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A few months ago, my daughter asked me a very simple question: "Who are your heroes, dad?"

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I said, "Well, besides my father ..." hoping she would get the hint.

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(Laughter)

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One of my big heroes is Malcom McLean. I realize that Malcom McLean is not really known on social media today, but, in 1955, McLean invented a metal box that changed the world: the shipping container. That invention reduced the costs of shipping cargo by more than 90 percent, and as a consequence ... global trade increased 200 times and lifted hundreds of millions of people out of poverty by connecting them and their goods to global markets at very, very low cost. I'm sure McLean's invention started with a big dream to transform the transportation industry, and I know it took a lot of attention to details to change all of the equipment of all of the transportation companies worldwide to benefit from this container.

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To me, that is what leadership is all about. Dreams that inspire people to pursue opportunities that may seem impossible -- and details. Because without attention to the details, the dream will just stay a dream.

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McLean's dream was to transform the cargo transportation industry by making it affordable. It is time to transform it again. We urgently need to make it sustainable. More than 9 percent of CO2 emissions globally come from transporting goods around the world.

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So what is the dream? In 2018, the management team of A.P. Moller - Maersk, the global shipping company I lead as a chairman, made a commitment to make the company carbon-neutral by 2050. For some people, 2050 sounded like a long time into the future, but in fact, this

was a very ambitious dream for a shipping company. To be carbon-neutral by 2050, we needed to invent a zero-carbon container vessel by 2030. Because then, it would take roughly 20 years to replace all of the 750 vessels that we operate. So the dream was truly big and really inspiring.

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But to be honest, in 2018, we did not know how to do this. We had to work hard on the details. Now at that time, we had already focused a lot of attention on reducing CO2 emissions from shipping. In fact, we had achieved more than 40 percent reduction per container moved since 2008. That was done by building bigger and more efficient vessels, and by slow steaming, which means sailing the vessel slower so it consumes less fuel. But we were reaching the limit. Obviously, you could sail so slow that you don't sail at all, and you would save all of the CO2 emissions.

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(Laughter)

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But that didn't seem like a good solution. Now some of the first humans who sailed the big oceans, the people from Polynesia, had figured out zero-carbon shipping by using sails, and it is true that sails can reduce the fuel consumption somewhat, but it cannot deliver on the efficiency and accuracy needed in today's global supply chains. Another alternative is batteries. But for the large vessels sailing the big oceans, the batteries would take up 60 percent of the capacity of the vessel. Some shipping companies started ordering vessels based on LNG, liquid natural gas. LNG is a fossil fuel, and it will never lead to zero-carbon shipping. Slow steaming, sails, batteries, LNG -- none of it would make us be carbon-neutral.

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So what else? Well, we knew we had to look for other solutions, and we realized we couldn't do it alone. To help us find a solution, our main shareholder, the A.P. Moller Foundation, donated 400 million Danish krone to create a global center for zero-carbon shipping in Copenhagen. That center would bring together companies and specialists from all over the world, not just from the transportation industry, but also from energy, from chemicals and engineering.

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And now, less than three years after our big dream, we have found the solution. It is called "power-to-X." Now power-to-X is not a new technology, nor did we invent it. It is a combination of known chemical processes to convert green electricity to green fuel. First, you convert the

green electricity from solar or wind to green hydrogen. That is done through electrolysis. And then, the green hydrogen can be converted to various types of green fuels through chemical processes. The benefit of power-to-X is that it produces a green fuel that is liquid at normal temperature and can be used in a combustion engine. So instead of spending 20 years to replace all of our 750 vessels and create a big pile of waste, we believe we can retrofit existing vessels by adding a combustion engine designed for green fuel, and with that, achieve zero-carbon shipping much, much earlier.

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(Applause)

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On top of that, power-to-X is actually a very nice solution for one of the biggest problems in renewable energy systems: the storage problem. When there's too much wind and sun, you can convert the unused electricity to a liquid green fuel that can be used in many different industries.

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So what are the challenges? Well, I often hear the same concern when it comes to sustainability. "Can we afford it?" And yes, it is true that this green fuel is more expensive than the bunker fuel we use today. In fact, it is two to three times more expensive with current technology. Like always, we need to scale these solutions to get the cost down. But even if the green fuel would be two times more expensive than the bunker fuel ... It should not be a showstopper, come on. Even at that price, a pair of sneakers, transported from Asia to the US or Europe, would only cost five cents more.

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So for me, the argument around affordability is just a bad excuse for not making the necessary decisions and investments.

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(Applause)

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And if we had a price on CO<sub>2</sub>, let's say around 150 dollars, the affordability argument would disappear. I urge governments to show leadership and implement a global price on CO<sub>2</sub> now.

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(Applause)

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Because with that, we could focus all of our attention on the real issue, which is not the price, but the scale. At Maersk, I asked the following question: "How much green electricity do we need to fuel all of our 750 vessels with green fuel?" Our fleet today consumes 10 million tonnes of bunker oil. To replace that with green fuel, we estimate that we need 220,000 gigawatt-hours of green electricity. That is the equivalent of 10 percent of the installed base of solar and wind in 2019. And Maersk is 20 percent of the cargo shipping industry. So to fuel the cargo shipping industry alone would consume 50 percent of the entire installed base of green electricity. And that's just cargo shipping. In other words, we need a dramatic, exponential scale of installations of solar, of wind, of hydrogen production, of green fuel production, to solve this problem. We estimate that the total investment will be in the neighborhood of two trillion dollars, which, granted, is a lot of money. But actually, it is the equivalent of four years of capital expenditure in the oil and gas industry today.

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(Applause)

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I predict that for the next 10 years, the demand for green fuel will be significantly higher than the supply. Isn't that wonderful? Higher demand and supply normally means great business opportunities for everyone who chooses to participate, and it proves one of my key assumptions in today's world: it has become good business to invest in sustainable solutions.

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(Applause)

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My conclusion is very simple. We have the technologies needed to create a sustainable future. What we need is leadership, leadership to get us there faster. On the first of July, 2021, Maersk ordered the first vessel designed for green fuel. It will be delivered in 2023. Only two months later, we ordered another eight large vessels and made our first investments in green fuel

production. What seemed to be an impossible dream only three years ago is becoming reality now, seven years ahead of the original plan.

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(Applause)

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This is a leadership moment. It is time for us to pursue big dreams, even if they seem impossible. And it is time for us to collaborate around the critical details so we get to a sustainable future much, much faster.

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Thank you very much.

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(Applause)