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UMI.BR - Full Year 2017 Umicore SA Earnings Call

EVENT DATE/TIME: FEBRUARY 09, 2018 / 8:30AM GMT

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PRESENTATION

Operator

Good day, and welcome to the Umicore Full Year Results 2017 Conference Call. Today's conference is being recorded. At this time, I would like to turn the conference over to Marc Grynberg, CEO. Please go ahead, sir.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Thank you, and good morning, everyone, and welcome to the Umicore conference call. As you will have undoubtedly seen from the announcements that we made yesterday, we have quite a lot of ground to cover this morning. Alongside the review of the record performance of last year, we will address the very exciting developments that will be shaping Umicore over the next few years.

I refer more specifically to the acceleration of growth, which is driven by the strong demand for Battery Materials used in electrified vehicles and by the unique position of Umicore in this segment. This acceleration will already show significant benefits this year and the successful execution of our Horizon 2020 strategy, which we launched in 2015, has in the meantime unlocked even more profitable growth potential in Battery Materials in particular.

In order to meet the fast-growing customer demand for these materials, we will invest an additional EUR 660 million to expand capacity in China and establish production in Europe. I will elaborate in a moment on the accelerating growth and the upside potential that we now see for 2020.

Allow me to start though with today's breaking news, which is the successful placement yesterday evening of 22.4 million new shares. The offering was rapidly and considerably oversubscribed, and the transaction was completed at a price of EUR 39.80, which represents a slight discount -of less than 3%- compared to the closing price of yesterday before we launched the offering.

It was really pleasing to see that despite a challenging climate in the global equity markets, we managed to raise close to EUR 900 million in approximately 2 hours' time. I'll take that as a clear vote of confidence from the investor community in our strategy and positioning. The additional equity that we have just raised will add to the balance sheet strength and will provide us with even more ammunition to fund the very fast organic growth, and at the same time, pursue potential acquisitions, selectively of course, acquisitions that could strengthen our current portfolio.

Let me now go back to the record performance of last year, the outlook for this year and the new investments in Battery Materials, which will make our growth profile even steeper. We recorded strong growth in 2017 with revenues from continued operations increasing by 16% and recurring EBIT by 24% from the levels of 2016. This was due, to a very large extent, to the outstanding growth in Energy & Surface Technologies, which benefited from the gradual ramp-up of new production capacity for cathode materials. The Catalysis and Recycling segments also contributed to the overall growth in revenues and earnings. It is also worth pointing out that the return of capital employed improved somewhat and is now above our target of 15%, thereby confirming that growth has not been pursued to the detriment of margins.

We also made significant strides with the reshaping of the group. We have completed the portfolio realignment that was announced in 2015. We divested the Building Products business, the large-area coating activity of Thin Film Products, and more recently, we sold the European operations of Technical Materials. At the same time, we completed selective acquisitions that will strengthen our position in Catalysis and in Energy & Surface Technologies. We acquired the heavy duty and stationery and mission control catalyst activities of Haldor Topsoe and the metathesis catalyst materials of Materia. We acquired the remaining interest in the South Korean automotive catalyst maker, Ordeg, of which we now have full ownership, and we also acquired Eurotungstene in France. This portfolio realignment has simplified the organization and sharpened the focus on the strategic growth priorities in clean mobility materials and Recycling.

As a result of the improvement in earnings in 2017 and considering the strong perspectives for the future, the board will propose to the shareholders to approve a dividend of EUR 0.70 per share in respect of the full year 2017, of which EUR 0.325 were paid out as an interim dividend in August of last year.

Turning now to this year, I can confirm that the execution of our Horizon 2020 strategy is ahead of schedule. This reflects positive market trends across applications in rechargeable batteries and our ability to respond fast to such a development. We have indeed been able to add somewhat more capacity than originally planned as part of the EUR 460 million investment program that we initiated in 2016 and to ramp it up fast.

The continued growth in the Catalysis and Recycling segments complete the positive picture. As a result, while it is still very early days, I can already say that we anticipate to approach already in 2018 the Horizon 2020 target of doubling the return on EBIT to a level of EUR 500 million. This outlook assumes, of course, no major change in the macro environment.

Moving on this momentum, we are powering ahead and we'll invest an additional EUR 660 million to accelerate and amplify our expansion in cathode materials and thereby, increase the gap with competition. The new investment program will start this year and be completed in 2020.

It includes the construction of a greenfield facility in China, very close to our existing operation in Jiangmen in the Guangdong province with the first production line coming on stream at the end of 2019. The program also entails the construction of a cathode materials plant in Europe. Final site selection should be done in the course of this year, and we should be starting production in Europe in the course of 2020. In both locations, we will use the latest version of our proprietary process technologies, which allows us to produce a broad range of product technologies to meet the specific performance requirements of each platform or customer. The combination of the EUR 460 million investment currently in execution in South Korea and China and the new investment program of EUR 660 million in China and Europe should enable us to sell at least 175,000 tons of cathode materials in 2021, including a sizable proportion of higher nickel-containing grades. In the shorter run, considering projected market growth combined with awarded business and the fast ramp-up of new capacity, our sales of cathode materials should reach 100,000 tons in 2019.

The new investment comes in response to growing demand for our materials for use in electrified vehicles. This is, in part, due to fast market growth as most automotive OEMs are rolling out their electrification strategies. This trend is most pronounced in China, where initial norms are playing out, in combination with the effect of quota for new energy vehicles and a compelling subsidy mechanism for both passenger cars and buses. Electrification is also making significant inroads in Europe, and the introduction of tighter CO2 norms in 2021 will exacerbate this effect. Alongside the EV market, we see significant growth in the energy storage segment and increasing demand for our high energy density materials used in the high-end portable electronic segments. Our current view of the market size implies significantly higher market demand than the view we had some 2 years ago at the time of our Capital Market Day.

In addition to the sheer market evolution, we continue to win automotive customers and platforms while facing higher demand for the existing platforms. These developments outline really well the strength of our technology portfolio and production capabilities in all application fields where product performance and quality constitute significant differentiators, whether it is in automotive, energy storage or the high-end portable electronics application.

Given this quantum leap in cathode materials and the continued growth in the Catalysis and Recycling segments, I now see an upside potential of some 35% to 45% compared to the original Horizon 2020 target while maintaining the 15%-plus ROCE target. We intend to elaborate on this upside potential during the next edition of our Capital Market Days, which will take place in South Korea in June this year.

Having commented on the growth acceleration, I would now like to review last year's performance of our businesses before handing over to Filip, who will comment on the financials.

In Catalysis, revenues grew by 8% year-on-year and recurring EBIT by 9%, driven, to a large extent, the consolidation of Ordeg in Korea since April. In the absence of any major changes in emission norms in 2017, we saw growing demand for our heavy-duty catalysts in Europe and in China while the demand for light-duty catalysts was somewhat below the market evolution. This was mainly due to lower demand from Korean car manufacturers and an unfavorable customer mix in North America.

In addition, the market mix itself was less favorable as diesel engines lost some market share in Europe. In light-duty applications, we have successfully positioned ourselves in the emerging segment of gasoline particulate filters both in Europe and China, and this will support the growth over the next few years. Also, we project significant growth in China and India as a result of market expansion combined with the introduction of tighter norms, and we have, therefore, recently decided to substantially increase production capacity in both countries. The new production lines are set to come on stream at the end of 2019.

In Precious Metals Chemistry, revenues grew across the board with a promising debut in organic metallics and significant business wins in homogeneous catalysts for pharmaceutical and large science applications.

In Energy & Surface Technologies, revenues grew by 46% year-on-year and recurring EBIT by a whopping 72% with strong performance across businesses. Obviously, the volume growth in cathode materials was the largest growth driver, and the swift ramp-up of new capacity has supported the volume growth in the second part of the year while delivering the first scale effects.

We also recorded significant growth in Cobalt & Specialty Materials, driven by strong demand across product lines as well as favorable market conditions. Revenues also grew in Electroplating and Thin Film Products and were stable in Electro-Optic Materials.

Alongside the large investments in cathode materials, we are also expanding and upgrading our Belgian refining and recycling capacities for cobalt and nickel-containing materials and these investments will come on stream in the course of 2018.

In Recycling, revenues grew by 1% year-on-year and recurring EBIT by 2%. In Hoboken, we processed higher volumes, and this positive effect was offset by less favorable commercial terms in certain supply segments. The benefits of the gradual capacity ramp-up should be somewhat more pronounced in 2018, even in the absence of an improvement in commercial conditions.

You may recall that we decided a year ago to accelerate the execution of environmental investments following an incident that lead to excessive dust emissions. It is worth pointing out today that we are making excellent progress on that front and dust emissions have already been brought down considerably.

In the other business units of the Recycling segment, the performance was mixed with subdued demand in Jewellery & Industrial Metals, stable revenues in Technical Materials and a slightly higher contribution from the Platinum Engineered Materials and Precious Metals Management activities.

On the people front, safety performance improved although not sufficiently. We had a 10% improvement in accident frequency and a more significant reduction of the accident severity rate by 25% compared to 2016. We are continuing to work hard at making bigger strides to make Umicore an accident-free workplace. The number of employees decreased from 2016 levels as a consequence of the divestments, partly offset by recruitment in line with our organic growth profile and the recent acquisitions.

And at this point, I'm turning to Filip, who will comment on the financials before I wrap up the main messages of the day.

Filip Platteeuw - *Umicore S.A. - CFO*

Thanks, Marc, and good morning, everyone. So as you saw from our numbers, we increased our revenue significantly in 2017. Particularly important is that growth did not come at the expense of margins. As on average, our revenues became more profitable compared to last year, resulting in an increase of our group margins.

Following the sale of Building Products at the end of September 2017, no businesses remained any longer under discontinued operations. Revenues in continued operations increased 16% year-on-year. Recurring EBIT and recurring EBITDA grew faster with 24% and 18%, respectively. Recurring EBIT for continued operations amounts to EUR 398 million compared to the high end of our guidance of EUR 385 million, which means that revenues, recurring EBIT and EBITDA all came in at record levels.

The return on capital employed for the group moved above our 15% objective, and with 15.1% is substantially above our effective cost of capital. Average capital employed for continued operations increased by some EUR 390 million year-on-year, driven by a combination of organic growth and acquisitions. Some 70% of this increase was accountable to Energy & Surface Technologies. Nevertheless, this segment was also the main driver behind the group return on capital employed accretion. Recycling remains the business group generating, by far, the largest returns with a ROCE for the year close to 26%. You will have noted that in our updated Horizon 2020 guidance, we reiterated our ambition to stay above the 15% return hurdle for the group.

The operating cash flow generated by the full group reached EUR 516 million corresponding to a 15% increase for continued operations. Still, last year's combination of strong organic growth and a number of acquisitions has increased our net financial debt from a low level at the start of 2017.

In total, we spent close to EUR 700 million of cash on organic growth, mainly in the form of EUR 365 million of CapEx and EUR 284 million of higher net working capital. As was to be expected, Energy & Surface Technologies accounted for the bulk of this amount. Increase in net working capital was driven by a combination of higher volumes, higher pricing and the increasing need for raw materials for the ongoing capacity expansions.

If you look at our growth outlook for 2018 and the planned capacity expansions, we expect a further increase in net working capital in 2018. In addition, through this organic growth spending, we cashed out some EUR 211 million on acquisitions, partly offset by divestment proceeds. On the waterfall graph, these elements are included in the other label.

The increase in financial debt over the year, including the new long-term private placements, translated into a higher net interest cash-out. Our cash tax charge of EUR 73 million was in line with last year. You will have seen that our recurring effective tax rate increased to 25.7%, and we currently anticipate to stay close to this level for the coming years.

Our CapEx spending of EUR 365 million in 2017 reflects the strategic growth priorities, and in particular, our ambition in the field of Rechargeable Battery Materials as over 60% of this amount was spent in Energy & Surface Technologies.

Compared to the EUR 141 million group CapEx of the first half of the year, it shows the acceleration linked to the capacity expansion projects.

In Catalysis and Recycling, CapEx was roughly stable year-on-year. Including the newly announced additional expansion in cathode materials, we currently expect the group CapEx in 2018 to exceed EUR 600 million.

And obviously, technology innovation remains a key differentiator to us. And last year, we stepped up our R&D efforts and this will continue to be the case in Battery Materials in particular.

We spent the equivalent of 6% of our revenues on R&D in 2017, corresponding to an increase of 14% year-on-year. And it is perhaps worth remembering that we directly expensed over 90% of the spending through the P&L.

Recurring earnings per share increased 14% year-on-year to EUR 1.22 per share. The 17% increase in recurring operating result was somewhat offset by higher financial and tax charges.

In view of our strong performance in 2017, the board will propose to shareholders a dividend of EUR 0.70 per share compared to last year's EUR 0.65. This 8% increase reflects the confidence and the execution of our strategic plan and our continued commitment to return cash to our shareholders, notwithstanding important organic growth investments.

In 2017 our nonrecurring items amounted to a charge of EUR 46 million on EBIT level and EUR 42 million on net earnings. Some 2/3 of this amount are linked to the divestments and the related restructurings, including a EUR 13 million capital loss on the sale of Building Products corresponding to accumulated depreciation for this unit, which, under IFRS 5, was no longer recognized in P&L as of the second half of 2015. Other contributors include the impairments on Nyrstar shares of EUR 7 million and some EUR 7 million of additional environmental provisions.

The EUR 840 million net financial debt at the end of 2017 includes the EUR 690 million of long-term European and U.S. private debt placements, the U.S. portion of which was only drawn in December. The increase in net financial debt in 2017 moved us away from the very low leverage ratios of the last years. The end-of-year net financial debt over recurring EBITDA ratio of 1.4x reflects that our capital structure remains solid, and we expect to be able to execute our ambitious growth plan while maintaining an investment-grade status. The EUR 892 million gross proceeds from the newly issued shares will provide us with additional financial flexibility in the execution of our strategic plan and allow us to pursue acquisitions and partnerships that would further strengthen our offering in clean mobility materials and in Recycling.

This concludes my comments, and I hand back over to you, Marc.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Thank you, Filip. Before turning to questions, I would like to recap the key messages of today's call. Umicore achieved record performance in 2017, driven mainly by fast growth in Energy & Surface Technologies. Excluding discontinued operations, revenues were up by 16% while recurring EBIT increased by 24% from the levels of 2016. The return of capital employed increased to 15.1%, which shows that growth has not been achieved to the detriment of margins.

Furthermore, the execution of the strategic plan is ahead of schedule. And if we assume no major changes in the macro environment, I can already say that we should be approaching already in 2018 the Horizon 2020 target of doubling recurring EBIT to a level of EUR 500 million.

Considering the strong results in 2017 and the promising prospects, the board will propose to the shareholders to approve an increase of the dividend to a level of EUR 0.70 per share in respect of the full year 2017.

On a strategic point of view, Umicore is making a quantum leap in cathode materials with an investment program of EUR 660 million to expand capacity in China and establish production in Europe. These investments come in response to the combined effect of business wins and projected market growth and confirms the strength of Umicore's technology offering.

With this significant acceleration of growth, I now see an upside potential of some 35% to 45% compared to the original Horizon 2020 targets that we presented back in 2015 while maintaining the target of return on capital employed exceeding 15%. Against this exciting backdrop, we decided to raise new equity to fund our superfast growth.

I'm convinced that there will be a premium for those technology players capable of acting quickly and decisively in this fast evolving space. And with this equity raise, we have the ammunition readily available to seize the best opportunities.

Obviously, I'm delighted that we managed to raise close to EUR 900 million of equities at only a very slight discount and this against the backdrop of challenging equity markets. I take this as a clear vote of confidence from our investors in the strategy and positioning of Umicore, and I would like to thank them for that.

With this, I would now like to open the floor to your questions.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) We will now take our first question from Wim Hoste from KBC Securities.

Wim Hoste - *KBC Securities NV, Research Division - Senior Financial Analyst*

Wim Hoste, KBC Securities. I have 2 questions on Rechargeable Battery Materials, please, and congratulations with the impressive announcements of yesterday evening on that. Some further clarification, please, on maybe the order book. I think in the previous announcements of additional investments, it was said that it was fully backed by orders. Is this also the case now? Or do you feel you have to be ready for market growth that has not yet translated into orders? So that's the first question. The second one is it seems that you advanced the EUR 460 million CapEx program that was announced earlier. Can you maybe share with us what kind of portion of the investments have already turned operational by now? And what is the schedule to be expected for 2018 with this respect? These are my questions.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Thank you, Wim. Let me start with the order book. I mean, a big portion of our sales will be in automotive. And in automotive, you get business awards. When you qualify for a platform, you get the award for that platform. And then the way we plan for capacity is a combination of having received the business award and making some assumptions together with our customers about how the platform itself would sell in the market. There is no volume guarantee. The only guarantee that we have is that we have been awarded the platform and that the platforms are ours. Then we have to make these assumptions on volume. And what I can say is that with the very diversified portfolio of platforms and customers that we have - similar to the situation in Automotive Catalysts - we have a pretty good view on what we will need to deliver in the next few years. So you have the degree of confidence about the sales and the capacity utilization is very high. Commenting on the ongoing investment program of EUR 460 million, I can say that the most significant part of the capacity addition coming from that investment is set to come on stream in the course of this year with a, I would say, a higher weight to be placed on the second part of this year.

Operator

We will now take the next question from Mutlu Gundogan from ABN AMRO.

Mutlu Gundogan - *ABN AMRO Bank N.V., Research Division - Analyst*

A couple of questions. So the first is on the capital increase. One of the reasons you mentioned is that it provides more financial flexibility to pursue potential acquisitions. So can you tell me what the reasoning here is? What areas are you interested in? Second question is on the investment in NMC. This should bring your capacity 175,000 kilotons by 2021. Can you tell me how does that compares to the sixfold increase you already announced? I mean, is it a doubling? Any numbers on that will be appreciated. And then finally, on the Energy & Surface Technologies segment, I'm a little bit surprised to see the EBITDA margin down 90 bps half year on half year despite the lower payment to BASF, the higher NMC volumes and the higher cobalt price throughout the year. So can you tell me why this is?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Let me start with the last question. Quarterly or half yearly movements in margins are not so, I would say, easy for us to come into because there is no -- we're looking at longer-term trends, and we don't see a 90 bps change in such a short period of time as either an indication of what margins will be in the future or any other specification of things. This is -- I think the margins are at very healthy levels and the growth will continue to be at very good, very strong margins and strong, strong returns. And I'm not looking so much at these short-term fluctuations in margins, I have to say. Taking your -- continuing to take your questions in reverse order, let me first clarify that the 175,000 tons of cathode materials that we announced are not NMC capacity. It's total cathode materials capacity. So of course, it will include a vast majority of NMC grade, and it also includes some of the other products like the high energy density material that goes into portable electronics and which is also a growing application for us as the quality of the product and the performance of the products that we are making is making a difference in the marketplace. Turning back now to the heart of your question about the capacity. It is becoming difficult for us to continue to comment on doubling or where are we versus the sixfold increase because, actually, the investment phases, because of the acceleration, are starting to overlap. So please allow me to step away from this approach of talking about multiplying or doubling capacity. Suffice to say that if you take the combined investment of EUR 460 million and EUR 660 million, this is, by large, what will bring us to the 175,000 tons of capacity, at least taking into account, of course, that we didn't start from 0 and that we're building on some existing capacity. Now let me go to the -- your questions about the use of the capital-raising proceeds and the areas that we may be targeting from an M&A point of view. Clearly, we're in a phase of superfast growth. And while we could sign up for the organic growth on the back of our balance sheet alone, we decided to build some more flexibility and generate some more ammunition such that we could act very quickly in the marketplace and react and add to the investments if necessary, depending on how successful we are with the qualifications. And at the same time, we need to be able to act very quickly if acquisition opportunities present themselves and for which additional funding may be required. Now what we have in mind -- or in the back of our minds when we speak about acquisitions, it's not about diversification. It's really acquisitions that would strengthen the existing portfolio of activities or portfolio of technologies in clean mobility materials or in Recycling. And you will have seen in recent times that we acquired quite a bit of IP through M&A deals, and this will continue or may continue to be the case in the future, that we acquired also the emission control catalyst activities of Haldor Topsoe to strengthen our portfolio in emission control technologies, especially in the run-up to the introduction of China 6 and the huge effect that this will have on our catalyst business. So I think this is a good example of the type of deals that we may be pursuing going forward.

Operator

We will now take the next question from Chetan Udeshi from JPMorgan.

Chetan Udeshi - *JP Morgan Chase & Co, Research Division - Research Analyst*

Just a few questions. Every time you see this inflection in some new market, there is always potential that customers could be ordering more than they actually need just to have sort of a backup of supply. So when you've done your analysis, Marc and Filip, have you guys taken some sort of a risk-weighted approach here in terms of taking into account all of the forecast that you can -- you might be getting from customers in terms of building new capacity for that? And second question is in terms of tracking the competitive landscape, have you seen any material change now or in your recent platform bidding versus, say, the situation 6 or 9 months ago?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Let me start with the first questions. Yes, we do, we do make our own assumptions based on the customers' forecast. And we have, I would say, some models based on the experience that we have and projected market data from other external sources and our customers to try and figure out at best how to project the demand. This being said, the reality today in the automotive supply chain for electrified vehicles is that the orders are -- tend not to be overstated and that the lead times for the customers are fairly long because the supply chain has yet to shape up in order to meet the surging demand. So we're not very much at risk of overstated orders. But still, the answer is that, yes, we have models in place to try and fine-tune the customers' forecast in that respect. Talking about the competitive landscape, no, I don't see major changes in the competitive landscape. I can only repeat what I mentioned on previous occasions, is that it takes time for technologies and new entrants to get qualified in this marketplace and in this environment, and that is not changing. So I think that, as I mentioned previously and as we also stated in the press release, we are in a position to accelerate our growth, to grow faster than the market, to take advantage of our early mover position and to somewhat increase the gap with our competitors because indeed, it takes time for them to get qualified. I'm not pretending that they are not successful or will not be. I'm just saying that it takes time and that we have a clear advantage in that respect.

Chetan Udeshi - *JP Morgan Chase & Co, Research Division - Research Analyst*

Maybe if I can have one follow-up, quick short one, is you're -- the last -- I mean, the recent announcement you -- on capacity expansion that you announced actually last evening, would you say it's more of a reflection of you guys winning more share than in the past? Or do you think the market itself in terms of maybe penetration is sort of trending up higher than what many would have thought maybe 6 to 9 months back?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

It's, Chetan, it's really a combination of the 2 effects that we see for us.

Operator

We will now take the next question from Peter Olofsen from Kepler Cheuvreux.

Peter Olofsen - *Kepler Cheuvreux, Research Division - Analyst*

Maybe first starting with Recycling. You mentioned lower commercial terms in the second half. Could you maybe shed some light on -- in which segments or for which type of supplies you are seeing these less favorable terms? And then could you maybe update us on any hedging that you have in place in Recycling? And if current metal prices and currency rates were to prevail, how would that affect the outlook for Recycling for 2018? And then maybe to follow up on Battery Materials. First of all, could you may be break out Europe, what proportion that will present -- represent of the CapEx or the capacity? And then secondly, given the size of Rechargeable Battery Materials and its very prominent role in the overall equity story, would you consider to report separately on that business?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Okay, thank you. So no, I'm not going to break that down in detail. And what I can say at this stage is that the significant majority of the EUR 660 million investment will be in China, where we'll continue to expand quite considerably. And a minority of that amount will be dedicated to establishing a first production facility in Europe. That's the level of detail or lack of detail that I'm prepared to go into at this point in time. And continuing on that subject, no, we do not intend to report the RBM, the Rechargeable Battery Materials business unit separately for a number of reasons. And the most significant reason is that that activity is very closely intertwined with other activities within the Energy & Surface Technologies segment, and it makes sense to continue to consider those as a fully-fledged segment. And I'm referring very specifically to the Cobalt & Specialty Materials business unit, which is the other large activity within that segment. These 2 businesses have a lot in common in terms of supply and some of the production of intermediate products and precursors, et cetera. So it wouldn't make a lot of sense from a business point of view nor from a practical point of view to separate them out. I will comment on the commercial terms in the Recycling segment and then hand it over to Filip to address the other questions. So the segments where we show increased competitive pressure in the second part of last year are actually not really new or surprising. It's a continuation of trends that had been initiated in the past. That's in certain grades of electronic scrap, for instance, or certain types of spent automotive catalyst. And in addition, we see a little bit of competitive pressure in 1 or 2 subsegments of industrial byproducts. And then I will hand over to Filip.

Filip Platteeuw - *Umicore S.A. - CFO*

Yes. So on the hedges, really, the hedge position has not really changed compared to what we told you on the end of June situation. So we did a few minor hedges but so not really anything material to mention. And as we said then, we have some hedges for precious metals and for some base metals running into 2018 and partly 2019. So really no changes. On the potential impacts based on prevailing currency and metal prices, so it's clear that the current ForEx environment is a headwind for us. On the metal side, there may be some upside, but if you take both together, the current situation would be a net headwind for us in terms of earnings and obviously is included in the guidance we've given you.

Operator

We will now take the next question from Charlie Webb from Morgan Stanley.

Charles L. Webb - *Morgan Stanley, Research Division - Equity Analyst*

Just a few for me. First of all, just bridging to the EUR 500 million for 2018, looking at the EUR 100 million delta you're talking about. Perhaps you can give us a bit more granularity as to how we get that bridge, taking into account the FX headwinds you just mentioned. I don't know, maybe you can touch on what the acquisitions will contribute, and then by division, a sense of where the growth is going to be coming from, first question there. And then secondly, on the 605 kilotons of cathode material that you expected by 2022, perhaps you can, at least for the automotive side of that, give us a sense of maybe EV or maybe just gigawatt hour capacity that corresponds to, to get that kind of rate or level of demand, that would be question number two. And then question three, just on D&A. Obviously, D&A in E&ST which we probably expect to step up again in '18, how should we think about that? What are your depreciation terms for the divisions? If you could remind us that, that will be helpful, just so that we can get that right.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Let me start with the bridge to the outlook to 2018. I can say that the majority of the growth is going to come from the superfast growth in Energy & Surface Technologies. And as I mentioned earlier, a big chunk of the capacity addition from the investment program of EUR 460 million that we initiated in 2016 is going to take place in 2018 with a significant part of that being -- taking place in the second part of the year. So that's the majority of the growth. Next to that, we expect to have somewhat more growth in Catalysis and in Recycling than with the case in 2017. And this will complete the bridge between 2017 and 2018. And indeed, this is despite the headwind that Filip mentioned, talking about the net effect of currency moves and metal prices. Coming back to the capacity expansion, let me first correct that it is -- we're speaking of 175,000 tons in 2021, not 2022.

Charles L. Webb - *Morgan Stanley, Research Division - Equity Analyst*

Sure, sure. No, sorry, Just on the slide, you put up for the cathode material market by 2022. And I guess, in one of the early slides, you put up -- just what assumptions they're -- is that based on?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

So the slide that you're referring to is talking about the market, not our capacity. And so that's why...

Charles L. Webb - *Morgan Stanley, Research Division - Equity Analyst*

Understood. I was -- I'm trying to understand your assumptions on the market.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Yes. So it's difficult for us to say exactly how many gigawatt hours this is corresponding to because this will depend on the final product mix that will be produced at that point in time. And then regarding the D&A, I would hand over to Filip.

Filip Platteeuw - *Umicore S.A. - CFO*

Yes. I mean, we're not going to give specific guidance, obviously, for D&A per segment. But what you can clearly see is, indeed, there's an increase in D&A that follows the acceleration in CapEx in 2017. We were close to EUR 190 million D&A for the group. You can expect that including this new investment and capacity expansion is that by, let's say, the end of the decade, we'll be coming closer to the EUR 300 million than the EUR 200 million because of this acceleration, which is pretty tough in terms of earnings, obviously, which is why we give guidance for recurring EBIT and return on capital employed. Actually, you have that increase also in the objective. So in terms of EBITDA and cash flows, it would be a bit easier. So close to EUR 300 million end of decade. In terms of specifically what we do for RBM and for the new expansions, I wouldn't want to detail that. It's just that we have the normal useful life assessment like we do for all businesses. We don't apply any specific principles for these investments or for RBM, in general. What I would say is that if you look at the lines that we have been investing in, in RBM in the past, they're still running. So in terms of technological obsolescence, the risk is actually very low. And so D&A is one aspect, but, really, the use of these lines is another. So nothing specific to mention, but clearly an increase in D&A to be expected for the group following the acceleration in CapEx towards something like, I would say, closer to EUR 300 million by the end of the decade.

Charles L. Webb - *Morgan Stanley, Research Division - Equity Analyst*

Okay. Then maybe just quickly a follow-up on the second question. What is your battery penetration expectations for 2021 or 2022 or number of EVs in terms of your forecast? And how is that changed, perhaps versus, say, 6 to 12 months ago?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

I -- Charlie, I don't have the number in -- on the top of my head, so I will come back to that when we meet next week. And then, of course, the idea was to provide a more elaborate update during the capital markets day. But let me see that by the time we meet next week, I can already provide with -- you with some more color on that subject.

Operator

We will now take the next question from Raghav Bardalai from Exane.

Raghav Bardalai - *Exane BNP Paribas, Research Division - Analyst of Chemicals*

It's Raghav from Exane BNP. Just one quick question left, please. You talked about the increasing need for raw materials given the increased input capacity. And I wondered what level of visibility you have in the raw material side for this new plan, primarily cobalt, how big is the risk in the supply chain you can't respond to meet this sort of accelerating trend in demand. And linked to that, do you see battery recycling being able to contribute faster than expected to meet this growing issue?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Good morning and let me, indeed, comment on this quite important and critical subject of raw materials. And we are pretty well equipped, I would say, to deal with that because we have been in the market for quite a while. And unlike some of our competitors, we have -- we do have in-house refining and recycling capabilities, which gives us the possibility to source very different types of raw materials that we then refine ourselves into the grades -- or the chemical grades that we need for battery material production. This being said, this will continue to be a hot topic for everyone in the industry because it takes a little bit of time for the supply chain and the raw material supply chain to shape up and cope with the fast surging demand. We're one step ahead, I believe, of many competitors because we have been able to source long term and short term and commit to certain raw materials in line with the commitments that we have with our own customers to produce the materials. So we're in a pretty good shape in that respect. And we continue to work on a number of projects to source additional quantities of the required raw materials. Now the good news on the cobalt front is that, while there was a lot of concerns or announcements about a very tight market in 2017, the most recent announcements are about significant expansion of production capacity, which should, indeed, provide some more oxygen for the midterm in that respect. In terms of the battery recycling activity, in the long run, it will be essential to source a significant portion of the raw materials from the in-house recycling capabilities, and we want to be positioned early in the game in order to benefit from more technology -- technological capabilities, in that respect. It will be essential because if the growth continues at the pace that we see today beyond 2025, the need for additional quantities of raw materials will not -- cannot be addressed only by primary production. It will have to be complemented by an effective collection and recycling chain in order to have the raw materials that are required. This being said, we're still quite some years away from the battery recycling activity reaching a very large industrial scale because the availability of spent batteries today is still very limited. The cars, the electrified vehicles have to be sold and it has to hit the road and then have to run their course for 8, 9, 10 or 12 years before the batteries come for -- become available for recycling, so it will take a bit of time. And I would, probably, today stick to the statements that I made a while ago that it's going to be a mid-2020 opportunity for us. It's going to be a big opportunity and probably the next big thing in terms of recycling development. But it's going to be more like mid-2020s than imminent.

Operator

We will now take the next question from Sebastian Bray from Berenberg.

Sebastian Christian August Bray - *Berenberg, Research Division - Analyst*

Could I ask then firstly on the capital intensity of this cathode expansion? Am I right in saying that there is potentially an over 30% reduction with this new announcement to EUR 660 million relative to the EUR 460 million previously announced in the amount CapEx that you have to spend, let's say, get 1 kiloton of NMC? And if there has been such reduction, how exactly has this been achieved? My second question touches on cobalt supply. If this facility comes online as planned to get to 175 kilotons, my -- as I rough guess, I think Umicore counts for over 20% of the world's cobalt supply. And I just want to get a closer idea of how much certainty there is around, let's say, being unable to source enough cobalt. And my final question is on Auto Catalysts. One of your competitors, Johnson Matthey has been talking about substantial market share gains in European Auto Catalysts. Are you going to lose, from your view, share particularly in diesel cars in 2018?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Sebastian, let me start with the CapEx intensity. No, it is more or less in line with the previous investment. It can be slightly different, taking into account some of the scale effects as we roll out the new investments, but it's not significantly -- it's not materially different. What I would like to point out is that our CapEx intensity is materially lower than that of any competitors and that's because we are using a proprietary unique technology process actually to produce different grades of cathode materials in a fairly versatile and very effective manner. So that's where I see a material difference. Talking about cobalt supply, the reality is, indeed, that we are, to date, already one of the largest consumers of cobalt in the world. And with the growth in the next few years, we'll continue to be so. And yes, I mean, clearly, we have sufficient confidence that we will be able to source these raw materials in due time and new quantity and quality. And there is sufficient confidence that this is the case to support the decision to move ahead with the investment. And I think the fact that we are qualified on so many platforms gives us the confidence that the materials, in a way, will be coming to us to a large extent. And then on the Automotive Catalysts questions, yes, we see some changes in relative positions in the market with Johnson Matthey gaining some ground on the diesel side. How much? I mean, I wouldn't dare to quantify as they have been daring to do. And on the other side, I would like to point out that we're winning market share on the gasoline side of things. And in particular, in the emerging segment of particulates -- gasoline particulate filters, which is going to be a very significant addition to the revenue and margin potential in the next few years, in particular in Europe and in China. So on balance, I'm not dissatisfied with the mix evolution, I should say. And as I mentioned earlier, I mean, we had discussions about the future engine mix and where diesel was going. And I continue to believe that diesel has a significant role to play in the -- in future engine lineup and -- in order to minimize CO2 emissions. But this being said, as I mentioned before, Umicore tends to benefit over time from a declining diesel market share versus gasoline and electrified drivetrains.

Sebastian Christian August Bray - *Berenberg, Research Division - Analyst*

If I could just ask one quick follow-up, related to cobalt supply. If I look at it from the demand side, I think there is reference within the press release to Cellcore, which I assume is NMC 811 or even higher nickel. Could you perhaps give an indication of how much of this capacity is mid-grade, i.e. 622 NMC or thereabouts? And how much is high grade, i.e. 811? And if you are currently selling higher grades or will sell than 811 NMC?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Actually, Cellcore is the brand name for all of our cathode materials, so it's not just one grade, so to clarify this point. And no, I'm not going to break down the different grades. Suffice to say that we're selling a broad variety of grades today and that the projection that we have communicated includes a sizeable portion of high nickel-containing grades, in line with where we see the market demand evolving and the platforms evolving going forward.

Operator

We will now take the next question from Ranulf Orr from Redburn.

Ranulf Orr - *Redburn (Europe) Limited, Research Division - Research Analyst*

Just 2 for me. Firstly, cathode materials. How is your visibility on price compared to volumes? Though the OEMs don't promise volumes today, they promise a price per ton. Or how does that work? And secondly, in terms of market share for NMC, by the time you're fully ramped up in 2021, what market share do you expect to have by tonnage?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

I'm afraid I'm going to disappoint you on both questions because I don't want to go into any kind of details about the commercial agreements and pricing. And I can...

Ranulf Orr - *Redburn (Europe) Limited, Research Division - Research Analyst*

Okay. But do you have any visibility, though? Or would you rather not share the detail?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

I was going to get there. So I can only say that we have sufficient visibility to be confident with the outlook statement that we made yesterday about the short and the medium term, indeed. And secondly, I'm not commenting on market share because we don't have a policy to do that nor a policy to drive the business in function of market shares. I have to say that size of the business and scale is really important in this type of industry because scale effects are important. And because you need to be able to afford significant costs of research and development, start up and ramp up and qualification of products and production lines, but I'm not market share-driven. And I see that the market share has been the result of our successful positioning in the market, both from a technical performance point of view and production quality point of view. I think it's becoming clear that we will be one of the significant leading players in that industry, but I'm not willing to put a figure on that in terms of market share.

Operator

We will now take the next question from Geoff Haire from UBS.

Geoffrey Robert Haire - *UBS Investment Bank, Research Division - MD and Equity Research Analyst*

Just wanted to ask a couple of quick questions. First of all, when you look at the platforms that you bid for in terms of electric vehicles, do you bid for every platform that's out there? Or are you more selective? And what is the criteria if you are more selective? Secondly, the chart on Page 8 of the presentation, so the market view for cathode materials, can you just talk whose view that is and what it would look like if we look at it from 2017? I'm assuming that the uplift would be smaller than what you have there. Those are my 2 questions.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

I'm sorry, Geoff. I missed part of the second question. Would you mind repeating it?

Geoffrey Robert Haire - *UBS Investment Bank, Research Division - MD and Equity Research Analyst*

Yes, sure. The chart on Page 8 of the presentation, so the cathode materials market 2018 view. Whose view is that? There's no source on it. And I just wondered what it would look like if we started in 2017 rather than 2015.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Okay. So let me start with the first question because I'll need a little bit of the help from my team to address the second question. So there is a certain degree of selectivity in bidding for platforms, indeed, because from early contacts with customers and relationships and technical work on sampling at large-scale level, we know whether our products are fitting better in one platform or another. And so clearly, we are focusing on those platforms where our products are making a clear difference in terms of product performance and where the scale is significant because we focus on moving into the mainstream applications and the mainstream platforms. So there is a degree of selectivity. This being said, it's not like we're discarding a significant number of platform opportunities. That's not the case. But we know fairly early in the game whether our products and our technologies are fit for certain application requirements, indeed. Now if you would allow me, I will revert a bit later on the second question and if I'm not able to do that during the call, we will provide an answer on that question early next week when we meet in London.

Geoffrey Robert Haire - *UBS Investment Bank, Research Division - MD and Equity Research Analyst*

Okay, I have one follow-up. The EBIT guidance you've given for 2020, the uplift, how is that risk-weighted? Is that risk-adjusted? Or is that just a number you think you're going to get?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Well, that's the best view I have today, I can only say that. If I'm sticking out my neck while it's still early days, it's because that's the best view I have today. I cannot say more or less than that.

Operator

We will now take the next question from Adam Collins from Liberum.

Adam Robert Collins - *Liberum Capital Limited, Research Division - Analyst*

I had a couple left. So the first one is on the battery side. It was interesting to hear you say that you're quite positive about the outlook for high energy LCO, where you have a strong competitive position. That might seem somewhat paradoxical given the steep escalation in cobalt cost this year for what is a very cobalt-intense product. I wonder if you could talk a little bit about the drivers there. And then the second question is around the recycling area. I wonder if you could talk a little bit about your anticipated production ramp in the next, say, year or 2. And then just to allay one potential concern. You talked about a commercial deterioration in end-of-life materials as has been an ongoing trend in e-scrap and in spent Auto Catalysts. Could you just confirm, in the core business, the complex mining residues, commercial conditions are more robust and that there is no risk there as you expand volumes in that area, there will be some commercial impairments.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Adam, so let me first comment about high energy LCO and the demand drivers that we see there. Well, it is, to a large extent, driven by product performance and product quality and quality consistency. And you have seen a number of incidents in the last few years with certain of these high-end portable applications. And you continue to see a number of issues being raised by consumers about the performance or the reliability or durability of certain of these applications. We see that very clearlythis is translating into a flight to best quality products, best purity, best performance. And this is supporting our business in a very significant manner, even if the overall market demand is not growing at the same base as we are. So that's one. On the recycling side, indeed, we see different types of evolutions in terms of commercial terms depending on the supply subsegments. I've mentioned a few trends that we see in the e-scrap and spent catalysts, which are not new. In the industrial byproducts, still, by and large, the conditions remain somewhat more robust and a little bit less volatile except in 1 or 2 subsegments, which are not the largest ones, but have a certain impact that we see today, albeit probably temporarily so. And in terms of ramp, we see a more pronounced impact of the ramp up of the capacity this year than in the course of 2017. And the reason I mentioned in the release and in the presentation now assuming even in the absence of improvement in the commercial terms was only meant to single out the fact that the volume ramp would be quite visible this year, even if we don't have a change in the commercial conditions. I'm not saying that there will not be an improvement in commercial conditions. Just wanted to point out the effects of the ramp.

Adam Robert Collins - *Liberum Capital Limited, Research Division - Analyst*

Okay. Just on that subject, could you help us understand what the maintenance profile is this year compared to last year?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Subject to verification, if my recollection is correct, we will have one maintenance shutdown in the second half of the year. And since there are quite a few investments that are being carried out at that point in time, it may be, I would say, a somewhat long shutdown not just the regular maintenance, but a little bit more than that. But it's going to take place in the second half of the year.

Operator

We will now take the next question from Jean-Baptiste Rolland from Bank of America Merrill Lynch.

Jean-Baptiste Henri Rolland - *BofA Merrill Lynch, Research Division - Associate*

Three questions from me, please. Number 1, please, could you highlight how you see European demand for NMC cathodes growing versus Asia over the next 5 years? And perhaps, could you elaborate on how you see authorities supporting the value chain in Europe? Secondly, you previously mentioned that the qualification time for cathodes remains fairly lengthy. It sounds, however, that lead times to get these cathodes qualified has quite diminished within the last 3 years. Could you confirm this is not a trend that you're seeing on your cathode product? And then lastly, on Haldor Topsoe, you're likely aiming to get market share in HDD, specifically in China and Asia, as these are the regions that are going to roll regulation forward. Are there any comments that you could share with us with regards to how competition is developing in those countries, please?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Jean-Baptiste, so let me comment on the European demand for cathode materials over the next 5 years. Actually, as we mentioned on previous occasions, we see Asia as continuing to be the main growth driver in terms of demand for the foreseeable future. And China alone, we believe, could account for as much as 40% of the demand in the next 5, 7 or 8 years, considering the penetration profile of new energy vehicles in that country alone. Europe as we see today and as we estimate it today, I should say, will probably come second to China and, possibly over the next 5 years, account for something between 20% and 30% of overall demand worldwide. We see a new acceleration in Europe driven by the tightening of emission laws and, in particular, the upcoming introduction of very tight CO2 limitations in 2021. So that's a little bit the picture. It's, I would say, a rough picture only that we can give because we still see a lot of variable parts and moving parts in the demand picture today. And as you alluded to, there is emerging support from European authorities to establish a fully-fledged battery value chain in Europe. And how and when these support measures will take shape is still work in progress. So it will take still a little bit of time for the European Commission and the member states to figure out how to best achieve that goal of establishing such a battery industry in this region. And I'm pretty positive about the initiative and the fact that the commission and the member states have figured out how important it would be for European industry, for European economy and for our technology position in the world to have this type of initiative and to promote this type of industry. So let's give it some more time to figure it out. And suffice to say that there is a positive movement in that respect. And we will be more than happy to participate in that type of initiative. Now coming back to your second question about qualification times. I think and read about that on a few occasions, and I wonder where this is coming from. We don't see that. This is not the automotive reality that qualification times are getting short or shorter. The certification process are lengthy and demanding in the automotive industry. And I don't see global car manufacturers making or taking any shortcuts there. So I'm not sure where this is coming from, again, but I'm not in a position to validate that there is a shortening of qualification cycles or qualification times. In terms of the position of the heavy duty tension activities from Haldor Topsoe, yes, this will add to our positioning and offering in heavy duty, clearly, and in China, in particular. And I think it's still a bit early to comment on how the market is shaping up. And we believe that we're working to have a meaningful share of the very vast Chinese HDD market once it has moved to China 6 emission norms, and that is set to stop early in the next decade.

Operator

We will now take the next question from Mathew Hampshire-Waugh from Credit Suisse.

Mathew Hampshire-Waugh - *Crédit Suisse AG, Research Division - VP*

The first is just following on from that technology split question. Realize you don't want to spit out the ratios, the different high and low nickel compounds. But can you give us an idea of whether the production facilities are able to switch between producing high nickel and producing NMC 111? My second question is just can you give us an idea of what the underlying growth was in catalysts if we exclude the JV consolidation for 2017? And the last question is just in terms of the new 2020 target. Can you give us an idea if is there any assumption for contribution from M&A in there? And can you give us an idea of what you think the free cash flow generation profile for the group is going to look over the next sort of 5 years?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Matthew, I will let Filip answer the question about the cash flow profile. On the technology split and the various grades, I can confirm that our production lines have a high degree of versatility and can produce a high number of different grades with different composition with nickel content. So that's a bit of a unique situation, I believe, in the industry. I don't have a clear picture of how versatile the production processes of our competitors are. But as far as I understand it from my own engineering teams, our process is pretty unique in that respect. So there is a high degree of versatility in terms of production capability. The growth in Automotive Catalysts excludes the consolidation effect from Ordeg since April. As we mentioned in the press release, it was somewhat below the market growth and that was due to the subdued performance of some of the platforms or customers that we typically serve, in particular the Korean manufacturers, which experienced a pretty challenging year last year in China and in some other parts of the world and because of the unfavorable platform or customer mix in North America. Regarding your question concerning the 2020 updated target and the upside potential, we have not incorporated acquisitions beyond those that have recently been completed and will start contributing very soon. Then I will hand over to Filip for the cash flow.

Filip Platteeuw - *Umicore S.A. - CFO*

And on the cash flows, I would limit it maybe in, first instance, to 2018. In the voiceover, we said that for next year the EBIT guidance more or less is EUR 500 million in 2018. So if you add about EUR 200 million of D&A, you had EUR 700 million of EBITDA. We've guided for more than EUR 600 million of CapEx. And working capital is a bit too early, but clearly, again, a meaningful increase in working capital because of the underlying growth. So from that, you can deduct , indeed, for 2018negative in terms of free cash flow. For the years thereafter, it's a bit too early to tell. But certainly, the investment levels will remain high, you've got it from all our indications. And with the growth comes working capital as well. And that will be offset by the fact that also EBITDA will, obviously, also continue to grow as we've guided for implicitly, I would say, in our updated 2020 guidance for recurring EBIT and the fact that I told you that by the end of the decade, D&A should be closer to EUR 300 million. But it's a bit too early to give thus far out guidance for free cash flow. But certainly, for this year, we will have a significant negative free cash flow because of all the expansions and the overlap in terms of the projects in RBM, more specifically.

Operator

We will now take the next question from Massimo Bonisoli from Equita.

Massimo Bonisoli - *Equita SIM S.p.A., Research Division - Analyst*

Two quick questions left. And the first for Marc, back to the question of Jean-Baptiste. What are the main challenges or risks for the plant that you will build in Europe in comparison to the new plant in China, considering the early stage of establishment of a supply chain in the region? And the second for Filip, back to the free cash flow. Thank you for the guidance for CapEx for 2018. Do you have any indication for the level of CapEx for '19, '20 just for the housekeeping of the model?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Massimo, so the challenges for establishing production in Europe are not so different than what we have in other regions, in a way. We have a lot of experience by now in all the aspects that have to be covered in order to establish such a production but that's related to permitting, procuring the equipment during the engineering work, during the commissioning and ramp-up. So I don't see very different challenges because the plant would be located in Europe rather than in other regions. And the experience that we had with the creation of our production facility in China was extremely positive in that respect because we managed to act with quite a lot of speed and effectiveness in order to bring the facility on stream very quickly and, actually, a little bit ahead of schedule. And now I will hand over to Filip for the cash flow.

Filip Platteeuw - *Umicore S.A. - CFO*

Massimo, so for the years thereafter, again, it's a bit too early, I would say, to give specific guidance. But for your model, you can assume that we will continue to be at a high level of CapEx. I would expect not to be at the level of 2018 because, again, we have this overlap this year of the different investment waves and capacity expansion waves. But for your model, assume something, which is still relatively close to the EUR 600 million, but not as much as 2018. So the message is that we will continue to invest in our expansion for the next years. And these amounts will be significantly higher than what we've seen in recent years. We will provide more guidance as we get later into the year-end.

Operator

We will now take the last question from Mutlu Gundogan from ABN AMRO.

Mutlu Gundogan - *ABN AMRO Bank N.V., Research Division - Analyst*

Question on the associates in your energy segment. Just wondering how much of those associates eventually work for you? So what I'm actually getting at is to what extent are the volumes that run through your associates, which are mainly in cobalt refining, if I'm not mistaken, end up with you. So that's the first question. And then secondly, is there a possibility to acquire those associates? Then the third question is getting to recycling on the volumes. You're saying that process volumes are higher this year. Can you give us an idea how much higher they were? And then finally, can you repeat what you said on dust emissions and what impact did it have on the financials?

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

Okay, Mutlu, let me comment on the first and the last question. And then I will take the second question on Recycling volumes. Okay. So on the associates, yes, there is a high degree of integration between the 2 associates and the battery materials activities of Umicore because they produce some of the ingredients and precursors that are required for battery materials. So there is a high degree of integration between these and the Umicore-controlled activities, clearly so. And then on the dust-related question, the effect on the financials is mostly through the investments. As I mentioned early last year when we had the discussion initially, we actually initiated last year a EUR 25 million investment program to address these emissions. And so we continue to invest. It's not a one-off. There is a continued investment in the plant in order to bring those risks of emissions to the lowest possible level. So the effect on the financials will be through increased depreciation, in a way. And I don't see any other impacts to be mentioned if you are talking about the financial consequences of that. And on the recycling volume, I would not say anything different than what I said earlier. The ramp-up is going to be somewhat more pronounced in 2018 and more visible in 2018 than it was in 2017 from a volume point of view and from a bottom line point of view, as a result of that.

Mutlu Gundogan - *ABN AMRO Bank N.V., Research Division - Analyst*

Okay. Right. Maybe a quick follow-up on the associates. Is there a possibility in the contract terms to buy out the other partner? And then secondly, on the dust emissions, I wondered whether that had a negative impact in terms of utilization, whether because of that, you could have not produced the volumes that you could do theoretically.

Marc Grynberg - *Umicore S.A. - CEO & Executive Director*

On the second question, directly not. Indirectly, you could, indeed, say that because of the large investments that had to be made and have to made in order to address these emissions, these are pretty substantial modifications to the flow sheets that we are carrying out. Because of that, yes, that has some impact on the shutdown time during the maintenance shutdown in order for us to have the capacity to carry out these changes. But there is no real direct investment in terms of availability of the effective capacity. Now coming back to the associates, I wouldn't necessarily say that there is a desire to buy them out. We're very happy with the current configurations where we are a minority shareholder in these associates while having a high degree of operational integration from a supply relationship point of view.

Okay. So this concludes the Q&A for today. Clearly, I assume that you will have follow-up questions and that you will address those to the Investor Relations team. And of course, Filip and I and our Investor Relations colleagues will be on the road in the next few days. And we'll have the chance to meet many, if not most of you, and continue this dialogue. So I look forward to that. And in the meantime, I would like to thank you for your active participation to the call today, and wish you a pleasant end of the week. Bye-bye for now, and talk to you soon.

Operator

That will conclude today's conference call. Thank you for your participation. Ladies and gentlemen, you may now disconnect.