.

But that was interesting. Okay, thank you, Carissa, And if you could, uh, hang with us a little bit, we'll be opening up for questions shortly.

So our next panelist is Julie Dawson, Chief Policy and Regulatory Officer, Yoti.

DAWSON: Thank you so much share with Michael. Some slides are different things for.

Able to be transferred to people….

It's not, I will kick off. (Yeah, we'll those round)

Yoti is a company which provides identity age and signatures.

 founded about 7 years ago, and in the last 3 to 4 years, we've developed a really unique AI tool,

"Process age," we will be corporations that we look at the triple bottom line and we're really quite unusual in having right from the beginning set up on the set up an external ethics Council. So looking at the human rights.(some untelligible)

Consumer rights law, small tech, accessibility and online homes elements.

Pretty grand for a company that was talking about 150 people.

So now wind forward 7 years when the 500 people, and we're leading very much in this area of age choice. We take part of the standards for these around insurance.

I think what's interesting if I can try and put you in the shoes of a company that started 3 to 4 years ago.

Into developing an AI age estimation approach that has a pedigree of wanting to do things the right way.

Um, I'm trying to help you be a fly on the wall of a small company that's trying to do this.

In the right way. So what

Drove this is the fact that if you looked at age assurance, you got to put a 1Billion people on the planet. That doesn't have documents. And that was the classic way of age of proving, or going through credit reference companies.

And if you could tell someone what price your sofa was on a monthly basis, they probably think that you were Fred Smith.

Well, actually, if you really knew it was 4 dollars, 26 or 7 dollars, and 92, you are more likely to move forward. So we wanted to look at what could there be ways. That would be inclusive to assess age- a 3rd of users on the Internet globally

Are actually minors, and how do we protect them? protect them?

You've taken analogy with the automobile a 100 years from the 1st car to making belts and car seats.

Mandatory for children are we going to waste 100 years before the Internet has the same approaches for children?

So, around the world now is a really complex legislative environment around online safety evolving. You've children's codes evolving, for example, in the UK and Ireland.

In the Netherlands in Canada in Australia, specifically age appropriate design codes. You also have Bill on the statute books coming through in California.

You have an 11 countries around the world looking at specific legislation around age, appropriate access to adult content.

And across the whole of Europe, the digital services act, the audi/visual service act has the same requirements.

So we know how did you make age assurance workable and how would you make it?

And hence, we actually looked at the data we had, which is quite unique from the identity part of our business.

We have a relatively new people, which is set up will be used for identity and through that, we have this really unique ground truth.

And we started to test that we use for AI.

What was unusual was that we already had our external ethics Council. We were then able to work with the center for democracy and technology the future policy forum, the world policy forum and we started doing regular round tables.

To get input and learn, just pretty unusual for a company that was then scaling from 500.

And then, over the years will still really holding a 4th roundtable on facial age estimation.

Crucially, and you can see the details of the slides. This is not facial recognition, because we're not training it with knowing that this is Michael or Adam or Brent. There's no details. There's none of your addresses in there. We just give it the ground truth of the face with 1, from your birth.

So when it sees a new face, they can look at it, do a pixel level analysis and spit out. 22,46,59-

And give that age assessment. the majority of age assessments really from using the 13 to 25 years, where most of the age restricted goods are, think pharmaceutical.

Think alcohol, think cannabis.

Think adult content. and so around the world, there's no, there's really complex set of noise.

The government that's on the 1 hand, saying to companies, ecommerce companies or content providers.

"We got to codify these rules. We don't want age restricted goods going to minors"

Well, the other hand you have techniques, which is this one coming through.

Which instantly deletes the image when it assesses age is not a facial recognition.

one of the things we have to do is publish re, regularly, thee updated, meaning active errors I'm (?)working on the transparency around that. So we were really fortunate in the UK. We have something called the ICU(?) sandbox

We only a handful of companies to be selected

to be part of the sandbox and that helped us do 2 things. So we did a whole education campaign creating materials that could be understood, or your 7 year old at home, or by your grandparents age 70 to 90 plus

We look to plain English, so we use things like the.

The flesh matrix of looking at a sentence.

Looking at how understandable was it—could a ten year old understands this?

and we actually found those the most helpful things when speaking with regulators

How many people just go to.

So, by actually having really short, explain the video to simple materials, that has proved really, really useful, but how to help other companies do on this journey. So, in our white paper, and in our roundtables

And through our blogs, he tried to chart this journey and how we got about demystifying what we're doing.

At the moment, for instance, we're working on a survey an experiential survey between 9 to 14 year olds.

You can understand more about what's under the hood. How do you create an AI algorithm

Um, especially that fact, it's not recognizing anyone's facial analysis. They can actually have a go of it and give us their opinions before And after.

So, this approach weve done 550,000,000 of them

In the last 18 months we have some really large global SEP, social network companies gaming companies

I console companies looking at this approach, but I have a few specific points specifically.The.

Roll out of it and what should regulators look at.

Um, because there's a lot of nuances in this, so a platform could say "oh, yes, we've integrated. We're, we're integrated. We're good to go"

Hmm, but actually we use the company can't see how many of the users they are actually age verifying.

We can't see the doing that. Some of the time or all of the time.

They can integrate, so, yes, they've integrated with this, but they could, on the other hand, be disingenuous and do absolutely nothing with that age assessment. We would never know.

So this then begin some conversation with regulators actually saying, "I'm also documentary makers. How do they check up on the platforms that say they've actually integrated and have these techniques?"For instance, we've worked with BBC documentary fellow for a few years ago.

I'm on a given platform. Supposedly said they were doing everything great.

Over 33% of the overall team was supposedly on the platform were under

On a given day. So then there's an example of them using 1 of our tools to see if what a platform said it was doing was actually working.

I'm going forward to seeing that some regulators are actually looking at using things like avatars so they themselves can be using these sorts of techniques. So do test purchases effectively.

Other things that we would suggest is that you have to look at the nuances of.

When of each account is being set up. Is it for 1 of uses?

Is it multiple usages? Is it a tokenized approach so that if somebody is maybe signing up and going on to a type of site and going onto lots of similar age verified

fsites over hours and not necessarily every time putting in their age.. but then the regulators have to decide well, how did these tokens work? How long should they last? Yeah, just a couple of conclusions.

If you go to the slide 5, we're about to put the different elements, but I think the things that regulators need to look at this.

So, we need to look at independent external audits. So do companies such as almost actually delete the image when they do for intense when they see a facial age now exists,

Are they taking part in the standard development,

Do they have, um, an ethics board looking at the positive and negative intended and unintended consequences? we used to adopt everyone matrix for example, for this.

And audio(?) such as the citizens biometrics council oversight panel was 1 that we took part in.

Many of the small companies don't have that luxury. So that's a quick whistle. Stop. Right? I hope it's helped You see through an example from a.

Scaling company Thank you.

DELANEY: very helpful. Thank you. Julie. Um, Siva Chamarti.CHAMARTI: Hi thanks for the opportunity, I'm Head of Machine Learning at Shell.

(associate of witness- name not audible) From the head of HR, a general manager, artificial intelligence shell. Okay. Um, so I'm supposed to deliver new algorithms. Um, we're going to share this last if that's okay. That's fine.

DELANEY: I would love to say that that allows you 14 minutes, but we're gonna have to keep with our 7 minutes.

Associate: Okay great. I think we got 6 areas.

Sorry, and to how to make sure that industry doesn't get ahead of itself. So these were people.

Is that funding data standards might be startups

Still not go through them. So I think 1 of the things that we found particular challenge in our phone calls is people it's very, very hard to get the right skillsets

Um, and I'd be part of that can be just about

Realistically really want. This is a risk is that the model? I mean, if you try to get to now=

But, certainly for universities, they are not stable, but even so, the rescue.

(*much of this is unintelligible… witness is speaking fast)

And if you haven't got 3Million people to actually take a job, it's really hard. It's hard for a company inside

It is embedded in the model? and, um, I think 1 of the things that we think about so much here is.

We often think about it at the business level. Well, the pipeline level.

Universities the reason we have a large number of people

Hanging London, wherever it is with the right skill set is because it came to university, come from somewhere else. Universities are not finding it easy enough to acquire this kind of study,

S the whole pipeline gets gets clogged, and we're not going to have people like you are able to join the company.

So that's one thing I'm particularly concerned about in the UK context and I know

..in the US. because even if it's okay to show once people are already based in London, we can go to that process

It's really hard for and he has met with universities, but sometimes they're just plugging in to box.(?)

I think also think that these are these conferences and one of my team members is Chinese national,

And she's been trying to get visas to come to the US. That's not the end of the world

but it does prevent the kind of free flow of ideas and that's a pity.

I also think if you're thinking--

Education, I mean, I don't know whether it's something like, um.

Subsidizing fees on the graduate level for those to some extent subjects. Clearly that's a huge problem in many countries.

And in some ways, maybe people stocking (inaudible)

Second is for research funding and I think we've seen a lot of research sponsorship through funding universities, Cofunding, government part-funding, research institutes and these are fantastic, theyveactually been really successful.

But I think sometimes the IP tools is doesn't quite work on this size

because if we're talking about very sensitive data(?) we're working with the transition and it's important to us

What we're working on we can actually ? into the future.

Uh, it's not important, but obviously we're effective. Well, there's lots of stuff here, which ….

So we have to be careful about what IP we

release and therefore it's quite hard sometimes

If they're not fully aligned with what we're trying to do. I don't think there's one answer to that. It's just making sure that there's kind of ?

And then, um.

And I think there's also a big opportunity for expended tax breaks and expenditure on the carried out locally ..in local investment to people…

is a huge part of making sure that you maintain the skill set. I think particularly high complications like the U. S. doesn't just get outsourced to another country.

And maintain that skillset.. (inau. DELANEY: Um, you perfectly divided the time CHAMARTI: I'm on the data, right? Like, when we are working on some, some of the projects. So we have to go through all the regulatory compliance.

We follow the triggers whatever it is, right across the region. We take that and we are, we spent a lot of time in order to clear that.

So, what can we do to decrease the time and things like that? Maybe, what we can do is, like, we might have some kind of a data banks where they can optimize this data and make that available to all people not just big organizations.

Like, even for the startups, right? So they can spend more time, uh, working on, like, um, algorithms and then how, uh, they can

Push that boundary kind of stuff like that, developing those algorithms right? Like that so completely respect the human rights and the privacy kind of stuff, but this database can enforce, um, all that anonymization.

And, um.

And data, privacy kind of things right? So, um, so that's what we were thinking like, um, I think, better to have something like that, or, like, we might need to think about, like, how.

Data can be easily accessible to

Multiple partners who can work on the AI.

Um, that's one thing and the, regarding the standards and IP protection.

-who will be responsible for the applications?

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Because then we have like this partnership and the data, because the data is a key.

To develop any AI algorithms so now we're bringing all these partners that we will be.

Actual responsible for the whole patent, things like that.

That's one thing and that's what I was like um.

Associate: I think it needs to be ready for Christmas standards? – inaudible…

And think of is a number of ways. It's very important. What process the client walk through.

Of how to use the right kind of it's hard to set outcomes? Andyou don't want to

Do a stranglehold to asses an AI algorithm cause ultimately…you certainly wouldn't the major bridge and go across if we don't actually have some external validation.

So, at any point, there should be some sort of method assessment and otherwise it should be solved for the self assessment…

Firewall.. and simply just click on a consistent standards. So I think it's really interesting how,

As a new field, and standards,

And actually funding to that actual framework is very useful thing to do.

^^^^^much of the above 10 lines were inaudible

CHAMARTI: Regarding the sort of kind of stuff. Like, I think a.

The government needs to provide funding or else it can be

Distributed not just concentrated like the only few people are developing the algorithms kind of stuff. Right? So.

Um, the other one is like, uh.

Provide good and what we found out was, like, in explainability and all that stuff, right? Like, it's not

That much mature I think that more funding and more resources happen because

Lot of times, we, what we found out was we need domain experts in order to integrate and then try to find out if there's a buyers and all that stuff. Right?

So so there should be a lot of funding and research activity needs to happen, um, in that level as well and as well as like, the hardware, right?

Like, what we found out was, like, when we look at the AI hardware, very few companies are making and then, like, uh.

And and the chips manufacturing needs to be local, because

Now, it's completely dependent on the 3rd party can be providing those chips and all that stuff. And then, in order to make it competitive, I think there should be, um.

Uh, distributed across quite many players needs to be there in that and then there are quite a lot of new chipsets coming into the picture, like a new market computing kind of stuff to make our edge solutions more greener and all that stuff. Right? But they're not many of that.

There are only very few companies who are adopting those chipsets .

Yeah, so what we need to do is like, there should be more funding in order to help. Yeah.

DELANEY: Okay, thank you. Uh, for your combined testimony.

So last, but certainly not least.

We have Sasha Haco.

Who is the founder of Unitary AI... Sasha?

HACO: On the on the calendars and the CEOs at the the startup... (inaudible)

So, as you likely experienced yourselves and your communication with family and friends and colleagues.

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An increasing proportion of our compensation to the tracking code base on line.1780?)

This is there's only restricted by.(?)

Plus the possibility to connect with people around the world enabled billions upon

Billions of people to maintain their relationships and exchange where it is.

People's experience of online spaces can vary wildly...

Too many users are exposed to by the (?) officials no control and what they see in that data.

It's challenge will become even more acute with the ever-growing value of online content.

Between 2020 and 2025 some estimates suggests that the amount of information on Internet is expected to grow by a factor of 10.

This is the growth of video content in particular, considerably adds to the complexity.

Today video makes up over 80% of all online traffic,

And it's concentrated on social networks and platforms. Video presents a unique moderation challenges...

It can cause infinite harms to users, so it requires urgent attention.

There's also more time consuming for human moderators.

Adequately complete best the Constitution says it's on the text.(?)

Policy makers are moving to address home online content... So that everyone can have a safer online experience.

Uk is the post online safety bill, for example.

Aims to establish a new regulatory framework to tackle online content.1703:15:25.740 --3:15:31.5Under this framework, social media companies and platforms that host user generated content.

We have the duty of care enforce conditions by

By proactively identifying and moving illegal online content. Given the huge scale and complexity of the moderating challenge,

You interview is cataloged and it should not.(?)

Particularly in light of the emotional toll humans experience.

Oh, so you said.

Automated solutions present the protective.

I would keep up with the pace and scale challenge and it's not from a cost.

^^^inaudible

Advances in AI and AI machine learning, present, new opportunities for successful moderation.

To identify and flag project before it can cause harm to users.

The fields of large language models entity, division, are being advanced every day.

As the searches organization, what industry are trading models to be able to have more and more human life of the standard text.(inaudible)

Recent development is based upon by default, for example.

Demonstrated ? across a wide range of tasks.

At the same time development in the field of AI ethics

A key to ensure the AI is applied to the fact (?).

It feels blocking portals and foundational.

Generally Stanford University last year, at least a paper backing out when it comes to safety issues.

And they highlight issues such as standards, privacy,

And bias, as well as exploring potential ethical implications

Using these tools for society at large. both the developments in models themselves as well as their interrogation to resolve the issues.

Suggest an exciting road forward and the potential of AI to solve real world problems,

Such as content moderation and online safety.

Central feature to contract moderation challenge is the need to simultaneously.

Understand multiple modalities, such as text audio and image content.

As humans, so we watch a video, we see the imagery at the same time as we hear the sounds and can interpret context

…for example, a youtube video, entitled (?)

Might be informative and educational or providing instructions on how to build it out.

Participants and achievements, we are capable of distinguishing between these 2 scenarios.

Because we consider all the various sequence. Multi, modal machine learning models are

beginning of the key role in content moderation and this space is another area.

That is beneficially very fast paced innovation today. Open AI for example, have recently showcased their latest models, which they call DALL-E

Very impressive roles(?), which have the ability to generate very high fidelity images.

From 5, minutes of text use to describe them even it's very obscure basis.

These types of models represent next evolution of multiple modi models possible capable of sophisticated applications that requires significantly more work in order to make the safety of the portal.

Upscale industrial application so, despite these governments, we still have a pretty rudimentary point of content but we do not have a good understanding of content online.

The key barrier is the importance of incorporating context.

So, for example, unity in the context of medical diagnosis.

Carries a very different meeting from (inaudible)…

Having content in it's context

Is a crucial step to better categorize content and almost on the Internet or widely. And similarly moderates the content of the highly specialized.

The Unity team is working to affect the process.

Textbook for the transportation online, should they be more effective for them? But just like today's large language rules, multimodal systems bring beautiful opportunities but also risks.

So, therefore it is crucial to develop these models in a way that maximizes transparency.

We at Unity are making great strides analyzing content, and getting a

 better understanding of context of online content

Through own search and commercial partnerships. We've made code publicly available

To encourage collaboration and foster research in this area.

We've also partnered with leading institutions, such as the University of Oxford,

To advance AI research in this space and look forward to sharing or what we're finishing up.

But central to the development of better AI models that can have really large scale, positive impact is the wide ecosystem that serves community.

Businesses and policymakers to

Build a pipeline of engineers and researchers, which reflect the world

…an intermodal community of innovators.

We also need to ensure that we have a capital (?) ecosystem.

To support businesses at the forefront of AI research.

The last of breach experimentation, it's hard to manage.(?)

Finally we need to establish and AI data sets and benchmarks that are representative of the real world, which starts with the ability to recognize harmful content. So to ensure these technologies.

Are Developed ….(inaudible)

A better understanding of what makes up the internet is 1st step to create a more transparent and safe digital space.

Any AI model reflects the data set….

So, I would like to suggest that development of content moderation models

Is really at the heart of creating a safe future for AI for all.

DELANEY: 7 minutes, and one second -Remarkable!

Uh, thank you all for your testimony and why don't we open up for questions.

Pass it on to my colleague, Mike, I have to step out.

Who wants to start?

Commissioners questions. All right.

THIERER: Uh, for a pipeline for the 1st time today, I know Americans will know what kind of Mark is. Maybe you can explain that. In other words.

It's not a big urgent vocabulary. It's…

And there are a lot of different quasi-organizations operating that have different standards, best practices next back to earlier panelists we heard from today.

So, maybe just some general thoughts about the role of how standard setting organizations in various contexts, whether it's online safety,

Security whatever else might play a role here we can learn. Uh, uh.

And then take back to the US with…

… what we can learn from how standards are said in the UK. Um on

These other issues.

DAWSON (?)Anyway, um, I'm gonna say, I'm definitely not an expert in Tidemark(?) I've just been in, um, businesses before where we have gone through that process of something like, say, project delivery project management.

And so what you're doing there is, you're not saying this particular outcome was excellent.. you're saying

in general, what we've seen about the process is you go about this the right way.

And the reason I think that's a useful model for lots of what people do for AI and digital in general

Is because most of these things are not high impact so, are you.

Having a kind of external, uh.

It's just about sort of making sure that we're all understanding what good looks like because I think often customers as well customers of AI software are not informed enough

-- it's very hard thing to get it.

To get digital, so I think having that kind of more kind of a validation of.

We've seen the way you do things we've seen your AI ethics policy//

…can be very helpful thing…

I think you also need something, which is a bit heavier than a bit too.

Um, for whether its on impact (?)

Algorithms…particularly sensitive data, for example healthcare.

For where it's, um, just 1 use, impact.

I just think it's about moderating that piece between.

Allowing innovation versus ensuring safety.

FERGULSON: I think we have a question from Shakur.

KATURI: Hey, thank you. Can you hear me? Okay.

Perfect. The question for Carissa… so you argued, uh, I like your conversation where you said that, uh, privacy is power and you said how.

Uh, equivalent of an FDA approach needs to be in place for AI as well,

Right? if I heard you right now, the question in my mind really is, you know, FDA really, you're talking about drugs that can ultimately kill a human being.

Most of the AI use cases are not in that extreme. There could be disparities between race and religion and.

Agents 1, I understand that, but how would they not that extreme …2nd thing is.

Pushing for such a high regulation can float on innovation significantly.

So, as you have articulated, I was just curious what your thoughts are in terms of.

The right regulation as needed.

For the right risk level in terms of use case, as opposed to a blanket reg level for everything AI.

VELIZ: Thank you so much, so 1st of all, I think good regulation helps innovation because at the end of the day, when we have huge scandals and people start

distrusting technology, and we end up having dysfunctional systems and dysfunctional societies.

So, I disagree that ai isn't as extreme. I think, for instance, just to give an example in 2013, the Michigan unemployment agency

Used an algorithm to determine who was committing fraud and it accused about 34,000 people - falsely - of having committed fraud and these people not only lost

Very necessary income, because they were already in a precarious situation and they also many times lost their families,

And they lost their lives were completely broken.

So, I think that is similar to having something like a physical disability for the rest of your life in some ways. And there have been cases in which

And people actually die, like, if they don't get the necessary health care treatment, and it was because of a faulty algorithm. And this is not hypothetical, it's already happened.

Plenty of times so I think that

AI is as dangerous and powerful and of course, we can have like.

Fault that puts national security at risk.

So, I think AI can be just as.

Dangerous as a powerful drug in some cases, even more so and the right kind of regulation will actually help innovation because we.

Everybody wants good technology.. regulation contributes to that.

KATURI: Got it Thank you. Thank you.

FERGUSON: Other questions if anybody else yes Conrad-

TUCKER: So this is also for Carissa -

A lot of time today we've talked about compromising AI

And the dangers of that, based on your descriptions, you seem to.

Um, assign human, like traits to these AI systems as though they're the end

Decision maker, however, in many cases there are humans at the at the end of.

This ai pipeline. So how do you reconcile the fact that there is still a human in the loop and, and.

Again, you seem to be advocating for this blanketed, very stringent regulation across the board? Thank you. So, no, I don't ascribe human-like, abilities to AI I wish they had it. AI is much more stupider than human beings, but oftentimes we treat it as if it weren't.

So, yes, there's a human in the loop in theory in practice. Many times

If the human being goes against the AI, they face a lot more risks than if they don't. So, there's a lot of pressure to just go with AI and very often. And we're not even sure what's going on with the AI.

So, in the case of the Michigan unemployment agency, just to take a case that actually happens so that it's not hypothetical. Um. That AI did actually decide who was committing fraud,

And 34,000 people were falsely accused of something. So that's just empirical reality. And how we are treating AI.

HACO: one of the things I think we just need to tell that is the investment in that pike mark (?)

If my service well known, my police standards well known, but even then there's so many of them.

You have to make sure that the significant investment in both the actual marketing and rollout of that pike mark(?)

So that it is something that small medium and large companies can take caution.

And then, if we can't screen goes, I think has been a really useful goal, um, in the UK playbook, such as ADA such as.

ICU sandbox, which is causing, um, regulator. (inaudible)

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And with that, those 4 things, I would have thought that that the 1 that public discourse would have been for. So if other people have engaged with other useful bodies.

And I think they are forming a really useful bridge point and education role in this whole area.

FERGUSON: Did you have a follow up comment candidates question?

UNKNOWN: I did actually if that's ok..I guess my question is about some of the very widely publicized failures in AI

Babies laying on my mind ideas of prospects. Actually, it doesn't matter what technology you put in there whether its just AI or a standard process chain. If you do that in a stupid manner because you believe in technology, build anything else.

You will have massive failures. So, to me, something like the Michigan result and many others, it's because people believe AI is magic will then put it in place without really testing it...And said this is the AI process it must be right...if you did that with any process, you did that with your

6 Sigma, factory, premium process, it's just that when people are doing in an engineering context, they've developed in the.

We had enough time to develop ways of process improvement than

They do to some site map, small scale testing and blah blah. I think part of the problem is the air image.

The reason I'm saying that is because I don't, I generally don't think AI in most contexts

Is more dangerous than any other technology or business improvement.

We actually have.. it's just that people

Haven't understood it and have rolled out in the very.

Stupid naive way and I think this is partly why I think very clear standards could be useful cause

If you say, never roll out until we had some time we tested this. We never.

particularly looking at so, anything effects humans …actually to try and make decisions that we think we just use it as a.

As information input, until we really confident that this is going right. Those are the kinds of things that help people understand who's going on and make sure it's successful.

FERUGUSON: Who wants the last question?

All right, thank you. All great panel. Great hearing. Thank you all very much for joining us. Uh, we are going to give you.

The very last word today back to Jonathan Kewley, our host

Here at Clifford Chance, Jonathan.

KEWLEY: So, um, thank you for and excellent panel and particularly Carissa, you did a fantastic job of raising awareness on AI risks and ethics

Um, good to see you again, Carissa.

I guess it's a, it's a, it's been a fascinating session.

1 thing that I wanted to reference was

Talent (?)..them something that we haven't necessarily focused on too much, but.

A really big issues for our schools and education systems. Universities need to tackle.

And there's a couple of statistics, I guess… So in the UK at the moment

And in 1, in 10 people studying computer science at a level.

Uh, the 620 is a woman, so we're having 9 in

Men progressing through to study computer science.

And that in itself is resulting in huge university when we talk about some of the challenges with AI today at on bias and prejudice and.

Different communities not being reflected in the way it's been built.

That's the case, the education system and stuff actually to.

It's a block and for them, and it's not just the UK issue. If you look at the U.S. That's a great level, and 18% degrees that were awarded were in

What is in computer science in university (?)

Established say this starts with.

Level setting and changing expectations.

And the mindset of our teachers, our education system.

I'm thinking that, you know, young girls can study

This subject and, I mean, they haven't really focused on this in detail

but I do believe the, when setting.

AI policy you need to think of.

Some of the sources of these issues and the sources start very early with our education system.

Um, I'm sure we'll continue this discussion over drinks this afternoon but I'd appreciate everyone's stores and reflections on how we can tackle this.

And at Clifford Chance one of the things that we've done is to start a foundation, a scholarship program is also in universities to encourage people

not just as agenda backgrounds, but also different economic and ethnicity backgrounds to study the science.

It's probably the main I think it is, uh.

Um, the privileged and actually the white man, we do need to change that. So, um, were proud to, uh.

Sponsor that and we're really proud today for what had been a

A fantastic, insightful, diverse discussion.

I say, thank you so much for being our guest today.

FERUGSON: Thank you so much and on behalf of the United States Chamber of Commerce and our, our panel today, thank you for having us. Thank you to all of our friends.

Here in London, for having us met and exceeded, I think all of our very high expectations.

This is a marvelous place to visit and, uh, we are hoping to I know I, in my family were hoping to be back very soon.

So, we, thank you for hosting us today and we think our analysts and all of our witnesses today

For another great hearing. Excellent.