Wärtsilä CMD 2021 - Transcript

Imagine a world where we could power our societies with 100 percent renewable energy, even when the Sun isn't shining and the wind isn't blowing. A world where ships were digitally connected and powered by green fuels, ensuring safe and sustainable commerce around the world. Our time demands that we go beyond imagination. Wärtsilä has been preparing for this moment for decades. The energy and marine sectors need to perform while transforming. We're uniquely positioned to shape decarbonisation on land and at sea, leaving no one behind. We are continuously shaping the decarbonisation transformation with the ultimate goal of reaching a 100 percent renewable energy future. With deep knowledge and expertise in modelling power systems, we help customers, cities and countries find their optimal future-proof energy mix. We balance the grid with our market leading flexible power plants, energy storage and energy management systems while preparing for sustainable fuels that will provide the final push to reach 100 percent renewable energy. We can already today set shipping on a clear path towards complete decarbonisation. Our know-how and technology are the foundation on which we enable a digitally connected and highly efficient fleet capable of running on sustainable fuels. Our solutions are upgradable and our agreements are outcome based, allowing our customers to navigate with certainty through an era of change. Awareness of the importance of collaboration and a powerful sense of responsibility drives us to join forces with like-minded partners across the globe to push the boundaries of innovation.

Our customer success is our success. With Wärtsilä life cycle services, we maintain and optimise our customers performance. This support encompasses our technology, software and service expertise, as well as our holistic view and understanding of installations. The largest network of maritime and energy experts in the world provide us with the expertise and passion needed to decarbonise the world's fleet and set our societies on a path towards 100 percent renewable energy.

Good afternoon, everybody, and welcome to Wärtsilä Capital Market Day 2021. My name is Hanna-Maria Heikkinen. I'm in charge of investor relations and I'm super excited to host this event today. We published our financial targets yesterday and today we will discuss our strategy and Wärtsilä future direction in a more detailed level. Our agenda has been divided into two main parts. We will start with the Wärtsilä's strategy

which consists of two main themes: Transform and Perform, and our CEO Håkan Agnevall will go that through in a detail level. After that, our CFO Arjen Berends will discuss our financial targets and actually our plan to reach those targets. After those presentations, we will host a Q&A session. Then we will have a small break, and after that break there will be deep dives to two of our segments. We will start with marine power and then continue with energy business. After those presentations there will be another Q&A session and also Håkan and Arjen will join that. Please remember that you can ask questions via the chat already during the presentations.

Time to start, please, Håkan.

So it's a privilege to be here with you today, both physically and on the line. And as an incoming CEO, I have had the opportunity to start meeting with customers in different parts of the world on energy side, on the on the maritime side. I start to meet with our team members also start to interact with politicians and policy makers and also with you, our investor community. Some reflections from my side, I mean, first, COVID continues to to significantly impact Wärtsilä, both on the maritime and energy side, and it will continue to do so also going forward. But if we look and when I listen to customers, to our employees, we have some pretty exciting opportunities in Wärtsilä going forward. And today we're going to talk about those opportunities. And if I were to sum up my experience 10 months into Wärtsilä of what I feel and what I see. If I sum it up in one word, it's excitement. So what is that we are so excited about in Wärtsilä? And this is what we want to show. Let's look at this. The world is changing, and we are a technology leader in an era where technology is evolving very rapidly and technology and people will help us to get closer, at least to the Paris Agreement, and will help us to evolve in the decarbonisation journey.

And this will give Wärtsilä a real opportunity to support our customer, and this will give Wärtsilä a real opportunity to create shareholder value. So decarbonisation will transform the world. Electric generation will grow with a factor of three and renewables by eight, because renewables are clearly the way forward when electricity generation is growing and the need to grow generation is driven by the electrification of new industries. It's driven by the electrification of transport industry, and that development will only continue. With the increased share of renewables the balancing power will increase significantly and with the fact of above 10x. So that's energy, if we look at the

maritime side, we will see an unprecedented rate of change in the maritime in the coming decades. And it's all driven by the decarbonisation journey. Now, regulations coming in, but there is also a demand side evolving for the green fuels and for the green transport. And in this environment, the good news is that Wärtsilä is a pioneer and a partner for the new technologies that will evolve. We are already today a leader in the traditional, but also in the future fuel, which will evolve a lot about fuel efficiency and fuel flexibility. We are a leader in performance based and outcome based services. On the energy side we have a leading position in balancing both on the thermal side with our combustion engines and with our battery storage, with our energy storage business. One word that you will hear a lot today is power system optimization, because that is what it's going to be in the future to drive energy efficiency and the lowest cost per megawatt hour.

We are also pioneering for other technologies like the electric, the hybrid like fuel cells, like energy saving devices, and there we are partnering up with different players. And finally, carbon capture is coming, and we are also pioneering that space in the marine sector. Really exciting opportunities Now. So a lot of exciting technology. The other positive news, I think we are set for performance and we are well positioned to to leverage the growth when the market is coming back. And then when the market continues to grow, We have defined our strategy. We've been working now for a number of months to define a focus going forward, our road going forward. We have been talking and discussing the Wärtsilä Way, which is our strategic framework, and I will come back to that later on, which is basically the roadmap to the future. And I really want to share it with you. We are evolving our culture around performance, and we are also going to be crystal clear on our capital allocation and work actively with portfolio management. Now, we have a road map, so where do we want to go? As you know, we have communicated new financial targets. If we look on the growth avenue, we are looking at five percent annual organic growth.

And I should say: that is over the business cycle. And we have also communicated our new profitability goals, which is 12 percent operating margin. And then the comparable: Where are we today? We are around six, so we are going to travel from six to 12. Which we think are perfectly manageable. It's forward leaning targets, but clearly achievable targets. And I know many of you are going to ask me, so, Håkan, that's fine but, what about the timing? When will you achieve those 12 percents? And I say it's going to take

us a few years to get there because we are right that six and we want to go to 12. Then setting targets for a global company like Wärtsilä, it's not only about financials, it's also how we can contribute to the decarbonisation journey in a very concrete matter. And there we have recently also formulated our decarbonisation goals. And one is about, and that is the biggest lever, it's how we can contribute to our customers. This is where we have our biggest carbon footprint, our products. What we have said is that we really want to have a product portfolio ready for zero carbon fuels by 2030. Then of course, we also need to walk our own talk and we have also set an ambitious target of being carbon neutral in our own operation by 2030, and that will be a stepwise journey in the coming years.

Good. We are also moving into next phase with Wärtsilä. And we have a proud history, and if we look at the different faces, we cannot go all the way from where we started. But if we look at the recent history, you could say we had one era where we successfully made acquisitions. We grew our service business. We expanded from the engine business into propulsion. Then we moved into to another area where we very much focused on becoming a total solution provider. So we expanded our product portfolio into to environmental solutions, and we made acquisitions in electrical and automation. Coming into 2021, we have gone through a time period with focus on smart marine and 100 percent renewables. And during this time strong focus on on the digital solutions, we also faced negative deviations. Let's be clear about that. That's been action taken. We have created the end-to-end value chain with a very strong ownership of the end-to-end business, and we have also done divestments of the business. Now, when we move into the future, it is about shaping the decarbonisation of marine and energy, and it's about customer focus in this era of change. It's about service focus. It's about technology leadership and technology partnering. It's about organic growth and continuous improvement. So. Going forward, I will talk briefly about how we see our two major industries evolving, and then I will move into the two strategic themes that we have: transform and perform.

But if we start with a quick overview of our industries. Marine will transform with an unprecedented speed compared to the past. We will look at the regulatory environment. IMO set targets for 2050. 2023 new regulations are kicking in that will start to really take bite in the decarbonisation journey. If they are sufficient, that we can discuss, but they will start to bite. And you're all aware of the Poseidon Principles. It's very important for

the financing side. The cost of carbon which certainly involved. We are all aware of EU's Fit for 55 proposal to include maritime in the carbon tax regime. We see there will be regulations evolving continuously going forward. But then, it may be even stronger than the regulatory context, is the business demand for green transport. That will be driven by life cycle life, by consumer brands, profile consumer brands and retailers that want to have green transport as their customer offering or commitment to us as consumers. And it will also be driven by all of these companies, including Wärtsilä, that are formulating the decarbonisation targets, looking through the value chain and wanting to work with green transport as part of that decarbonisation journey. So it's both regulatory and business opportunity.

And technology is evolving fast, and it's going to be about carbon neutral and zero carbon fuels. The carbon fuels will still be there for many years. But it's not only about fuels, it's about electric solutions with hybrid and battery systems. It is about abatement technologies and the new steps into the abatement technologies. But, I would say that are a couple of general themes. One is fuel efficiency. The new fuels estimates all will be two to four times more costly than the current fossil fuels, which will lead to a strong focus on efficiency. The other key element is fuel flexibility and upgradeability. You need to be able to use different fuels depending on where you travel in the world and if you invest in an asset, you don't want to be stuck with stranded assets. And maybe for a vessel, you want to be able to upgrade and shift in seven, eight, 10 years down the line. Now, the other key element is connectivity and data, and this is evolving in all industries, but certainly in marine as well. And vessels are data pools, and we can really use these data pools for the decarbonisation journey in optimizing the whole logistics chain, but also optimizing uptime and reliability. And this is where we see some really great opportunities, also to support the performance based agreement, which is a major theme for Wärtsilä. Cybersecurity, the focus will only continue to grow and we start to see autonomous operations, supporting vessels also going forward.

So those are some of the general trends on the maritime side. If we switch to the energy side. It is the shift to 100 percent renewables, And yes, power systems look different in different parts of the world. In Scandinavia and Finland, we have a lot of hydropower amd nuclear power. But if you look generally, if you take a broad global approach, the big shift that will need to happen is the shift to renewables, wind and solar. The electricity demand will continue to grow. There will be a gradual replacement of coal and

fossil fuel energy generation, for sure. And another theme is that the power systems will continue to be more complex. I mean, the past will be big, centralized generation assets. In the future. We'll have smaller assets spread in the power system, also generating power at different levels of the power system. So it will become a more complex power system, that you need to work with power system optimization to have the lowest energy cost, to have the stability, and this is where Wärtsilä has a role to play. And policy and regulations, I think we all know the commitments, the pledges that has been put out there. We can discuss if they are, you know, fast enough or forward leaning enough. We know EU 2050, US also 2035, 2050, China 2060. Personally, I think that these pledges will evolve, they may accelerate.

And if we talk about the Paris Agreement coming out of COP26, I would, yeah, it's alive, but it's clearly on life support. The technology disruption will be very strong because the shift to renewables, solar and wind will be strong, and that will drive the need for balancing power because the sun doesn't always shine and the wind doesn't always blow and you need that balancing power. Green fuels will also be part of the balancing journey going forward, and digitalisation will create opportunities to optimize this complex power systems that will evolve. Cybersecurity, I think if I say Colonial, I think we all realize how important cyber will be going forward, and this is clearly a critical theme for Wärtsilä. So this is how we see our industry's evolving, and you can see some common themes new technologies, fuel balancing, digital cyber going across the two industries. So let's now talk about the two strategic themes. It's first about transform and then perform. And this decarbonisation transformation that will create a new business opportunity for Wärtsilä. It's accelerating, and we should also acknowledge that it will go with different speed in different sectors and different regions in the world. And this is if we start here, this is a marine industry picture and what we are showing here is some simulations or studies we have done together with DNV. So we have a close cooperation together with them. And on the y axis you see the predictions of carbon neutral or zero carbon fuel and how it is evolving through the years until 2050.

And then you see two curves. The first curve, the steepest one, so to say that is the curve that we actually need to follow if we're going to achieve the 1.5 degree Celsius target The less steep curve or the dotted curve, that is where the IMO regulations, the current regulations will bring us. And then you could have any scenario in between, which is the yellow space, so to say. Now, the key thing here is the fleet owners. They

need to make decisions today or in the close future where they want to go. Because during that lifetime of that asset that they are ordering now or buying now this will change. So the operators, they need to decide who they're going to partner up with for the upcoming lifetime of the vessel. And what will be extremely critical, and when I am engaged in dialogue with senior leaders in on the maritime operators, they want to partner up with somebody that can provide multi fuel capability upgradability because it's going to be a journey with blending of fuels. You also want to partner up with somebody that have conversion capabilities. So that's the maritime space. Now, if we look at the renewable side and I think many of you know this.

I mean, the growth of the renewables will be exponential. And this is the EIA numbers and some of the scenarios that they have. And you can see the share of renewables. Then you should also consider that at the same time, 100 percent is growing threefold. So it's going to be a real growth in renewables. And this is the way forward to create a sustainable future, because the energy sector provides 30 to 35 percent of the world's CO2 footprint today. Now, what is the way forward, how do we achieve this? And then I think, one starting point, there will be no silver bullet in our view. There will not be one simple solution. I mean, green is not black or white. So we're entering into an era with a number of technologies and a number of fuels. And if we start to look on the fuels and they will go both into the maritime space and to the energy space, we can start with the carbon neutral fuels, biofuels, methanol. Then this carbon free fuels ammonia and hydrogen will evolve. Fossil will be around for many, many years, and that will be a gradual conversion and blending will be a major theme going forward. And also, the performance based agreements will be a major way forward to ensure that you meet carbon requirements and fuel requirements. Now, if we then look on specific technologies for the marine side, it's going to be battery technologies, they will certainly be there for certain applications.

Plug-ins, hybrids, there will be different energy saving solutions. There will be optimization solutions both for the whole holistic system but also on the vessel level, and autonomous will evolve. On the energy side it's the growth of intermittent and therefore balancing and energy storage, the battery storage will grow significantly, but so will also the thermal balancing. And the reciprocating engine continues to have some very strong fundamentals because it's an energy generator that is very flexible. It's fast to ramp up and down and can do it frequently, and it has leading fuel efficiency. And

also one thing that we should recognize: I get a lot of questions on this is that thermal and batteries are complementing because they cater to different needs of the power systems. Sushil we'll talk more about that later on. The power system optimization will be very strong. Because when you have all these different renewables, you have some thermal, you have battery storage. how do you bring it all together to make sure you get the lowest energy cost at all times? And also that you have a system that is reliable and stable. Now, a lot of technologies. The good news, Wärtsilä is very well positioned in this, the technologies needed for the decarbonisation. I mean, already today we are leader in the carbon neutral and zero carbon fuels.

And as I said. We are already today ready with methanol and biofuels. We have been in methanol since 2015. We have also earlier communicated our development portfolio and we will come with ammonia concept by 2023 and the hydrogen concept in 2025, so we will be ready. Then we need to recognise we are a player in an ecosystem system, fuel needs to become available, and the whole ecosystem needs to move. We also provide energy efficient fossil fuels and that will still continue. But the important element there is to continuously work fuel efficiency, drive down methane slip, etc. And then the power system optimization. We are leaders in that given our decade long heritage from operating in power system, actually in fairly challenging environments. We are pioneers in marine electric drivetrains. I mean, we did some of the first hybrids we are cooperating on the complete electrics. We are now pioneering as we speak. Marine carbon capture, carbon capture is at land, but we are bringing it into the marine side. With Voyage we are also pioneering the marine optimization and route. We had the world's first digital port call, Tanjung Meds months ago. Really exciting step. And then clearly we will be partnering for other technologies like fuel cells, like air lubrication systems, et cetera, et cetera. And what we provide to those partners is our competence to marinize things, to bring things into the marine space and all, I would say, industry leading service network.

So, we are very well positioned, so how do we deal with this in a very practical way? I mean, if we want to lead the decarbonisation, we need to have a strong commitment to R&D and then we would partner up because customers are looking to go green. But they want to have a dialogue with somebody that can talk and have knowledge about basically all different solutions. And these are heavy, capital intensive investments. Very strategic. 20 to 30 year lifetime. And there is no solution that fits all. And this is where

we are evolving our competence to basically talk about all solutions and have a balanced discussion about what is the best fit for you. To have that credible discussion, we will have a fairly broad solution. We will offer most solutions. And how we then solve that from a practical view is that we will focus on certain of our core technologies, which evolves around the combustion engine, battery and digital, and then we will partner up. And what we get from that is the following. One key takeaway: We have been working for decades on many of these new fuel technologies, so the new fuels are not new to us. We can actually do the conversions and we see this now as we are evolving and testing, we can convert to the new fuels.

We limit the changes of the engines. We also see good, strong synergies between the solutions in the marine space and the energy side. So we can manage these transformation, major transformation on a strong commitment to R&D, but a fairly stable commitment to R&D, around three percent of our sales. Ok. So sum it all up. A lot of exciting technology is coming. There is no silver bullet. Wärtsilä is very well positioned and we can manage this transition with a robust but stable commitment to R&D. Now, we're going to move from the transform to the perform. And here it's two elements.

One is to leverage the market recovery and the another one is around robust execution. And this is how we see some of our growth opportunity. Wärtsilä is very well positioned as number one to three in core global markets. We will focus on organic growth and decarbonisation and services and then complement with partnerships. And if you see here, this is where we see the growth potential on the top line. Energy, very much driven by services, the balancing, and both on the thermal side and the energy storage side, it's about the services. And the marine power side, the fuel flexibility. On Voyage, it's turning around. Part of Voyage, 60 to 70 percent of Voyage is a hardware business and that we are turning around. Then we have a software business which is growing very rapidly.

But that is why if you blend that the total growth is not as high as in marine power and energy. And on the marine systems we have benefited a lot from the scrubber boom. But now it's a more, you could say, stabilized market. Carbon capture will come, but that is further down. Then we have some growth in softline solutions. But overall, I would say marine systems are pretty flat. On the non-core businesses, we will continue with active portfolio management. And taking a sharp looks on strategic fit and, you know, the

value creation potential, and I think we have shown that we are managing actively our portfolio. I mean, in 2020-2021, we have done six divestments. Now turning to the real growth opportunities, and here I'm going to give you three examples from the services business because service is a major growth generator and this is showing some of the potential that we have on the marine power side and in the transactional space. We can see already, I mean, today, about 30 percent of our customers are what we call smaller accounts, 70 percent of the larger accounts, and you can see the spend rates here. Spend rate per kilowatt. And you can see the difference between the 70 percent of the bigger and 30 percent of the smaller accounts. And here we see a growth potential and this growth is actually happening right now as we speak because we are leveraging digital solution, creating more intelligence about those customers to serve them better.

And it worked with automated lead management. We are redefining, tuning our offering to the needs of those customers. And we have improved and are improving our logistics. This is a really exciting opportunity. Another theme is what we call moving up the service value ladder. And this is moving to agreements and performance based agreements. And you can see this is a little bit similar logic. I mean, you could say that 25 percent of our installed base today is covered in agreements and performance based. The rest is more transactional. And you can see the differences in spend. I mean, if the baseline transactional is one as we move customers up the service value ladder, it's a factor of two to five. And here we have some really interesting opportunity. Once again, it's about what opportunities digital solutions bring. And using data, artificial intelligence to analyse and to drive the performance based business in the value creation in a creative way and also managing the risk. And we have the successful proof points. Both in the marine and on the energy side. Third growth theme is that the green transformation will also generate opportunities for retrofits and conversions. And here we made some estimates, two and a half billion market. This is our own installed base of two stroke and full stroke. And you see the marine side, you see the energy side. And the marine, it's a conversion from heavy duty to LNG and anti-green fuels.

Energy, it's in two-step. It's from heavy duty to gas first and then later on to green fuels. And this we estimate, this market potential, to two and a half billion over a time of five to 10 years. So those were some, what we think, really exciting service opportunities, both in marine and energy. If I now move over to the energy side and balancing power. And how we leverage the growth of energy generation. If we look at our base load, we think

business. I think we think it will be rather flat, I mean, compared to 2020. And we do see that a lot of customers are moving to renewables, and therefore there is a shift to balancing. Now, the good news is that we see and it's not only us, we see balancing really taking off during the coming ten years. Please note this that time period is not next quarter. But over this time it will grow. And I know that we have had this message in the past, and I know some of you have questioned, you know, why is it not happening? But now, ladies and gentlemen, it is happening and Sushil, the head of energy, will talk more about that going forward.

And I would say this will happen. By the laws of physics, it's not that I thinking it up. And the reciprocating engine is very well positioned. Then on the energy storage side and we all see it, it's growing exponentially and we continue to see very rapid growth, 30 percent. If we zoom in on the energy storage side. What is the Wärtsilä's position? I mean, first of all, we are one of the three biggest players in the world. And where we want to differentiate is in our power system optimisation capabilities. We have a complete balancing offering where we can integrate different generating assets, leveraging our background and knowledge of power systems. And when we do this, bring bring the different generating assets together for optimal performance, energy cost and uptime reliability. And we have a software platform called GEMS, which our customer tells me is the leading in the industry. But of course, the software platform that is just an expression of our knowledge. Then we combine this with strong execution skills, we do bring a lot of experience from executing projects in the power industry, and we are ramping up our team and execution capabilities, transferring staff, transferring experience from working with power projects. And we have a very competitive supply chain and I would even say partnership for the batteries. So it's currently a loss making business, so we are clear on that, that we expect to become profitable in a few years.

2021, we expect the order intake to be above 700 million euro, which corresponds to six times growth in order intake compared to previous years. And on the services side, we have more than 70 percent of long term services agreements. So now. Leveraging switching from leveraging opportunity to robust execution. And then one of the key things that we have been working with in that during the last month is to define our way forward and how we want to evolve as a company. And we sum it up in what we call the Wärtsilä Way. And it sets the scene for profitable growth, and there are some critical elements of the Wärtsilä Way. First of all, we upgraded our purpose. A purpose is to

enable sustainable societies through innovation and technology and services, so we put even stronger focus on innovation and technology, and we added services clearly. Already today, services is like 55-60 percent of our business. We define a new target position and part of that, shaping decarbonisation for marine and energy, is our new financial targets and also our new sustainability targets. We have strategic priorities, and I will come back to them and which really sets, how are we going to achieve this? How are we going to get where we want to go? And we have also upgraded our values, focusing on customer success, on passion and performance and customer success. We become successful by making our customer successful the passion, attracting the stellar people, developing and providing an exciting experience for people to evolve with a strong purpose and also a leadership that is focused on providing direction and then supporting the teams.

Delivering on commitment in the performance side. A strong personal commitment to deliver and then continuous improvement. Now, focussing on the strategic priorities, how are we going to make this happen? First is to excel in creating customer value, and that is staying very close to the customer because the customer's needs is evolving in this era of change. So the customer is relearning, we need to relearn. We have technologies. We need to train and educate the people to stay close. And in this thought leadership dialogue, really interesting, interesting avenue. The other is also to provide support and services. And you know it. If service is to be successful, you need a great product supported by great people and with a great culture. But if you have that and you get that source in the right way, it's a really strong competitive advantage. We need to continue to develop our teams, and it's about attracting high performing people, building high performing teams, excelling on continuous learning and collaboration. Lead us being formulated, lead us providing direction and support and then empowering people to act. The third element is clearly to drive the decarbonisation of energy in maritime and then to do razor sharp investments in new technology, to partner up for other technologies to also decarbonise, as we talked about our own value chain.

And then to provide optimisation solutions. And I really work as thought leaders. Services is a major way forward, and we are talking transactional agreements, performance based and and there are so many opportunities and we are really on the roll here on the services side. And then finally continuously improve our end-to-end value chain. And it's about reducing lead time, it's about improving quality, it's about

delivering what the customer is requiring while reducing complexity, while improving our competitiveness and then leverage digital to help us doing that. And by that, we can certainly improve our businesses as it is today. And we clearly see that we can generate the funds needed to transform our businesses technology and at the same time deliver good returns for the shareholder. And we will continue the clear focus on capital allocation and portfolio management. Now, so this is how we want to do it, but what about the cultural aspect then? What is so important and here developing? How do you develop a performance culture? Well, it's about engaging in a dialogue as leaders being out there, talking about and showing how we make customer success. We are successful by making customers successful. We created a structure, we delegated P&L ownership and we can really see that people are taking on the ownership, when people get P&L.

We need to care for people. If we care for people, the people will care for the customer. And we need to develop our people. Now in the big technology transition, on the risk management side and project execution. And I have the privilege to have served in many project businesses in the past. And as one thing I have learnt, it's the criticality of risk management, both when you work in the tender phase and the product execution phase and have the discipline around it. We are a big organisation and we constantly need to remind ourselves that we need to make the decisions close to where the customer value is created to move with speed. And then for me, the live stream of it all, continuous improvement every day. So this is how we want to do it. Now, setting targets, the financial targets I will leave to Arjen to go deeper in, and I will then talk briefly about our decarbonisation targets, which are really important for us. And we recently launched them. So first element, our biggest carbon footprint is actually with our products when their customers use them. So the biggest impact we can have is to make sure that we decarbonise our products. And there we have set a very clear target to have a product portfolio that will be ready for zero carbon fuels by 2030. And we are on the road with the commitments on ammonia, with the commitments of hydrogen we are moving there.

And then walking the talk, moving ourselves in our own value chain to a carbon neutral own operation. So, with that I think that we are ready to go further into the financials and also have Arjen joining us, so Arjen please come up.

Yes, hello to you all. We are set to deliver long term shareholder value. Why? First of all, we have really good growth opportunities as Håken was reflecting already upon in decarbonisation of marine and energy. And I'm sure Roger and Sushil will talk about it even more. Secondly, we have clear financial targets and we are committed to achieve them. Thirdly, our balance sheet and financing structure support strategy execution. We can do it. And finally, we have clear capital allocation principles with a high focus on R&D and shareholder return. But before continuing, let's move a little bit back and look a little bit back on the past few years and what has happened there. As you know, and we have seen it for sure as well, we clearly have had our challenges with COVID 19, with project execution, with not meeting all the financial targets and with cash flow. But with an extremely high focus on transformation and performance. Today, our situation is a lot better. We have made a lot of improvements. We have radically changed our project execution.

We have in 2020 and also in the first half of this year, and we are very proud of it, record operating cash flow. We have made adjustments to our cost structure wherever and whenever it was needed. We've made good progress on divestment, Håken touched it also. And we have also clearly, let's say, improved our P&L and working capital ownership in the whole organisation with the organisational changes that we have made also in 2020. So we are moving in the right direction, but. COVID is still there. And this is something that we as a company cannot transform, I think the whole global world needs to deal with this and find a way how to go through this. And if you look at our energy core markets, many of them are in quite a red-colorish countries on this map. If you would make the same map as on the left side of this slide for first of January and compare it to this one it's pretty much the same colours. At the same time, vaccination rates are low in these countries, and this is good to keep in mind. Håken stressed it also, but I think we all need to be very well aware that COVID will still be around for time and not only in energy. We also know it for marine. When COVID hit us in 2020, we immediately started to adjust our cost structure. Because we had to and we wanted to.

And that is part of our DNA. Whenever and wherever is needed, Wärtsilä has adjusted the cost structure. You've seen that in the past. You will see it in the future as well. And this is not an exhaustive list of examples. In a corporation like Wärtsilä. There's always somewhere, at any point of time, big or small optimisation actions ongoing. And we will

continue to do so. If I go to cash flow, as I mentioned already, record cash flow, let's say we are very proud of that in last year and also in the first half of this year, really coming from majorly the working capital and what was driving this? First item is the new approach to receivable collection, I would say that's the really the big main item. Where receivable collection in the past was more an activity of a, say, trade finance, credit management, treasury environment. Today, it's a much broader involvement of many more in the organisation, from front line sales to sales support to project management and even technical people in case of disputes when customers don't pay. And these are not monthly. This is weekly and sometimes even daily. We are also making much more use of RPA tools, robotic process automation tools. Which improve the efficiency of collection as well. Global inventory management programme, really an important one and also an important contribution to our working capital improvement. Move away from local stocks, move more and more to the Central Global Logistic Warehouse in a company in the Netherlands.

Global visibility of stock. Make sure that you don't buy a part of one end of the world where there is the same part somewhere else available. And also just in time, stock for agreements, lifecycle agreements. That is, if you know, the maintenance schedule in a life cycle agreement, there is no need to have the stock three months in advance, get it just on time. Also, we have been able to maintain very good payment terms with suppliers, despite the fact that the volume dropped. And finally, let's say our supply chain finance programmes have really been explored in a much wider context, much more suppliers have joined that. Actually today, about 40 percent of our trade receivables is covered by supply chain finance. And that's not only good for us, it's also good for the suppliers. They get paid earlier. The good cash flow enabled us to make significant improvements on our debt situation, on our gearing ratio and our solvency ratio. From 2019 to today, basically, we have been able to reduce net debt with more than 400 million. On the same horizon, we were able to improve the gearing ratio from 0.30 to 0.40. And also, we have been able now to bend the trend on the solvency back up again. Is extremely good cash flow. And a strong financial position enables us to allocate capital. And then I come to the capital allocation principles.

R&D, the first one extremely important for the future of Wärtsilä, Håken expressed it also. This is the future we need to invest and need to keep investing in. We have been spending about three percent of net sales historically, and we are committed to do so

going forward as well. We should not jeopardise this. We have a very strong track record in innovations. We have extremely good portfolio capabilities to serve the market, especially now in this era of decarbonisation. Second capital allocation principle is mergers and acquisitions. And they, of course, need to fit the strategy, otherwise you should not do it. We will focus mostly on synergistic bolt-on acquisitions in relation to decarbonisation services or digital. Finally, let's say the third capital allocation principle is profit distribution, and this is basically, as you probably all know already, let's say, at least 50 percent of EPS to be paid as dividend. And this is also what we are going to have going forward. And we are committed to do so. We have done so, as you can see, and we are committed to do so going forward. If I then move to the new financial targets that were published yesterday. And I will start in the bottom. Capital structure and dividend, actually they didn't change, so the gearing to be below 50 percent and the earnings dividend basically at least 50 percent of earnings, that won't change. And we have always met these targets.

What has changed is the net sales and the growth targets, as well as the profitability target, the growth target we had before, let's say, growing more than global GDP that move now to five percent annual organic growth. And on the profitability target, we moved from 10 to 14 percent over the cycle to 12 percent operating margin. If I go a little bit deeper into these two financial targets that have changed. First of all, let's say net sales. We have with our portfolio and capability, a very good opportunity to grow in the decarbonisation space and in the new equipment space. And at the same time, our massive installed base gives also a lot of opportunity to grow on the service side, on the life cycle side. What this slide shows is basically, let's say, what are the main items that drive our growth opportunity. And the pluses indicate the share of contribution to that growth. And if you look at this slide, the main one is clearly, let's say, storage. It's a fast growing demand for energy storage and power optimisation solutions. We can all see it. You've seen it in our order intake as well earlier. And this we believe will continue. Secondly, the service. Very important, also from a profitability point of view, I will touch it later as well. A lot of opportunities increase share of wallet of customers. Deeper penetration of the installed base, customers that don't buy from us today.

Get them back. Let them make sure that they buy the life cycle solutions from us. Very important part, let's say decarbonisation retrofits. Opportunities have been discussed, also touched by Håken. And Sushil and Roger for sure will come back to that as well.

And then new business models, you can think of software as a service, but also otherwise. Thermal balancing, I would say it's back. It's coming, it's happening definitely with a coal face out being more and more visible everywhere. And thermal balancing is complementing energy storage. Then we also see that there will be a recovery in Marine, in particular, the important segments for us cruise and ferry and special vessels. We believe that growth will come. If I move to the profitability target and this slide is basically the same structure as I had on the growth target. Where the plus basically indicates the share of contribution or the size of contribution to the increased or improved, let's say, operating profit margin percentage. The biggest element is service, clearly. In a company like Wärtsilä, and I'm sure you all know this, the service business is the most profitable that's bringing the biggest margins. And we see tremendous opportunity to grow the service. I mentioned already on the previous slide being decarbonisation retrofits, being a deeper penetration, etc. Secondly, the thermal balancing. It will not only contribute to better factory load and cost leverage, but it also will contribute with margin.

Storage, Håken mentioned already, let's say loss making today, we want to scale it, we want to improve it. And we want to turn it into profit within a few years. Voyage turnaround, you know, also from the published numbers, that Voyage is quite heavily loss making today, things are improving. It has been somewhat, the turnaround, hampered by the COVID situation, but you are back on a very good track. And also this we will turn into profit. I am convinced. Then the bottom three, first of all, cost inflation. Any company is facing cost inflation. And what we want to do, and we believe we can do it, is with pricing continuous improvement more than offset this cost inflation as that should contribute to the growth of the profitability. What do I mean with continuous improvement in way of fairly wide definition? It varies from temporary layoffs to footprint optimisations to doing more with the same. For example, growing the sales while at the same time, keeping your cost structure low or similar. Our starting point, operating margin is low. Six percent. And this is after items affecting comparability, just to be clear. And we are committed, and we believe we can do it, to make this 12 percent within a few years. So to conclude and finalise. We are set to deliver long term shareholder value. Thank you very much. Now I would like to ask Håken and Hanna-Maria to join me here.

Thank you, Arjen. Now we have a great opportunity for questions. We will start the questions from here, Salmisaari.

Thank you, Tomi Railo DNB. Firstly, question of the financial targets, why five percent? Where is that number coming from? Why isn't it four, seven? And I think on one of the slides you mentioned that the starting point is the last 12 months. Should we read that as an indication for 21 ending some way, 22, starting some way? Is the five percent like a guidance or average for business cycle. How should we think about that?

Ok, if I start. I mean, why five? We like the Figure five, it's a prime number. It's always good with prime. But I mean, apart from that, I think, you know, this is clearly average growth of the business cycle. So some years it might be less. Some years it might be more. Some years might be much more. But over the cycle, five percent and I think when we see the growth avenues that I talked about, we can clearly get those numbers together. No, I would say that's basically covering it pretty well, actually. But in a way, whether you take it, let's say a rolling 12 forward, let's say it's the five percent target doesn't change, right? So if you look at the year end target for the year after is still five percent, so it doesn't change.

And and maybe to continue on the 12 percent. Why 12 percent, I mean, the previous target was 10 to 14. It's now neatly between those, at that level. The other aims of course read sort of your previous peak levels of roughly 12 percent. So when you say, in a few years, should we read that as midterm, is it three to five years? What is that? You must have sort of an internal roadmap or thought process that, OK, I want Wärtsilä to reach that within three or five years.

So if I start, I mean, clearly we had 10 to 14 percent. I think we never achieved the higher percentages. So from that perspective, because some people is asking, is this a lowering of the of the ambitions? And it's not. It's clearly we think that 12 percent, I mean, currently we're at six. We want to take it to 12. So it's forward leaning, but it's definitely achievable.

Yeah, and I think it's also a good thing to mention that, OK, we are still in COVID, right? So who can predict the world. And like Håken said we believe absolutely this target is achievable, but there are, of course, factors that we cannot fully influence. COIVD, the

pace of decarbonisation on the longer term will have an impact to the pace. And then maybe two number questions or one number question on the energy storage. How much sales have you created? Uh, let's say last 12 months or past the nine months for the business? And can you comment in any way? How much loss making is that business and and maybe even going further, what kind of profitability level would you assume that business to be making in a few years time?

So, we will not go into the details of the financials for this year so to say. If you look at what we have delivered and what we have in our order backlog, it's more than four gigawatt hours, though that is an element. It is clearly loss making. We think that we certainly can turn it around over a few years time and that in a way that it fits into the profitability strategy that we have to 12 percent. Yeah, I think that's what it is.

Hi it's Erkki from Inderes. You have quite high expectations in services, but aren't some parts, at least some parts of your installed base, especially in N&T, it's becoming obsolete in the coming years, with renewables replacing old oil and gas based power stations. Are you going to kind of fill this void?

So first of all, I mean, and you know, but to clarify, I mean the thermal business, and if you look at the installed base, this is business that, you know, the services are running over decades. Then to your point, you know, what about will they become obsolete? No, because right now we are converting to gas. And in the future, we will convert them into the new fuels. Then, of course, and to be clear, there are, engines with different vintages and types, et cetera, et cetera. So it's not as black and white as I described it, but the logic is clearly there. We are upgrading the installed base and it's the customers, but we are helping them to do that and we take it in two steps. On the energy side, first is to gas and then it's the green field.

Thank you.

Thank you very much. Andreas from JPMorgan, I wanted to talk a bit about mix in your business. That's always been a big driver historically in profitability. I remember, in the past, when the business environment was good, the mix wasn't good and if the business environment wasn't good, you couldn't make the 14 percent because the business environment wasn't good. So how do you think about mix going forward,

particularly when the 700 million euros of storage hits the P&L in the coming 12-18 months, I guess still at losses? Or is that ramp up in margin going to come quick enough for that not to be a big negative mixed driver? And then just to clarify, when you say a few years, obviously it's depending on the language and what people understand on the few.

This can be quite difficult to interpret. Some people saying few means one to two, others ... Or do you mean more three to five? Just to make sure we all understand what you mean when you say few? I don't know what the Finnish word or the Swedish word is for few.

It's a good question. It's like I put it. Part of the equation is COVID, and how fast that will phase out or transform. Part of the equation is, of course, also how quick the decarbonisation shift will be. So a few years from that perspective is a few years and it's not entirely clear and it coming back to your your questions on battery storage or energy storage. I would say that that will also take a few years and a few years is not next year.

Hi, it's Tom Horsey over here. Thank you very much for hosting us in Helsinki. It's great to be here. I've got two questions. One goes back to the five percent revenue growth and I'd love to know what governs that five percent. You've outlined these great revenue growth opportunities. And is it a question of what sellers, internal capacity and risk control that limits the growth? Or is it the rate of customer adoption or something else? And then also, if you could explain your framework for deciding what you develop with your own R&D, what you buy in bolt-ons and how you partner, then that would be great to understand, too, Thanks.

So, when it comes to what are the constraints to the growth, I would say that it's more related, you know, to the market adoption than to that we have internal resources and competence constraints. And so I think if the adoption, if COVID evolves in a more positive way, yes, there could be more positive. But that's why we say five percent over the cycle. Then coming back to your second question, can you repeat it?

It was when you think about the new technologies, how do you decide what you're going to develop with your own R&D, what you're going to buy with the bolt-on and then what you're going to partner?

So, we are clearly defined what is our core technologies and they evolve around the combustion engine and they evolved around energy storage and evolve around our digital solutions. So these are core technologies. Then we have other technologies, take fuel cells, take their lubrication. Those are technologies that we don't have in depth, development and manufacturing skills. So I think it's fairly clear for us where we are strong and where we are not strong and from a technology perspective and for the areas where we feel that is outside of this core, we will partner up. And as I said, what the feedback that we have from our partners, what value do we bring to them is a competence from the marine industry and how you marinize things. I mean, how you adapt, because it's a pretty special environment, to help the partners to adapt to that. And then also, in many cases, our industry leading service network, because all those great new devices that needs to be serviced as well.

Stick to your core competencies, I think that's critical for success.

Yeah, and the key thing here, there is so much exciting stuff in our core.

Manu Rimpelä, Nordea Markets. Getting back to the five percent growth target, I would like to challenge you a bit on that I mean, you're saying you have a 700 million euro storage business today and then you're saying that market is going to grow 10, 15 times over the next 10 years. So that means that if you kind of stick to your market share, you should have a seven billion business in 10 years. So that's quite a lot more growth than five percent. And then I guess you are not assuming that the old Wärtsilä business will decline. So why not the higher growth target? Or are you not targeting the whole energy storage market, just in the light of the numbers you gave me? It sounds quite low.

Your maths is right. I mean, we will not target all geographies on the energy storage side. Clearly, we will focus on some of the core regions like U.S., like Australia, like U.K., like Europe, etc. So to say, so we're not going to be all over the place at the same time.

Ok. Are you able to help us to then understand what rate you are end market is growing?

Once again, please.

At what rate will your end markets grow or how much of the target?

I think we indicate that, you know, 30 percent overall. And and when we look at our targets, we are looking at same magnitude of numbers.

Ok, thank you. And then getting more practical. I mean, when you look at your quotation pipeline and what you actually talk with your customers and compare that to the numbers you provided us for the end market. Are you seeing that your end market pipeline in terms of quotation on the storage side and on the thermal combustion market side is kind of agreeing with the numbers to get from your consultants, that you're seeing a massive increase in those pipelines.

So if I understand your question, I mean, if you're Bloomberg, DNV, etc. I think we are fairly aligned on the values, so to say.

And you see that in your sales funnel when you talk to your salespeople, they tell you compared to two years ago, we have 10 times more quotations.

Well, we see growth. And then as I said and I said it, you need to take a perspective over a couple of years so you cannot look at quarter by quarter development. But if we look at the development over a couple of years we do see a lot of tender activities both on the energy storage side, but also on the thermal side. And I think you're also seeing the order intake on the thermal side is building up. Only this morning we announced yet another order, so to say. So we are seeing correlation.

And then finally on the profitability target. I think you never really achieved the 12 percent, historically. If you look at the reported numbers pretty close, at least what I can track for the last 10 years. But during that time, we see the service business growing quite significantly. But then it hasn't really contributed to a higher margin. And now you have service business at the 2019 sales level already. And your profitability is very low. So can you just help me to kind of bridge the six percent to 12 percent because the service is the biggest driver, and at least I'm struggling to understand how that's going to come from the top line side.

So I don't want to comment your logic there, your calculation, but I can clearly say that service business is profitable and it's a major driver of profitability.

Absolutely. And yes, service business is good today and we are, OK, we are not exactly for all business lines on the same numbers as we were in 2019, pre-COVID, but things are improving and that's positive. At the same time, of course, if you look at the total profitability target going forward, there are also negative influences, right? Let's say we have a loss making storage business today, so that will direct the numbers down. So it's also a matter of, let's say, how good is your new build at this point of time versus your service business activity? And that is different and that will be different. Also going forward, it's not a one-to-one comparison that, OK, now we should be exactly the same profitability as pre-COVID because service is on the same level. That that's not how it works, because on the new build-side, we have a lot of businesses or business units actually that are still, let's say, hurt by COVID.

Ok, then we will take a couple of questions from the chat. You highlight storage growth with one plus to reach the 12 percent margin target. Does this imply that storage is just around the level today or will it be at that level in the coming five years?

It's a good question. Of course, let's say the pluses in my profit bridge indicates the size of contribution to the operating margin percentage. And OK, the one plus is an indication if you compare it to the service part that is less than the service. So it's a negative number today. And I think we will not guide, let's say, on margins, but you can do your own calculations here. But of course, the bridge to the zero is smaller than the benefit that we intend to gain from service business.

Thank you. And question regarding Voyage. What would be a reasonable timeline to turn the Voyage business into profitability?

So if I start on that. I think I pointed that out before, I mean, Voyage is a turnaround. We have earlier said a couple of years. The turnaround has clearly been delayed by the big pandemic. So from that perspective, the time frame is still a couple of years. However, I would give a lot of credit to Sean and the team. We see a lot of things moving in the

right direction. One big customer segment is cruising and therefore Voyage will benefit as the cruising is picking up.

Then another question regarding Voyage. Any more specifics around where the growth is expected to come from? Region, new technology, service?

So, I talked about that. 60 to 70 percent is more hardware oriented. And there we see me more moderate growth. The real growth generator is our software business, force and our whole digital offering, and this is where we see significant growth going forward.

Now I would add to that, let's say in Voyage, as you mentioned already, let's say a big portion is related to, let's say, equipment and a big portion of that equipment is related to cruise and ferry, which have been severely hampered by the pandemic. So with that recovering, I think it will accelerate also in the recovery of Voyages on the numbers.

Thank you. Then question regarding the decarbonisation and our financial targets. You mentioned the pace of decarbonisation has an impact on when you can achieve the 12 percent margin. Can you please explain why does that mean that the current max 12 percent is not achievable? Does the target rely on assumption of higher margin on decarbonisation offering?

So it's a mixed answered, many questions there. I would say that, you know, the shift, if we look on the energy side, it's very much correlated to how fast renewables are picking up. And I think that would be a strong correlation and we can follow the pick up of the renewables and the need for balancing. On the maritime side, we clearly see that the piloting for the different green fuels in different countries like Norway are clearly spearheading ammonia, but they're also for the other fuels picking up. And yes, I mean, with new technology, we do see potential for price realisation. Also, we see a potential avenue that some, if we look on the four stroke side, some segments will probably be a bit decommoditized because, you know, we, the green fuels, is going to be technically more advanced.

If I can add to that, let's say, if you look at energy, for example, yesterday the storage business is loss making business. But the thermal balancing business is not a loss

making business, and that's where we also expect quite significant growth. And that's part of the whole equation as well.

Very true. Thank you. Questions regarding energy storage. Will the energy storage business lifetime profitability ever be in line with a 12 percent margin target considering the lower need for services

Energy storage, will it be ever, let's say, on the on a 12 percent operating margin, I would say it's difficult to say. Might be, but typically, let's say if you compare storage business, for example, to thermal business, in the thermal business, you have rotation, conversion and whatever spare parts.

That's typically not in the storage business. There, I think the profitability growth is probably more coming from absolute terms rather than, let's say, on the percentage. But of course, it contributes positively.

And bailing on that, I mean, we certainly get a lot of questions, you know, OK, thermal balancing, less running hours on the engines and more electric and less maintenance. Will you hold, what will be your impact on the services business, but what we see balancing that is the possibilities to move up the service value ladder that we talked about to move to performance based agreements and provide energy or decarbonisation as a service where we, you know, work together with the customers to reduce cost of energy, provide uptime reliability.

Then continuing with the storages, I think it's fair to assume that there are different investors interested in a high growing but loss making, and its storage business, and a stable marine service business. Given the valuation we see on some energy storage peers would it not make sense to spin off or separate the energy storage business?

We got a lot of questions on that and and I always say, and this is our key message on battery or energy storage. It's a very fundamental part of our value proposition. It's this power system optimisation and Sushil will talk more about it later on. And this is where you connect the thermal and the battery storage and renewables, et cetera, to drive, you know, an optimal operation, therefore lowest cost. And so it's highly integrated for us and also on the business side. Then also on the resources side, we actually are

building up our execution capabilities by resources and competence from our thermal side, so to say. So for us, it still hangs together.

We can go beyond, let's say, our competitors in storage in our offering.

And then going back to financial targets, how much of margin increase the 12 percent would come to operating leverage on higher growth versus mix versus self-help accents on the cost base. This is after items affecting comparability. What do you assume is the underlying margin equating to the 12 percent?

We will not go into the details on all these questions. Let's say we don't guide on margin. But I would say, let's say on the items affecting comparability, I would say that, what we assumed in our calculations is normalised level.

Another question regarding the market margin target, you said it takes a few years, but do you see a steady improvement or back ended and loaded achievement to reach the target?

Ok, that's a difficult question, and of course, it depends to what we have said earlier as well, let's say how quick is the pace of recovery from COVID? What's the pace of decarbonisation? Those are two factors that are not fully in our own control and so we can work on the turnaround of Voyage. We can work a lot on the installed base and getting up to the service value later. But those two factors, I'm not so easy to influence. We have a certain view, we believe it will kick off. Let's say it's happening, let's say we just recently announced a lot of orders, but the pace going forward is still a bit of an foreseeable thing.

What kind of investment levels are required to hit targets and get back to 12 percent margins? Will they need to increase capex from current levels as a percentage of sales? Do you have an ambition to free cash flow conversion and what is normalised level of working capital to sales for the group?

If I start with one part and this is the key message on the R&D, but it actually goes on the capex side as well. That and that's really really exciting, but we can we actually think we can drive, we can be a leading player in this transformation at fairly stable levels.

That's why we say about three percent R&D of net sales. And capex will also also be stable, so to say so.

No, I think that's a correct statement. Let's say the three percent of net sales for R&D that, of course, will grow in absolute terms when the volume grows, right. When it comes to, let's say, capex in plans and equipment, for example, that will be fairly stable. We don't need massive extra to facilitate the growth. No need for that.

Could you comment on the level of opex investment you are making in the storage business annually for the next few years? How much does the cost base need to go up to keep up with the robust demand growth?

I don't thing those details at this stage.

Please wait until the microphone.

Thank you very much. I wanted to ask about kind of how the business works when you close some of these larger contracts in terms of pricing, securing supply and so on. So if you look at something like the LATAM order you recently announced on energy. At what point in time is kind of the price fixed and what happens then until it becomes a firm agreement? And have you the ability to then to make some adjustments again at the end, given the inflationary environment we are in, particularly if you look at Brazil. Things get 10-20 percent more expensive every year. So how long is the lag where you have to make a price until you then can lock Singh Singh? And also, if you look at battery storage, how does it work actually? In terms of when you do some of these larger orders, you lock in the battery supply, the electrical balance of plant supply. And how do you manage these risks in a very inflationary environment?

So basically, if we go to a general approach in our tendering. You negotiate with the customer to the very end. And of course, you have in your calculation, you have your cost where you also, of course, include cost escalation and the standard of risk in contingency so to say. And then, you know, when you reach the signing point you sign and you close that and then you hedge and then that's it, for the big businesses.

But during the quoting process, we also negotiate, of course, with critical large scale suppliers to make sure that, let's say we are not facing a surprise, let's say, after we signed it, the price goes up. Those have been prefixed.

So when we sign and we lock it in, so to say, then we have locked in both the sale side and the cost side.

What share of the cost side do you normally lock in?

I will not go in ...

Can you kindly please repeat the question for the microphone?

Can you lock in the very, very large majority of some of these costs? So given that some of these cost items now have ramped up very quickly, much more than you normally budget for? I was asking in terms of backlog margins versus what to expect for next year when you execute these contracts?

So I would say certain things you can look in and certain things you take an approach where you bake in expected inflation. So that's part of your provisions in the calculations.

And logistics is a good example, as you mentioned.

Ok, then some more profitability related questions from the chat. Further on battery storage. Why is the business loss making currently? One would think that Wärtsilä's business in batteries is fairly light costs so why a loss?

I don't think we comment on that, right?

This is a state of the business. We are in an early stage. Yes, we take a lot of orders in. We still also need to deliver a lot, right? So it will improve as we go.

And it's scaling, I mean, you, you invest in a lot of R&D, you set up a structure and of course, then you grow the revenues and you scale.

Yes, that's it's a lot of initial investment at the moment.

Exactly. Does the margin uplift from decarbonisation mostly come from operating leverage or a shift in the product mix.

I think decarbonisation has many positive impacts, let's say, which we talked about thermal balancing. We talk about, let's say, the different fuel types of the future, the retrofit capabilities. I think there is a lot of opportunities that link to decarbonisation. I would not say specifically one, it's many.

Your biggest growth driver is energy storage, which is loss making and difficult to say, if ever, will reach the group target. This must imply that profitability in Wärtsilä core business will have to reach levels well above the 12 percent margin target, which have been difficult in the past. Can you elaborate how you plan to take Wärtsilä profitability to higher levels than in the past?

Yeah, I think you broke it down in the waterfall. I think that's as far as we go in detailing out, let's say the margin improvement. But let's say if you calculate like this, of course, it's a logical conclusion.

Do the comments on battery storage profitability imply that energy margins could go down before improving longer term or will improvements in thermal business more than offset the negative mix from storage?

I would say that the trend is up, but of course again and I repeat myself here. And also what Håken said before the pace of decarbonisation is a question mark. Let's say, of course, let's say the we see a lot of momentum actually with coal being shut down. That momentum needs to continue.

Fortunately, many countries in the world have said by X year I will be off the coal. And many of that is between the period 25 to 2030. So it's happening. People also realise more and more that let's say if you don't do anything you will face the blackout. And we have seen that also happening. So I do believe that the pace of thermal balancing power will go up. And if we are good, let's say, with or turn around and scaling of the

storage business, I think the equation might be positive, yes. But base is a question mark.

Continuing with the battery storage business, could you discuss the value chain in terms of who makes the money? Is it the battery developer or the distributor such as Wärtsilä, who enjoys strong support? Who has the strong position in terms of money making capability in the value chain, you think?

Well, we are not commenting on that. It's quite competition sensitive. So no comments.

But from our side, I mean, if you look at our business and why we think this is an interesting business and we can make money, it is this power system optimisation capabilities and integrating these assets in an optimal way, leveraging digital to really provide the lowest energy cost. Because it's not as simple just to hook up a battery storage. I mean, the storage in itself is a fairly complicated device and in the sense of how you run it actually affects lifetime. I mean, how you have tuned the chemistries, how you are running the storage, current utilisation over 10 years, it's actually fairly complicated and to have the optimal point. And the second level of complexity is running this together with the thermal generation and the wind farm. How should you do when the weather changes? Should you then use the batteries or use the thermal to make sure you have the lowest cost and prolong, for instance, the lifetime of your batteries? So from that perspective, there are great value creation opportunities in this optimisation.

Thank you Håken, thank you, Arjen, and thank you for.. OK, Tomi has one more question.

Thank you. Tomi Railo, DNB. I wrote down three more questions if we have time. Orders, you're targeting storage orders over 700 million this year. We know the third quarter number, 180 million. What is the year to date numbers? Nine nine months number? I don't have it out of the top of my head.

We have not published that.

But we can come back to that.

We have not disclosed that.

And secondly, what kind of lead times are there in the storage? How much of that 700 million or over of orders are delivered this year? How much next year and maybe a follow up, just how much sales should we need in order for that business to be make making profits?

So the one that I will elaborate on is the lead time and that we will see a lot of these sales happening during next year because I would say there is a six to eight months lead time. So a lot of the order intake this year will hit next year and also going into 2023.

Last question comes from Erkki, then we will have a break.

Yes, this is the last one. Are you concerned if all of the capacity utilisation rates we see in the near future and further down the line? I mean, do you expect that the engine market will be sufficient to keep these factories and their people fully occupied?

So if I start, I mean, if we look right here right now with the successful streak that Sushil and the energy team has, I would say we are running Wärtsilä at a good rate. And in Italy we are actually bringing in additional resources to help us. But that's the very short term perspective. If we take a more mid to long term perspective, I mean, the general loading situation has has been low, but it's coming back to Arjen's point. We in the past, we have taken actions. In the future, we will take actions. The actions we have taken so far is that we have, you know, slimmed down the costume.

being low on resources, keeping very careful track of our capex. But I would put that in the in the basket of continuous improvement.

A good example here, you mentioned the Trieste factory. In quarter two we made an adjustment there. Temporary layoffs in the Trieste factory. Now we are hiring external people to facilitate the assembly because the load is so high, so it fluctuates quite quickly. And again, like our Concetta, the orders now coming in from energy storage, of course, greatly supports better factory load, and it's beneficial.

THank you, Arjen, thank you, Häkan. Thank you for great questions. Now we will have a break. Please be back here at three o'clock Finnish time.

Thank you.

Thank you.

Welcome back to Wärtsilä Capital Market. I hope that you enjoy the short break. We still have two exciting presentations. We will continue with marine power, which is our biggest segment in terms of comparable operating profit. Roger Holm, who is the president of the segment, will describe how he will deliver profitable growth by focussing on decarbonisation and services. As you may have recognised already, also today, energy business and the growth opportunities there have been one of the hottest topics amongst the investor meetings, and we have Sushil Purohit, who is leading the business, describing how he will capture the growth in balancing solutions and services. And I hope that all of you have recognised that Sushil and his colleagues have been very busy and successful closing the deals recently, and the latest deal was announced this morning. After those presentations

there will be another Q&A session and and also Håkan and Arjen will join that Q&A session, thank you.

Good afternoon. If we look at the maritime environment and look at LNG as a fuel, the maritime environment has been transforming during the last 20 years into LNG as a fuel. We are still at a rate of less than five percent of LNG fuel usage looking at the whole fleet. Now looking at the transformation we need to do during the next 30 years, we need to see a transformation of the whole fleet that is 60 percent or more. This is a change in the maritime environment that we have never, ever seen before. And if we look at it, it's a change of a vessel lifetime. The time we look at is the same as a vessel lifetime. It's 25 to 30 years. It's the change and the speed that we will see that is totally different than what we have seen so far. The fuel flexible engine will be the technology where the industry can transform in a way that makes sense both financially and from a decarbonisation point of view. We need to keep in mind this is not about an on-off thing when we talk about decarbonisation. If you would go on-off your can't afford it, as Håkan

mentioned already earlier, the new fuels will be two to four times more expensive. You need to make this transformation in phases, and this is where the engine technology is really suitable because you can look at the transformation where you can combine the financial viability with the decarbonisation path that you need to take. And this is the key in the transformation for our customers. You can already see it in the discussion we have with our customers today. It's almost impossible to have a customer meeting today without talking about the decarbonisation journey. It's on every agenda for our customers and the key is how do you do it on the right path? It's too late already to say that you wait and see, then you will be out of business. You also need to make sure that you do it on the correct path to keep this balance in place. Our service business drives the stability, the profitability and growth, and we also see, thanks to the decarbonisation, definitely more opportunities also from the retrofitting business of the existing fleet. If we take a look at what do we have in the offering portfolios marine power today that supports this, we look at the propulsion equipment, we look at the engines, we look at the energy management systems onboard and the fuel gas handling systems. These are all core technologies to look at for the decarbonisation path for our customers.

It's all about how do we make this transition in a path that that makes sense to support that on the life cycle side and with transactional services. Is it then spare parts? Is it our competent field service engineers? It can be related to agreements or performance related agreements where we share the pain and again, together with our customers. Or as mentioned already, projects services where we talk about upgrades of of the assets. Already today a key question for our customers, when you order a new ship, needs to be who is the technology provider that will be there with you during your lifetime of the vessel? Who do you trust that will be there making sure that your asset value is going to stay and that you can optimise the asset value? Because if you are not on the correct path of that one, it will have an impact on your of your balance sheet as well as your competitiveness. So let's go into the transformation phase. Håkan already mentioned is about the decarbonisation, and let's look at what does this mean for the maritime industry? We have already talked about the regulation framework, which is in place by IMO, coming from regional regulations, coming from EU Fit for 55. That's one part of of the change, but more and more we see other stakeholders pushing for the decarbonisation. It's from the financing angle when we look at the Poseidon Principles, making sure that to finance your ship, you need to stay on the development path for the decarbonisation with your assets.

It's also from the from the cargo owners and the Sea Cargo Charter. Here is a perfect example where we look at where the cargo owners are demanding that you use ships that are on the right path towards decarbonisation. And then more and more companies like Wärtsilä, like other companies are setting their own targets, how to decarbonise operations and actually the logistics chain here might be a good pathway to make sure that you optimise your footprint. If we then look at it from what we call here, the CII index, this is the carbon intensity index. Compare this with when you buy a washing machine at home or a TV, you have the same marking on these ones. This is the same what we will see now in the shipping world. The only difference is that you don't upgrade your washing machine at home during the life cycle, but this is what will be expected by the ship owners. You will need to upgrade your asset constantly if you want to stay competitive. And the key here is to make sure you do it in a way where you combine the financial viability with the decarbonisation path. How do you make sure that your assets stay competitive on the part of the grouping of this CCI Index? And we already see that this is going to impact the competitiveness of of your vessel.

And this provides a big framework for the shipowners to look at, how do you stay on this right path in the decarbonisation? So let's have a look then, what does this mean for you as a ship owner? If we start from the upper part there and and look at what do you need to think about if you are planning to order a new build vessel, we see already today talking to customers that they they think about, for example, can I prepare storage space for methanol as a fuel already now? Methanol is the easiest fuel to to prepare for from a fuel perspective. Can I make sure I have the tanks, the space for methanol as a fuel? Can I prepare a bit space in the engine room for equipment that is needed when you run on methanol? It's fairly small investment in a new build phase that you can do to be much more prepared to say that when the first big dry dock comes five years after you have taken the ship into operations, you would convert the engines to run on on green methanol. These are the things you need to look at on top of making sure that you are as flexible as possible to bring in energy efficiency devices so that you can constantly improve the way that you operate your vessel.

If you are then looking at your existing fleet. Here today, you might look at whether I can do improvement? Looking at the propulsion equipment, shaft generators, installing hybrid installation you go by the industry standard. You might install air lubrication to

improve the resistance of the hull. All of these things looking at the total fleet to see that how do I stay on the CII curve that we already mentioned? What makes sense financially and what makes sense then, from a pathway towards decarbonisation? And then at some point in time, you will also get into this question that should I convert a future fuel of the vessel? Does it make sense looking at the remaining lifetime of of my asset? This is a constant discussion together with our customers today, and it's definitely at the core of the customer strategy that how do I stay competitive in the industry by looking at the fleet, optimising the newer build vessels to make sure that I'm going to be there where I need to be five years ahead and 10 years ahead of time. Let's look at what does this mean, then from a fuel perspective. And here you can see that green is not really black and white. It's a mix of many things, and we are moving from an environment that has been very much a single fuel environment into a multi fuel environment with much more complexity, even regional differences we will probably see. If you start by looking at the dotted orange line here.

This is coming back to what Håkan showed earlier in his presentation. This is the 1.5 degree scenario and what speed we need to take to reach that scenario? And how much uptake do we need to see on the carbon neutral and zero carbon fuels? The challenge on this curve is that in the beginning, you have the chicken and the egg thing. The green fuels are not available. You will not invest in equipment that can utilise green fuels if it's not available. The fuel distributors will not invest in green fuels if it's not available, and then you need to solve this circle. On the other angle of the time axis, if we look at 2050, is to make sure that we have started the transformation fast enough so you can do this in a financially viable way. There will not be enough yard capacity, not be enough retrofit capacity if this is coming too late and that will impact the asset value of the vessels if you cannot make sure that you are on the right path on this transformation. So you are pushed from both ends, which means that the industry as such needs to move now. It's already moving and in a maritime context, it's moving fast, but we still need to remember we talk about decades when we talk about the transition here.

So when you look at this curve, it looks like small steps, but in a maritime context, this is big and it needs to constantly move. Otherwise, you will have an asset challenge towards the end of the lifespan here. As you see, you will also see, especially in the first part of the timing here, that this is a lot about also looking at the blending. So you will

blend fossil fuels with bio or synthetic fuels. It can be then either on the diesel side, the liquid fuel or on the gas side talking about bio LNG or similar. And the reason we will see this is more from a financial perspective. Fuels will be two to four times more expensive. How much do you need to blend to be on the right curve? And to look at it also from another angle, the fuel and the fuel conversion. When you look at the fuels, it's not just about the fuels itself, it's also about the characteristics of the fuel. And we need to remember when we look at this in shipping the space is precious. You need a space for cargo or passengers. Every corner of the ship is something that you will try to optimise, and when you then look at the future fuels on the left hand side, here we have the existing fuels and then you can start to compare.

If you look at the bottom line here, there we talk about the gross tank size factor. This is not just about the fuel volumes itself, but also the tank structure that you need for this specific fuel. And if we start from the right hand side of this picture and you look at the battery you see today, it's around 40 times more space than if you go with traditional fuels. We might get in the future to something close to 20 times. It's still a lot of more space that you need, which means that for this to happen, you need to go short routes only. You cannot have a vessel that is full of batteries only and no space for cargo or passengers. You need to optimise the space. And of course, depending on the turnaround time, the charging time that you need to do in the port. On short routes, this will work well with the additional note, remember 25-30 year life cycle of the vessel. You are not going to move this vessel to a longer route during the lifetime of this vessel without doing significant changes. You are locking in the vessel for a short route for the lifetime of the vessel, so this is also good to remember. If that works, this is a good solution. Then if we go to the fuels you hear discussions today talking about hydrogen fuelled vessels, most of that today is compressed hydrogen.

Then we talk about close to 20 times the space again and all the complexity that comes with hydrogen. If you go cryogenic and you go to liquid hydrogen where you need to have it, then to minus 253 degrees, then you get clearly less space, but a lot of more complexity due to the cryogenic setup of this one. So for sure, we will see some hydrogen vessels also in the future, but it's not going to be a mainstream fuel in maritime. In energy it might be different and that's a different story. But remember, space is precious in maritime, which then leaves us with with two mainstream fuels looking about future fuels in maritime, methanol, which is fairly easy to handle. It's a

fairly straightforward fuel. We have been running methanol since 2015 together with Stena on Stena Germanica and we know how this works. Tank construction wise, although this is fairly simple, ammonia is a newer fuel, and that's also clearly much easier to handle. You might say it's toxic at the same time, ammonia is used today in many applications, and it's transported also already by sea in big quantities. So this is nothing new. It can be handled. Storage need wise it's also OK. So these are these are the direction we will see this going. Then coming back to the engine, the key technology here. Because when we talk to the customer and what we can do already today, is we can start with drop in fuels. So you can already blend biofuels either in liquid or gas forms in the tank today, so you can start transforming with existing technology, it works today.

Then you can move in the future to something what we call also blending. This is where you inject two fuels into the combustion. As an example you can blend ammonia with marine diesel oil. And again, you are moving in the right direction on the decarbonisation and towards then in the future, depending on price and depending on where you want to be from a decarbonisation perspective, you are mixing this in the right order. This is not going to be an on-off thing, it's going to be a gradual transformation. And the reason for this is that here you can bring in the best total cost of ownership, both from change needs on the engine and the vessel structure, as well as then from a fuel cost perspective. We know these fuels, we have been working on gas and liquid fuels for decades already, dual fuel applications. We know how to run on biofuels. We know how to run on LNG. We know how to handle methanol. We have also run on hydrogen blends and we have tested actually better than we expected this summer on ammonia, where we have run an engine on 70 percent ammonia, 30 percent marine diesel oil with really good results so far.

And this is the way we also believe it will go where you start the mixing percentages saying we have done on hydrogen to test the engines on pure hydrogen. Combining that with the electric side we will see more hybrid installations where you use batteries to take out big shavings, to optimise how you run the engines. And you can also then on top, of course, add the energy saving devices that was mentioned earlier. So all in all, if you summarised the decarbonisation journey, we sit on the technology, the know how where we can be part of the customer's journey on this decarbonisation pathway, where

you combine the financial viability with the greenhouse gas reductions in the most optimal way as you look at your total fleet.

Let's then quickly look also on the perform part and how we are going to drive this from a service and connecting service to the decarbonisation path. We have four clear growth drivers. One is, what I earlier said, that our customers needs to be really, really careful looking at the technology choices today. Who is your partner for the lifetime of your vessel? Who will be there upgrading your vessel in the best potential way? Increased transactional sale. Look at fuel conversions, combining that with the energy saving devices going back to the CII curve. How do you optimise your vessels to stay on that one?

And then agreements where we already see today the increased the interests of agreements thanks to more complexity on one hand, but also the more value we can provide to the customers on the agreement side. And if I start with the transactional side, this is going back to what Håkan already mentioned in his presentation. And the key here is this is already ongoing. What we are doing is looking at how do we optimise the know how on the data we have well in advance for when a customer is doing a dry docking. A dry dock is happening around every fifth year and usually the customers try to optimise most part of the maintenance to this dry dock because it's more efficient. Not all of it, but but as much as possible. If we are proactive on being there, providing them the value for these dry docks, we can also optimise the way we do business on these smaller accounts. We have seen good results so far, 12 percent compared to 2020 and four percent compared to pre-COVID. And here we have clear growth to target going forward as well. Retrofits. Going back again to the CII curve, remembering the washing machine or the TV. Here we upgrade the equipment as we go. The easy thing now for 2023, a target for the customers might be to bring down and put in engine speed limitation.

That's the easy first step to reduce your carbon footprint. After that, it will be to look at energy efficiency devices. How do you keep the vessel on track for that curve? And going into fuel conversions later on when it makes financial sense? This is what we have for four stroke engines. But as we already announced earlier this week, we are also going to do this for two stroke engines where we have launched the concept, where we can go from liquid fuel to gas conversions with very limited methane slip. And

that will also be a base for us to develop future green fuel developments on the two stroke side. So this is really exciting. Then looking at agreements. We have proof from existing agreements that we can optimise the fuel consumption. And this is a case referring to two and a half percent fuel consumption. Remembering now fuel bill will go up two to four times in maritime with the green fuel. The value of this 2.5 percent will just increase. Payback for doing this will just improve for our customers, and it will not only be about the fuel itself, it will also be about reducing emissions. So combining again the financial with with the reduction of emissions. We do this by having the best know-how about our hardware, our equipment, combining that with data, understanding how to best operate the equipment and do then dynamic maintenance planning.

And our target when we look at the agreements we have in place, our target is to double the number of vessels that are covered by agreements. That's one thing, but our other target is to push them up the value ladder, also from a content point of view and a value creation point of view. On the left hand side, we start more with maintenance planning combined with transactional services. And in the other end, you go up when we talk about full performance based agreements where we share the pain and again with the customers, it might be then related to uptime. It might be related to fuel consumption. It's what is important for their installations, and I'm sure we will see more in the future as well as related to emissions. How do we optimise the agreements that we have together with our customers? We today have a 94 percent renewal rate of our agreements, which shows already the value we can provide to our customers and why they come back again and again to make sure that we we are working in a partnership together with our customers. And to take a few concrete examples. I mentioned already two and a half percent. This is a lot, for the customer, for a fleet of cruise vessels. Second example in the middle. Reduction of unscheduled maintenance cost over a two year period minus 69 percent for a fleet of LNG carriers.

And savings by increasing time between overhauls and minimising interruptions, €40 million for the customer, for a fleet of LNG carriers. All this, of course, depends on what operation they have, how critical it is, but the more critical vessel, the more critical operation, the more higher asset value they have, the more value they can provide to our customers by bringing together our competence that we can provide together with the customers operations. So to sum it up. We are on a path and a change journey that maritime has never seen before. The key will be here to combine the financial viability

for our customers together with the decarbonisation journey, and we provide the knowhow, not only the engine technology, where you can do the transition in a phased way, but it's also with the total knowhow we as Wärtsilä can bring in to look at how do we optimise your fleet, How do we optimise your installations to be on this path? And we are well positioned to be part and take a leading role on this decarbonisation transformation. Thank you for listening. And now I'll welcome my friend Sushil to talk about energy and based on the questions, I'm sure there will be a lot of interest to listen to Sushil as well.

Thank you, Roger, for taking us through the decarbonisation of marine sector, decarbonisation of energy sector we all know is a global imperative, but let me start with a small reflection.

Imagine yourself in Helsinki. It is February. Pick up the winter. Outside temperature is minus 20 degrees. Your power and heating goes off for 48 hours. This happened to me, not in Helsinki, but in Houston, where I live, february this year. The Texas freeze event caused a massive blackout, leaving 4.5 million homes and businesses without power, heat and even water, and for some it lasted several days. They even caused economic losses of one hundred and thirty billion dollars. Almost everything in the power system actually failed, except Wärtsilä engine based power plant, which kept on running throughout the blackout to do what it was supposed to do, provide electricity. What we need is flexible form balancing capacity to support renewal in our power systems. Our growth strategy is simple. The transition to net zero will require right technology, software, services and skills, and Wärtsilä is in the right position, we are well positioned to provide that support to our customers in their journey. Now, today, my presentation is structured in two parts. Transform, where I'm going to talk about how the energy system is changing and perform, how we're going to capture growth in balancing and services. Now, our vision is to lead the transition towards 100 percent renewable energy. And I'm going to talk about how decarbonisation and increased amount of renewable in the power system is creating immense growth for our business.

And I'm also going to talk about how we are going to grow in power system optimisation through our leading position in thermal balancing and energy storage. And finally, I'm going to talk about how we're going to improve our business performance through growth in services and project excellence. What is going to be different today in my

presentation compared to the last CMD is we have proof points to demonstrate that the transition is happening. We all know that the energy sector is undergoing a massive transformation and the future is renewables. Decarbonisation and renewables are fundamentally going to change the way energy is generated. And as Håkan has already shown, 88 percent of world's energy is going to be coming from renewables by 2050. And Wärtsilä's role here is to provide balancing power to support txxhe maximum utilisation of renewables, we all know that the Sun does not shine always, and wind does not blow all the time. But also what we have seen this year in Nordics and in Brazil that big hydro countries can also have dry periods. And this is where Wartsila balancing capacity will provide needed power. Now, many people in the energy sector is asking this question, how do we make the transition happen and what steps do we need to make it to net zero? I think the path is similar everywhere. The pace may be different. So what we need to do is add a lot of renewables as quickly as possible.

We need to create conditions for investment in thermal balancing and energy storage. Once we have adequate amount of renewables, we need to start phasing out the inflexible thermal capacities like coal. And to make the final push to 100 percent renewable. We need to invest in power-to-X to create carbon neutral and zero carbon fuel and then convert the thermal balancing capacity to run on those fuels. And at that point, we can phase out the balance fossil fuel capacity if it is already not done. Now, Wärtsilä's technology, both thermal balancing and energy storage will be a key part in this transition and be a part of the future energy system. Now, when we talk about power systems, let me show you how the power system work in practice and what role they play in that power system. You know, that optimal power system is the best solution at hand at this point of time. In a day when you have adequate sun and wind, you can produce enough power to meet the demand and you can store excess energy in energy storage. As we approach sunset the solar capacity comes down. The demand peaks because people come home and switch on their appliances and lights. At that point of time, you need the energy storage to take part of that peak. The thermal balancing needs to follow and ramp up quickly to take the rest of the power.

As we go into the evening. You don't have any solar anymore. Your battery is discharged. Of course, you have low demand and that should be able to be catered with wind. But you may not have wind, the wind sometimes comes down, and that halts the power generation. At that point of time, you need to quickly ramp up the thermal

balancing to provide power for the demand and also for system resiliency. Further into the night you may have the wind coming back again. At that point of time you need the thermal balancing to ramp down quickly to provide a path for the wind to take over. Now. It is really important to understand that inflexible capacity cannot ramp up and down to provide this path for the renewables to take over. On the left hand side, you see an optimal power system, which will always be coupled with with energy storage and thermal balancing capacity. This is going to provide us the cost optimal path or cost optimal power system. On the right hand side inflexible power systems will have inflexible thermal capacity, which will mean that we will have to build out or overbuilt the power system. And even then, you will have to, because you cannot efficiently use the renewables, curtail a lot of power.

So remember: three C's. Our balancing solutions, both thermal balancing and energy storage are complementary, and they provide a reduction in CO2, reduction in curtailment and reduction in capex, making it the cost optimal power system. Now, when we talk about power system, I think planning is extremely important. And when we plan well, when we carefully plan, we can save billions of dollars and achieve rapid decarbonisation. Wärtsilä has systematically developed power system modelling capability over the last decade. We have modelled 150 countries and regions around the world, many of them actually are with our customers. Now. when we talk about power system modelling, we just released, last month, our front loading net zero report. And I'm going to take a couple of examples from that. Germany can achieve net zero five years ahead of their national target and save 55 billion euros. India, on the other hand, can achieve net zero by investing in renewables, thermal balancing, energy storage and reduce their power tariff by up to 48 percent from what it is today. And at the same time, they can save billions of dollars from fuel import. If you have not read this report, I recommend you to do so. There are very interesting findings there. Now, Wärtsilä's thermal balancing and energy storage are going to play a absolutely key role in the power system. Let us now talk about in the performance section, demonstrate how we're going to capture growth in balancing and services.

Balancing market is going to grow tenfold. And we will capture opportunity in thermal balancing, energy storage and services. We will tap into the growth in thermal balancing and energy storage and maintain our top three market position. We will create value through our strong power system knowledge. And experience in integrating different

generating assets. We will grow in our services business by increasing agreement coverage through performance based agreements. And last but not the least. We will also tap into 10 gigawatt of conversion opportunities. Let's take a closer look at the thermal balancing market. The thermal balancing market is growing by 30 percent. Over the next decade it's going to grow tenfold. We are one of the top three players in the thermal balancing market, and we are a top five player in the balancing market. The base load market is moving towards balancing and that is making our technology more competitive in the near future. Gas is going to remain a critical transition fuel to replace coal and provide system balancing. Forty countries, if you have read recently the report from COP26, have already committed phasing out of coal and we think more will follow. Now. 90 gigawatt of coal capacity alone is going to be phased out this year.

Hydrogen and other carbon neutral fuel will be gradually available. And as Roger mentioned, we're working on our hydrogen concept, and we will be ready with the concept by 2025. Ammonia will be earlier. Now, let's talk about some exciting things. We have increased market activities, 17 states in the United States have set their target for 100 percent renewable energy and included thermal balancing as a part of their plan. Brazil is going to procure 12 gigawatts of balancing capacity. They already had a reserve auction and they will have another capacity auction at the end of the year. South Africa has already awarded 1.2 gigawatt of ICE, internal combustion engine to IPPs. Germany will replace 25 gigawatts of coal with renewables. And CHP. And we have done a study with the EPPEI of China, which demonstrates that the internal combustion engine market in China. In Jiangsu province alone will be eight gigawatt. Now what does it mean for us as a business and as a company? The market is picking up, and as Arjen mentioned, Thermal is back. We announced more orders this morning. And this time, the winds are from Brazil, where we got three contracts. Altogether 150 megawatt. Sixteen engines from our Vaasa factory. Last week, we announced two major deals from Latin America, totalling 480 million euros. A few months back, a couple of months back, we announced a 156 megawatt contract from United States, from Omaha.

We are currently building six power plants in Italy for thermal balancing, totalling 380 megawatts. This gigawatt plus capacity takes our thermal balancing installed base by 20 percent up to eight gigawatt and all these thermal capacities, thermal balancing capacities are providing balancing support for renewables and also for weather

variability. Let me show you how. You remember we commissioned a 211 megawatt project just last year in South Australia. South Australia is a market where they have already reached 50 percent renewables. We did a study of the South Australian market by taking real time operative data, not only from the Barker Inlet plant. But also other plants in the system. And what that study shows is that the Barker Inlet plant, which is actually powered by Wärtsilä's internal combustion engine, is by far superior to open cycle and combined cycle turbines. And why is it so? It does because of its modularity and fast ramp up and ramp down capabilities and efficiency. It is able to balance the renewables and follow the demand continuously, and by doing so, it is able to capture 30 percent more price spikes in the market, Australia is a open market, so it is able to capture 30 percent more price spikes, resulting in millions of increased millions of dollars of increased revenue. And what is really important is that is able to avoid negative prices which results in millions of dollars of savings.

Now, we have had a lot of discussions about the market of engines. And thermal balancing versus gas turbines. The scenarios that I have presented, the winds that we have, quite a few of them are against gas turbine. And the real case that we have demonstrated, and we have been talking these in power system modelling, but now we can actually demonstrate this with real time data. All of these demonstrates that engines are very competitive compared to other technology. Now, when we talk about balancing capacity, what is what makes our balance balancing portfolio incredibly strong is our other balancing solution and that is energy storage. Let's talk about it. Energy storage market will continue to grow at 30 percent for next 10 years and beyond. We have been growing quite rapidly in past year by leveraging power system competence and integration capabilities Our order intake has grown six fold. We already have a portfolio of delivered and contracted capacity of four gigawatt hour. Now, the orders, as Håkan mentioned, this year will be over 700 million. Now, the business is expected to be profitable in a few years time, and that is the focus of my organisation. And let's talk how we can do it. We have deep know-how in power systems. And we will combine deep understanding of different technology and software integrating generating assets and maximising the revenue for our customers over the lifetime.

We will continuously invest in to maintain our leading position in power system optimisation and explore also different revenue models with performance based incentive. Now on the execution side, we will we will continue to have a competitive

supply chain with partnerships with world leading battery cell providers. We will grow by combining strong customer base that we have with our Wärtsilä global network, which provides us enormous strength to grow. To provide for that growth we will systematically grow our energy storage organisation and leverage our project management capabilities. When we talk about revenue models I would also like to talk about how our intelligent energy management system is creating value and capturing it also for us. We signed a frame agreement with AGL. And AGL really values our critical expertise in power systems and also our technology. The Wärtsilä automating software is able to improve the day ahead forecasting and predictability of the intermittent generation for RWE in Texas, and it is also able to optimise their dispatch under the PPA. They will create, amongst other things, value as our critical safety and cybersecurity features. Now, when we talk about smaller grids and island grids, we have a lot of use cases on how we integrate different assets and provide CO2 reduction, lower generation cost and provide reliability for our customers power systems.

B2Gold, where we have delivered a 15 megawatt hour capacity and GEMS, they have been able to save seven percent in their gold processing cost. Not energy cost, gold processing cost, which is enabled by GEMS, because GEMS is able to optimise their solar, thermal and batteries. I'm really fond of this statement by Dennis Stansbury of B2Gold. He says GEMS is basically the quarterback of the team. This is what our customers are talking about, our energy management system. Now, when we talk about customers, I also like to talk about services. As our service business is strongly growing. We had a 11 percent growth in our service business. We have a extremely strong installed operating installed base right now of 57 gigawatt of thermal capacity and 2.5 gigawatt of energy storage. And we have focussed our strategies on increasing agreement coverage. We saw that there are untapped potential and now we are converting customers to have agreements through performance based agreements. And there is a potential to increase the euro per kilowatt price on the installed base. We are also pursuing heavily on gas conversion opportunities currently. Now let's let's take a deeper look at that. Now, power systems are getting complex and our customers are coming to us because we provide them support on integrating different generating assets, providing them lower CO2 emissions. Providing them with lower energy costs and, at the same time, also providing them with reliability and resiliency that their power systems need.

And this is driving the need for performance based agreement. What is really, really exciting is the convergent possibilities that we have, which is also enabled by the customers setting up their decarbonisation goals and they want to convert their assets. We have a 10 gigawatt conversion opportunity within our own installed base. We have already converted or secured deals for 1.5 Gigawatt already. And when the sustainable fuels will be available, we will also have the opportunity to convert them going forward in the in the future. Now we have a great service business that is supporting our customers in this time when they are transitioning to a new world. At the same time, we are also able to capture growth through decarbonisation services, performance based agreements and conversion. Now we have also taken steps in our business and in our organisation to deliver robust performance. We have implemented rigid programme to improve risk and requirement management, both in the tendering phase and in execution. We have strengthened project management and resource planning, strengthened sales and operation planning and above all, strengthened leadership and performance management with continuous improvement mindset. We know that project business will always have some risk, but with this we are moving into the future with with a healthy portfolio which will improve our profitability.

Now to summarise. We are witnessing a massive energy transition. We are well positioned when the decarbonisation and increase of renewal will happen. We are well positioned to grow in our business. We will continue to lead, continue to maintain our lead in energy storage and thermal balancing, and we will also improve our performance through service growth and project excellence. Now, we will lead the transition to 100 percent renewable energy future, we have the best technology on thermal balancing and energy storage to provide reliability and flexibility to power systems of today so that neither Texas nor any part of the world will have to see a blackout in the future. Thank you.

Thank you, Sushil, and still congratulations for the deals. So now I kindly ask Håkan, Arjen and Roger to join for the Q&A. And we will start the Q&A here in Salmisaari.

Manu Rimpelä, Nordea Markets. You were right, Sushil that the question would probably be coming to you. But the on the storage side, so how big is the addressable market for Wärtsilä? I mean, if it's 55 gigawatts in 2030, how much actually is something that you're going to target?

Thanks a lot for that question. We are focussing on some focussed markets like, as Håkan already mentioned, United States, UK, Australia and South Africa. These are some of the focussed market that we have.

So of course, the entire market is 55 gigawatt, but we're not present in some countries knowing that we will not be competitive and our values will not be valued. So we are only focussing on a certain market, but as we said, the market will grow at 30 percent and we will keep our top three position going forward.

Ok, and we didn't miss the USA. What is it, the whole market, your targeting there or are there some specific markets that are not relevant for you?

We are focussing on certain markets, which are big. But we are not going to focus on markets where our technology will not be valued yet.

And also the battery or energy storage and thermal balancing market is not one market. It's like when go back to the schoolbook, you segment the market and there are different players in the market. So we have the utilities, the IPPs, the developers, etc. Maybe you should develop that.

Yeah. I think, you know, when when we talk about the energy market there are different types of players. You have utilities which are buying their own assets and utilising it. And there's a different way they value assets. So there we can look at some business models. So that is an attractive market for us, IPPs and developers. There's a lot of project being done by IPPs nowadays, and developers are also jumping in. And that's where we see quite a lot of value for our technology. When I talk about our technology, it's the overall technology, including the software and how it creates value for them. The example that I gave on the on the RWE side. That's where the [inaudible] operating system is actually optimising their PPA and also giving them a day ahead forecasting and predictability. So we are looking at certain markets where we know that we are going to be extremely competitive with our technology and also certain customer segments. And then finally, the small customer segment, not a small customer, it's a large customer segment, but with smaller island and industry. That is where we see tremendous value with our solutions, which can integrate and optimise all kinds of

assets and create value for our customers. And we are looking at revenue models where we gain some from that.

Thank you. Then there's a follow up, if I understood it correctly, you have 70 percent service agreements to that 700 million order intake. So can you walk us through what it is actually that you do? And do you have uptime guarantees? And if you do, then how does a uptime guarantee work? And obviously, what's the risk for you in it?

Thanks a lot. We have 70 percent long term service agreements where the software is a component in that and the warranty is a component in that. And then reactive maintenance and keeping the uptime. I can't talk about what level of guarantees we commit in a certain project because that's also a bit competition sensitive. I would not like to go back, but we have back-to-back guarantees with our suppliers on that. So from a risk point of view, I think we mitigate it quite well.

Ok, and the final question from me, If you're able to save seven percent of the operating cost for a gold miner, I guess you should be getting a pretty good share of that. If you are able to price your product

You can reach your own conclusion in that one.

Are you able to price your product?

Of course, This is still a nascent market. And and there are all kinds of business models are coming in. So right now we are trying to understand is how we create value for our customers. And we are confident that once we can do that, I think we should be able to make money.

And as we said, we are moving up the service value ladder.

Also a question on the energy side, if you look at the fossil balancing plant engines versus turbines, you highlighted the benefits and the advantages of engines. The last five years we have seen the market share fall. Can you maybe explain a bit what drove that and what should change that? And if the ramp up speed is the key highlight of the engine, that's always get put first as the advantage, is that as important going forward

where you may use batteries for that rather than an engine or a turbine. Is it going to matter in the future, whether you're two minutes or 15 minutes, if that role is taken by batteries anyway? And if you lose that advantage, what is then the remaining advantage of an engine?

Thank you. You have two two questions. So let me address the first one where you said the market share. This is a market where one big order can change the market share a player. If you look at the market share now after we have released orders, our market share will grow. But also, I think it is important to note that last couple of years we have struggled in our core markets and in those markets, not even the gas turbines got deals because they were not awarding any contracts to anyone. They were just coping with the health crisis that they had. And and that is where we have been strong and that probably has impacted our market share. That doesn't say why engines should be used for balancing leading to your next question. The engines can ramp up quickly and ramp down quickly, that is one of the advantages why they are able to balance the renewables continuously. You saw the Barker Inlet plant example, it's the modularity. So in 211 megawatt plant, we have delivered 12 pieces of 18 megawatt engines. Now with with that kind of size, you can minutely follow the load because if you have turbines of 100 megawatts of two pieces, you will have to run on part load. You know, you can't even go below 50 percent load in those turbines because the the technical minimum is 50 percent. some days, we saw that this plant was actually generating four megawatts. And then in some days it was doing 200 megawatts.

So that's another advantage. Then the third one is if you stop a gas turbine and if you have to start one hour later, you can't do that. It's just not possible because the technology is not meant for that. With engines, you can do that. You can start and stop as many times whenever. And then when you are starting and stopping a turbine, forget about starting after you stop because you can't do that. But if you still start/stop many times a day, you incur a lot of cost. With engines, you don't. The efficiency because the command cycles will not play a part in the in the future energy system because they will do balancing duty. The efficiency of engines are several percentage higher than turbines. So even if you run for a thousand hours or 2000 hours, it has economic cost. I can count a lot of other advantages. But what is really important to understand here is you need to plan the power system with sophisticated power system modelling tools, and that will give you the optimal path. For the future, and that is important. This is no

guessing game anymore. This is about really systematically planning the power systems.

And also on the battery this is a good question we often face.

On the battery that's a good question. So. If it is 15 minutes or one hour it still requires capacity in the battery. But you need to have outbuilt the system. If once you stop the turbine because you have enough solar and wind capacity and suddenly you see that the wind has disappeared, you have to start up the turbine. But you can't. What do you do? You have to have the energy stored in batteries to provide that pick. So you have to outbuild the system. You have to have more capacity in the energy storage. Similarly, because you cannot cycle the turbines that well. Your solar and wind capacity will not be utilised as as well as you can do in an optimal power system. Think about Germany, I mean, during the COVID time last year. The power demand came crashing down because everybody stopped everything right in the in the first month, first couple of months. And their share of renewable increased. What did Germany do? They actually dispatched power to Norway. And paid them. So. At the same time, Norway, because they had flexible capacity because of hydro, bought that power and earned money, and that's that's really what will happen if you have an inflexible turbine in the system.

You will have to overbuild the solar and wind, and then you have to overbuild the energy storage because you need because you need to overbuild storage and you need to save a lot of excess energy, you have to overbuild also the solar and wind. So again, I think it's about building a power system with proper planning that will demonstrate what is needed in the future power system.

And yes, to build a substream on that. If you have rainy days for three days, you're going to need a lot of batteries.

In Texas we were without power for 48 hours. We were just close to our fireplace just to pass by that time with our little daughter, it's not fun. And I think that's why it's important to to build systems that will work in the future.

My main focus is that you need to overbuild the battery system by less if you combine it with engines than with gas turbines. It's clear that you need that. I'm not debating

whether you need some form of backup for renewable. But you think the the capital cost of the system is lower if you combine it with engines than with turbines because you need more batteries because of the longer cycle time?

Absolutely.

It's not only that we think it, With the with the proof points that we are starting to have that view is shared by our customers.

Second question, can you give any indication what share in a typical contract that GEMS system is relative to the overall revenues, just a big ballpark in terms of the core value add versus the pass through?

We can't go into the detail of the of the calculations, but battery forms the biggest part That's what we procure from outside. I don't think I can give you a a percentage number, but GEMS is smaller at this point of time.

The the big value creation potentially is as we move up the service value ladder and we can provide energy as a service. There is a software as a solution, but even more interesting is to move up the service value.

That is very important. It's the quarterback, right?

Yeah, it's the quarterback of the team.

Next, we will take a couple of marine related questions. You say customers may retrofit existing fleet to decarbonise. What's stopping cannibalisation of new build, whereby customers delay new builds until zero carbon is ready and simply retrofit in the meantime.

It's a good question, but I think as I mentioned during my presentation, not to do anything will not work because you will be out of business, if you are not on this. You remember the CII when going back to the washing machine at home, you need to upgrade and of course, you need to upgrade your existing vessel, but you will also need to get fresh vessels that are more efficient. The newer ones will be upgraded, but they

will also be older ones that goes out of the system, so you still need to continue to feed fresh things into the system.

Thank you. All the levels are at quite low levels on the marine side in segments where Wärtsilä has a strong position. How is this affecting pricing levels on equipment?

Pricing on new build will continue to be tough. It has been tough already for several years due to the lower volumes and and that continues. Having said that our target is with the fuel flexibility to step by step improve that situation, but we are still in a tough pricing environment.

What is the portion of growth today for your equipment revenues and backlog? Cruises are now starting to recover, which is driving your service revenues. But when would you expect your gross new build revenue to bottom out?

We still have, as part of our new build order book, quite a lot of cruise ships or cruise ships deliveries in the order book. If we look at when we expect to see new cruise orders coming in, I think we will first start to see smaller cruise ships. That's the first segment where we'll start to move. Bigger ones will take some years before we will start to see orders coming in. And if you look at the big, big yards, they have their order books until 25 around field. So it would then probably for ship deliveries after 26. Looking then at the service business, we start to be at a level where 60 percent of the fleet is is in operation and continuing to ramp up gradually during the rest of the year. So it looks good.

If green fields are only really closer to 2030 and vessels are supposed to last for 25-30 years, is there a risk that marine orders will be very limited until 2026-2027? How easy it is just to minor retrofit in existing vessels for 2030 IMO targets to be met?

It's a bit going back to what was asked before because we need to remember the older the vessel, the less efficient it is. So going back to the CII and the washing machine example, you will not necessarily upgrade retrofit an old vessel, meaning that you will thus start to look at how to phase it out. And we will then need in the other end a new capacity coming in. So, the demand will be there. It will not be possible just to look at

retrofitting. There will be a continuous demand for new build as well to feed with newer, more efficient vessels that are as flexible as possible.

And I would add that there is going to be big regional variances. If we take Norway's new government. In the governmental programme, it stated that it wants to take Norwegian shipping green. Do you think that is a business potential for Wärtsilä? So we should not be caught in averages. We should look at where some of the action will take place, and that will create significant opportunities.

Then moving back to storage, could you be more specific when you say Wärtsilä is top three in batteries, does third mean Wärtsilä is top three battery distributor, installer or system optimiser or what is the role exactly behind the expression top three? And can you say who are number one and two?

Thanks a lot for that question. Wärtsilä is one of the top three energy system integrator alongside Tesla and Fluence. I think that's that answers the question, right?

Yes, and there is Bloomberg statistics, too.

This is identified by by Bloomberg.

Then what is the lifetime aftermarket revenue opportunity in a battery storage project relative to the initial project or the value? How do performance guarantees, software licences and maintenance agreement work in monetary terms?

I think I touched up on that already. We are at this point of time in a in a state of growth. The market is nascent. It's growing rapidly. We are installing a large amount of capacity. Most of the projects are tied with the long term service agreement, as we saw 70 percent so far. And we provide guarantees and warranties which are backed up with suppliers guarantee when we procure stuff and we charge a fee at this point of time, Going forward we are looking at different revenue models through performance based incentive, which is going to come into play. And as the volume grows and we have the fleet to work on, I think there are possibilities.

What is Wärtsilä's current exposure towards offshore vessels, both within oil and gas and wind?

Offshore vessels for quite some time has been a bit more silent and there have been quite big lay up percentages, but that has also improved lately. The growing segment in offshore is definitely on the wind side, especially talking about wind turbine installation vessels. And there we have a strong offering. So there we are for sure part of that business opportunity.

Marine upgrade, it seems like that these upgrades are now one of the hot topics. It sounds like the biggest investments will be for the tank system rather than the engine upgrade. Is that right? And does Wärtsilä have any revenues from a potential tank upgrade from HFO to gas or from HFO to methanol or ammonia?

It can be depending on the vessel structure, so it might be actually the bigger part of the cost is related to finding the space and putting the tank in for the future fuel. That's correct, and the engine part is smaller. But today we provide the storage and the tank for LNG fuel. So if you do an upgrade from liquid fuel to LNG as a fuel, we provide also the the tank for that installation.

How much of the equipment sales in marine power today is for new build and how much for existing vessels, meaning retrofits or replacements? What has this split been historically? Roughly it's one third and two thirds. So the big share is on the service side and the big opportunity, coming back to my comments earlier, is related to how do we support our customers with retrofit upgrades. It can be energy efficiency devices or, later on, fuel conversions.

Is Wärtsilä financially well enough positioned for a major acquisition during the period of 2020 to 2024 If such a strategic measure should be needed.

Yes.

Our strategy is much more focussed on bolt on acquisitions, making acquisitions of critical competence that is aligned to our core technologies.

Moving back to storage. In the battery projects there's lots of pass through revenues included. Can you comment how you mitigate risk risks regarding costs and EPC execution?

Thanks a lot, and I think Håkan tossed up on that question already up front? We have frame agreements with major suppliers and that's how we make sure that we we don't have cost overruns, first of all, in the supply side. On many of the storage projects transportation logistics are a big thing, so there we are either passing it through to the customers or taking measures to make sure that we are not going to get into a cost overrun on that side, either taking more contingency or taking a higher cost base on projects. We also have strong project management experience for such a long time. And I think that is probably unique for four Wärtsilä compared to other system integrators that you see in the market. And through that and all the actions that we have taken in past past couple of years, we are really ready to make good projects and not getting into cost overrun. Project business is still going to have some risk and that is that is fine, but we're pretty confident with our portfolio right now.

Thank you. I think we are running out of time for the Q&A, so I'm handing over for Håkan for the closing remarks.

Thank you. So, wrapping up the day, and I hope you enjoyed it. If we start with the markets on the energy side and the marine side. Decarbonisation will transform the world, will transform our two industries. It's about regulatory changes, but it's also a demand that is coming for green transport and also for balancing. The good message is that Wärtsilä is a technology player in a rapidly evolving technology space and we have been in many of our core technologies for decades, and those core technologies are part of the future and will actually make a significant contribution to the future. And of course also represents growth opportunities for the future. On the execution side, we are set for performance, we can leverage the markets that are coming back and that will continue to grow. Yes, we are still heavily impacted by COVID, but we do see very interesting opportunities going forward.

And we have a strategy in place, we have the Wärtsilä Way. That is the foundation of how we want to work together as a team, where we are going, very clear direction and how we want to achieve the targets. The targets, we talked about them. We have new

targets, the five percent organic annual growth. Over the cycle we definitely think it's achievable with the significant opportunities we see in services, on the energy side, both on the balancing and the storage. On the profitability, the 12 percent. We're currently at six. We really believe we can take it to 12 over a few years driven by growth, but also by continuous improvement. And then we have set ourselves some ambitious decarbonisation targets both for our portfolio and for our own operation. But I would say the most important thing is our team and the culture that we are building, performance culture, making our customer successful, staying close now in the big transition, it's a great opportunity, but customers are evolving. It's about delegated P&L responsibilities, with ownership accountability. It's about caring for people so people care for customers. It's about moving in the right pace with the leadership, providing direction and support. And it's about continuously improving our performance. And if I sum up the mood with one word, which I started with this morning, and that is to say, we are all really excited about the future. Thanks a lot for today.