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Umicore and Volkswagen AG to create European EV battery materials Joint Venture

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Operator: Hello, and welcome to the Umicore and Volkswagen AG to create European EV battery materials joint venture. My name is Josh, and I will be your coordinator for today's event. Please note this conference is being recorded, and for the duration of the call, your lines will be on listen-only. However, you will have the opportunity to ask questions at the end of the call. This can be done by pressing star one on your telephone keypads to register your question. If you require assistance at any point, please press star zero and you will be connected to an operator.

I'll now hand you over to today's speakers, CEO, Mathias Miedreich, and CFO, Filip Platteeuw, to begin today's conference. Thank you.

Mathias Miedreich: Thank you very much and good morning to everybody. My name is Mathias Miedreich, as it has been announced, and it's my pleasure to talk to this audience for the first time. If we would not have this very significant event, probably the first time we would have talked in this forum would have been February next year, but I'm very happy that we have this good news as a reason to exchange already earlier.

So I am now, since 1st October, CEO of Umicore. And during these first weeks, I am very happy that I could personally reconfirm my very positive due diligence that I made before stepping into this new challenge, and which is confirmed by the news that we will be sharing with you and probably we can detail this in the question-and-answer session earlier.

Today's call is set up to talk about the joint venture that we have announced to create with Volkswagen on the battery materials, as well as an outlook on the battery materials business in '22 and '23 and is not intended to share any news on our '21 guidance, which has not changed, neither already give an outlook about the Group in 2022. So I would be very happy if we could focus all of our attention on this important subject.

What we have been announcing today and what I am very happy to discuss with you going forward is the creation of a joint venture that we think is one of its kind in Europe. It's a combination of two very strong players in the field of electrification.

Volkswagen AG, who is known to be the most dynamic of the traditional OEMs to transform all of their product lines into electric vehicles based on a concept that is called the unified cell, so the vision to have a large-scale high-tech, to a large extent, standardised battery cells available for all the car platforms, which, of course, is a very attractive business case for a company like Umicore that we ourself consider as the leading supplier in terms of technology but as well in terms of capacity in Europe at this point of time. And those partnership, they together to create a such an intervention, it's a first of its kind in Europe. And by the announced ambition and size going forward it is, to my knowledge, also the largest that has been announced globally up to-date.

So it's actually a consequence of the emerging trend that we see in the battery market that the OEMs are gradually taking or stepping more into the battery value chain, while in the path to buy or to purchase battery cells from cell makers and then the cell makers would work on the material side and with the chem suppliers is changing towards a more direct model that I think

has similarities to what we have seen in the after treatment catalysts market, where the OEMs themselves want to specify, want to influence the technical properties of the cathode materials, which is, as we all know, one of the most determining factor of the battery performance.

And with that also, secondly, they want to solve the equation of how to secure the supply in a world that seems to be scarce on resources and where there is a competition not only on the downstream but also on the upstream side.

And its logic that then a joint venture with one of the leading parties on the cathode material side, which is Umicore, in our feeling, makes a lot of sense for the OEM and it is a combination of several strengths that we can bring together. And I think what I want to mention here especially is the strong focus on scale. And this is something that we would focus later. Economies of scale play a major role in the business of cathode materials in this, partnership that is also a strong contribution to the European green deal and will help the European whole economy and industrial supply chain to step up also on the self-supplying of the ambitions going forward.

But it's also important to mention – we are still on page two of the presentation – what is also important to mention that this joint venture is not – or this announcement to form a joint venture is not yet in detail covering the aspect of battery recycling. However, it is clearly mentioned and it will be announced by both parties that a very likely next step could be, will be to work closer together on the battery recycling, which, as we know, is a necessary piece in the puzzle to achieve a fully circular supply chain to exploit all of the possibilities that are there in terms of CO2 reduction of recycling versus mining approach, and also, of course, from a European geopolitical perspective, will provide the necessary recycling materials that will be most probably be needed also from a legislative point of view.

So I think the logic why such a joint venture makes sense is very clear. I would, now on the next page, page three, like to explain you a little bit what are the reasons for the two partners to work together, why Umicore and why Volkswagen and vice-versa. As I said, for Volkswagen, and this is also, of course, shared in the announcement that our partner is doing themselves, a very important topic for them, as for any OEM, is the security of supply to be sure that the – from the raw material to the cathode material to the cell, they have what they need for their ambitious plans going forward through to 2030 and beyond.

And all of that, of course, cannot be any material. It is of utmost importance that this is sustainably sourced material that is complying to the sustainability targets of both partners. And – but not stopping there. I think we will come back to later to this point. There was some mentioning lately of some other market players that the cathode material market is – could be a commodity market where differentiate you through technology is not possible.

We see the absolute opposite right now happening because it is very clear that the performance of the cathode material, the distinct properties not only in product but as well in process development and the properties of the materials in terms of reliability and quality especially. So pureness is very important. And Volkswagen is convinced that through their partnership with Umicore they can get exactly that. And I can tell you that this was not something that was done within two weeks, two partners came together and say we're doing something. It was a multi-year structured process which finally ended up in the decision of, as we think, the people who should know the best to partner with Umicore on the technology side.

And as we said, the value chain is an important element in the whole decision. And when I describe what I have seen now and with Umicore as the strong point of Umicore that is, I think, unique in the marketplace today is the combination of three things that I think not any other company has. On the one side, through the long decades of working in the automotive catalyst business, Umicore has a very good understanding what are the needs of an automotive OEM, what are the processes that are used, what are the normal ways of doing business, what are also the pain points of an OEM. And with it, speaking the language of the OEM.

On the other side, due to its history and legacy and many, many decades being active on the raw materials side, having the knowledge, the relationship, the expertise, but also the contracts in place to assure reliable and sustainable stream of raw materials that is going in, is already a very unique combination. But what comes on top of that is also – and here I'm also speaking about decades now, decades of experience in circular economy, recycling, especially on the precious metal side, which is something that in these three combinations I think is unmatched in the industry and I would be happy if you could mention to me later one other company that has these properties, I didn't find anyone.

Now, of course for Umicore, from the Umicore's side, this partnership makes also a lot of sense, because first of all, because we will have a secured access to a very, very substantial part of the European demand for EV cathode materials. You have seen that in the VW Power Day, VW has announced a capacity vision of 240 gigawatt hours for Europe that they want to supply through their own unified cell strategy.

You have seen that our joint venture announcement is scaling up to 160 gigawatt hours. So you can make a math to what extent that relates to an overall market share. If you just look to VW and VW itself, of course, is the, as we think, most successful player in the automotive landscape globally but it's definitely in Europe to ramp up electrification. So it's clear why it is very important for us to secure or to have a very good chance to grow with this important customer.

The second big reason for us, of course, is it's going outside of the joint venture. And if it was not clear by the announcement that we did, I want to say that this is not an exclusive joint venture. So it's not like Umicore will be now a subsidy of Volkswagen to produce cathode materials. Volkswagen is our very, very important customer. And this is the first activity that we ever do in this kind, and as you see how serious we take that. But we will continue to serve other customers and other markets of course going forward. And this helps us significantly to operate also for this business outside of the joint venture to harvest from the economies of scale that it will bring for our whole operations and the learnings that we do and also the fixed cost integrations that we can have takes on those scale effects.

And finally, of course, and this is a little bit related to what we will talk about the years '22 and '23, this is a strong confirmation that Umicore has the right technology that is needed and that is asked in the market. I can already say maybe we should have been faster in providing this technology to the market. I will come to that in a second. But having said that, we can now see this as a strong confirmation of our position, not only in products technology, but also the way we are producing the process technology, the approaches we have we're demonstrating in our factories with our latest instalment and latest evolution of technology in our Nysa plant.

So I think all of this together, plus our shared conviction, and that's really something we discovered working very intensive with Volkswagen that we are – have the same vision in terms of sustainability, in terms of responsibility also, makes this partnership a nearly perfect match that we are happy now to further develop and jointly harvest the fruits of that.

If we would go to the next page, on the page number four, I would like to share some insight and thoughts with you about the market of cathode materials in itself outside even of the joint venture, just to give you our view on the market dynamics as well as the positioning of Umicore in this market.

It is our strong conviction that this is very high-volume market. It's – actually nobody will doubt that there would be an extremely high growth over the next – in the next decade in this market segment with the increasing EV penetration and for sure Europe will be a front-runner in this development.

Now, having said that, it is not at all the case as we think that the commoditisation, which is an element also of high-volume production, is happening on the product and process technology side. So first of all, I have said that there are very specific requirements that the OEMs have in terms of energy density and also the different properties of a cathode materials that the OEMs want to get – that they have identified as key for the battery performance. And this is one of the reasons why they are now actively working with the chem players, like us, because they see this as – for themselves as a key discrimination factor and they see a co-development on those topics, having the expertise of Umicore and other chem players in other constellations as very valuable asset that those company can provide.

And the second aspect is the aspect of safety. Safety is one of the most – the biggest things to handle in the race for electrification. And if you can – if you want – Ralph Kiessling, our Head for the E&ST business group, has given a very good picture to me that this crafts a little bit. So if you want to produce cathode materials, you have to use, from a scale point of view, really go into chemical refinery dimension.

However, from a pureness and precision, you have to go into a pharmaceutical grade production, which in itself is a certain contradiction. So the way to do that – the process technology to be able at a very high quantities to have very pure materials is determining the safety of a battery at the end of the day. And the most stable that is, the fact that this safety can be guaranteed. And we think today and the feedback we get from the market is that our – not only our product technologies now in high-nickel but also our process technologies state-of-the-art if not cutting edge on that segment.

The other thing I want to mention is, of course, a function of time. The chem market is a new market that hasn't been there before and that is developing now with accelerating speed. And of course, there are, like in every market, entry barriers. And the entry barriers are higher the later you step into the game.

Now Umicore is already, since more than two decades, has started to be active in that field, and has of course over the time invested a lot into R&D but also into capacity into giga factory, first giga factories in Korea, then in China, now in Europe. So there is a huge also learning curve, very steep gradient[?] on learning curve that has been going through. And all of this is not available to parties that enter at a later stage.

And, of course, for them the entry barriers can be simply too high. So what I want to say is that this market today is a very attractive market for the company that have the right assets in place in terms of product technologies, in terms of manufacturing capacities but also manufacturing technologies. And it will be very difficult for newcomers to catching up. Of course everything is a function of time.

So if players like Umicore would just stop doing something at one point in time, a catch up will be there. But as we are not stopping and if the other leading players in this industry is not stopping, I think the entry barriers are getting higher and higher. So we think that the company that are now positioning themselves, that are now taking stakes in the markets, securing market shares for the mid-term for the race beyond 2025, it would be very difficult to catch them from the outside and have surprising new entrants in that market. And without commenting on firms, you have seen some other market players deciding that it is actually too late for them and changing the strategies for that matter.

Now, as we said, we are – we think we are very well-positioned in this highly attractive market of chem technologies, product, and process technology leadership, as I will not repeat what I just said, but also our global presence that we are in Asia and in Europe first-mover advantage and of course is also the time tag attached to it. We will not rest on this. We would continue. And of course the next question for us that we are tackling is North America and in due time we will also come back with our strategy for this continent.

And then, of course, sustainability is a very important point. I think it's well-known that on the sustainable material sourcing, Umicore is the front-runner since many years. But also in terms of the zero-emission leadership, we aim to achieve the same, great positioning due to what our Scope 1 and Scope 2 activities that we – because we are in the Scope 3 of our customers, so we want to provide. Of course, at the end of the day the ultimate vision is to have CO2 free cathode material, which is a vision and needs to be reworked[?], but this can be also great competitive advantage and we think also that with the steps that we have taken, we are well – very well positioned in that mid-term.

Now having talked about this mid-term development and how we see ourselves positioned confirmed by our agreements that we – has been done and will be doing with Volkswagen, I would like now to move to the next page, page five, where we talk a little bit more about the short-term, so the next two years how we see that and then going forward.

So you know that Umicore was communicating and was telling to the market that mid-nickel applications are in the focus of the attention in terms of R&D and in terms of rollout to the customers. And the reason for that was at that time of course – and it was, let's say, in the last two to three years, if it would have been possible to high-nickel in the car already everybody – every customer would have chosen high-nickel because of its advantages of power density and also packaging and then weight.

Why it wasn't possible at that time had to do with the next level in the technologies, I mean, next shift in level in terms of battery and then going to the cell, because the battery makers didn't find a solution to package those high-nickel materials in a safe way that high-nickel has a higher tendency to has gassing[?] at higher temperatures and also a cell design that was very large cell design that was the trend of the industry at that time did not allow to use very high nickel, so 80% and more nickel chemistries at that point in time.

And we were focusing to provide a solution to the industry with our mid-nickel application that we were also with coatings and with applications on higher voltages developing also towards the same goal of higher power density. And I think we were giving very successful – at that time very powerful technical solutions to the market, which was good. What was probably not so good is that we did not react fast enough on the changing trend.

We were so much concerned to deliver the right answers on the mid-nickel that we had. We had always had high-nickel developments, but we didn't prioritise them in our roadmap, and what we saw now, and I have to admit, faster than we have initially expected. This technical problem of how to bring high nickel into the battery cells was solved by the cell makers. And then, of course, the market very swiftly moved and is moving to more high-nickel applications. And for us, of course, we have seen that, and we have reacted we could accelerate – successfully accelerate in our product roadmap and technology roadmap, the application, the technologies we have started on high nickel.

And we also have been able to stick to our very flexible production system to adapt our manufacturing streams, and you know the high nickel applications need, certain different treatment methods like oxygen encapsulated furnaces, etc., very quickly able to adapt that. But as a consequence now of that change, we see in 2022 and 2023, where the market share that we have expected to have are not materialising and our growth is slower than expected.

And you can say it's a bad luck or it's just a consequence of what we did. But this, in combination with the shortages we saw on the – through the semiconductor crisis and with the mix of the platforms that we own, are leading now to a statement that we do not expect that our earnings in rechargeable battery materials that will grow in 2023 – '22 and '23 but they will grow lower than expected in these two years.

And then, if you focus on the complete segment, our Energy & Surface Technology segment, we have also the Cobalt & Specialty Materials inside that had a record year in 2021, a very exceptional combination of market demand, of superior availability of supply and a positive pricing momentum. We do not think that we can repeat this earnings profile in 2022. And with that, we don't see a significant uplift in the profitability for the whole segment.

Having said that, we are confirming, and I think what I've told you before should give you confidence in that post 2023, so starting in 2024, we will be rapidly ramping up our market shares with secured volumes. A large portion of that, of course, is coming then from the year '25 through our planned joint venture with Volkswagen; but even before that we would be able not today but at a later stage announce other customer contracts on the high-nickel side.

We are in advance qualification with key customers, and we will already start with, let's say, even in '22 with high-nickel volumes growing that then into '23 and then have, let's say, the breakthrough year of '24, where we will disproportionately or over proportionally benefit from the growth. And as we see today, gain market share together with the businesses that we have been able to secure by then from our customers.

And all together, we think that the economies of scale that we have through these activities through the capacities that we have installed and also a positive side effect of the joint venture, as I had explained earlier, we are very confident that we can create also a returns profile that – return profile is creating sustainable shareholder value and it's in line with the vision that we have for the profitability of our battery material business going forward.

So to summarise again, a landmark partnership is forming between Volkswagen and Umicore to pioneer for the European cathode material market in the not-seen-yet collaboration that the benefits for the two partners has been clearly laid out. For Umicore, the economies of scale and the reconfirmation of our technological strengths and high-nickel roadmap that is hitting the right requirements of the industry is confirming our ambitions to be the leader of cathode battery materials in Europe, and at a later stage, also evolving that into the global market.

And the 2022-2023 situation where we are seeing the consequence of us being late – making that late in being on the path for high-nickel but reacted fast and with that with a strong offering now to the market expecting significant customer contracts over the next six to 12 months and reconfirming our ambition post 2024 with an extraordinary growth and market share gain.

This was all I wanted to share with you. And I will be more than happy now to ask – answer any questions that you might have. Thank you.

Questions and Answers

Operator: Thank you very much. If you would like to ask a question or make a contribution on today's call, please press star one on your telephone keypad now please. Please ensure your line is unmuted and then you'll be introduced into the call. That is star one on your telephone keypads now, please. Okay. Our first question comes from the line of Mubasher Chaudhry from Citi. Please go ahead.

Mubasher Chaudhry (Citigroup): Hi. Thank you for taking my questions. Just two relatively high-level ones. You think that this is a growing trend going forward that you've started to see OEMs start to vertically integrate into the kind of the upstream side of things and start entering into the market of producing cathode materials. And the second question is more around the – I don't think you made any comments around the LFP technology. Can you talk about it more the sheer dynamic of LFP? And do you think mid-nickel NMC is losing market share to this technology? And does that make it even more important for you to deliver value through the higher density, higher cathode materials that you're looking to focus on going forward? And then finally just on the financials. Could you talk about the kind of CapEx requirement from this OEM[?]. How we should think about on earnings potential from 2025 onwards? Thank you.

Mathias Miedreich: Thank you very much. A very relevant question. Let me start with the first one. Vertical integration trend in the industry between OEMs and chem on the battery supply chain. This is a very clear trend that we are seeing. So – and we have a lot of customer relationships through our catalysis business, direct customer relationships with OEM. And we have – we see the trends directly going into this segment.

You can also – you have seen, I'm not commenting here on other competitors. But you have seen in the announcement on the North American side, which, let's say, a similar logic has been put into place and we expect this also to continue that there will be a closer relationship working together partnership of any kind between the OEMs and the cathode material suppliers.

And I think, let's say, the two reasons for that and you can adjust on the different OEMs then how much there is. The first reason is security of supply. Of course, everybody wants to secure

the supply chain. It's not repeat the very painful experience of the semiconductor shortage. So a way of vertical integration is one means to mitigate, at least it partially. But the second one, which is also we see a very strong reasoning, is that the OEM R&D teams, the technology and engineering teams think, and we agree with them, that with working directly with the cathode material makers and talking about the chemistries, the properties, the different ways to go forward are key to develop the right performance for their vehicles, which they tell us is something they are missing a little bit if they have to go a step forward.

Having said that, I would never say that that's the end of the market for the cell makers. There will be a market that will have some OEMs that strongly go that route that you have now, for example, seen with VW. There will be others that will not do that, and there will be mixed combinations. So I think the cell makers will still play a very significant role in this market going forward and they are very important customers of ours.

However, this more direct interaction we will see more and more coming also from the OEM side. And this is directly linking to the second part of your question LFP, a low-cost threat what are we doing with it and how are we positioned. And I think the good thing is through these strong appropriations with the OEMs, we now understand much better, more and more what the OEMs want.

And I can tell you that the OEMs do not want LFP. They also do not want to have any other chemistry. The thing that they want is a battery material that is fulfilling the technical needs. And for some segments, necessity is also at a lower cost than an NMC high nickel can provide. And the second rationale is they want to get more independent from nickel in itself because nickel could be a scarce resource in the future.

So the discussions that we are having is not LFP. The discussions we are having is what kind of chemistries are giving the OEMs these two aspects, so being a lower cost and less dependent on nickel. And we have today on our HLM technology very good market response on exactly those points. But also we are not operating – we will not say there is no market for LFP. I think that also here there will be market shares and segments and regions for all of the technologies. We think today for the European markets, we personally think that the HLM is a very attractive candidate in this segment with all of the aspects of LFP, but on top of that, the big benefit of recyclability and the closed loop business model that is much more difficult on the LFP side.

Let me answer your third question on the capital – necessary capital investment for the joint venture going forward from 2025. Please understand that at this point in time, we have agreed with our partner not to disclose any financials of the joint venture. We would be able to do that once the joint venture agreement finally has been signed.

Mubasher Chaudhry: Thank you. That's it.

Operator: Okay. Our next question comes from Alex Stewart from Barclays. Please go ahead.

Alex Stewart (Barclays): Hi there. Good morning. It's Alex from Barclays. I've got a couple of questions. Firstly, this announcement to do with maybe pushing back to the question with your high-nickel products. Is that also related to the comments you made a few months ago about the veins of start of Poland plant. Is that part of the reason why OEMs [inaudible] start up if you can shed your views on that.

And then you – a couple of years ago you agreed a long-term supply agreement with LG and Samsung. We've heard nothing from that agreement for years. Can you tell us whether that's still in place, whether they have triggered the agreement, whether they're taking off volumes in line with that in terms of their announcements?

And then just finally, I've looked back over the transcripts over the last four years and so – and while I appreciate you were not CEO at the time. Marc Grynberg repeatedly said that you've had commercial volumes available of all battery grades, including high nickel. And this therefore comes as a bit of a surprise today that you're saying that you've put too much emphasis on mid-nickel and not on high nickel. In fact, I remember once in an analyst presentation him telling us that Umicore was not a mid-nickel company. It's a high nickel company. So where has the communication in all of this gone wrong because the story you're presenting to us today is radically different to the story that's been presented to us on the capital markets for the last couple of years by the previous CEO? But I'd really appreciate your comments on that because it can be confusing for us to try and piece all of this together, given the lack of disclosure around the capacity and the production. Thanks so much.

Mathias Miedreich: Yeah. Thank you, Alex. Let me start with the last question first, was indeed might be most confusing situation. We are not saying that we do not have high nickel on the start. We will, even next year, have very small quantity of high nickel applications that will go live. Most significantly it will be starting in 2023 but then from 2024, we would be around 70% of high nickel in our product offerings.

I wasn't there at this time what you mentioned. I've also, of course, read everything that was before. But my conclusion on this is actually this is a market that is rapidly changing in terms of what the customer wants and what the platform says. Now you could argue that is really for every automotive market; and as you know, we compare this a little bit to our automotive catalyst market, where also different chemicals and compositions and precious metal loadings are requested, and platforms are changing.

And we did not see such a big shift that suddenly we – our portfolio was not mentioned what the market needed. The difference however is that the AC[?] market is a very well-established market with a lot of platforms that are in the market. So any change if you want, you have just from a probability point of view, you kind of self-hedge because you're on so many platforms. So if some platforms change, we have others who are more beneficial and so on.

So in our case, the platforms that we were on and that has changed mid-life, we didn't have the same partners, of course, not yet because the business is just starting that we had on the AC business. So any change on the customer demand of course has a significant impact or can have a significant impact on our mix that we have in our supply. And I think this is what happened. And all the statements that has been made before have been totally through at the time they have been made.

But now I think we have to face the reality of today that is exactly a long [inaudible] and this plays into the second question of LG. Yes, of course, we have a long-term supply agreement in place. This supply agreement is – has certain properties but the basis of this is more mid-nickel applications. We have contractually agreed volumes with foundries, and we are supplying towards this contract also going forward.

But the thing that we see is that going into '22 but then '23 and then ramping up '24, this will be now largely replaced with high-nickel contracts with a broader base of customers. And this is also something that we would be happy to share with you when we can that we see now a much broader base of platforms, programmes, customers. And with that, the volatility, of course, will naturally go down because we have – we will gradually come to a more normal situation like we have experienced in the AC type.

Now the Poland plant, your first question. So the progress of the Poland plant, as we have announced couple of weeks ago, certain delays here. These delays have been, I think, meanwhile confirmed in the market the disruption that has from – that came from the semiconductor crisis that also was influencing launching project of customers and was reflecting on the schedules but now there is no further change.

We are ramping up now the production to be mid-2022 on the demand capacity. And then with those other customers around high-nickel that we will integrate here, we will further increase that towards 2024, where we already had announced the 20-gigawatt hours capacity that we will have in place and then of course there will be more capacity in place we think before the joint venture will start and this joint venture, by the way the decision for the location has not been made.

We will do this together with our partner going forward. But of course, you can be sure that the Nysa plant is one of the [inaudible] that is on the list to be expanded to serve the JV, but this is an open question that we will need to discuss with our joint venture partner.

Alex Stewart: Thank you so much. I suppose just to summarise all that or taking a step back, it's very difficult for us to know which part of this story we can trust and believe, and which is guaranteed, and which isn't, because the narrative and the way that you presented your battery material strategy has changed so much over the years. And it's very hard for us without any financial details about this joint venture or any granularity about capacity or your customer contracts to really have confident. They don't materialise. Is there anything you can do to help us anchor our expectations because that's been almost totally absent in the story around battery materials sometime but perhaps that's an issue[?] some other day.

Mathias Miedreich: Right. So what I would like to tell you here is that in a very dynamic market, of course, things are changing that you have seen that, and you have commented on that. What we are currently doing is we are putting together all the elements that we know, all the elements that we have learnt and all the elements that we think that will happen to revise – to bring together our strategy for the battery material business as well, of course, as you can imagine for me coming in as a new CEO also to revisit what we – what I and the management board team are thinking to be the right strategy for the next decade.

And what we are planning is to announce that to you and to discuss that with you on the Capital Markets Day that we are planning in the course of the next year something around mid-next year. But of course we will try to share elements of that as soon as we think they are secure enough at an earlier stage with you from today until that point. And we totally understand that you might be puzzled or even disappointed by the outlook that you see now for '22, '23 versus what was expected and you can be sure that we will make all what we can do to take these learnings away and to provide you more guidance that is reflecting also a long-term trajectory that will be kept whatever we can do in the boundaries of a very dynamic market environment

that is kind of just now forming. And I think nobody has the glass ball to know everything into the future. But your message is clearly taken, and we will project this forward.

Operator: Thank you very much. Our next question comes from the line of Tim Hoff from Canaccord. Please go ahead.

Tim Hoff (Canaccord Genuity): Thanks very much guys. I've got two questions. The first one, where does Umicore see the biggest bottlenecks in terms of raw material supply for cathodes?

And then the second one is, as most of the OEMs are moving upstream, is it likely that Umicore is also going to be moving further upstream, not necessarily all the way to mining but towards mining to secure raw materials into the future?

Mathias Miedreich: Yeah. Thank you, Tim, for the key questions. I mean, these are the key questions that the whole industry is asking itself, what are the bottlenecks in supply. Today, I think we – the discussion is focusing on nickel and lithium, of course, while cobalt also be in the play, but we plan of course to reduce the cobalt content in our batteries. And this is a demand of the industry.

In regard to lithium, you see that there are several announcements going forward of new lithium projects to be started. I think the important topic is here with – and by the way, the same comment is valid for nickel, which I think compared to lithium could be even the more scarce supply but the challenge that the industry has to tackle is not just to take any lithium or any cobalt – sorry, any lithium or any nickel but fulfilling the sustainability criterias, especially on the CO2 footprint of getting to that.

And I think what – your question is, does Umicore want to go upstream again? And the clear answer is no, we do not want to go upstream ourselves in terms of investment, but we have – what we have been doing, due to our knowledge of the market and the relationship that we have, is to sure exactly those sustainably sourced materials with as long as possible contracts that you can think about and also to see what are the new technologies that can be used also in the mining industry to make sure that the CO2, the ultimate goal of having CO2 – at least low CO2 nickel and maybe zero CO2 lithium going forward.

So – however, when I talk about that, I'm talking about the mining. For sure, on the refining side, we are considering the increase investment into the future and also our experience and expertise that we have here. So that would be how up – how much we would go upstream refining that will then lead into our precursor and then our cathode material production.

Alex Stewart: Excellent. Thank you very much.

Operator: Thank you. Our next question comes from the line of Charlie Webb from Morgan Stanley. Please go ahead.

Charles Webb (Morgan Stanley): Good morning, everyone. Maybe just two from me. First just around this market share kind of shift that we've seen in the near term, presumably the Asian players – Asian competitors taking share there of the U-flag technology being part of that, which begs the question, why did you miss that first wave if you have the technology competence, and your customers are telling you interested just why that happened?

And just to check also on kind of pricing. Would you say that Umicore is competitive with those Asian players, or is it the fact that they're offering the technology people want and at lower price that's kind of sharp shift? So just some extra kind of clarity around that would be really helpful.

And then just thinking about scale. I mean, you mentioned how important scale is for this industry. Given the share shift and what's happened, and you look at your competitors and their capacity ramps and their plans, I think some of the Koreans targeting 500,000 tonnes by 2026, it feels like that scale gap is actually only going to widen over the next few years versus peers. So just any thoughts there or what that means for kind of competitiveness around pricing about the margins on the next kind of three to four years, given that scale effect seems to be swinging a little bit away from you over the next couple of years, given the market share shift. So just some thoughts there would be helpful.

Mathias Miedreich: Okay. Thank you very much. Also very good questions. So why did we miss the boat versus our Asian competitors if our technology is strong in development is a good question. I think the answer is very simple. We – as is usual in the automotive industry, the customers are sourcing for platforms that have a certain time window of sourcing. And in that time window, we didn't have a ready-to-market product available. And you see that consequence that happened in the last years, let's say, in the last year to – you see that in 2022 and '23.

Now this is the consequence of that together with the changes that have been going forward on the awarded platforms. Now let's say the other things happening right now. So now it's an even more important window where we talk about the platforms being taken for the post 2023 ramp up '24, '25 and here we have the right product portfolio. And by the way, it's – again working closely with OEMs gives you also a good benchmarking in a certain way because they can tell you what they like with you and not like with you. And let's put it like this. We are quite self-confident after we have been benchmarked by some of the key players in the recent times.

Now the second question part of your question I think is combining the pricing competitiveness and the question of scale. Do we have a scale disadvantage, etc.? So I think from a pricing point of view, you have two things are important. The first is scale. So pure scale, economies of scale through fixed cost equations, which I think we will get through the contracts that we will put in place, but even only if you look at the announced ambition of 160 gigawatt hours going forward, this should be a significant scale for the European marketplace and then combining with the other regions that we have.

Now – and I don't want to comment on announcements of the schedule I've just mentioned because these are announcements today and we – it's not up to us to judge whether this is a realistic announcement or on what data this is based. We do not have the feeling that we are going to a scale gap on the negative side, especially in Europe we have a big timing advantage that we will utilise.

And the second thing which is important of price competitiveness outside of scale – and we should not forget it, and this is an old rule in the automotive industry that is even more important here. You have to be able to provide consistency, consistency in the material properties and in quality. As I stated earlier, purity sector, so the amount of impurities in the

cathode materials is one of the key factors for safety where OEMs will make no compromise. So that means produced materials that does have impurities is scrapped, which is an important cost factor over time.

And from all of the feedbacks that we get is that Umicore is really cutting edge on this purity of the material, which is a cost factor because if you have a very low scrap rate, you have a cost of the materials and the process cost that you see, you have a competitive advantage. So I'm not saying that we don't have strong competitors. Don't misunderstand me. And for sure in the Asian region, especially in China, this is the case.

However, in Europe, we are quite self-confident; our economies of scale are superior to – even the announcement that – when going forward. Now, of course, I agree it would be important now to look to the North American markets and to make the right move over there. We are already in the advanced planning phase on that matter, and we will come back to you once we are ready to talk about it.

Charles Webb: Okay. That's helpful. And sorry just to sneak one last one in.

Mathias Miedreich: Sure.

Charles Webb: Just around the potential capacity additions. As you say, 2025 new capacity with the JV of around 30,000 tonnes going towards, I guess, 200,000 tonnes by 2030. How do we think about the CapEx and the cost per tonne? Just – I understand you're not going to give the exact numbers or anything around that because it hasn't been agreed or decided and there's probably a number of permutations. But there is a lot of inflation out there. I imagine having CapEx today is more expensive than it was two years ago on a per tonne basis. So just any – and to your comment just then about thinking about the US, I mean, presumably that's the most expensive place to add capacity. So just trying to gauge from you, it sounds like CapEx needs to go up significantly based on these plans you have in place to grow with the market and presumably that's the plan. So how do you see that over the next few years? And when would you start to expand – expect to start to spend on this investment in the JV? What kind of timeframe for 2025 have capacity up and running? When do you have to start spending money? It might be helpful colour.

Mathias Miedreich: Yes. So touch upon – you talk about the CapEx density and please understand we – I cannot give you anyway difficult to talk about numbers here. But now in this joint venture contract formation, we really have to – we have to stick to our agreements and cannot tell you anything right now. But what I can tell you is that you know that our plant in Nysa is the latest instalment of the capacities that we are going forward with a certain capacity density.

And we will be able to support the next capacity increases post 2025, not just in an incremental base but we are preparing really some breakthrough technologies here on the process side that would enable to have a significant impact on CapEx density.

Now I understand that this is not at all what you would need from me at this point in time, but I think this would be part of our strategy going forward that we will also explain to you what is our vision here and what are the key measures that will be – that we will be taking forward.

But let's say coming back to the second part of the question, not I would say the US. Maybe I was not doing – saying the right word. I was talking about North America. And obviously in

North America, we are looking to all of the possible locations but what – let's say, a pre-conclusion is that at least a very attractive location in terms of cost base, in terms of energy cost but also availability of green and clean energy is obviously Canada also with the close proximity to some of the OEMs over there. And this is part of the equations that we're taking in.

Last part of your question on when will the – when will we see the necessary investments to be done for the 2025 upwards? I think we will start with this in '23 but maybe in '24 we will see those CapEx investments going in. And once we have clarified exactly how it's set up, we also feel comfortable to talk more about that.

Charles Webb: Okay. Thank you very much.

Mathias Miedreich: Filip, you want to – Filip continue?

Filip Platteeuw: No, just to add indeed, I think because '25 sounds like a long time away but actually it's kind of tomorrow, so will come in '23, '24. You see that the first step is the 20 gigawatt that's the first intention. I would just to underwrite indeed the importance of capital intensity in the overall equation of the attractiveness of this business.

I think sometimes when you see people making statements on returns, very much it's because of the hurdle in terms of capital intensity we've seen that. I think that's a big advantage – one of the big advantages of Umicore related to our process technology is that we're able to provide to our customer the best-in-class process technology and therefore lowest capital intensity as part of that, because if you look at this business, indeed, it's very capital intensive.

So if you can make a different, it really comes to the overall equation of returns and profitability of this business.

Charles Webb: Thanks, Filip.

Operator: Thank you. Our next question comes from Charles Bentley from Jefferies. Please go ahead.

Charles Bentley (Jefferies): Thanks very much. So I just wanted to ask one question around the changes to guidance. So I mean, are you able to break down the elements around the higher earnings in cathode materials and lower earnings in cobalt? And I think one thing that would be kind of very helpful going forward is to kind of help us understand the earnings from the CSM business versus the cathode material business. And kind of it would be great if you can give us that transparency today just so we have a better understanding about the kind of sources of earnings in those two businesses.

And then kind of secondly, sorry, related to that. I just wanted to ask on the utilisation rates through '22, '23, '24. And can you give us an indication of how utilised you are or expecting to be in the different regions and if you would expect to be fully utilised by '24 or even by '25? Thanks.

Filip Platteeuw: Yes, I'll take the first question on guide. I mean, if the question is noted, you know that we typically refrain from really giving profitability by business. But I can certainly give you some directional steps. I mean, the CSM business you know in 2020 was a very difficult challenging year for that business. And what we've seen in 2021 this year is actually

a combination of, I would say, ramped up demand, together with a very – I mean, good context in terms of rise in terms of premiums.

So the contribution and the difference in contribution for CSM between ’20 and ’21 was important to the overall segment[?] of E&ST. And therefore, because it was quite exceptional in this year, we do expect that normally going back to some normalisation that CSM should have a decrease in earnings, which in a way is a headwind for the overall E&ST segment.

The other thing maybe I can add in terms of the earnings for E&ST going forward for next year is this aspect of cost increases. I mean, you may recall that in the past we have said that just to give an indication we see something like €50 million of fixed cost increase in RBM in year-on-year. Well, probably for this year a bit less than that but let's say closer to €40 million.

From next year, we are looking at roughly the same kind of increase in fixed cost for businesses. What we want to say with that is what the absolute number that is really the fact that every year because you’re preparing for this massive growth going forward and because you have a number of mechanical effects like depreciation that there is already quite substantial headwind just from your fixed cost basis where you need to overcome on the additional contribution margin. And that’s where in combination with the fact that we do expect lower volumes, as explained by Mathias, from the mid-nickel segment, where we basically expect that this layer of mid-nickel volumes to carry us through plan when we would be, let's say, having serious contribution from the high nickel.

Now that that is, to a certain extent, falling away, we have kind of the effect of, on the one hand, the lower contribution margin[?], the higher cost and then also the headwind that we expect from a normalisation in CSM. So those are the, I would say, directional elements going into the guidance of E&ST. And the second question?

Mathias Miedreich: Yes, second question. Thank you, Filip. In terms of utilisation, of course, when we have to group it as from a regional perspective. So in Korea, as we, I think always have said, we are quite utilised for 2023 and 2022. In ’23, we have fully utilised our capacities. In China, we will still be underutilised in 2022 and in ’23 we expect to reach about 80% of utilisation of the capacity.

And then going forward, as we just have laid out, Poland plant starting mid ’22 and then going over ’23, ’24 the further capacity increases and we would see that from ’24, these instalments will be then well utilised and then we would be going, as laid out, into the next steps for the other contracts as well as for the potentially the joint venture if Nysa would be chosen for allocation.

Charles Bentley: Okay. Thanks very much. And sorry, can I start to follow up on the earnings in EST. So if I look at ’20, €75 million and consensus for this year in ’21 is €135 million, so you’ve got €60 million of growth and you’re saying you’ve got 100 million of headwinds coming from RBM. So it sounds to me like the RBM business could be a loss next year. Is that a fair expectation?

Filip Platteeuw: No, that’s not at all what we are saying, no. And the only thing we are saying is that, I guess, the headwind that we have in fixed cost still are being substantial. I think that is the message. But we’re not at all I mean saying what – I mean, what you’re saying. So no,

RBM is a profitable business and again we expect the continued growth. So I don't think we should turn it around.

It would just that be earnings potential that we foresee now is less than what we previously expected because of the fact that we see these lower volumes in the mid-nickel segment, which we expected us to carry through to 2024, but no, not at all. So RBM is a profitable business, and we foresee, I mean, continuous growth that we said. It's just that the growth potential is less than what we had anticipated based in the most recent indications on volumes we receive from our customers for the next basically two years.

Charles Bentley: Brilliant. Thanks very much.

Operator: Thank you very much. Our next question comes from Chetan Udeshi from JP Morgan. Please go ahead. Hello, Chetan, is your line on mute?

Chetan Udeshi (JP Morgan): Sorry, I was on mute. Just two quick questions. Firstly, on all of the CapEx that has been spent on RBM, can you help us understand what happens to it? Do you have to write it down? You can reformulate the plans? That's one.

Second, do we have to think about possibility of an equity raise to fund these expansions on this JV and any future JVs that you might have? Thank you.

Filip Platteeuw: Yeah. Good morning, Chetan. So the first question on CapEx. So the investments we have made in the past and that we're making now are very much, I would say, flexible when it relates to the discussion about the grades. So that's the first thing. I think we've always said that they are very flexible.

So coming to your question on, I don't know, impairments or anything, that is not on the agenda at all because we will need our all of this[?] capacity because if you look at it compared to what we're heading for towards 2025 and beyond, we're absolutely be leading that capacity, and as we said, we do foresee also, for example, in China, where I think the delta is the most important versus capacity and utilisation, we do foresee an increase of that capacity over the next few years. So no, there's no issue from a technical perspective on CapEx and there's no issue from, I would say, an impairment perspective. It's just that it will take a little bit longer because of this mid-nickel for the next two years.

And the second question on funding. I mean for this joint venture setup, we have all of the required fundings, so there is no need for a capital increase. Overall for the Group, I would like to also indicate that we obviously have two strong cash flow generators, as you've seen from our guidance and you will see in February, which is recycling, which is, I would say, the obvious one but also increasingly in catalysis you know that, I would say, the business profile of catalysis and especially with the evolution of the business in recent years is very much becoming a strong free cash flow generator.

So I think from Group perspective, definitely if we look at the investment needs which indeed will be substantial in the next years, that will help us. The last thing to that – to add is increasingly and that is across our businesses, so that linked to what we see on RBM on the capital intensity will really scrutinising the CapEx. So should give the impression that we spend a lot of money on CapEx, but we will be scrutinising the CapEx across all of our businesses, making sure that in terms of footprint we optimise things, making sure in RBM in terms of process innovation, we do the best thing.

So – and you'll see that in February probably we guided previously for a CapEx for this year of €500 million. You see that actually is lower. And one of the reasons why it's lower is because of that CapEx scrutiny. So no need for equity – for the setup of this joint venture. And I would say if you look at the overall balance of Umicore, two very strong free cash flow generators. And indeed, E&ST, which will require quite a lot of CapEx and investments going forward, but we can handle that.

Chetan Udeshi: Thank you.

Filip Platteeuw: Thank you.

Operator: Thank you very much. Our next question comes from Geoff Haire from UBS. Please go ahead.

Geoff Haire (UBS): Good morning and thank you. I've got a couple of questions. Just – I mean back to the JV; I appreciate that you can't give details financially. But just how does the – how will you – will VW be committed to taking all the capacity that you produce? And how will price discovery work within the JV in terms of the price at which you will supply cathode material?

And then just coming back to Chetan's question about leverage. To what level do you feel comfortable pushing the leverage of the Group to? And then can I just clarify on what you're saying about ES&T profitability in 2022 and 2023. Are you saying that it will be up from 2021 but just at a slower rate than consensus currently expects?

Mathias Miedreich: So let me answer your first question, Geoff. And for the second one, I'll give it to Filip. So you're right, we cannot give you the details of the contractual pre-agreements that we now have. But let me tell you one logic that I could share with you.

So what is the interest of VW is to have a securitisation of supply. So that means that the reason – one reason to do a joint venture is to have a more leverage on debt versus just buying things on the market. So the intrinsic motivation to buy a material from that joint venture of course is very high.

Secondly, the product that is developed in this joint venture will have probably the most data available that you could imagine on how it should look like and what are the properties of this product because it is actually co-developed by the end user, the OEM and Umicore. So these two things alone make it very difficult for any other company to propose similar materials. That's just from a strong point of view.

Now the other thing which is important to mention is that the growth partners, so we and VW, we agree that this – the joint venture as a standalone basis has to be value creative measured on the return on capital employed versus the cost of capital. And this is part of how we will be running this joint venture.

So if you take all these three things together, I think you can see that there is an equation that works. And then with the increase of the volume in this joint venture, also the economies of scale will kick in, which make it even outside of any other agreements – and I'm not saying that there wouldn't be any, but I cannot talk about it – very difficult for any other competitor to supply the product that the customer wants.

So – and I'm sorry that I cannot share more with you at this point in time. Hopefully that helps and I will have over – hand over now to Filip for the second part of the question.

Filip Platteeuw: Yeah. Geoff, good morning. On the leverage, the stance that we took before that hasn't changed, which is we always want to stay investment grade. And I know that that gives a big of wiggle room, but I think you're pretty familiar with the ratios that means.

I mean the message is that, like we don't want to take over risks also not on the leverage side. So when we take about investment grades, we look at our numbers, we look at our projections, we do take into account also some volatility that we know intrinsically we have in Umicore, we have metal prices that are difficult to predict. So I would say the strategy is very much to stay investment grade. We believe that is important for the business that we are. I think we've seen by our customers and more OEM customers are very important to be a reliable partner. So that goes also into the financing. So investment grade is what we're aiming for. And definitely if we look at the projections that we're making today taking into account all of the investments and all the cash flow generation, we're comfortable that we have that in front of us.

The second question on E&ST earnings, I think it's a bit too early to give guidance. That was not really the purpose. However, so what we said is that we do not expect for the segment for E&ST to show a significant uplift over that period. So we're not excluding growth. It's just that I think also look at the consensus expectations we felt it was right thing to do to guide you through that reality, which is that we don't expect a significant uplift at least in the short-term, so for 2022 and indeed going into 2023. But we'll provide, as you know, typically the directional earnings guidance comes in February and then after the first quarter we typically quantify that. So I think that's also the intention for next year.

Geoff Haire: Thank you. Could I just come back with one smaller one on that. Mathias, I think you said that the JV will be positive from a return on invested capital versus one point of view. Is that from year one or is that going to be at some point after the start in 2025?

Mathias Miedreich: It would be great if this could be from year one but it's the same logic like for every industrial ramp-up is – comes here into play that first you need to come to critical scale before you can do that. So my answer it's not now. It is going to be not from year one, but we expect based on the scale we can already pluck this on because this is not just a standalone thing. It's coming on top of the Umicore existing businesses. We will be able to have a quite fast way towards this value creation situation.

Geoff Haire: Okay. Thank you.

Operator: Thank you very much. We do have time for one more question. It comes from the line of Adam Collins from Liberum. Please go ahead.

Adam Collins (Liberum): Yeah. Hello. Just some very quick ones actually. Just a few. We haven't talked about LMP. What role is that going to take in terms of manufacturing and where will you do that?

Secondly on – back to the joint venture. Is it right to assume that it's likely to be a 50-50 share of CapEx in profits, so sort of straight joint venture share. And then just in terms of the kind of rough model if I'm to understand what the tonnage might be from the European projects that you're talking about. You're talking about 160 gigawatt hours longer term. In the past,

we've been guided to overall, if I remember around about 1.7 kg per kilowatt hour. Is that the right assumption?

Filip Platteeuw: Yeah. Thank you very much. I would start again with the last question. So we would more guide you to something 1.4 to 1.5 as a relevant factor that you could multiply with the 160 that to come in the right range.

But now this joint venture, 50-50 joint venture another one, I cannot comment on that at this point of time, unfortunately, but we will of course disclose that once the joint venture contract is signed. For the first question, could you repeat the question? It was not translated properly I think. It was something on LMP but was not clearly audible.

Adam Collins: Yeah. I think that one was in relation to – well, I'll now ask anyway, which is in relation to what you're saying in terms of the expansion mid-term in North America, likely to be perhaps Canada because of its characteristics. Is that likely to be under an OEM partnership model again?

Mathias Miedreich: So that's too early to say that. Unfortunately, of course, we have several routes into that and several strategies that we're looking into now. If you recall, the – our first mover advantage that we have in Europe was based on an initiative from Umicore. You know there are several discussions we have with OEM. So it's too early to say what's the right setup and what will be the model that we start with. So this is also I have to tell you that I cannot tell you anything more right now. It is not yet fixed. We will do that.

Adam Collins: Sure. And the question actually was about LMP from memory and what role that's going to play looking forward in your business, the high manganese conversion[?].

Mathias Miedreich: You talk about – the high manganese, yeah, of course, this is, of course, also – when I talk about the – earlier today the mix of chemistries that we have and we not – we don't discuss about LFP or not, we discuss about mix in the portfolio of chemistries. Of course, this is also a very important element that we have. And as said earlier, we do not want to be dogmatic on a chemistry.

It's important for us to understand what is the trend in the markets in terms of needed technologies. And especially as one colleague mentioned earlier, we want to be not in a position that we have obsolete CapEx that is not treating anymore to a change in trends. So that's why we are putting lot of emphasis and flexibility of our systems going forward. And also this chemistry plays a major role into it going forward.

Now how this will be – what will be the exact market share projection to 2030 of the different chemistries? We are starting to have a picture and we would like to share this picture with you in the next Capital Markets Day or maybe even earlier than that. And then I think we have a good date for the continue to discussion to see how these different elements are evolving.

Adam Collins: And I'd like to check one thing. Did you say earlier that you expect China factory utilisation to be 80% in 2023? And if so, what cathode materials will you be deploying in that China factory?

Mathias Miedreich: So the 2023 number, yes, about 80% is what I had mentioned today. And the cathode material will be mainly on the mid-nickel side, but we will start also with high-nickel applications with Chinese customers that we are going forward. So the start – this 80%

still will be mainly mid-nickel but with an increase in share of high-nickel in '24, I think we will even reach the tipping point to high-nickel also in China.

Operator: Thank you very much. We have no more time for questions. So I will hand you back over to the hosts.

Mathias Miedreich: Okay. Very good. Thank you very much for the very relevant and detailed questions. It was a good discussion. And we, of course, would be very, very happy and you saw that to share even more details on the joint venture with you. I have to apologise again that at this point in time we simply cannot, but you can be sure that we will be doing that as soon as we are able to do so and of course we take very seriously the remarks on the consistent messaging that we – that you expect from us going forward, which I think the more and more the market is stabilising, big trends are emerging and the big partnerships that we are doing, we will be – as the whole market will be much more coming into that mode and we have clearly heard your message and we will, going forward, really like to exchange with you on our next Capital Markets Day that the date we will announce.

But as I said, it would be around mid-next year. And of course, the two topics that we would like to discuss with you in the next year is, of course, our strategy on the RBM side, but not only that because also the Umicore strategy in itself, our vision for 2030, we put a lot of energy in that right now to develop that and I would be happy to share it with you especially also in the light of the dynamic that you see in the market with companies that make announcements also on similar fields that we have seen in the last months and also just yesterday. And it would be very good for us to get also your input on that and make sure that we – you understand our rationale and strategy forward.

So thank you very much again for that quotation. I personally thank you for having me here the first time and I'm looking forward to continue that now in the next weeks and months to come. Thank you very much. And if we don't speak before, have a good and safe Christmas period. Looking forward to talk to you next year. Thank you very much.

Operator: Thank you very much for joining today's call. You may now disconnect your handsets. Hosts, please stay on the line. Thank you.

[END OF TRANSCRIPT]