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# **Umicore Sustainability Strategy**

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## Let's go for zero

**Marc Grynberg:** Hello everyone and welcome to Umicore's sustainability event. I am happy and proud to share with you today our new sustainability ambitions which will guide us, in the coming years, in everything we do at Umicore. As the name "Let's go for zero" suggests, our new strategy is really ambitious and my colleagues and I will be pleased to explain the what and the how of our sustainability roadmap. I will first provide an overview of the strategy, then Géraldine Nolens, Executive Vice President and An Steegen, Chief Technology Officer, will elaborate on our roadmap to net zero greenhouse gas emissions and our ambitions to minimize the impact of our operations and ensure zero harm. I will then address the theme of zero inequality before handing over to Natalia Agüeros, ESG Communications Director, who will address the topic of governance.

Our strategy aims at addressing sustainability in a comprehensive manner. However, during the presentation today, we will not have the chance to detail all of our objectives and we will focus on some of the most iconic aspects of our strategy. Of course, we will be happy to address other aspects of the sustainability strategy during the Q&A session which will follow the presentation and for which you can send us your questions through chat.

Before we dive into the heart of the strategy though, I am pleased to share with you a foreword from Thomas Leysen, Chairman of Umicore's Supervisory Board.

**Thomas Leysen:** Sustainability has always been at the heart of Umicore's vision. When we started the transformation of our group in 2000 and when we renamed our by-then already two-centuries old company, Umicore, we also adopted three clear principles that would drive our strategy going forward. The first principle was that we would focus only on those businesses where we had the potential to really distinguish ourselves through technology. Second principle was that we would focus only on those businesses where we had the potential to be or become a clear global leader. And the third principle was that we would focus only on those businesses where we had the potential to bring clear solutions to sustainability challenges, and we linked that clearly to a number of mega trends.

We also adopted a visualisation of our business model which had circularity at its heart, and this I have to say probably 10 or 15 years before the circular economy became a household word.

Since, a lot has been achieved, a lot has changed, also for Umicore. We have become a clear leader in clean mobility, in recycling. We have put sustainability really into our DNA. It's now part of who we are as Umicore. And we have created a lot of value for all our stakeholders. But so much needs to be done to ensure a sustainable future for us all and we feel its our responsibility to continue to be at the forefront of that, and also to hopefully inspire others.

So today we are presenting a new framework that will guide us in the decade ahead and beyond. It's a framework that was developed, assembled, by our teams; that was driven by Marc and by the management board, that was discussed and enriched by discussions – and intense discussions, I have to say – in the supervisory board. And after all these discussions, we jointly decided to go for it. To make it the new guiding light for Umicore. To embed it in our performance metrics, to establish clear links to executive remuneration. And most importantly to commit to them, to commit to them internally but also externally to all our stakeholders.

So now the time has come to set this bar, to announce these new targets and to go for it. To go for zero.

**Marc Grynberg:** As Thomas Leysen outlined, we have a longstanding tradition as a pioneer and leader in terms of sustainability in our industry. Sustainability is truly engrained in who we are, how we behave and we see it as our mission to be an industry leader in terms of sustainability. In fact, we have established a strong track record and, over the past two decades, have been recognized on multiple occasions as a leader in sustainability. More fundamentally, since 2010 and the launch of the Vision 2015 strategy, we have sharpened our focus on those activities which are providing solutions to some of the most pressing societal challenges globally, such as the need for cleaner mobility and for a circular economy.

As part of the Horizon 2020 strategy, we have successfully turned sustainability into a greater competitive advantage.

Clearly, one of the areas in which we distinguish ourselves the most is in the supply of raw materials. We are pioneers in ethical supply and Umicore was the first company in the battery value chain to offer materials which are certified by an independent third party as coming from a clean and ethical source. I recall having been asked on several occasions how long we would persist and endure an unfair cost handicap relating to clean and ethical raw materials. I have consistently answered: as long as necessary because this is the only way to go and, in the end, ethics will prevail. The good news is that our approach to ethical supply is now gradually becoming the industry standard. In addition, we have made Umicore less dependent than any competitors on metals coming from primary mining sources by increasing the proportion of recycled metals in our products over the past 5 years.

In terms of eco-efficiency, we have drastically reduced metal emissions to air and water. We have also made Umicore a better place to work which helps us attract and retain talent in all regions where we operate. In terms of diversity and safety however, we still have quite some way to go.

So, now that Horizon 2020 is behind us, what is next ?

In a way, you may expect more of the same because the new strategy builds on 20 years of achievements. However, our approach is more comprehensive than in the past, both in terms

of substance and disclosures. Also, you will see an acceleration and our new ambitions are truly bold. In other words, we are raising the bar, both for ourselves and our industry.

By bold, I mean that we go for zero: net zero greenhouse gas emissions by 2035, zero inequality and zero harm.

Let me start with greenhouse gas emissions.

Climate change requires action now and we have chosen not to leave it to the next generation to solve the issue. Therefore, we have worked out an aggressive roadmap to become carbon neutral by 2035, with intermediate milestones of a 20% reduction to be already achieved by 2025 and a 50% reduction by 2030. In order to get there, we will harness all of our capabilities to improve energy efficiency, modify processes, switch to renewables as fast as possible and ensure that our growth be carbon neutral.

This timeline is way more ambitious than the industry practice, as you can observe from several recent announcements. In addition, I would like to point out that our new cathode material production capacity in Europe will be carbon neutral right from the start of operation this year, which is a big plus for European EV's and sets us apart from competition.

Moving to zero inequality, we aim at increasing diversity and inclusion.

We have a lot of diversity in the group and in order to harness the full potential of such diversity, we will increase the representation of non-Europeans in the various management teams and will be aiming at gender parity in management as soon as possible, with an intermediate goal of having 35% of women in management by 2030.

Umicore instituted the principle of pay equality in its operations globally several years ago. Now, we have to formalize the verification mechanisms as well as the related reporting.

As I mentioned when looking back at Horizon 2020 achievements, we have made Umicore a better place to work. However, it is fair to say that our safety performance remains unsatisfactory in a limited number of industrial sites despite the various improvement programs which have been introduced over the years. We are now changing gear and addressing in a more fundamental manner the culture of the group in terms of safety. Our approach and ambitions are broader than safety though and will comprehend wellbeing in general, with the aim to reach zero harm.

Our ambitions are stretched, first and foremost because these are the right things to do. This is what our stakeholders expect from us: our customers, our neighbors, our suppliers, our business partners, our shareholders, our employees and society at large. In a way, we owe it to society to make best use of our capabilities to address key challenges such as the need for cleaner mobility or a circular economy, and we will make sure that we meet the expectations of our stakeholders in a manner that leaves absolutely no regrets.

Our ambitions are stretched, yet they are achievable because we have what it takes to be successful, we have what it takes to be a sustainability leader and continue to establish new benchmarks for our industry. We have the necessary competences and, more importantly, we have it in our DNA and this is what I would like to show you in this short video.

I would now like to hand over to Géraldine and An who will elaborate on our roadmap to net zero greenhouse gas emissions.

**Géraldine Nolens:** Thank you Marc. As Thomas indicated sustainability has always been at the heart of Umicore's vision, it has become part of who we are and how we act. And as a frontrunner in sustainability we believe that in order to address climate change and limit global warming we need to act now. That is why it is our ambition to become Net Zero by 2035.

2035, I am sure you will agree with me that that is a very ambitious goal. It sets a new benchmark in the industry and demonstrates once again Umicore's commitment towards sustainability.

By aiming for 2035 we take responsibility now and are not passing it on to the next generation.

This timing of our Net zero ambition also sets us apart from competition and will differentiate Umicore towards its customers and will give us a strong competitive edge. There are various Greenhouse Gas emissions and for Umicore the most important one is carbon dioxide.

Our net zero objective focusses on those emissions that we can control, namely our Scope 1 and scope 2 emissions. Scope 1 being the direct emissions from operations on site: so relating to how we manufacture our products and scope 2 relating to the purchase of energy, mainly electricity.

In 2019 the total scope 1 and 2 emissions of Umicore amounted to 792kT of which 389kT in scope 1 and 403 in scope 2.

Together with the business units, teams of experts and our R&D department, we developed a roadmap towards net 0 emissions in scope 1 and 2 by 2035, with 2 intermediate milestones.

We envisage a first reduction of 20% compared to our baseline of 2019 by 2025. This first milestone will be reached largely through the reduction of our scope 2 emissions.

With respect to this first reduction by 2025, it is important to note that the amount of CO2 emissions indicated for 2019 (just below 800 kTon CO2e) does not yet include our plant in Kokkola, Finland where we have cobalt refining and cathode precursor activities which we acquired in 2020, so in absolute terms we aim to be reducing more than 20% of our baseline of 2019.

As from 2025, the reduction of scope 1 GHG emissions will complement the scope 2 reduction. That should bring us to the second checkpoint of a 50% reduction in 2030. To then achieve Net zero GHG emissions in 2035.

We have identified these 2 milestones because there are different levers that will be put to use in order to achieve our ambitious goal. Some of these will show their effects in the short term such as the purchasing of renewable energy

While our most impactful innovation and collaboration projects will need more time to come to maturity and bear fruits.

Beside these high impact innovation projects, we will continuously strive to improve our energy and process efficiency throughout the sites. Consuming less energy, remains the best and most economical way to reduce GHG.

And finally, in addition to reducing the carbon emissions of our existing activities, we will need to ensure that all our growth, whether organic or through acquisitions, is also carbon neutral.

Let us now zoom in on the reduction of our scope 1 emissions. The decarbonization of our operations is complex and requires us to rethink our technology and processes.

The first years the cost of decarbonization of scope 1 emissions will mostly relate to R&D expenses. As of 2025, after completion of the R&D programs, capital expenditures will be required. The aggregate amount of capex to achieve the scope 1 reductions is estimated to amount around 100 to 200 million euro over the period 2025 -2035. You will agree that this is actually a relatively modest amount.

Our 2 largest emitters of CO<sub>2</sub> are two sites located in Belgium, namely our Precious metals recycling site in Hoboken and our site in Olen, which houses among others our Cobalt and specialty Materials and Electro Optic Materials businesses and our R&D headquarters. These two sites represent around 85% of Umicore's scope 1 emissions. Our efforts to reduce GHG emissions will accordingly focus mainly on these two sites.

An will provide some color on some of our most important ongoing innovation projects.

**An Steegen:** Thank you, Geraldine, I'll be happy to do so. From a technology perspective, we look at several ways to reduce Green House Gas emissions. At R&D, we focus mainly on two of the levers that you just have indicated, innovation and process efficiency. That said, for all new technology projects, we take from the start carbon neutrality into account in both our technology feasibility and our upscaling phases of new projects. This way, we at R&D, contribute in different ways to Umicore's carbon neutral growth.

Improving process efficiency is often the easiest short-term approach to reduce scope 1 Green House Gas emissions. Based on our extensive industrialization capabilities and our focused R&D on process technologies, Umicore has an impressive track record with regards to improving process efficiencies. A good example of optimizing the energy usage is the implementation of a clean heat network on our production sites. I will come back to that later.

Another step towards reducing the carbon footprint of our operations is the switch away from fossil fuels - as much as possible - in our processes.

For the remaining emissions, those that we cannot reduce through process and technology optimization, we will [have to] apply gas capturing technologies which allow the captured gases to be reutilized in our own production or, alternatively, transported, stored and utilized in other applications.

These technology developments are based on our unique expertise in metallurgy and gas cleaning. In addition, advanced digitalization methods and tools are playing an increasing role in monitoring and pro-actively identifying sources of emissions. We continuously expand our knowledge through additional investments in R&D, open innovation collaborations and developing partnerships.

As Geraldine mentioned already, the majority of our scope 1 GHG emissions are coming from our industrial sites in Hoboken and Olen, both located in Belgium. We are not starting from scratch. Let me now give you some specific examples of our decarbonization realizations and ongoing projects for the sites in Hoboken and Olen.

Let's start with Hoboken. The majority of the emissions in Hoboken are related to pyrometallurgical processes where we extract and refine metals by applying heat.

From an energy optimization point-of-view, in Hoboken, 80% of the steam, necessary to heat buildings and to be used in the industrial processes, is generated on site by using excess heat from the pyrometallurgical processes. This has led to significant CO<sub>2</sub> reductions by avoiding the use of natural gas, which is the traditional way to generate steam in a boiler.

Secondly, there is the use of fossil fuels in Hoboken. Fossil fuels are used as a source of energy in our pyrometallurgical processes and as a reduction agent in the furnaces.

Replacing fossil fuels as energy source can be achieved by transitioning to renewable electricity. On this topic, we will explore the possibility of heating the Lead Refinery's kettles by electricity instead of natural gas.

For the replacement of fossil fuels as a reducing agent, we are currently experimenting with the use of low Green House Gas intensive fuels. In the short term, we are identifying where to apply bio-based fuels with small process adaptation.

This depends of course on certification and market availability of these bio fuels. In the long term, we are exploring the use of hydrogen instead of carbon based metallurgy. This will depend heavily on the availability and cost of green hydrogen and on the safe implementation of hydrogen based processes.

Let's now move to our innovation in capturing technologies.

Umicore has decades of expertise in gas cleaning. Recently our technical teams developed and successfully commissioned an innovative technology for the recovery of nitric acid out of a nitrogen-containing side stream in the Hoboken plant.

N<sub>2</sub>O has, as you may know, three times the global warming potential of CO<sub>2</sub>. As a result, this plant already brought a 13 % reduction to our scope 1 carbon footprint reduction roadmap towards net zero. At the same time, this plant generates nitric acid, which is now used elsewhere on site.

In addition, we are evaluating carbon capture technologies. Carbon capture and storage (CCS) is the process of capturing and storing carbon dioxide (CO<sub>2</sub>) before it is released into the atmosphere. Carbon dioxide can be captured using different methods. The main focus for Hoboken is identifying the technical fit between the available CO<sub>2</sub> capturing techniques and the Hoboken specific CO<sub>2</sub> streams. This technology development will be executed in collaboration with experts in the field and includes inhouse lab and piloting testing.

Besides carbon dioxide capturing, we also need ways to transport and store the captured CO<sub>2</sub>. Access to transport and storage infrastructure will be an important enabler. Industry wide collaboration will be needed for the installation of this infrastructure. As part of this evaluation, we collaborate with industry and universities to mature our insights in the carbon capture value chain.

Let me now switch gears to Olen.

Hydrometallurgical production processes and heating of buildings account for more than 70% of the carbon footprint of the Olen site. The Olen emissions represent about 13% of our total scope 1 emissions. The sources of carbon input in Olen are mainly related to natural gas while only a small fraction comes from grid electricity and process emissions.

Hydrometallurgy refers to the application of aqueous solutions for metal recovery from ores and recyclables. They typically use steam heated vessels and autoclaves to extract valuable metals from solvent solutions. Historically, these processes are steam based, while most hydro-metallurgical processes today do not require steam as such.

The most basic way to generate steam is to burn fossil fuel like natural gas in a boiler to heat water and produce steam. The Olen site has a proven track record in efficiency projects, including the installation of a Combined Heat and Power plant. This is an energy efficient technology that generates electricity on site (from natural gas) and captures the excess heat that would otherwise be wasted to provide useful thermal energy to generate steam.

As a next step, Umicore has the ambition to partially complement the legacy natural gas based steam infrastructure with a smart low temperature heat network, supplied with waste heat and renewable geothermal energy. The ambition is to realize a state-of-the art joint geothermal project between industry and surrounding communities in Flanders.



As you can see, scope 1 emission reduction is an integral part of our technology roadmap at Umicore. We have dedicated projects that focus on the Green House Gas reduction of existing plants and processes.

**Geraldine Nolens:** Quite some exciting and promising projects in the pipeline. Now let's turn to our scope 2 emissions, which mostly relate to the use of electricity.

The first goal is of course to ensure our activities and processes are as energy efficient as possible. And An gave some examples to that. Secondly, with respect to the energy consumed, our decarbonization trajectory is mainly focused on the purchase and production of renewable electricity.

In the next slides we will go into more detail, but you can already see on this timeline that we plan for our first green PPA to be effective as of 2023. With respect to the production of renewable electricity onsite, I just want to note that while the bar starts in 2019 in the graph; our efforts in this respect are not new. We have in fact already been working on this since many years, with our first on site windmill farm installed in 2015.

On the short term the purchase and production of renewable electricity will be complemented by the purchase of renewable energy certificates.

The vast majority of our scope 2 GHG emissions will be reduced through the purchase of renewable energy through green PPAs.

The main consumer of electricity is our Rechargeable Battery Materials business unit, followed by Automotive Catalysts. Currently 44% of our scope 2 emissions is generated by our battery materials business. And with our production expansions in battery materials, such as for instance in our greenfield cathode materials production plant in Nysa, Poland, this percentage would grow further in the future.

We will enter into a long term green PPA for our cathode material plant in Poland later this year. In fact, we are very proud that our cathode materials production plant in Europe will be carbon neutral as of the start of production and I'll come back on that a little later.

We are also launching a number of green PPA tenders elsewhere in Europe, including in Belgium and Finland. These PPAs would cover a substantial part of our European electricity consumption.

Our new plants in Americana in Brazil, which we opened last week and which house several activities including Catalysis, recycling, platinum engineered materials and precious metal catalysts are also entirely supplied by renewable electricity including wind, solar and hydro.

Finally, considering our extensive cathode production activities in Korea and China, it is important to note that today green PPAs are not yet available in these countries. We have, however already done the needed preparations at our side and are ready to start green tendering as soon as it becomes possible. In the meanwhile, we intend to bridge that period with the purchase of green certificates.

We also have a number of projects involving the production of renewable energy on our sites. Our ambition is for about 5% of our 2019 baseline scope 2 emissions to be produced on site .

Already in 2015 we installed the first wind turbines on our site in Olen in Belgium. We are currently in the process of expanding this project further by adding two additional windmills; As a result hereof, 80% of the electricity consumed in Olen will be renewable electricity produced on site.

We have also already realized a number of solar panel projects in 2020 on our sites in Hoboken, Bruges and Brussels.

In addition, numerous projects for the production of renewable electricity on site are ongoing throughout the world.

These include for instance solar projects in our automotive catalysts plants in Shirwal in India and in Florange in France and Hanau in Germany ; and our battery materials plants Cheonan (Korea) and Jiangmen (China). We also have a number of windmill projects in the pipeline in Belgium. These projects are somewhat more challenging from a permitting point of view though.

Finally, we have an interesting pilot project running in Olen where we have installed a battery energy storage system, with recycled batteries from Renault vehicles, which provides flexibility services to the grid. As the production of energy from wind and sun is not flexible, (you know you can't control how much electricity is produced when), this system stores the produced green electricity and then supplies it to the grid when there is demand.

Beside reducing the scope 1 and 2 emissions of our existing activities, it is of course also essential that any growth whether organic or through acquisition is also carbon neutral. When evaluating a growth project, net zero emissions will be a key criterion.

In this respect, our cathode manufacturing plant in Nysa Poland is a perfect example of such carbon neutral growth.

The electricity consumption of the plant will be carbon neutral as of the start of production planned later this year, which is very impressive and setting us well ahead of competition. In the beginning net zero will be achieved through the purchase of green certificates and then as of 2023 through a long term green PPA. When deciding on the location for our plant, the availability of low carbon electricity supply was a key criterion for us, together with for instance customer proximity and access to skilled workforce.

The site will make use of wind, hydro and photovoltaic energy. And as I just mentioned, our newest plants based in Americana, Brazil, are also entirely supplied by renewable electricity.

Finally, a few words with respect to our scope 3 GHG emissions, which are linked to the raw materials we buy. In this respect we will work together with our suppliers to reduce emissions and we are currently defining targets in alignment with the expectation to achieve the objectives of the Paris Agreement and with the aim of being SBTi certified.

GHG emissions are not the only emissions we are working on though.

**An Steegen:** Indeed, at Umicore we are committed to minimizing all our emissions.

Metal to air emissions are defined as the total amount of metals emitted to air in solid fraction. Since 2015, we identified the sites that contributed to metal emissions the most. The actions that we have taken since then have led to a significant reduction in metal emissions. Since

2015, we have reduced the metal emissions to air with 67% and the metal emissions to water with 59%. Besides that, we have also reduced our Nox and Sox (nitrogen and sulphur based) emissions with 47% and 67% respectively.

The evolution in metal emissions to water can be largely attributed to our Hoboken plant, where the large investments in a more efficient wastewater treatment plant at the site has paid off.

The reductions in metal-to-air emissions are observed across many sites to a varying degree and are the result of improved air filter efficiency and to the improvements in overall process efficiency.

Building on our strengths, we want to further minimize our environmental impact and raise the bar for the future by adding a group target of 25% diffuse emission reduction by 2025. Diffuse emissions are emissions that are not coming from our processes themselves, but for instance from dust moving when we handle raw materials.

Over the previous years, our technical competences have enabled us to significantly speed up identification of diffuse emission sources.

Take for instance the diffuse emissions of Pb in Hoboken, we are using very advanced sensors to detect emission sources; based on these data, we take actions to systematically eliminate these sources.

In addition, modeling and artificial intelligence are playing an important role to migrate to a more pro-active approach. For example, based on the measured data, we have developed Continuous Fluid Dynamics models of the Hoboken production site to simulate the behavior of sources, emission concentrations and wind directions. Based on these models, we are developing artificial intelligence algorithms to predict emission behavior based on weather forecasts and production data. This way, based on the conditions and circumstances, we will be able to pro-actively adjust our operations if needed.

The identification of emission sources has led to large investment projects resulting in significant improvements of metal emissions. This mainly includes investments in gas cleaning systems, combined with a full encapsulation of certain production and storage facilities. In addition, a roadmap for materials handling and logistics has been developed last year.

We continue to investigate novel gas cleaning processes, measurement and digitalization tools to stay at the forefront of technology innovation when it comes to reducing metal air emissions. Besides that, we will also create a green zone in Hoboken.

Geraldine will tell you more about that.

**Geraldine Nolens:** Indeed, on top of all these internal process improvements we are working on creating a green zone, both on site and adjacent to the site. The green zone will have a surface area of more than 5ha and as you can see on this slide, it will structurally increase the

distance between our facility and the residential area thereby further reducing the exposure to diffuse emissions. The combination of the investment program on site and the creation of the green zone provides the right conditions for the local community and the plant to co-exist sustainably.

I would now like to turn to the Zero Harm pillar of our strategy. The success of Umicore relies on our employees. So it speaks for itself that one of the pillars of our sustainability strategy is all about ensuring zero harm:

- Zero work related injuries
- Zero excess exposure
- And wellbeing at work for all our colleagues

While for certain ESG ambitions there could be discussion as to what the right target or percentage should be, with respect to safety the ambition is not up for debate, there can be no other goal than zero work related injuries. Although in 2020, 83% of our sites were free of lost time accidents. We still have a long way to go to reach our target.

In order to achieve zero work related injuries, we will on the one hand; focus on further reinforcing our processes and safety standards and on the other hand establish a true and caring safety culture. And it is especially on this latter part that we want to make a breakthrough.

We are rolling out “coaching for safety” trainings which focus on making safety leaders out of each Umicore employee. These trainings are aimed at changing the behavior from within instead of simply imposing. A safety leadership that is lived, seen and felt by all colleagues on all levels of the organization.

We also want to ensure zero excess exposure. In our processes, we may be exposed to certain metals such as cobalt, lead and platinum salts. It is essential that we continue to improve the design of our workplace and our employees continue to be properly protected with the right protective equipment and apply the right hygiene habits. We go beyond the legal requirements and set our own, more stringent voluntary science based exposure targets to ensure the health of our employees.

And last, but certainly not least, we want to ensure the wellbeing at work of all of our employees. Next to offering our colleagues a safe workplace, we want to safeguard their mental, physical and social wellbeing. This is supported by a multitude of programs ranging from offering preventive medical checks, to providing training on early detection of burn-outs and ensuring digital hygiene.

These three elements of our zero harm objective are part of the way we care for our employees and are key enablers for a happy and engaged workforce that is able and willing to give its very best to achieve our ambitious objectives.

I'll now hand the word back to Marc who will discuss the Zero Inequality pillar of our sustainability strategy.

**Marc Grynberg:** Thank you, Geraldine. Umicore is a global company with a truly diverse character. We have more than 70 nationalities making up the workforce. However, when we move up the ranks, we observe that diversity tends to diminish. Women, for instance, make up only 23% of the management population and non-Europeans make up 20% of the management teams, which is not representative of our business footprint.

We now aim at increasing diversity in a more pronounced and harmonious manner across levels. In particular, we aim at gender parity in management as soon as possible, with the ambition to have already 35% of women in management by 2030. Also, we will increase the proportion of non-Europeans in management teams in a way that moves us closer to how our business is developing.

Finally, we will measure and disclose in a more formal manner how we apply the principle of pay equality.

As a matter of illustration, I would like to mention a few programs which we have rolled out within the group in order to promote diversity and inclusion. One of them is a training program which is now part of our standard leadership curriculum and addresses the unconscious bias that we may have, for instance when making recruitment or promotion decisions. Many of us do have a propensity to hire or promote look-alikes and the program will help us bring the value of diversity in the equation more systematically.

In terms of gender diversity, we are also setting up different programs to attract more women, for instance through industry initiatives to promote STEM studies for all, or through more active campus recruitment.

Everyone in Umicore has equal opportunities based on merit and skills, no matter gender, background or identity. In recruitment however, we are making an extra effort in terms of gender diversity. Last year, 30% of our management recruits globally were women. This year we are raising the bar to 35%.

In essence, we are addressing diversity with structural measures which are integrated in regular management processes. This is how we want to ensure that we do the right things and that we do them right. At the end of the day, sustainability requires that our talent management decisions continue to be driven by merit and skills rather than by quotas.

I will now hand over to Natalia who will elaborate on our governance approach.

**Natalia Agueros:** Thank you Marc. Governance is the invisible pillar that supports this ambitious strategy and we're going for best in class. How?

First by maintaining a continuous dialogue with our various stakeholders, to understand and meet their expectations, to meet YOUR expectations, and maximize our positive impact on society. In the lead up to our "Let's go for Zero" sustainability strategy, we turned to our stakeholders to define materiality for Umicore: mapping what was most important to them and where Umicore had the greatest impact.

Next to that, benchmarking against industry peers and ESG ratings helps us define pathways to continue our sustainability leadership.

And finally, combining both with leveraging our technological, material and sustainability knowhow to deliver sustainable solutions to society while at the same time giving full disclosure on our impact.

First and foremost, ESG is squarely on the agenda of both the Management Board and the Supervisory Board. Working together in the lead up to this sustainability strategy, as also explained by Thomas, the Chairman of our Supervisory Board, the Management Board and Supervisory Board engaged in an iterative process to arrive at the stretched, comprehensive and relevant ambitions defined in Our Let's go for Zero strategy.

Moving forward, a dedicated, cross-discipline ESG committee will serve as an advisory body convened by the Management Board to provide ongoing feedback, along with half- and full-year progress reports against ESG strategic ambitions and performance.

This commitment to sustainability will be further reflected in sustainability linked remuneration as announced at the AGM earlier this year.

Where there is good governance there is good disclosure. We have heard the call from our stakeholders to increase both granularity and transparency in our reporting.

So in addition to transparency on our ESG governance, our stakeholders can expect full disclosure on impact.

That means increasing our level of reporting, including on our emissions and on water use and expanding the use of frameworks used in reporting. Along with increased disclosure, our commitment to continuous improvement in terms of ecoefficiency remains and meaningful and ambitious reduction targets for water use and scope 3 emissions will be defined in 2022.

As soon as our scope 3 emissions reduction target has been defined, we will pursue SBTi validation for our ambitious net zero greenhouse gas emissions approach.

Because we know and understand the importance of climate resilience, Umicore officially supports the TCFD and will begin working on an alignment as well as reporting on our progress.

Finally, but certainly not least, we will be favoring sustainable instruments as part of our sustainability-linked funding approach.

This is where we stand today, and as I said earlier, Umicore values the ongoing dialogue with stakeholders. We look forward to continuing the sustainability conversation with you over the months and years to come.

Thank you, back to you, Marc.

**Marc Grynberg:** Thank you, Natalia. Before opening the floor to your questions, I would like to recap some of the key messages from today's presentation.

Umicore has a longstanding track record of sustainability leadership and, over the past two decades, we have relentlessly paved the way for our industry to become more sustainable in many respects. Take, for example, the voluntary remediation programs that we have carried out in and around our sites, or the circular business model which we presented for the first time exactly 20 years ago. Another example is our pioneering approach to ethical supply which goes back to 2005. More fundamentally, sustainability cannot be dissociated from our strategy, as evidenced by the portfolio choices which we have made over the years.

Today, we are raising the bar once again, both for ourselves and to set new benchmarks in our industry. We aim at net zero greenhouse gas emissions by 2035, well ahead of competition and with a head start in our battery materials activities in Europe. We aim at zero harm and zero inequality. Our ambitions are stretched because these are the right things to do and they reflect how we want to distinguish ourselves.

Sustainability at Umicore is not only about minimizing the impact of our industrial operations, it is first and foremost about creating a positive impact on society. We will continue to harness all of our capabilities and bring solutions to some of the most pressing societal challenges, be it the need for cleaner mobility, the need for a circular economy or the need to address climate change with speed and decisiveness. This is what our stakeholders expect from us and we will do what it takes to meet their expectations in a manner that leaves absolutely no regrets.

So, let's go for zero!

And with this, I would now like to open the floor to your questions, and please bear in mind that you can continue to send your questions through the chat.

## Questions and Answers

**Marc Grynberg:** So let's go to the Q&A session, and the first question comes from Dominic Wells at Roskill. The question is, will carbon credits – emissions trading – be part of this strategy to achieve net carbon neutrality by 2035?

Geraldine do you want to take the question?

**Geraldine Nolens:** Of course. Thank you Dominic for this question. Will we buy carbon credits as part of our strategy? I think the answer is clear to that: as little as possible. We have an extensive strategy with different levers. We want to make sure our processes are as efficient as possible, we want to focus on reducing our Scope 1 emissions through the technology developments An mentioned. We want to focus on our Scope 2 reduction with electricity and buying renewable energy, and finally we want to make sure that our growth is carbon neutral. If there is CO<sub>2</sub> left, then of course we will offset that with carbon credits. But as little as possible.

**Marc Grynberg:** Thank you Geraldine. And if I may add one consideration; indeed we will use carbon offsets to the minimum extent possible for the marginal residual carbon emissions that we have, and actually as a matter of fact we are already initiating a first carbon offset programme through a large reforestation programme that will engage Umicore for the next 25 years.

The next question is coming from Nabil Al Kabir from Schlegel und Partner, and I hope I've pronounced the name of the company well. The question is regarding the plant in Nysa, Poland. As the precursors for cathode materials production volumes in Finland are not sufficient to supply entire Nysa, from where will it be supplied? Do you plan to increase capacity in Finland or will you be supplied from China via the new rail connection?

The answer to both parts of the question is yes. So the idea is that we will over time establish a fully-fledged value chain in Europe and so indeed yes we will increase and we're planning to increase the precursor production in Europe and Finland is a good place, definitely, to do that. In the meantime, we may use existing precursor capacity and capabilities in other regions, including in China, and use the most sustainable transport solutions and by all means the rail connection that exists between China and Europe. As a matter of fact, when we selected the location of the plant in Nysa, one of the criteria that was also important is the existence of a railway connection. And we have now engineered actually the railway at or in the site to transport raw materials, incoming raw materials, as well as outbound finished products.

So I don't see other questions coming. Question from an individual investor, Lucas Leitz. The question is, what is your vision for the future of Umicore?

It's a very broad question and let me try to address it in meaningful and palatable way. As I've mentioned during my introduction, over the past several years, Umicore has sharpened its focus on clean mobility materials and recycling. We really want to use our competencies, our capabilities and our expertise, in order to address key society challenges, such as the need for cleaner mobility and the need for a circular economy. And this is where we believe we have the best and the fastest contribution to make to society. So this is why the strategy in the past several years has focused on these areas and we have developed significant capabilities to



support, for instance, to enable the electrification of mobility, and this is going to require more investments going forward.

As you see now not only electrification taking shape, you see electrification accelerating in a significant manner in several regions including in Europe. Next to that, the trend to electrification will also entail a need for more raw materials to be available to produce those battery materials to power electric vehicles, or in the future the same will be the case for fuel cell-powered vehicles.

And clearly our recycling know-how and our positioning in the value chain and our closed-loop business model will continue to be essential in pursuing the strategy of Umicore and in growing in those areas and in that respect.

So you should expect that we'll continue to pursue these businesses and these growth opportunities that we detected a while ago and for which we have positioned Umicore early in the game.

The next question comes from Anne van Drunen Littel from PGGM. The question is, you have set very clear and ambitious targets for your operational impact on the SDGs. However, what is your strategy with regards to your product-related impact on the SDGs, which can also be positive?

So, the way we look at this is that in the first place we want to bring only products which contribute to the SDGs, that contribute to addressing and to solving some societal challenges such as I've mentioned previously the need for cleaner mobility. We bring products that enable electrification, we develop materials and produce materials which enable the hydrogen economy to take shape, which is not only a matter of mobility, it's also a matter of greening the industrial footprint in many regions, in greening the way electricity, energy is going to be produced or is going to be utilised in industrial processes. So our view, our vision around the – our products – is that our products have to contribute to the SDGs by addressing the elements I've just mentioned.

Next to that, from a practical and operational point of view, for each product that we make we conduct a detailed lifecycle analysis to make sure that our products contribute also to making the products and the supply chain of our customers as sustainable as possible. So that's a two-pronged approach, which I would say addresses the substance of what our products are aimed to do and on the other side, the operational aspects of optimising the lifecycle of our products. And of course when we talk about lifecycle, I would like to remind you that one of the trademarks and specificities of Umicore is our ability to close the loop and recycle any products that contain our materials when it reaches its end of life. This is an essential element of our lifecycle analysis.

The next question is from Chi Chan from Hermes. Why are the water and Scope 3 targets being set up in 2022 rather than this year?

Do you want to take this question Geraldine?

**Geraldine Nolens:** Of course. Okay, thank you, thank you Chi Chan. Why are the water and Scope 3 targets being set up in 2022 rather than this year? Let's start with water. It's a very important question.

In order to be able to set our targets in respect to water, it's very important that we first map the consumption of water in our very plants and secondly that we then identify which of these plants are located in water distress or risk zones. And then by putting these two elements together, we will then identify the projects and the highest priority projects of those plants which would need to have a priority in reducing the consumption of water. And we are currently in the process of doing this and plan to put our first targets in 2022, once we've done this analysis.

Similar, actually, with respect to our Scope 3 targets. Scope 3 targets are those that relate to the materials, the raw materials, that we purchase. And in this respect it's very important because obviously our customers expect for our products to have a very low CO<sub>2</sub> footprint and we wish to supply as low as possible a CO<sub>2</sub> footprint, and so we are currently also looking into our Scope 3 targets. We do not have direct control on these targets though, like we have in the Scope 1 and 2 emissions. So with respect to this, we are also now doing the analysis both for our upstream and to a lesser extent our downstream CO<sub>2</sub> emissions in this respect. We are talking to our suppliers at this stage and seeing how we can work together to make ambitious and meaningful targets with respect to Scope 3 as well, and you should be expecting those later in 2022 as well.

**Marc Grynberg:** Thank you Geraldine. The next question is coming from Juliana Brunini at Terra Alpha Investments, and the question is, could you say anything more about what you know about Scope 3 emissions-reduction opportunities so far?

Well, adding to what Geraldine just explained, I would like to maybe qualify that the majority of our Scope 3 emissions, so the Scope 3 emissions that we are looking at, are coming from PGM supplies to our various activities. And we are working, we have started as Geraldine has just mentioned, we are starting to engage with PGM suppliers in order to help them reduce their own Scope 1 and 2 emissions, which are our Scope 3 emissions, and yes we have already identified what are the largest pockets of Scope 3 emissions that will need to be addressed through these efforts indeed and engagement with the suppliers.

At this stage I would like also to remind you of one important element is that while we acknowledge the Scope 3 emissions and will work to minimise them and along SBTi methodology, it is also important to bear in mind that Umicore is less dependent on materials

coming from primary mining sources than anyone else in our industry, because we have already – we have already increased a lot, we have developed a lot of recycling capabilities. And if I look at the numbers for 2020, more than 60% of our metal needs for our products in the group were actually fulfilled by in-house recycling capabilities. This is way beyond what anyone else in our industry can claim.

The next question is coming from Martin Evans at HSBC. The question is, is there any way you can cost for the group the aim to transition from replacing fossil fuels with products such as renewable electricity, as there must be a period where costs will go up until the costs of – the higher costs of new forms of energy themselves decline, sorry.

Well, I think that's – there are two ways to look at that question. There is the approach that we take, first and foremost, which is, what is the cost of not doing it? Well, the cost of not doing it is huge. Not simply because the cost of carbon emissions is gradually being incorporated in everything we do and is continuing to increase, or expected to increase, but more importantly because we need to address emissions, we need to address climate change now. And it is now that our customers are making their products more sustainable and their supply chains more sustainable. So if we want to qualify for new business and for large business volumes that are, I would say, within reach in just a few years ahead of us, we need to act now. So the cost of inaction would just be terrible. So that's the perspective that we take and which motivates us even more to act with speed and decisiveness.

Now, if I look at it from another perspective and my colleagues Geraldine and An have addressed, have elaborated quite a bit on how we will address Scope 1 and Scope 2 emissions, the view that we take today for instance on Scope 2 is that there will be – there is in some regions and there will be in many regions in the not so distant future, possibilities to source renewable electricity at a competitive price. And by competitive, I mean a price which is competitive, which is comparable with the price of non-renewable electricity. So this is how we look at it. So we are not today assuming that we need to sacrifice on the margin side or that we need to – that the transition to clean electricity needs to come to the detriment of our margins or productivity or whatever else, we see the possibility and the distinct possibility to do this transition at par.

The next question is from Edward Whitten at Baillie Gifford. The question is, it would be interesting to see more reporting from Umicore around the positive impact of its products, for example the emissions savings enabled by recycling. Will reporting this be a focus for you in the future?

Well I'm so glad Edward that you raised that question, which is a suggestion more than a question, because as some of you may know from interactions that we've had in recent past, I continue to be somewhat frustrated to say the least by the fact that our customers are in a way

being rewarded for using recycled content which we bring to them, which we offer to them, while we are being measured on the emissions of our recycling operations and not actually being rewarded for the fact that recycling comes at a minute fraction in terms of emissions compared to primary metal production. So the official standards or frameworks do not provide for such reporting. However, Edward, I will make sure that we do exactly what you suggest, because it is of utmost importance that we show that our positive impact goes well beyond what is formally being reported.

The next question is from Nabil Al Kabir at Schlegel & Partner, and I think this time I have pronounced it somewhat better. So my excuses – my apologies, Nabil, for the previous reading. The question is, how can you ensure changing battery chemistry by OEMs in regard of battery lifecycle analysis?

That is a constant discussion that we're having with battery makers and with car automotive OEMs indeed, and that's why the lifecycle analysis is so important. You know that the focus so far of the automotive industry and the battery industry has been on reducing the cost, bringing down the cost per kilowatt-hour to make electric vehicles more affordable. The focus has also been on increasing the range to make the electric vehicles more attractive to a larger audience. The focus has been on shortening charging times, also to make the usability of these electric vehicles more attractive again.

We are systematically introducing in our conversations with our customers the need to also take into account the lifecycle analysis, and in particular as part of that the end-of-life treatment of these batteries. The batteries need to be designed to be easy to dismantle, easy to collect, easy to transport and easy to recycle. And the battery chemistry needs also to be taken into account in the whole lifecycle analysis and in comparing the various dimensions that I have already mentioned, such as cost, range, charging times, et cetera.

So yes, I cannot guarantee that this will – that we will – that this will be achieved by the industry very fast, that it will be achieved overnight, however, we're gradually getting there and this is becoming part of all the conversations that we're having with the car OEMs. And let's face it, car OEMs are as much concerned as we are about the environmental footprint of the new products that they bring to the market and they do care about the lifecycle analysis.

The next question is coming from Mohsin Ahmad from Regnan and the question is, what actions are you taking to ensure more sustainable sourcing of lithium?

Well, the actions we're undertaking are no different than the actions we are carrying out for other raw materials, be it cobalt, nickel, PGMs. We have frameworks, we have a policy around the sustainability of our supply sources. I thought in my remarks about ethics, of course I insisted on ethics but it's not only about ethics, it's also about the environmental impact and other impacts of our raw materials sources.

So when it comes to lithium, we work along the same lines of selecting and screening and working only with suppliers which subscribe to our own methodology in terms of sustainability, to abide by our principles, accept their operations to be verified by us and by third parties which we could mandate to do so. And last but not least making the connection with some of the previous questions, this is simply part of our lifecycle analysis.

The next question is coming from an anonymous investor. Can you discuss availability and cost of renewable electricity? How comfortable are you that you will have access to the big amount of renewable energy PPAs needed for your future growth, in particular outside of Europe?

Well, let me first talk about Europe, because a lot of the growth in the near term is going to be in Europe and this is where we will source a lot of additional electricity there, and let's be very clear about Poland: we have already, I would say, tied up and locked in the source of – a dedicated source of renewable electricity nearby our site. So the good news is two-fold: first, it's 100% renewable and secondly, it is local. So it doesn't have to be transported over thousands of miles to arrive at our site, so this is really the ideal configuration and the kind of configuration that we aim at in terms of renewable electricity. There is growth also foreseen by the provider in expanding the capacity, the power generation capacity of the park that will feed our plant, and we will continue to work with that provider and with other local providers if need be to increase our access to this renewable electricity.

As Geraldine mentioned a moment ago, we have started – we have launched tenders in other European countries, PPA tenders, in Belgium and Finland if my recollection is correct, and we will extend that to other countries and we have readied our sites and our teams to do that already outside of Europe, in Asia in particular, where we today have some large electricity-consuming operations, in particular for the battery materials activities. The Chinese and the Korean markets are not yet fully mature in terms of PPAs and for renewable electricity. However, we are getting there and I read, not as long as yesterday, a news that was coming from Korea with a project of installation of a very large-scale offshore wind park, which will provide quite significant capacity and shows that – and it's a non-Korean investor which will invest there – which shows that the market is gradually opening up and will provide these renewable electricity sources. Let's bear in mind that Korea is a large exporter of batteries to the rest of the world. We have Korean exports of batteries going into Europe, going into North America, and if these batteries have to compete with low-carbon products made in Europe or made in North America, they will have also to green their electricity supply similarly to what we do. So I have a lot of confidence and we're starting also to see evidence that the markets outside of Europe are opening up.

The next question is coming from Byron Galarza and the question is, how can you avoid an illegal market from other countries, especially from Asia, to supply cobalt around the world?

Byron, you remember that I've been very vocal about the unethical sources of cobalt and the fact that this was distorting completely the competitive landscape, and I've started to be vocal about that in 2018, 2019. And these are the times when I was asked on several occasions how long would persist, endure a cost handicap, because we had to compete with unethical sources of cobalt. The good news I have to say is that our approach to ethical supply, our pioneering approach, is gradually becoming the industry standard. We have worked hard with a number of bodies and through a number of bodies, like the Global Battery Alliance, to create new standards for the industry and to incorporate these new standards into formal mechanisms like a battery passport, which we are currently piloting with the global battery alliance. And this is supported by blockchain technology to ensure the traceability of the materials from the source until the end-of-life treatment and then the reuse of these materials.

So we are working hard and as I see these efforts starting to bear fruit through the Global Battery Alliance in particular, I can say that my degree of confidence is increasing that we are as an industry ringfencing much better the landscape and prohibiting with the support of the car OEMs illegal materials or unethical materials to enter that landscape. I was also pleased to see that the European Commission is embracing the principles of the battery passport and the traceability in its new proposed directives, battery directives. So it is really taking shape and we will get where I told you several years ago that we would get and we would take the time to get there.

The next question is relating to our greenhouse gas emissions and the question is, do you aim for net zero in each region and each activity separately or only for the group?

Geraldine, pass it on to you.

**Geraldine Nolens:** Okay, thank you for the question. So our target of zero greenhouse gas emissions is a target on the group level. It's a little difficult to set it for each individual activity, because our activities are so different. As I explained before, Scope 1 and Scope 2 emissions are very different depending on the activity. If we focus on Scope 1 activities, we're more talking about RBM, the rechargeable battery material activity – sorry, the recycling activities, Hoboken and Olen. So, there we have a priority with respects to R&D and innovation projects, and these projects will take a little longer. With respect to our Scope 2 activities, we're more focused on our rechargeable battery materials and catalysis activities, and these will move faster along because we can there purchase green, renewable energy through PPAs and that will be a shorter timeline.

So the timelines of the Scope 1 and the Scope 2 activities are not at the same pace and so we do not set a specific target for a specific region or for a specific activity because it will be the two efforts together that will bring us to the zero net target.

**Marc Grynberg:** Thank you Geraldine. The next question is regarding carbon capture. Will you take the risk around the carbon liability and storage? If carbon pricing keeps rising, you have got a rising liability.

May I pass the question to you, An?

**An Steegen:** Of course, thank you Marc. So today we are basically working and collaborating together in forums to better understand the carbon capture value chain, but at this moment it is basically the idea that we identify a source where we can store the CO<sub>2</sub> and then in principle we pass it on to that entity. So that is the idea of how Umicore looks at it right now.

**Marc Grynberg:** Thank you An. The next question is, will you set an internal carbon pricing? I have to say it is not on the agenda today, because I believe we don't need it. We have a natural incentive in the group, or we have natural incentives in the group, to eliminate carbon emissions. One is what I mentioned earlier: it's simply the right thing to do and this is what we want to do because we all believe at Umicore that climate change needs action now. So we're just simply committed to doing that. Secondly, we have a natural incentive which is provided by our customers. As I mentioned as part of the response to a previous question, our customers are making their products and supply chains more sustainable as we speak and if we want to qualify for future business, we have to bring low-carbon and zero-carbon solutions to them, and this is the best incentive we have for our business leaders throughout the company and our business units throughout the company to eliminate their carbon emissions. Adding an internal carbon pricing would add a little bit of more work, would add a little more work, and actually would not fundamentally change or would not change even our objective nor the roadmap to get there.

The next question is coming from Lucas Leitz and it's a fairly broad question, if I may say again: in which ways do you work and interact with the youth?

And, yeah, so there are many ways for us to interact with the youth and I will ask An in a moment to talk about what we're doing in respect of the promotion of STEM studies for all. But before going there I would like to say that clearly we are a company which is growing, growing fast, which means that we're hiring quite a large number of people every year and we hire people coming I would say from school. Fresh from school, fresh from vocational school, from universities, et cetera, so our working population is getting younger and younger, which is great news. It's inspiring for us all, it's energising for everybody.

We have programmes to – like, I would say, young graduate programmes and other programmes within the company to fast-track the training and education and learning of our young colleagues joining through technical assignments, commercial assignments, financial assignments and you name it, and dedicated training programmes and exchange programmes

also, in order to make sure that our youngsters can contribute as quickly as possible to growing our business and also to gradually change the culture of the company and to keep it up to date.

But I think it's also important to talk about what we do in terms of interactions with the youth outside of the company.

**An Steegen:** Yes of course and in R&D it's extremely important that we invest in the youth and in scientific education of our youngsters, and that's also at Umicore we participate, we collaborate in many STEM programmes. So STEM stands for science, technology, engineering and mathematics. We basically participate in these programmes in Flanders for instance, where we go to high schools, where we invite schools on our sites, to really make them aware about the passion of what materials science and chemistry actually can do and how that can actually also contribute to the environment and to sustainability. So, many of those programmes we have for us it's also essential that we make these young people enthusiastic about what we do, to also feed our talent pipeline in the future of course.

Besides that we also focus a little bit on the college age. We have many internships within Umicore where we basically bring college students on site, who can already participate in some of our technical projects. That is hands on, foot on the ground, they basically get experience of what we do in science and typically that also ends up in that we keep them at Umicore.

**Marc Grynberg:** Thank you An. The next question covers – is coming from Thorsten Leupold – I hope I pronounced your name correctly, Thorsten – and covers specific measures to reduce energy consumption in new plants like Nysa. For example, more efficient ovens. If so, how much energy consumption can you reduce compared to your old plants?

'Old plants' is hyphenated, our plants are not so old, but still the question is extremely relevant, Thorsten, because the best way to reduce CO<sub>2</sub> emissions is not to emit. Is to reduce the consumption of energy. And a lot of work is being done in all of our business units and in research and development in order to constantly improve the production processes, and ovens are of paramount importance in Umicore. For recycling purposes, as An explained a moment ago when talking about pyrometallurgy, so for recycling purposes and also for the production of a number of products like catalysts and battery materials, cathode materials.

So yes, we do from one generation of ovens to the next generation, we do systematically improve energy efficiency in order to reduce consumption per kilo of product coming out of the facility. I regret I cannot give you a percentage, because this is fairly sensitive information. Anything we say regarding our cost or the quality or the specifications of our process could be utilised by our competitors and you will understand that in a high-technology business like ours, we are a bit paranoid about information – about sharing information.



The next question is about collaboration and partnerships for Scope 1 greenhouse gas capture and conversion as well as for the heat network. Can you elaborate a bit on these types of collaboration?

And I turn again to An.

**An Steegen:** Yes, of course. As I said already, today we are participating in many of these forums to better understand the carbon-capture value chain. For instance, we are active in VoltaChem, we are active in Procura, in capture, we are in many moonshot programmes, for us to understand every facet of the carbon-capture value chain. That comes from which technologies are out there, which one would match our specific CO<sub>2</sub> streams the best and of course we make use of experts in the field to better understand that.

But at the other hand also, what do we do with the captured CO<sub>2</sub>? Can we reuse it on our own sites? That's of course something that we investigate. Or do we need indeed to transport it, do we need to store it somewhere and then it can be used in other applications?

So again, we're working with many other industrial partners, academia, governments, to understand better this carbon capture infrastructure and how this will be actually developing over the next years, to see what role Umicore can play in there. One is carbon capture, and we need these technologies, the other one is also in this entire carbon-capture value chain are there other areas where Umicore could play a role?

Recently you saw maybe a press announcement from Umicore where we are now engaging in a research programme on liquid organic hydrogen carriers. This is basically a way to transport hydrogen over distances, but this is a way in a carbon-capture ecosystem you could see, when you start thinking about utilisation, that you need also hydrogen together with the CO<sub>2</sub> and then you can basically form methanol new liquid fuels. So there are other areas and we in research this is of course something that we look at, that also Umicore could play a role in the carbon-capture value chain.

**Marc Grynberg:** Thank you An. The next question is coming from Xavier Vandoorne at Homeport Family Services. The question is, can you comment on the energy use of the blockchain technology for your batteries? How does this compare with Bitcoin's energy discussion going on at the moment?

Well, Xavier, I have to say that this is exactly the question I raised to my team when the project started and was submitted to my attention for approval. Is it going to be a Bitcoin type of project, which is an energy-hungry technology, an electricity-hungry technology? Because I would have been concerned and reluctant to engage in that direction.

And the answer was absolutely not. It is not the same technology as for Bitcoins and it is extremely low in terms of energy consumption. Unfortunately, I cannot give you the technical

explanation, and what I suggest is that if you want to understand why and how this project that we support differs from Bitcoin technology in terms of energy consumption, I suggest that my team in Investor Relations follows up with you and provides the explanation.

The next question is relating to CAPEX. Why is your envisaged CAPEX so much lower than for some of your peers?

Well, first of all I have to say that our total Scope 1 and Scope 2 emissions are not huge in the overall scheme of things compared to what some of our competitors have to deal with. That is one. Secondly, one of the key advantages that we have when we look at Scope 1 is that 85% of our Scope 1 emissions are coming from just two sites, which makes it very much more efficient and effective to go for new technology solutions, technology developments, investments, whether it's investments in process modifications or investments in carbon capture, it is very efficient – CAPEX efficient and cost efficient because it's so concentrated. So that is the main reason.

And also bear in mind that when it comes to Scope 2 emissions, that we aim at parity in terms of cost, and this comes mostly at no CAPEX. I say mostly at no CAPEX because we go for green PPAs and when we do investments on site – well actually, sorry, I should say, when we go for renewable production on site, in most of the cases – most, not all, but in most of the cases, we do not invest ourselves. We have collaboration with a provider and operator that uses our land or our facility to install the renewable electricity production capacity.

The next question is regarding remuneration. How is management incentivised towards helping the ESG goals?

Well, today we are already incentivised as part of our regular variable remuneration components and in the future, which is starting in 2022, this will be formalised in a more extensive manner and towards the end of the year we will be working out detailed KPIs, which will help us monitor progress overall against our ambitious sustainability goals, and these KPIs will also be incorporated – formally incorporated – in some of the variable components, short and long-term components, the variable components, of management's remuneration. So please bear with us a little longer. The work – the detailed work – has to be done to work out the KPIs and then they will be incorporated in the variable remuneration components for management. So you will read more about that in our next remuneration report due at the beginning of 2022.

The next question is coming from Akhilesh Kumar from Credit Suisse and the question is, don't you think having a target of having 35% women in power is a conservative approach when you have 67% women in the current panel?

Well, Akhilesh, I have to say it's even more extreme than that. Because now you see in the panel that we have one third of men and two thirds of women, if you recall the rest of the presentation, Natalia presented the governance topic, so that makes it three quarters, one

quarter. And if I extend that to the team which is supporting us, the investor relations teams, the communication team, the male proportion is getting down to let's say around 12%. So it's a bit extreme indeed and I'm quite proud of that in a way. And if I look at my own situation as a CEO, out of my eight direct reports I have four women and four men. Which means that it is possible. It is possible and it is possible without quotas, because I can assure you that I'm not making any compromise on competencies, on talent, on leadership skills, and it's not because my colleagues are here around the table that I say that to flatter them, it's because this is the sheer reality.

So parity is possible, indeed 35% is somewhat conservative. However, it takes into account where we start from. The 23% of women in management that we have today is the situation we have today. If I were to start from scratch, I would probably have different target settings and different timelines in mind. But taking into account where we start from I think that an intermediate goal of 35% by 2030 is a realistically achievable target and I'd be happy to exceed it, more than happy to exceed it. And everybody has to bear in mind in the company that the target is not 35%, the ambition, the target, is gender parity in management.

Now, I also have to say that diversity is broader than looking at the gender dimension. We look at all dimensions: nationalities, background, ethnicity, sexual orientation, identity, there are so many dimensions that need to be taken into account to create a truly diverse workforce, which we have, and a truly diverse senior management, which we aim to have. And this is important because this will help us to become even more innovative in the future. And so we're getting there but these were the elements I wanted to mention regarding the 67% about the panel and the 35% milestone that we commented on.

The next question is coming from Nabil Al Kabir from Schlegel & Partner. The question is regarding precursor of cathode material production: we know that a major waste product is sodium sulphide. What happens to it in Finland? Have you identified potential applications for it?

Well, indeed you're right Nabil, one of the significant by-products of the precursor production is salt, to put it very simply, it is salt. In Finland our facility is at the seaside and the sea, where we located, has a low salt content and we can indeed discharge the salt into the water without having an impact on the ecosystem. So that is extremely important and the permitting process has taken that duly into account.

Now, one of the directions that we have in mind in terms of for the longer-term future, in terms of research and potential developments, is for certain grade of materials to look for products which can work with precursors that can be produced using a salt-free process. And this is on the drawing board, will take probably a bit of time to materialise if the research programmes are successful. I just want to highlight that we bear that in mind and that we believe that this

is an important element, as the industry and ourselves will need to scale up production of cathode materials and precursors relatively fast, relatively soon.

Great! I see that we have answered all the questions which have been submitted to us, so that means that our programme is drawing to a close and at this stage I would like to thank my colleagues, Natalia, Geraldine and An, for sharing the speaking-time with me and elaborating on these very ambitious targets and roadmaps that we have presented to you.

As I mentioned as part of my introduction, I'm really proud and happy to present this strategy, this sustainability strategy today. It is truly ambitious and again, I want to reassure you that we will do what it takes to make it happen. We have it in our DNA and we know how to achieve, how to reach the ambitious targets that we have set for ourselves and that we have set to meet your expectations.

So, we'll go for zero. With this, I would like to thank you sincerely for joining the programme today and of course if you have follow-on questions, please feel free to reach out to us. Thank you and bye for now.

[END OF TRANSCRIPT]