

The Worshipful Company of World Traders



'Too Hot to Trade': world trade and climate action 25th February 2021 Dr. Kirsten Dunlop Tacitus Lecture

INTRODUCTION

Good evening. It is a privilege to give the Tacitus lecture, and to be the first, I believe, to do so in a virtual Guildhall setting – very much the sign of our times and a precursor of more to come.

Tacitus was a historian of world changing choices and actions, coloured by the complexity of human nature: the dangers of vested interests, power without accountability, concentration of wealth generated through trade and conquest, leading to corruption and abuse.

*Slide: The desire for safety stands against every great and noble enterprise.
Tacitus Book XV, 50 - Annals (117)*

I am here to talk with you this evening about a topic of world changing choice: the relationship between world trade and climate change – where the desire for the safety of the status quo stands indeed against the prosperity and survival of our children and of all future generations.

I am neither a climate scientist nor an expert in world trade. I am here as a practitioner of innovation in service of transformation – of core business models, industry paradigms, places and spaces – the cities, regions, nations in which we live. My business is: *how* to change the world. The focus of my work, at EIT Climate-KIC, is on doing that to avert the consequences of climate change – specifically through systemic approaches to innovation designed to catalyse systems transformations.

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I am also, however, an historian of cities and of urban civilization, which as a history, is all about stock and flows of resources and the people husbanding, exchanging and speculating on them – from salt and gold to alum and paper, cotton and sugar, spice, herring, wool or saltpetre. Cities and urban civilization flourish where trade possibilities accumulate; trade connects and relates, enacts our interdependencies, traces human lines and marks across the skin of the planet.

As I researched for this evening, I noted with increasing concern how little discourse, relatively speaking, there appears to be within the circles of world trade on how to connect world trade to climate action, how disconnected still WTO and UNFCCC processes are; and neither getting us to where we need to be. Perhaps the most telling aspect is that climate change is rarely mentioned in trade discussions and agreements, and where it is, only in an environmental context whereas climate change is far more than an environmental issue. It is now fundamental to the economic prosperity of humanity, let alone nations, and to world trade in every dimension. Resolving emissions in cities, for example – currently responsible for more than 70% of global emissions and in the agricultural practices that sustain them (11% emissions globally) – is bound up inextricably with global trade architecture, habits and practices.

So with that, **let me come to the topic at hand.**

I am going to make a series of assertions about the situation we face. I am happy to talk to them in the Q&A but for the purposes of this talk I won't elaborate beyond the key points of principle. Suffice to say that what I am bringing to you is based on the latest scientific findings and conclusions.

These point to the fact that we have badly under-estimated both the speed and extent of climate change. In particular our analysis has failed to pay sufficient attention to what are called the 'tipping points' of the climate system. These are points at which our climate system may change abruptly from one relatively stable state to another one, far less conducive to human development and possibly trigger irreversible, self-sustaining warming. Examples are the collapse of the West Antarctic ice sheet, and the disappearance of Arctic sea ice. Put simply global warming and global warming feedback effects are happening much faster than we have anticipated.

You'll see here the original 1992 UNFCCC objective. It aimed to stabilise greenhouse gas emissions sufficiently fast to allow ecosystems to adapt, food production to remain viable, and economic development become sustainable.

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“stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”

We failed to meet those objectives. Dangerous climate change *is* already occurring at around about ~1.3°C global average increase in surface temperature of the planet, relative to pre-industrial levels. Ecosystems *cannot* adapt to this naturally, food production *is* threatened, economic development is *not* proceeding in a sustainable manner and *far* from precautionary steps are being taken to avert adverse climate impact. To make matters worse, massive expansion of fossil fuel use is still being contemplated which will only accelerate those impacts.

In 2015 the Paris Climate Agreement was to: “hold the increase in global average temperature to well below 2°C above pre-industrial, and to pursue efforts to limit the increase to 1.5°C.”

Unfortunately, it looks now as if 1.5°C will occur around about 2030, irrespective of the actions we take in the interim. The upper 2°C limit is now likely prior to 2050, even with actions better than the current Paris commitments. 3°C is likely early-to-midway through the 2nd half of this century.

In short, the current global warming, of 1.3°C in 2020, is already dangerous, as we know because we are experiencing it. 2°C would be extremely dangerous. 3°C is catastrophic.

SO... we now live in a time of climate emergency. Emergency means: to quote David Attenborough, “we face irreversible damage to the natural world and the collapse of our societies”. But our collective action still amounts to denial. We are not yet acting as if we are facing an urgent, life threatening emergency.

We need to transform – not *incrementally* improve a few things, and invest in renewables now that they are profitable – but dramatically and radically change things.

Our current global commitments are to reach net zero carbon emissions by 2050. That is estimated by the IPCC to give us a two-thirds chance of survival. Would you hop on a plane if you were told that you had a two-thirds of getting to your destination alive? You would probably ask for something to be done to give a higher probability of safety, and that indeed is the point. Net zero globally must be achieved as soon as possible, ideally by 2030, if we are to avoid

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breaching the 2°C limit. That is a massive undertaking, far greater than anything currently being contemplated officially. Roughly a decade in which to implement the greatest transformation in human history. That is what the *science* is telling us.

To put things into the context of our recent experience: global emissions reduced unexpectedly in 2020 as a result of COVID lock down by about 6-7% overall. For us to get to net zero by 2030 globally we would have to commit to 2020 scale emissions reductions every year for the next 10 years at least.

The primary focus of transformation needs to be us – ourselves.

Specifically, we need to transform our paradigm for life and for human society – to find a manageable way of living. The ultimate issue is whether our current *design* for life is feasible, whether this is *how* a population of 7 billion and more can live. – to which the answer is no.

It comes down to changing our assumption that we can continue to aspire to growth and prosperity in material terms: to consume, to design for obsolescence, to waste... rather than contemplate and act on the alternative – something closer to what is currently called ‘degrowth’. On the contrary, we have created a narrative of collective abdication of responsibility to market forces ‘beyond our control and agency’ as John Ralston Saul so eloquently pointed out in 2005.

At the core of the self-transformation we need, is a fundamental reframe of our sense of collective *identity* as a species. We need narratives that help us think of ourselves as part of and dependent upon our environment – recall our indigenous roots – and at the same time teach us – all of us – to see our identity as part of a collective – one species – dependent upon the *coherence* of action in that collective – as global citizens. This is about moving from globalization of self-interest to a shared narrative of shared interest, commons and common good – which requires a global mind or ‘noosphere’ as Teilhard de Chardin describes it: a prevalent normative awareness that a cooperative approach is the only way to make interdependence work for each of us instead of against all of us.

My sense is that this is something that world trade and world traders would have a close affinity with – I note the motto of this Company “Commerce and Honest Friendship with All”.

Lastly, to stop the existential problem we are collectively making, – to transform in time – **we need to educate ourselves to *think* and *act* differently** – something I know to be dear to the vision of Sue Algeo, Master of this Company.

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What we face – whether we like it or not – is systemic and complex. Changing human beliefs, notions of identity, expectations and habits on a global scale – across different cultures and societies – and under pressure of time, is an immensely complex task.

With complexity of that order, comes extreme uncertainty. To act – to manage, to design, to decide, to regulate – in a context of such uncertainty, to turn complexity into advantage and opportunity, requires appropriate mindsets and design tools.

We will need to deliberately develop our ability to rise to this challenge in ways that are commensurate with the nature and the scale of its transformations. We need *complexity friendly* business models and economic models, incentives and evaluation frameworks and above all leadership skills and mindsets.

The shock of COVID-19 has shown us what complex adaptive systems and wicked problems look like on a global scale and how incredibly difficult they are to wrangle. It has also shown up how fragile our design for life and economy is. We need education, research and innovation to equip us to deal effectively with the emergency we face – with a common language and understanding, together. Ultimately this is about working ‘with’ systems and ‘in’ them to induce transformation outcomes grounded in places, in cultures, in value chains, and in people so that they are inclusive, sustainable and effective.

So, what does this mean for world trade?

I am speaking to you now as business owners and as entrepreneurs as well as global citizens.

Climate emergency, for world trade, spells disruption... and ... transformation. The question is: which will come first and how will our individual and our collective decisions determine that.

I am going to take a look at this from a strategic risk perspective. Thinking in terms of strategic risk – seeing climate change in these terms – from a business perspective – is an action inducing framework.

I am defining strategic risk here as a risk to the survival of businesses as a consequence of their incoherence with evolutions in the external world.

I ran a quick analysis over what I understand of the core components of world trade and I came up with six major areas of strategic risk for businesses in the ecosystem, both as an outcome of physical risk – climate change effects – and

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what is called transition risk – the effects of necessary action to stop and reverse global warming. These have to do with demand and supply, with the flow of goods through transportation, with storage, with information architecture, regulatory frameworks governing trade and with the resilience of business and industry model design. All of them are existential for some or many businesses since they identify incoherences between existing business models and future contexts that arise not only by failure of core competencies and assets, but also a result of changes to the underlying needs or demand that drives world trade.

Broadly these are areas of extreme structural tension between current business models and success factors and future market conditions, impacting one or more of:

- What is traded or can be traded
- How it is traded
- What happens to it while it is traded

Let us take for example the core components of demand and supply.

1. Demand

- Global trade depends on resources being unevenly distributed across the world, therefore requiring the mechanics of trade to provide people with access to the basic ingredients for living well.
- Societies and political systems are relatively stable and support productive activity which in turn ensures sufficient wealth to sustain consumer buying power
- Employment in productive activity is normalized in most countries as a central focus of human life
- Consumers and communities everywhere appreciate access to goods and services from all over the world and are willing to pay – goods from elsewhere are considered appealing or even convey a sign of status and wealth
- Manufacturers are keen to find the best value for money and hungry for low-cost production / supply to maximise margin

In a 2 plus degrees of global warming future, business models based on these conditions and assumptions will be at risk since climate change effects will disrupt normal economic activity and social stability, and in many areas of the world, as a result of extreme weather and failure of staple crops, lead to mass migrations and state breakdowns.

- This is a future context in which the extent of danger to human life definitively changes perceptions and public sentiment

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- Acceptability of goods that are not local – particularly agricultural produce – creates strong resistance to global trade practices and a steep drop in overall demand
- New models of production and manufacturing – modular and local – change market dynamics so that less is shipped in from outside
- Synthetics, advanced manufacturing and circularity solve a significant part of the uneven distribution problem

2. Supply

- If we take a look at the other side of the coin – supply – again global trade depends on reliable sources of supply of goods and services to trade – characterized by predictability, reliability and diversity essential to planning and profitability since logistics are structured for maximum efficiency
- Business models and revenue depend on relatively open or easy access trade agreements being in place to keep barriers to entry as low as possible, conditions of trade predictable and goods affordable.
- Currently agricultural products are amongst the most traded in the world
- And trade is concerned with point of sale, modes of transport, safe passage and consignment; everything else rests with other industries and responsibilities
- Again in a climate changed future context, supply is simply not reliable and stable enough to sustain profitable and insurable global businesses in many areas, particularly agriculture; major sources of affordable industrial manufacturing like the east coast of China will be under water and the introduction of carbon pricing and border taxes will drive the cost of goods made with high emissions footprints through the roof, creating stranded assets. Scope 3 emissions associated with production will be a necessary disclosure for all supply and require end to end responsibility and tracking. Moreover food security and rare metals security are likely to prompt national protectionism, with security measures and military intervention overriding trade agreements to protect resources in national interests

The situation is similar on other dimensions of the world trade ecosystem such as transportation – what I have called ‘Flow’ – and storage:

Pressure to operate with zero carbon footprint – governing direct and indirect emissions, enforced by regulation and pricing; competition driven by those who have acted early enough to have solutions at scale in play; and significant ongoing or intensifying disruption from sea level rise and changed weather patterns, increased heat in summer, unpredictable storms in winter, insurability close to zero and spikes in costs for cooling and regulatory compliance.

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With respect to Regulation, businesses designed to be successful within the current context of trade friendly regulation, relatively low barriers to entry and reasonably predictable pricing with little or no inclusion of externalities, will find themselves uncompetitive in future contexts of penalties or exclusions for goods and services that cannot show independently verified provenance and governance of emissions right through the supply chain, aggravated by local protectionism as resources come under extreme stress. Resiliency measures are likely to be introduced – similar to solvency measures, forcing the redesign of supply chains and value chains for greater redundancy, circularity and anti-fragility.

To these I would probably add a seventh area of strategic risk that I will call: Moral Hazard - or the Legacy risk Businesses currently act with a present tense, self-interested, short term profit maximization logic, where the problems of future generations are out of sight and therefore out of mind (other than in rare places like Wales, where intergenerational legislation is in place).

How will that be viewed in the future, by the generations that are taking Fridays for the Future online while home schooling in lockdown?

Think about the analogy of an asbestos case, brought to court 40 or 50 years on from board decisions to overlook or downplay a long-term hazard. Future generations looking back at our decision making in these years, will note that we do have all the information to know that we are condemning their safety and their prosperity to a very uncertain outcome, and will likely judge us as both morally deficient and criminally negligent given the privations and risks they will be living with as a consequence of our actions.

This seventh area of strategic risk is about incoherence between current business models and future sentiment.

What damage that will do to businesses hoping to still be in the market in 40 years is incalculable but imaginable.

Now, in sound governance and business management terms, if you know risks to your business of this magnitude are possible, no matter how plausible they may be, you have an obligation to address them, not least because the inclination to focus on plausible things, tends to result in slow responses to change, which in turn intensifies the risk. In fact company directors have a legal obligation to understand and act upon such risks.

So, there are two things here: what and how

What to do about climate change if you are in the world trade business? – and how?

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And more importantly, from my perspective, how could world trade be part of the solution and not the problem – indeed take a leadership position in the field of climate action?

Strategic risk is most helpfully met with strategic innovation, by which I mean innovation that is designed to produce rapid, deliberate learning and action to generate options, alternative business models and solutions for world trade to:

- a) find ways to keep trade going in a climate changed conditions and
- b) contribute as much as possible to decarbonisation across the board.

In the case of climate, choosing to innovate now, ahead of extreme disruption, to prepare to do business in a changed future and contribute to avoiding the worst of its effects, has the beneficial effect of making your businesses more resilient, regenerating the environment thereby reducing the underlying risk, protecting or renewing the supply of resources and the value of assets. Most importantly it offers the opportunity to shape the architecture and the conditions of an alternative global system of human economic activity capable of living within planetary boundaries. This is a first mover advantage, I would argue, currently wide open and of great interest for a number of reasons, not least with respect to the risk of moral hazard.

Let me come now to the what and the how, and take a little time in this lecture to show you the world through the eyes of an innovation agency working to catalyse systemic change.

If I can frame this from the perspective of a board of directors: how does one go about transformation of an existing business, successful in the current market and with little spare resource to invest in non-revenue generating activity – and on account of an unquantifiable possibility of future catastrophe?

I referred to taking a strategic and a systemic approach to innovation. What does that mean in practice? I am going to break it down into an ABC – capital allocation, a portfolio approach, and systematic learning

A) Optimal capital allocation to strategic innovation

First of all, it starts with a commitment of resources, dedicated to the purpose of business model resilience and renewal.

How much is your business worth to you – e.g. gross annual revenue, assumptions about projected revenue base on current market conditions? And how well prepared are you for disruption – on the scale that we have experienced last year and this as a result of COVID? The higher your confidence in self-transformation (self-insure), the lower the percentage of gross annual revenue you might want to commit; the less prepared you feel, or rather the

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more you are locked in to existing ways of doing business, the harder you are going to find it to change, and therefore the higher the % of annual revenue should go towards investment in innovation. You can think of the investment you would commit to innovation in these terms as a risk management premium.

B) Compose a portfolio of strategic innovation options

Secondly, innovation is key to transformation, but not in the way we have been doing it. The classic funnelling of ideas to select one or two in which to invest as winning bets will not service us well here, nor will incentivisation of individual solutions for their own sake. Transformative, systemic change means investing in innovation in a very deliberate and specific way. It starts by working out from an understanding of the specific risks your business faces and choosing to de-risk lock-in to the status quo by acquiring a spread of innovation actions or options – learning ‘positions’ if you like – in the form of innovations that will help you learn how to adapt your business to a changed world. This requires a portfolio approach – not a portfolio in the sense of an aggregation of pure financial puts to spread risk in volatile markets, but a deliberately composed spread of innovations that are unique, context relevant, embedded mechanisms for learning, sensemaking and problem solving. Innovation activities can be investment in start-ups, participation in research or implementation projects, strategic alliances with organisations developing new technologies or innovative financing mechanisms, regulatory sandboxes and so on. What you are doing is casting wide and deep, engaging in multiple simultaneous initiatives and connecting them up to understand how to induce the transformations that are necessary and to equip yourself with the resources, the partnerships and the pathways to achieve that

C) Decision support

Thirdly, the value of a strategic approach to innovation is to leverage your portfolio to produce business intelligence and generate real options for scale up and further investment. This is achieved by conducting a process of deliberate learning from the experience that each innovation option can provide, and working with that insight to generate knowledge and partnerships to enable business transformation.

In the case of the businesses represented here, many of the risks you face are transnational and solutions for business model renewal will have to be transnational. Collectively your efforts in this regard could influence the entire global trade architecture – to create real options for global transformation of the order we need – and indeed that is what we need of you. I will come back to this point

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I would like to illustrate what such a portfolio would look like to manage the risks posed to world trade by climate change (see slide).

Here is how I would compose a strategic innovation portfolio for world trade businesses, based on what I know is out there.

To manage disruption and changed expectations for transportation for example, I would take positions in

FLOW

- Alternative energy sources for shipping – windpower Bound4Blue, Flettner rotor, ES/Orcelle
- Alternative energy fuels for aviation – biofuels (SkyNRG), hydrogen (Airbus)
- Alternative materials for shipping containers – CocoPallets
- Waste and bilge water sustainable management with algae
- Alternative transport mechanisms to reduce exposure to aviation emissions – hyperloop
- Green steel manufacturing – scope 3 emissions in the materials used to make ships and planes
- Hydrogen fuel

To learn about and prepare for emerging markets and new approaches to SUPPLY and DEMAND – the redesign of trade – I would make acquire access to:

- Modular and circular manufacturing – Slovenia plastics production
- Bioeconomy production – local organic alternatives to major commodities
- Advanced manufacturing – 3D – to provide goods locally and on demand (trade in materials rather than manufactured goods)
- Development and testing of 3D business models – combining multiple streams of production and consumption – e.g. Coffee for Parisian cafes – shitake mushrooms – Nike, Garnier, Timberland; Sundrop Farms
- Smallholding agriculture and local markets
- Multi-agent Artificial Intelligence to optimize agricultural production and supply for low/zero carbon emissions – Petr (Russia)

To anticipate regulatory changes and physical disruptions affecting storage sites and infrastructure I would partner with innovators working on:

RESILIENCE / STORE

- 4D printing – MIT – for resilient materials
- Nanotech for resilient materials (wind, heat, water resistant)
- Biomimicry – e.g mycelium fibres for manufacture of buildings and structures to create create flexibility and resilience, temperature control

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- Wood in construction for warehouses – Woodoo, RISE (nano-crystallisation of lignine) – also benefit of acting as a carbon sink
- Disease resilient seeds and plants - CIMMYT

To build organizational competencies and alliances ahead of disclosure requirements and competition in smart systems, with a view to financial as well as regulatory resilience, I would include innovation options in:

REGULATION

- Provenance tracking for goods in trade – digital signature and distributed ledger for open and transparent disclosure and tracking – Everledger
- Short sequencing DNA analysis to check for provenance from zero emissions production (organic materials) at point of sale, shipping and border transfer – Oxford nanopore
- Data analytics – internet of living things – and digital twins to plan, model costs and reserve according to carbon prices – AI
- Global carbon price administered and traded through Ethereum/ blockchain
- Financial innovation – securitization of future value of land and trade, offtake agreements

To some extent what I have described so far are substitutive – exploring solutions to decarbonize global trade without fundamentally changing flow of goods. But the world also needs to change demand and change the shape of the market – i.e. move from footprint to handprint – and the alignment of global trade to that end is both essential and a game changer.

This is where the seventh strategic risk I identified comes in. It would be important for a strategic innovation portfolio for the world trade industries to invest in innovation that responds to our collective need for world trade practices, expectations and design to change the paradigm we live by, thereby contributing to the regeneration of the planet as a whole.

Trade is an industry that profits enormously from the mechanics of a high carbon emissions world. In the immediate future, however, that may become less acceptable globally – with the Biden administration determined to make a difference, Antonio Guterres stepping up the call for global action in the run up to COP26, and the EU moving already on the primacy of climate change. Now would be the time to act to demonstrate the power of world trade to make a difference.

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This is about thinking systemically – participate early and learn, shape new sources of supply, different mindset for demand, capabilities for thinking and acting differently. Examples of relevant innovation in this sense....

- Wood in construction and Trees as Infrastructure – City of Madrid, New European Bauhaus
- Biomimicry
- Biodiversity protection and regeneration – woodlands, wetlands, urban forests
- Education of women and girls (drawdown.org)
- Geo-engineering
- Water capture on shipping
- Standards setting – measures, rewards, incentives,
- Open interoperable data infrastructure – IceBreaker One
- Humanitarian infrastructure and relief (anticipate climate refugees, reduce political and social instability, respond to sudden surges and concentrations in demand)
- Nutrition – to reduce conflict (Jacqueline McGlade)
- Degrowth and Beyond GDP – new ways of measuring value and designing the parameters for economic activity
- Enhanced VR – alternative ways of experiencing goods and services from elsewhere
- Decarbonisation of data centres
- New structures for capital investment at appropriate scales to catalyse systemic change – e.g. a shift from looking for single ‘bankable’ assets to looking at whole cities undergoing urban transformation as investable assets – what we call in CKIC Transformational Capital

In addition to accelerating the development and integration of innovations in materials, modes of transportation, production and consumption, international trade can offer a major contribution to emission reductions and to achieving a sustainable future, but for that to occur, climate and trade policies must be aligned. At present they are largely in conflict.

I would refer you to the excellent recommendations of the Economist Intelligence Unit report of 2019, for example, which identified seven opportunities for boosting climate friendly trade flows through trade policy: (slide)

- Removal of tariff barriers on environmental goods & services
- Removal of non-tariff barriers on same
- **Most urgent:** Removal of subsidies on fossil fuels
- Border adjustment carbon taxes
- Green procurement

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- Approval of non-discriminatory renewable energy subsidies to accelerate renewable expansion. Note the potential dangers of Investor-State Dispute Settlement (ISDS) clauses in Trade Agreements, which historically have been used to perpetuate the role of fossil fuels in some economies.
- International co-operation at a completely different scale and quality of intent – as we are going to need it far more than ever before.

There are also first mover good practice examples now emerging, for example the ACTS agreement between Fiji, Costa Rica, New Zealand, Iceland and Norway.

And I am delighted to note that the European Commission yesterday published a new directive on EU trade policy that names as its first objective transformation of the EU economy in line with its green objectives, including the ambition to achieve climate neutrality by 2050 and a proposed introduction of carbon border adjustments. Not yet ambitious enough but a good start.

CONCLUSION

I mentioned the 'a, b, c' of strategic innovation. There is a 'd' – that reflects very the ACTs example I referred to.

Transformation can be achieved, must be achieved through alliances and strategic partnerships – radical collaborations – to learn, to maximise value and the effectiveness of innovation, to encourage progressively bolder ambitions for emissions reductions, and ultimately to make together a new paradigm for trade and the global economy.

This includes radical collaboration with the state wherever the political landscape permits – working with public authorities and public institutions to direct attention and interventions – very much in the model of the entrepreneurial state described by Sekera and by Mazzucato. There are opportunities here to create international standards and to set examples and benchmarks – to create the 'rails' as it were for net zero by 2030, and to make new markets with NZ2030 compatible business models, just as the invention of shipping containers created the rails for the global logistics industry.

The world needs bold acts of leadership and global-mindedness – worldliness repurposed to collective good – to purpose collective transnational solutions for transnational problems. Robert Schuman's words from 1950 are a salutary reminder: "World peace cannot be safeguarded without the making of creative efforts proportionate to the dangers which threaten it."

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The etymology of trade refers to 'a manner of being' – not simply the goods passing through our hands but the sense of self, identity and capability that those handling goods and enabling trade signifies – a role in the world of connecting, enabling, providing the pleasure of discovery and acquisition.

I would like to conclude with a reflection on the fact that our greatest challenge – a timely response to climate change - presents an opportunity for the 'manner of being' associated with world trade and world traders to demonstrate what is needed – in terms of a worldly mindset, an appreciation for complexity and uncertainty and the importance of thinking systemically, managed with nuance and skill through relationships, connections and understanding of interdependencies.

My message to you is: this is coming – the risk and the opportunity; the regulation and the pricing and a gathering geopolitical will – regrettably late, but coming nonetheless. You still have capital available and in significant amounts. Use it. At very least invest in the innovations that will allow us to trade in a world of storms and heat, higher seas and uncharted change in our environment. But at best, use it to bring to life a world of trade that regenerates and cools the planet and in doing so expresses the best of human solidarity and community.