## The 4<sup>th</sup> Propulsion Revolution

[1475 words - 11 minutes]

Ladies and Gentlemen good morning.

First of all, I must thank Class NK for such wonderful hospitality for hosting last night's reception and dinner.

Dōmo arigatō

Friends - we are entering uncharted waters, what the World Economic Forum calls, the Fourth Industrial Revolution.

The underlying basis for this fourth industrial revolution lies in advances in communication and connectivity rather than just technology.

These new advances have great potential to continue to connect billions more people to the web, including through new satellite networks to every ship and every

port in the world. Thus, we have the potential to drastically improve the efficiency of business and organizations and help regenerate the natural environment through better asset management.

This however poses fundamental questions for the global workforce with digitization, autonomous vehicles and artificial intelligence disrupting almost every industry. And the breadth and depth of these changes herald the transformation of entire systems of production, management, and governance.

We are seeing all sectors and all parts of the world being impacted by this revolution. We are also seeing unprecedented strain on political systems and the leadership of nations. And finally, we are starting to see the implications of a changing climate.

The world has already recorded a four-fold increase in major flooding events since 1980, and a doubling of significant storms, droughts and heat waves. Our thoughts and prayers at this time are with the families of

the crew of the cargo vessel Jia De, which sank in Tokyo Bay last Saturday, and all those affected by Typhoon Hagibis.

We are all aware that in April last year the IMO concluded that ground-breaking agreement on CO2 emissions, "The Paris Agreement for Shipping". This heralds the most important transformation to face the maritime sector since the transition from sail to steam. But it is more than a mere change in the way a ship moves through the ocean, it represents the catalyst for a fundamental transformation in the business of shipping, something that we at the International Chamber of Shipping call the 4<sup>th</sup> Propulsion Revolution.

Industrial revolutions are not unique to the maritime sector but translating words of an agreement into action falls to us all – to engage actively, to identify solutions and to deliver a sustainable maritime sector for the future.

We all know there are no clear solutions, no silver bullets that will enable us to easily transform our industry.

I know that many of us in this room have people looking at how change is going to impact our sector. Indeed, I have read many of the reports from our class society friends. Many of you also see that in other industries and are seeing first-hand how traditional business models are being turned on their head.

Now we all know that change is coming and as in all business the winners will be those who identify the opportunities and make the right decisions. The evidence is clear we need to act now, for if we do not, we will be at the mercy of forces that we may not be able to control.

But ladies and gentlemen I still wonder if there is still a level of complacency amongst many in the maritime sector. For too long we have kept ourselves to

ourselves, kept our head down and told everyone, including ourselves, that we have a good story to tell.

It is true that shipping is the most efficient method of moving goods and people around the globe and we have made significant efficiency gains with more to come. But if we are honest - other sectors have improved efficiency much more than shipping. Just look at the exponential increases in the efficiency of the IT and communications sector. There is even a law that covers this - Moore's Law – which states that;

"The number of transistors and resistors on a chip doubles every 24 months". That represents a phenomenal rate of improvement.

Now we are starting to see many innovative solutions taking shape in the maritime sector and we even have the introduction of zero emission ferries being placed into service. But this is just dipping a toe in the sea to see how warm the water is. The reality is that we need to significantly increase the speed and scale of action.

Whilst it is of course for the International Maritime
Organization, our global regulator, to set the standards
and finalise the 2050 strategy, we are starting to see our
businesses being impacted by other regulators and
other actors. As we look to the future, issues
surrounding our licence to operate will become ever
more present.

The United Nations in New York is facilitating negotiations for a new legal instrument to provide protection to marine Biodiversity in sea areas Beyond National Jurisdiction, or as it is more commonly referred to, "BBNJ".

Other actors such as the World Bank, the EU and the OECD are talking about the introduction of carbon pricing mechanisms. Indeed, we are even seeing the energy sector openly calling for a clear and significant carbon pricing signal, something unheard of a few years ago. As I am sure many of you will be aware this is

something that the energy sector came to after much soul searching but reflects a realisation that without a carbon price signal their business model will not survive. And the Chinese government have been trialling different methodologies to identify the most efficient carbon pricing mechanism.

In finance the Task Force on Climate-related Financial Disclosures (TCFD) led by Central Bank Governors, the UN and the G20 is starting to have significant impact on the wider finance sector. Indeed, this is pressure being placed on the finance sector by its regulators, which in turn has spawned the development of environmental, social and corporate governance reporting (ESG), which will in time impact the cost of finance.

In the maritime sector we are seeing the development of things like the Poseidon Principals. Indeed, one of the architects of the Poseidon Principals, Michael Parker of Citi, recently addressed a forum in Greece where he said of the shipping sector: "Change is coming quicker than anyone can foresee and decisions that have to be

taken in the next three years will determine whether the industry is viable or not."

He is not alone voice, Mark Carney the Governor of the Bank of England recently said, "Companies that don't adapt will go bankrupt without question."

So, ladies and gentlemen we can spend the next few days and future meetings talking about technicalities and incremental change – important though that is but we also need to seriously look at how we design and deliver the fundamental changes that will be necessary if we are to meet the challenges of our 2050 commitments

We must all work together to mitigate the risk inherent in transformation. Risk is our common language. And we will need to reach beyond our own community to ensure that the risk is equitably allocated and priced.

We need to understand what is happening outside of our bubble, to challenge ourselves and to build new partnerships that will enable us to address the 2050 agenda.

If you think there is political pressure now – watch out as this is only set to increase. We as the leaders of the industry need to get ahead of the curve, we need to shape the future of shipping, before someone else shapes it for us.

The shipping industry is about to embark on a significant transition on 1 January 2020 with the introduction of the new sulphur regulations. But beyond this to 2050, where we are faced with a journey where there are no maps, there will be much that is new, and we only see a myriad of paths with significant consequences.

Without a clearer understanding of what the future fuel mix might look like, how can we make the right investment decisions? Will supply meet our needs in terms of availability and at a price that will actually facilitate transition?

What are the right technologies and where will we need more investment? How do ports need to operate in the future, while adapting to rising sea levels, increased extreme weather events and new technological requirements?

What do we need it terms of wider infrastructure and is there a role for new players in the market? How will the legal framework of our operations develop?

These are just some of the questions that will need to be addressed. The 4th Propulsion Revolution is an opportunity for us all to power the global economy and our businesses in a more profitable and sustainable way; and this is the conversation that the Tripartite should be having as we look to shape the future of shipping.

Thank you