

Croda International PlcHalf year 2020 resultsTranscript of analyst presentation, 23 July 2020

Steve Foots (CEO):

1.

Good morning. Many thanks for joining the call today and hope you're all safe and well. We're sorry not to be with you in person, but the presentation, as usual, will follow the normal format for Croda. Some comments from me up front, then over to Jez for the financials, and then I'll come back to talk about some key aspects about strategy. We'll take questions over the telephone and by the webcast at the end of the presentation too.

4.

So overall, our strong business model has delivered a resilient performance, and we've managed through a very challenging period, it goes without saying. I use the word "resilient" for a number of reasons. On the supply side, all of our 19 principal manufacturing sites have remained in operation, and nearly all of our workforce has continued to function as normal. So limited impact operationally around the world, and that's great credit to our teams and great credit to the local government support that we're getting as well.

On the demand side, we've seen a modest reduction in sales, and the group margin has also held up well. As a capital-like business, we've continued to generate strong cash. This has allowed us to continue investment in future growth, agree an exciting technology-rich healthcare acquisition, and pay a dividend to shareholders demonstrating our confidence in the future, the 28th successive year of increased dividend payments.

5.

In response to COVID, we have three priorities from the outset, and, as you'd expect, our major priority, has been the health and safety of all of our people. We needed to look them in the eye at the end of the crisis -- and we're not there yet -- knowing we've done everything possible to safeguard their well-being. And we have a more engaged workforce as a consequence of that, more loyal, and it generates a lot more good will. We're looking after our people, which is absolutely right.

And next, we've focused on keeping the show on the road, maintaining the performance of the business by closely controlling costs and working capital, as you'd expect us to. We've been talking to customers on a lot more frequent basis along the way. And finally, but just as important, we have continued to plan for the future to ensure that Croda is taking full advantage of the emerging opportunities from the pandemic, which I will come on to later. A key principle has been treating all our stakeholders fairly. We didn't furlough anybody. We protected employee salaries. We helped a number of our smaller customers and suppliers with flexible payment terms. We helped communities around the Croda world with our Acts of Kindness initiative. And we paid a final dividend to our shareholders. We've treated everybody fairly, and we're doing the right things. And all of this plays well to our purpose.

6.

Turning to the numbers, they are what they are, but you can see the resilience borne out in them. Innovation and commercialising Croda people's knowledge is what our business

model is all about. We had a modest reduction in sales, a resilient performance in margin, and the output of which is strong profit and cash generation. And this is allowing us to further invest in the business.

7.

Turning to the sector performance, in Personal Care we continued to see positive trends from Quarter 4 into Quarter 1. Quarter 2 was significantly impacted by a downturn in consumer demand, luxury travel, department stores. This was particularly evident in Europe, where a lot of our customers either closed or repurposed their facilities into making hand sanitiser gels, and in Latin America, where there's a greater reliance on door-to-door selling. During the quarter, we've accelerated our customer interactions massively, much more engagement than we normally would see, and we're excited about what our customers are telling us, with lots of innovation in the pipeline. And we've also seen a very good recovery in China, with Personal Care sales in China up 9 percent in Quarter 2, and we remain confident of a good recovery, once lockdown measures have eased further.

Turning to Life Sciences, that's less impacted by COVID. Strong underlying healthcare business. Crop will be more second half due to phasing issues, and the margin progress is in line with our expectations. The Avanti acquisition I'll come back to later in the pack. In Performance Technologies, industrial end markets are clearly challenging, but this is partly offset by strong food packaging and home care sales for the Group. So let me stop there, and I'll hand it over to Jez for the financials.

9.

Jez Maiden (CFO):

Thanks, Steve, and good morning, everybody. As Steve has said, the first half year saw a resilient performance. Sales were 5.8 percent down in reported currency. That's £673 million. This reduction is 7 percent in constant currency sales terms, translated to a 9-percent reduction in adjusted operating profit in constant currency to £161.6 million. Operating costs reduced with the benefit of cost savings delivered at the end of 2019 and lower discretionary spend during the first half of 2020. These cost savings were partly offset by the startup of the North American biosurfactants plant in the early part of 2020.

Net interest was broadly unchanged at £9.1 million, with higher net debt from the 2019 special dividend payment, mostly offset by lower interest rates following our refinancing. Adjusted profit before tax came at £152.5 million, 10 percent behind the prior year period. With lower volume and a weaker product mix, return on sales declined by 1.1 percentage points to 24 percent, a resilient performance reflected in the strength of Croda's operating model. With the tax rate broadly flat at 25 percent, adjusted earnings per share were 88.8 pence, just under 10 percent lower than 2019. Having paid the increased 2019 final dividend in May, the interim dividend has been held at thirty-nine and a half pence per share. Finally, the free cash flow remained healthy at over £80 million in the half.

10.

Adjusting profit items charged in the first half totaled £7.6 million. This covered a further £1.7 million exceptional charge for delivering the cost savings announced at the end of 2019, which are delivering up to £20 million of annual benefits to reinvest in the business. Acquisition costs relating to Avanti totaled £1 million, and the amortization of intangible assets relating to previous acquisitions was £4.9 million. Profit before tax on an IFRS basis was £144.9 million.

11.

So now let's look at the key bridging items for the change in sales. Corporate and sales declined by 6 percent. This comprised a 2-percent reduction in volume due to the impact of COVID-19 and a 4-percent reduction in price/mix. Whilst raw material prices were generally stable, this price/mix primarily reflected a weaker product mix due to lower sales of higher value-add products in Personal Care and Performance Technologies and relatively better sales of low-value-add products used by consumers during the crisis. There was no impact from acquisitions during the period. Industrial chemicals contributed to a 1-percent reduction in group sales, and currency translation was favorable by 1 percent.

12.

Now looking at the key movements by core sector. Consumer product markets responded more rapidly to lockdown than industrial-end markets, as Steve has described. As a result, Personal Care sales were hardest hit, 9 percent lower. This, together with a weaker product mix, saw operating profits 17 percent lower. Margin was resilient, though, staying above 30 percent. We expect this to recover back to the low 30s once volumes return. Life science sales were 2 percent lower. As we highlighted at the full-year results in February, this reflected a strong comparative period from 2019, particularly in crop. Continued growth in target markets in health care saw operating profit rise by 7 percent, and return on sales increased to thirty-two and a half percent.

Although sales in Performance Technologies were 6 percent lower due to slower industrial demand, the impact of COVID-19 was seen later here than in Personal Care, with customers initially moving to protect their supply chains. However, profit was harder hit, down near 20 percent, and return on sales was just above 15 percent, still a strong performance compared with its peer group. Let's look at each of the core sectors in more detail.

13.

Following a solid first quarter, which saw continued recovery in the North American market, the Personal Care and beauty industry was significantly affected by the COVID lockdowns. China was impacted in the early part of the year but rebounded quickly. As the bottom chart shows, Croda sales were down 4 percent in the first quarter before recovering to be up 9 percent in the second. The second quarter has seen European consumer demand heavily affected. As Steve said, most of the French cosmetics industry had shut down for several weeks, and consumer retail data showed a 14-percent reduction in sales in the quarter. By contrast, North American consumer demand has been less impacted, with lockdown intensity varying state by state. Latin America has been hardest hit, particularly in Brazil, where 50 percent of consumers sales are typically made on the doorstep. Whilst there are signs of lockdown conditions easing in Europe, Latin America is likely to remain difficult.

Overall, this resulted in a 6-percent reduction in Personal Care volume and a 3-percent weaker price/mix, as the more at-home use staple products of the beauty formulation business proved more resilient than the higher value going-out products. Also, beauty actives demand is typically resilient in these circumstances, but disruption to the prestige distribution channels of duty-free, department and luxury stores had an impact on consumer buying patterns. We've not seen any signs that the long-term drivers to growth in Personal Care have changed. Our strategy, to strengthen to grow in Personal Care through organic and inorganic investment, remains unchanged. Pleasingly, our digital investment has begun to pay off, allowing us to maintain our customer intimacy through virtual contact and support.

14.

Life Sciences has seen limited adverse impact from COVID-19. Healthcare demand has been modestly affected, with fewer prescriptions issued and delays for some elective surgery. There has been no discernible impact on Crop, volume grew by 2 percent overall in the half, while price/mix decline due to crop sales moving from the first half to the second half year.

Growth continued in the key high-value niches of health care. Our recipient delivery systems business grew by 11 percent, as pharma customers looked to high-quality solutions from well invested, stable and innovative partners like Croda. The Biosector vaccine adjuvant business had a much stronger period, growing sales by 25 percent. Consumer health product sales were broadly flat year on year. Crop production sales were lower against a strong comparative period coupled with the late plantings in Latin America due to adverse weather. We also withdrew voluntarily from products with a negative environmental footprint, as announced at the last year end. The outlook for Crop looks strong, with North America recovering from last year's U.S.-China trade disputes and a strong innovation pipeline with our global customers.

Seed enhancement also recovered some lost sales from 2019 during this seasonally quieter first half period. Our expand-to-grow strategy for Life Sciences is working well. Return on sales for the overall sector has reached thirty-two and a half percent, an increase of over 4 percentage points since the acquisition of Incotec at the end of 2015. Our specialty excipients and vaccine adjuvants are being trialed in a number of COVID-19-related projects, and we're investing for the future both organically in plant expansion and inorganically through M&A.

15.

After a weak 2019, Performance Technologies experienced a steady recovery in demand during the first quarter. However, with significant closures of automotive and industrial plants, sales weakened progressively through the second quarter. Partly offsetting this, sales have been strong in both the home care and packaging markets due to COVID-related demand and new innovation. This is shown in the top graph. Home and fabric sales grew by 11 percent in the first half, whilst energy technologies saw sales decline by 18 percent, reflecting its focus on automotive and industrial lubricants and on flow control in oil production. Smart materials was more resilient, down just 2 percent, with polymer additives being used in many COVID-related applications including PPE, medical devices, and packaging. Overall volume was down 2 percent in Performance Technologies. Profitability was impacted by a combination of operating leverage and production constraints in our European and Indian plants.

The refine to grow strategy will reduce the sectors exposed to more cyclical markets, with growth in high-tech, higher growth markets. Innovation will be important, and we have seen strong interest in growing sales for Coltide Radiance, which we presented to you at the full-year results, which doubles the life of fabrics. We are building for an expected 20 million sterling annual sales pipeline for this product by 2023. We're also investing in Asia, with our new Shanghai R&D facility opening in the second half of this year, which will give greater access to many new Chinese customers.

With the successful commissioning of our North American biosurfactant plant earlier in the year, we secured our first two contracts for eco-products in Performance Technologies together with a first contract in Personal Care. The eco pipeline is now worth almost \$20 million in annual sales, with sustainably positioned customer products launching from the end of 2020. While we are excited by the developments of new sales opportunities, COVID has provided something of a perfect storm for the plant, with food-grade bioethanol, which we use as a feed stock, in short supply due to hand sanitizer demand, resulting in high raw

material costs at a time when petrol-derived ethylene is at record lows. We expect to be able to move the plant to a lower cost feed stock later this year but in the meantime anticipate that this will cost us about \$10 million in added costs in 2020.

16.

Croda continues to generate a healthy cash flow despite lower demand. Free cash flow in the first half year was £80 million, a reduction of 15 million on 2019, driven entirely by the reduced EBITDA. The change in working capital was 14 million better than 2019, and it's pleasing to note that we have seen no material deterioration in the timeliness of customer receivables during the COVID crisis. Capital investment increased by £9 million to £50 million in the first half year, despite some delays to projects during lockdowns. I would expect investment in the full year to be just over £100 million, allowing us to complete key investments, including the doubling of specialty excipient capacity in the U.S., creation of a new customer and R&D facility in Princeton in the USA, and consolidation of our U.K. distribution facility. We're also expanding in health care in Japan and Denmark, investing in greater digital innovation capability in China, and expanding some of our European plants. At a time when many companies are slashing investments, we believe that maintaining investment at this time will enable us to grow more rapidly in the coming years.

17.

Finally, Croda has a strong balance sheet, having completed its debt refinancing in 2019. As the top graph shows, we have excellent liquidity, with almost £450 million in undrawn committed facilities at the 30th of June. Furthermore, there are no material maturities before 2023, as the bottom graph shows, with funding out to 2030. And on top of this, we have in July added a \$200 million acquisition funding facility to allow us to complete on Avanti, therefore preserving our ample liquidity.

Net debt at the half year, which is pre-acquisition, was £577 million. This is a leverage ratio of one and a half times EBITDA. Our downside modeling shows significant leverage and liquidity headroom, even in more extreme crisis scenarios. I'll now hand you back to Steve, who will update you on our strategic priorities.

Steve Foots:

19.

Thanks, Jez. Okay, so let me take you through our strategy update. As an Executive team, we've prioritised trying to think through the impact of a post-COVID world for the group. So just look at the slide on strategic priorities. Whilst our megatrends and sector strategies remain unchanged, which is very reassuring, by the way, we've refreshed our near-term strategic priorities, and we have five key priorities. Scaling drug delivery, which I'll come on to shortly. More proactive M&A; the pandemic could open up more opportunities, and we want to be more focused with more bolt-ons. As a reminder to you all, we're interested in more Avanti-type acquisitions, lots of IP, new technologies, and clever people.

And Asia as a region is the most significant growth opportunity for us and ambition too. Our aim is to build the Croda brain there, especially in China. And we want to scale by biotechnology. We have a lot of talented innovators, but nature does it better. And here we want to scale up a lot of our technologies, both operationally and from R&D. And this will involve a number of smart partnership arrangements going forward there.

And in digital, a real area of progress, which is creating new opportunities to engage with customers in many different ways. For the purpose of today, I wanted to provide more color

on scaling drug delivery, including how Avanti fits into our strategy, but first digital.

20.

During COVID-19, quite surprisingly, really, when you think about it, we've become more intimate with our customers. One of the big benefits has been even closer interaction with customers and potential customers. Digital has driven that. And if you look at the table on the left-hand side, we've seen a 200-percent increase in webinars and a 400-percent increase in customer attendees. And these webinars often involve our marketing and R&D teams, a powerful way of explaining our latest innovations and trends to our customers and, again, to our potential customers. It's all about creating business opportunities, and the stats are a great leading indicator for future business.

We're also putting firmer foundations in place, building our digital marketing brain. We've got over a dozen people around the world now in places like China, America, Europe, et cetera. And we're building a new Personal Care website for Indian customers and focused websites in China because of the rapidly developing growth potential there too. And if you look at the case study on the right, you can see that we've found new ways of bringing our innovation to life in China. Digital users in China spend an average of six hours online per day, so they're used to seeing technologies coming through. But the response has been amazing. 65,000 participants in one of the live stream trade events we participated in there. We're accelerating our conversations with customers. And in the old days, a good salesman would visit 12 to 14 customers per week through digital channels. Our customer audience is an order of magnitude bigger. We're seeing a surge in customer interactions, particularly in Personal Care. And that bodes well for the future.

21.

Turning to drug delivery, I want Life Sciences to be as profitable as Personal Care as quickly as we can. That's the mandate for the group. Fast growing drug delivery platforms are an essential part of that. And we want to build drug delivery into a truly global business for Croda. If you look at the trends on the left, some of these we've spoken about for some time, but some of them have emerged more recently. There's a shift from more traditional drugs to biological actives. This is already happening. As nine out of the top 10 selling drugs around the world use these biological actives now. Biological drugs are challenging to deliver with the majority of it by injection. Specialty excipients are chosen for their superior performance, enhancing the API performance in sensitive, challenging applications. Developing a next-generation therapeutics is probably a new area to you and to us. And that's things like small molecule and large molecule development of actives, driven by immunology and wider gene therapy in areas like vaccines and cancer drugs, really good technology for the future for the group. And of course, COVID vaccines are heavily profiled at the moment in gene therapy. But equally, there's new solutions to address diseases outlined in SDG 3, which are things like malaria, TB, and HIV; in all of those, we're investing in R&D.

From a regulatory point of view, things like safety, transparency, and traceability remain the buzz words of the industry; they have been there for quite some time, and customers are selecting our products increasingly because of the high performance, purity, and potency of our products. And all of that is to de-risk the supply chains. So a competitive advantage for us and for them as well. In terms of direction on the right, essentially, we're moving from consumer health, which is like -- you can see that is non-prescription drugs, to patient health, more prescription drugs, to capture increased value. And with the price opportunity increasing from a few pounds per kilogram to hundreds of thousands of pounds per kilogram, you can see why we're interested in that. Our job is not to make the active ingredient, though. It's to enhance the performance of the active. So we have a broadening

set of platforms for drug delivery. Lipid nanoparticles is the exciting emerging technology from Avanti. And it goes without saying revenue and margin opportunities are increasing as we move from left to right.

22.

As we move to drug delivery, we have an increasing breadth of technology in our portfolio, which is creating lots more opportunities for us. You all know about specialty excipients. We've been banging on about that for quite some time.

But many others, you don't know the new opportunities for the Group. And one of the big ones, gene therapy for vaccine in cancer applications. A good example is Avanti's messenger RNA technology for vaccines. Effectively, it's an encapsulation technology that delivers the active into the cell. But we've also got processing ingredients to fast track the manufacture of biological actives. Again, we're not making the active, but we've got ingredients that can facilitate the manufacture of these actives. And also a number of nascent technologies coming through for respiratory diseases as well. The photo on the right at the bottom is from the Denmark Biosector acquisition. And as Jez talked to you about, really good growth this year already. And we're expecting good things with that going forward. They have the only aseptic adjuvant manufacturing facility in the world for vaccines.

23.

Turning to Avanti then. We bought Avanti because of their deep knowledge in drug delivery, exciting new technologies, rich IP, but above all, clever people. And if you look at the picture at the right, there's lots of R&D people there and a great age distribution, which you probably can't see. And that's one of the central reasons for buying Avanti. They will become our central R&D brain in drug delivery as we globalize the drug delivery platforms. Most of the employees are scientists serving around 3,000 customers. They launch over 100 products per year. So a very impressive innovation culture, great track record. And the strategic rationale, it's all about buying knowledge and clever people. I think you've heard that a few times from me now. It doubles our R&D capability in healthcare. We'll learn from them. And they will learn from us. No doubt about that. And this isn't the technology startup. It's a great brisk business in its own right, growing double digits and generating strong profit and cash.

24.

So in summary, then, we've delivered a resilient performance, which reflects the strength of our business model. And we will continue to take advantage of our healthy cash flow and strong financial platform to invest further in the business. In outlook, it's very difficult to anticipate the future with the timing of recovery unclear, but the working assumptions are Life Sciences will benefit from the phasing of crop care sales and opportunities in healthcare. Consumer markets were rapidly impacted by lockdown. But I expect them to recover more quickly than our industrial markets and the group margin and cash generation expected to remain robust. So the strategy unchanged but refreshed, and that will underpin and even accelerate our future growth. So let me stop that and head back to the operator to take your questions.

Q&A

Female Speaker:

We have a question from Charlie Webb, from Morgan Stanley. Charlie, your line is open. Please go ahead.

Charlie Webb:

Brilliant. Thank you very much. And morning, Steve. Morning, Jez.

Steve Foots:

Morning, Charlie.

Jez Maiden:

Morning.

Charlie Webb:

Morning. Just first off around Personal Care. Thank you for kind of breaking out price/mix and volume; that's helpful. Just on that volume, the -6 percent you saw in the first half, can you -- when you look at the industry, when you look at your customers, would you say that is reflective of that -- of that environment you see with them? Or would you say that given the tough environment, perhaps -- typically your products are more geared toward some of the higher end customers, they're seeing, a bigger shift there, and therefore, maybe you have lost some share in this more volatile market. Just trying to understand if it's in line with the market or is there some kind of share moving around, given perhaps the overall product mix? That's the first question, and the second question on Life Sciences; obviously a resilient first half. Just trying to get a better sense on what gives you that confidence. It sounds like you're confident on the second half with phasing in crop and obviously the healthcare and scale up of your additional capacity. It's just perhaps you can give us some more context around what you're kind of expecting for healthcare and crop in the second half, what you're seeing in July, just so we can we can understand how that's going to play out for the rest of the year, would be helpful.

Steve Foots:

Yes. Okay, thanks, Charlie. Well, let's do Personal Care first, and I'll bring Jez in on the volume side, and I'll come back on Life Sciences. Personal Care, so the trading as modeled are correlated very well with the government lockdowns everywhere around the world, we would say, and we monitor that. You can see that through the Nielsen data, in our own data, which we look at. We're probably two months lagged behind that, two and a half months lag. So what you see there is very directional to where we're going, probably. You've got in there is out of home and the in home differences. So the out of home has been more effected. So that's obviously things like high end skincare, duty free, hair salons, and the like. And people clearly haven't been going out. So that's been hit harder than the in-home, which is more the shampoos, conditioners, and things like shower gel. Volumes are broadly where I would expect them to be. you can look at individual customers out there and see differences. some have got bigger volume negative. Some have got smaller volume negative, very difficult to correlate on that.

I tend to look at Croda by geography because of the national lockdowns in Personal Care, and you look at Personal Care in Europe, for example. So the quarter two effect has been most significant in Europe and Latin America for different reasons. Europe primarily is -- well, we're all locked down, so that's obvious. But the French beauty industry virtually closed for about six weeks because they were repurposing their plants to hand sanitizer gel. So that has an effect, particularly on our skin actives business and our effects businesses more than it does on the formulation business. And also in Latin America, as you well know, it's direct

selling there. So nobody is knocking on the door. Very few people are knocking on the door. So that's been more impacted. But, look beyond that and you start to see really encouraging signs. China is the parameter that we use. I think I mentioned that before. We're up 9 percent in sales in quarter two in Personal Care, which is a good sign. And that's encouraging us to think that once the national lockdown's moderate further, and your guess is as good as mine as to how quickly they are moderated, then the Personal Care business will start to come back strongly. So there's no market share loss for sure. If anything, we're gaining -- we're gaining in some areas and we've got some good evidence that we're gaining in some areas, in particular right across the board in there, because we're around -- we're in a good position, we're looking out. We're not cost cutting and we're not looking internally. We're actually looking a lot more with our customers. And you can see that with the digital stuff. So that's -- I don't know if there's anything else on volume, Jez, you want to say?

Jez Maiden:

No, I don't think so. Charlie, yeah, the volume is down more in the cosmetics area and that's consistent. If we break into consumer data, that overall 14 percent drop in Europe, within that, you see cosmetics down 41 percent. In the U.S., although overall the market's pretty flat. You see cosmetics down by 26 percent. So it's that -- it's that going-out side of things, which tends to be the higher -- the higher end, the higher value of the portfolio because it's clearly been more affected on volume with simpler products. And the everyday products used at home, as Steve says, being less effected.

Steve Foots:

Charlie, we're confident on Life Sciences. My sense is effectively immune from the pandemic. First off, you read into the first half very good underlying healthcare, pharmaceutical performance, which you get very good seed enhancement performance, one of the best performing first halves in the mix of markets that we operate in, and it was crop that was behind, so crop was the one that was behind for no particular reason. It was more a phasing issue, and we knew that. And there were tough comparators. But a lot of that is certainly in the second half. We can see that already. So the three things for the second half in favour of Life Sciences, are rebounding crops due to phasing, and as I said, we can see that. We have got some new, committed healthcare orders for the second half of the year as well, which is in train now. And obviously supporting that as the new capacity coming downstream. But we also got Avanti as well. We should close Avanti shortly but we'll have Avanti for a good part of the second half as well. And that's growing very, very well. It's got double digit growth in there. So, we're really pleased with that, too. So Life Sciences is a good, and you can see the margin projections are good. They're going towards what you would expect Personal Care margins to be in the normal environment, and they can easily get there soon.

And, we would expect that. So, yeah, very confident on Life Sciences, but very difficult to predict on Personal Care and Performance Technologies in the second half, but consumer markets will probably move ahead of that, will rebound quicker than the industrial ones.

Charlie Webb:

So that's very helpful, guys, thank you very much.

Female Speaker:

Our next question comes from Matthew Yates from Bank of America. Matthew, your line is open. Please go ahead.

Matthew Yates:

Hey, good morning, gents. Just a couple of questions, please. The first one on the biosurfactant, which I guess continues to disappoint. And I appreciate -- I don't think any of us could have seen a collapse in ethanol availability, but the \$10 million additional feedstock

costs you're highlighting, do you think you can recover any of that through passing through price increases to customers? First question. The second question is around what you talked about in the presentation in using these digital tools to interact with customers. Just how good a substitute are you finding that virtual offering to the physical working with customers on new product development? And do you think that's going to have any impact on your NPP product developments over the coming quarters? Thanks.

Steve Foots:

Yeah. Okay. Well, about ethanol, if you look at the plant itself, it's not disappointing. It's disappointing it's taken longer than we'd like. But actually, for the last six months, it's had a really clear run.

And operationally, it's in a good position. So, once you get these sites up and running, -- they're a bit like an aircraft. Once you get in the sky, they stay in the sky for several years before you bring them offline. And this one -- this one is no different to that. So that's working well. The customer engagement is brilliant. Yeah, we've got now -- I think you see in the pack \$20 million of pipeline there already. And, lots more engagement. The pandemic is the big challenge of today. But the bigger challenge for the next 10 years is sustainability, I call it. And we're already seeing a much heightened interest from our customers on our specific composition of our products, safety of our product ingredients, renewability. And we think that's going to drive an increasing interest and future sales for that plant because that's renewable -- based on renewable ingredients. All of that looks really good.

The disappointment and we couldn't plan for that has been this bioethanol issue. We didn't model that. And it's the perfect storm in terms of raw material positioning. But, the 10 million is -- Jez will help me -- but probably 4 million hit already in the numbers in the first half. So, we've taken that hit and potentially up to 6 million in the second half of the year. But it's a 2020 issue rather than anything else. What we can do to mitigate that is using non-food grade bioethanol, which we are trialing, and we expect to continue through the second half of the year. So that will also help. Also, the demand will probably moderate as we get towards the end of the year for hand sanitizer gels as well. So, in the round, actually, it's largely out of our control. But things are in our control about customer interaction, pipelines, getting the plant reliable. They're all in great shape. So we see a really good opportunity for 2021, '22, and have really good growth being captured there.

On digital, yeah. It's amazing. I was a sales guy growing up and trying to do 14 customer visits a week was a challenge. And that wasn't just for me, by the way. It was for everybody. Some might say it wasn't. The interaction is a magnitude different. The customer audience is just a different audience. Now, over the last three months, we've obviously been tuned into that with our marketing teams and R&D teams. And it's definitely the future, but it won't replace direct, face to face -- for me, it will never do that. But it will be a very important part of our selling programmes and marketing programmes going forward. So you need them both. It can -- it will accelerate NPP. While we haven't been able to spend time at the bench with our R&D facilities because a lot of them have been offline quarter two, we've spent a lot of time promoting our products in front of customers. And you can see from those stats, some of the numbers are very significant.

And it's a great opportunity to engage with the customers. As I've said, we've become more intimate with them as a consequence of this. So we'll certainly be continuing that in different forms too. Okay?

Matthew Yates:

Thanks, guys. Take care.

Female Speaker:

Our next question comes from Andrew Stott from UBS. Andrew, your line is open. Please go ahead.

Andrew Stott:

Morning, everybody.

Steve Foots:

Oh hi, Andrew. Morning to you.

Jez Maiden:

Morning.

Andrew Stott:

Thanks for taking the questions. Had a couple mainly on Avanti. I wonder if you could explain to a layman, especially around what seems to be more complex chemistry than I can manage. What's particularly exciting about that acquisition for you? I appreciate the slides gave us a lot of detail, but if you can try and tell us what does it really bring to Croda that you just didn't have? And then on the technicals of that acquisition, how does the earn out work? Is it a three year target? How does that full payout potential -- how is that reached? And then for this year, how many months do you expect to have it in?

Steve Foots:

All good questions, Andrew. When you say a layman, I think we're both the same, but I'll try the last question first. We expect to close in quarter three. So let's assume we own it for four months. There should be 3 to 4 percent growth to Life Sciences this year. So we start with that. I think, secondly, your point, I'm excited about drug delivery. But I'm more excited about the depth of knowledge that we can create in drug delivery. Personal Care is brilliant for Croda because it has great, great knowledge and we're developing that in Performance Technologies too.

Here, we're buying great knowledge, you've got 150 people, 100 plus scientists, lots of them PhDs as well. The previous chief exec would have a field day talking about propeller heads; brilliant R&D. And they have a deep pharmaceutical expertise in drug delivery. They've got 3,000 customers, but they've got a lot of academic partnerships, which we can leverage. But their competence is R&D, not operations. And what they do is they get it first. But then what tends to happen is that's farmed out to bigger contract manufacturers. And then they lose quite a lot of value with that. Well, Croda can do quite a lot of those because a lot of the scale up in our sites. And we've got multiple sites that could scale this up, their projects.

So the technology -- lipid nanoparticle technology is what is it. It's liposomes. And more and more of the next generation drugs, whether it's cancer drugs, oncology drugs, or vaccines are using this type of technology. And what it does is encapsulation. It encapsulates the active and it delivers it into a cell. So it opens the door of a cell effectively. And that's what it does. It does it very differently to specialty excipients. So, the example I used in the presentation was a messenger RNA. That's a good example where it delivers -- it encapsulates around the RNA. The RNA can't go into a cell directly. But what it can do through an encapsulation route, through lipid nanoparticles, it can deliver that into the cell; it opens the door of the cell. So that's really -- that's really important. We would say that.

What counts -- the next generation cancer drugs and oncology drugs are moving that way. And it's all about boosting the immune system as well. Immunology, it's called. And a lot of new development in pharmaceuticals is about boosting immune systems. And they have very sophisticated technologies to do that.

On the earn out -- we appreciate that's unusual for the chemical industry. And it's a significant earn out, but how we look at it is we paid \$185 million for the business, the base business. We wanted to detach the opportunities from the base business. And the base business was growing. It effectively is growing at double digits. So we didn't want to pay for potential future projects that didn't pay out just in the base value. So we did that. And then what we've looked at with them is, like in any pharmaceutical company, they have bigger projects that they're working on. We always have them as well. But a lot of them never get commercialized. Some of them potentially do. And what you're trying to do then is agree to an earn out that effectively captures the benefit for both parties if it's material, if things take off. So we wanted to detach that away from the base business. We want to pay for potential business rather than the real business and the base business. Jez, anything else on earn out?

Jez Maiden:

Clearly on the earn out, it pays in full or in part. Clearly the value of that earn out to Croda is much more than the amount we're paying away. So I think it's a win-win from that point of view. But as Steve says, the \$185 million is based on the existing performance.

Andrew Stott: Is it revenue or EBITDA?

Jez Maiden:

Yes, it's revenue -- and you don't really need to know the proportions, but it's revenue based. These are very high margins. So, the revenue base is significant. From completion of the acquisition, we control the projects that are going on, the projects that have been delivered, so you're not going to end up in a position where you're paying the revenue earn out on something which is unprofitable because, we're responsible for the company.

Just let's put it this way. We would be delighted to pay the full earnout, because the company would generate a lot more -- a lot more profit generation than that earner. I think some of the projects that we're sitting on are very -- potentially very significant, but we know a lot of them never get to market. That's the issue with these things. So they're quite binary, I call them. So the earn out is so that they work hard with these projects for quite a few years and there's a contribution of the profit that effectively goes to them, if they do come good.

Andrew Stott:

Thank you. I'm sorry, just to follow up. The capex for 2020, do we just take £50m and double it and then also, any thoughts on 2021?

Jez Maiden:

And so, yeah, we've got quite a lot of growth projects going on at the moment. What we'll be completing this year is the doubling of capacity on the specialty excipient plant in the U.S. And we started work on the U.K. and the Japan plant. We've got new customer centres for the U.S. and for R&D in China. So there's quite a lot going on at the moment. I think the 50 million in the first half year was slightly constrained by COVID, clearly on some sites. We took off the people who didn't have to be there, which would include construction workers. So we could just focus on the operations side of the business. So I suspect second half will be a little bit higher than 50 million just because of the number of opportunities we have. So something just over 100 million for the full year should be a good guide. We still think going forward that the overall level of spend should be around about 80, 90 million pounds. It's just the way in which the projects are falling this year. And as Steve said, the opportunity to invest at a time when a lot of people are slashing their investments.

But we think that there's a lot of opportunities there, particularly around the life science business. So we'll continue to do the appropriate investment. But, yeah, we'll remain

relatively capital light. There's no major projects in there. The biggest one would be about £20 million. So this isn't big projects on the eco scale, but there's a number that are going to add meaningful capacity and capability over the next six to 12 months.

Andrew Stott:

Okay. Thanks, Jez, and thanks, Steve.

Jez Maiden:

Yeah, thanks.

Steve Foots:

Thanks, Andrew.

Female Speaker:

Our next question comes from Chetan Udeshi from JP Morgan. Chetan, your line is open. Please go ahead.

Chetan Udeshi:

Yeah, hi. Thanks. A couple of questions, maybe one for Jez. Just looking at the depreciation in first tab, there wasn't a major material swing, I think. At the full year results, you were talking about maybe including biosurfactants, an increase of maybe 12, £13 million. So can you help us understand if that is going to come primarily in the second half, or has something changed in those numbers for full year? And maybe one for Steve -- I appreciate the lack of visibility on how -- what is the pace of recovery, so it's okay. But are you seeing any of that yet in the numbers or is it still pretty patchy to call out in terms of any noticeable signs of recovery?

Steve Foots:

Okay.

Jez Maiden:

Okay, hi, Chetan. Yeah, so on depreciations, as you say, the key driver to depreciation was commissioning of the biosurfactant eco plant in North America. Because that came on during the first quarter, we only have one quarter of depreciation. The second quarter, the overall impact of that is about -- around about £8 million in a full year. So that's a couple of million in the in the first half and there'll be a couple of million more in the second half because of having two quarters of depreciation. Okay?

Steve Foots:

The recovery is very difficult for us to forecast. If you wanted us to put a forecast together, you wouldn't believe it. And we wouldn't believe you with your forecast as well. It's just very difficult out there. But, it's going to be evidence based. And, we look at China, we're very pleased with China, how that's recovered. We're looking closely at the Nielsen data and the IRI data from the U.S. And, they're good indicators for us that people are starting to purchase Personal Care products again.

And that's probably the best. And we're starting to see that the Nielsen data is improving. It's less negative, as is the IRI data as well. So, that bodes well for a recovery. And, we relate it to SARS. When SARS was upon us, we recovered pretty strongly. I think before we get there, we just have to see how these national lockdowns moderate further because, Personal Care is exposed to people getting out -- the more people that are out, then, obviously, the more people that will use cosmetics. There's no doubt about it. I think that will gradually improve certainly over the next few weeks and months. So, it's a great business. It's a very solid business for Croda. There's lots of technologies in there, and we're in lots of countries around the world. So, we will expect that to come back. In Asia -- certainly

China's doing well, but the rest of Asia coming back and North America, too, encouraging signs in North America. And we want to see Europe start to come back.

We would expect that over the next few months as well. Latin America will take a bit longer because of where they are in the pandemic at the moment.

Chetan Udeshi:
Thank you.

Female Speaker:
Our next question comes from Kevin Fogarty from Numis. Kevin, your line is open. Please go ahead.

Kevin Fogarty:
Oh, great. Thanks very much. Just a couple for me. I guess if we look at Performance Technologies, the drop through there in terms of the operating leverage would have much more significance than we've seen in previous periods. I just wondered, is that purely driven by the mix change or is there anything else going on there? And just secondly, in terms of working capital, I get the year on year improvements are lower volumes. We still saw increased investment in inventories. And I just want to know what business is kind of requiring that increased investment on the inventory side? And just finally, if I could wrap up with a general question on benefits from COVID-19, perhaps in terms of market share gains, where do you see the equation potential for that coming through?

Steve Foots:
Yeah, okay, well, let me -- I'll let Jez do Performance Technologies. I'd just like to comment on working capital and the benefits.

Jez Maiden:
Hi, Kevin. So, yeah, I think, first of all, probably about half of the plants that we have are shared across the sectors. So clearly, one of the issues you have when volumes are dropping in two of the three sectors is ... it's a better operating leverage position when you've got subsectors rising, as we normally do, while other sectors are falling. So clearly, you have a bigger impact on our pricing leverage when several businesses are going down at the same time, as we've seen during the COVID situation. But overall, in terms of operating leverage, it is a low operating leverage business. But the other thing we saw was we did see significant impacts just on production from a couple of the European plants where we had shutdowns going on and also from the Indian plant, which is quite a main performance technology producer. And India is the one place, the one site where we've had significant restrictions on our ability to produce volume, to ship it in India and outside of India. And the only products we've really been able -- allowed to produce in India for at least a couple of months now has been life science products because they're obviously on a list that you're allowed to make. So you've had a sort double -- well, a triple whammy, probably. You've had the operating gearing effect. You've had the fact that other businesses are not picking up the slack in volume and therefore carrying more of the cost. And you've got the specifics around the European and India's sites. So I think it's an extreme position on that, but not generally a sign of how much gearing effect we would expect to see in our business.

Steve Foots:
Yeah, and on working capital, the working capital increases are 100 percent deliberate. It's been quite a bit of intervention from the CEO on stocks. I've been here before four or five times in a recession. And I've made sure that we've got stock in the right place around the world for recovery. And we haven't had that in some -- in some cases in the past. We would expect Asia and North America to come out of it pretty quickly. And then Europe, soon after the U.S. is our working assumption. So there's one thing about getting the right stock --

getting the right stock in place. And the other thing is making sure it's in the right location. So we've been making sure in Asia and North America that we've got stock from all assets globally in the right place, rather than in the wrong place. We feel comfortable with the stockholdings we've got around the world. We'll monitor that closely in the second half. But we're there ready to respond when demand starts to come back, which of course, it will. The \$64 million question is how quickly it responds.

But we're in a comfortable position, so don't worry about working capital. Just see that is a great opportunity to capture fresh growth for later in the year and probably next year. So that's the point on working capital.

The benefits to COVID-19? We'll come through this. We're weathering the storm very well as one or two of you have mentioned. And what that means, because we always invest. Jez talked about maintaining, but we're actually increasing investment. We're increasing investment in R&D, in digital, in acquisitions by buying Avanti. We're doing the right thing and we're investing in our people as well. And the best time to invest, I've always said, and it's a Croda mantra that goes through decades, that you invest in the downturn as well as the upturn. And that's what we're doing. And I think in a year or two's time when we reflect on it, we will be in a much better place because of that. So we'll be capturing -- we are capturing business. We're particularly capturing business in Personal Care, we feel. Life Sciences is just great for us from the technology platform. And we also capturing new business in some parts of Performance Technologies.

So I think we're in a very good position. We're doing all the right things. We're planning ahead. We've got time to do that. And we're putting our programmes in place to accelerate those strategic priorities I talked about earlier. So, in good shape, certainly for a rebound whenever that comes.

Kevin Fogarty:

Great. That's really helpful. Thank you very much. Thank you.

Female Speaker:

Our next question comes from Isha Sharma from Mainfirst Bank. Isha, your line's open. Please go ahead.

Isha Sharma:

Good morning, gentlemen. Thank you for taking my questions. Could you help us with the monthly progression? How did you see the Personal Care business developing especially? How do you see July in the first few weeks, if that is possible? Is it incrementally better than June or flattish? That would be really helpful. My second question is on Life Sciences. Now that you've already achieved the margin of 32.5 percent, is it fair to assume that the expansion might even be beyond the 33 percent level in the mid-term and more accelerated? And the last one is on raw materials. What is the reason for the assumption for the full year, year over year, given the decline in oil derived from the geo space.

Steve Foots:

In Personal Care, best to look at a trend of we would say May, June, July. And that's pretty stable. So it's weak, but broadly flat, we would say. And it is patchy everywhere and it's all correlated with the lockdown. So, we'll be watching that closely as things develop. In terms of Life Sciences, the margin improvement is great. And that will continue. I have no doubt. And the Avanti acquisition is very high margin as well. So, the growth -- the growth that we've got in the core platforms, which are things like liquid nanoparticles, the vaccine adjuvants from bio sector, and specialty excipients, they are the major drivers and there is a high margin. So we would expect continued margin progression. Now, let's call it that. And we've always said we want to get to 33, 35 percent margins like Personal Care. And there's

no reason why they can't. And who knows? getting beyond that is not -- it's something that is certainly achievable, too. So I would say that on those two. Raw materials, Jez?

Jez Maiden:

Yeah, we picture it as broadly flat. Obviously, we're buying primarily naturals, the commodity grown raw materials. So overall, the impact has been pretty flat. It's subject to a lot less volatility overall than you would see in a more petrochemical sector's basket. So, yeah, overall, we're -- with the increase on -- around bioethanol and some decreases in other areas, I would say, pretty benign from raw materials, as we've seen for a number of years now. I think on the Life Sciences' margin, we might get a small bit of initial dilution on Avanti just because it's at a very good margin, but probably 25 to 30 percent EBITDA-type level. So it'll be quite a small dilution. But again, opportunity wise, we certainly see it as a -- as a Life Sciences plus margin opportunity.

Isha Sharma:

That's very helpful. Thank you so much.

Steve Foots:

Thanks, Isha.

Female Speaker:

We have a question from Adam Collins from Liberum. Adam, your line is open. Please go ahead.

Adam Collins:

Good morning. I think I've got three loose ends, please. First of all, Life Sciences, I think at the beginning of the year, you were talking about a 2 percent growth impact as you deliberately exited some crop products with a negative environmental footprint and just wanted to understand, is that happening? And then on Health Care it's a very defensive area. But was there not some negative impact from the fact there's been lower GP visits and elective surgeries during the period? I'm thinking now, if this is a consumer health business, the smaller parts of your operations, but nevertheless affected by the frequency of prescription activity. I'll do it in turn. That's the first question.

Steve Foots:

Yeah, fine. I'll do the first and then Jez can do the GP visits. He visits the GP more than I do, so he knows these things. He's a bit older than me. The two percent thing, like yeah, that happened. we took the decision. very much part of our sustainability agenda is we don't want these alkylphenol systems in our -- in our plants or any other hazardous material of that nature, so -- or toxic ingredients. So they're out, and they've gone out, so they're impacting, and they have impacted. So -- but that's fine. It's one of those things. But the underlying -- the underlying strength in the life science result in the first half has been driven by the healthcare platforms generally and Jez talked about those in his part. And also seed enhancement, which has been great. It's only been crop that's been down just on phasing. But Jez, you want to talk about GP?

Jez Maiden:

Yeah, we saw a modest impact. We're a bit removed from it and the inventory pipeline and pharma can be anything up to 12 months, but we could see that there was clearly some impact from the reduced number of prescriptions written and the reduction in elective surgery going on. So we could definitely see some impacts of that when we look at the customer product mix. But the general feel was in the excipient side, we still saw very good 11 percent growth for that across both the standard excipients and the specialty excipients. So the specialty excipients continuing to grow 10 to 30 percent year on year. So we didn't really see a change in that.

Consumer health, yeah, we were flat to plus one percent on that. So that for us picks up more topical treatments, oral care, that side of the business. And it's been relatively steady. So I don't think anything that we would be concerned about that there. And as we've said, the second half outlook can be -- looks very positive on both the health and crop.

Adam Collins:
Thanks.

Steve Foots:
Second question?

Adam Collins:
Yeah, well, I had a couple here. So within six months, we could be heading for hard Brexit in the U.K. You mentioned that you are comfortable with the inventory position and the touched on being right size for Asia and North America in particular, as it recovers. But what would you anticipate being the impacts of business in the event that we do see a hard U.K. exit from the EU -- so that's the first one. And then the second one was just on the OPEX issues. Givaudan yesterday was talking about puts and takes, lower travel costs, no product testing in its Personal Care areas, but more freight costs. Have there been any significant movements there, either positive or negative?

Steve Foots:
Well, let me start with Brexit. And Jez leads the Brexit team internally. So I'll get him to comment on the detail. But we've got a chemical industry group that works with government on a weekly basis to talk about Brexit. So I'm involved in that. And other chief execs are as well for the industry. So we're encouraged with where they are behind the scenes with the development of that. They're discussions, let's call it that. The impact for Croda is modest. We have 95 percent, but more than that now of ourselves outside of the UK. So, the impact is always likely to be small. I think the area that we're focused on at the moment is making sure we keep the regulatory playing field the same as Europe and the U.K., which is Reach and making sure that our European partners want the same thing. So we're still hoping that that will be the case, although who knows where that goes. So we're lobbying government very hard on that at the moment. But that's an industry point. But Jez, do you want to go into any more detail on Croda?

Jez Maiden:
Yeah. I guess a couple of areas that we've looked at. I think now actually we're at the point where from the trading point of view. It doesn't really matter now whether we're in the hard Brexit or whether we get a basic free trade agreement at the end of the transition agreement in the sense that under both systems, we're going to have to account for the duties, et cetera, in Europe, where in the past we've just shipped from the U.K. and not have to worry about that. Obviously, what we prefer in that is a free trade agreement where the duties are set at zero rather than having to have duties. But we did evaluate the tariff impacts of moving completely to WTO for the UK and the European manufacture a couple of years ago. We were looking at mid to high single digit million pounds annual impact from WTO tariffs.

So that's our backstop, I guess that one could end up with 5-, £7 million of duties and so forth, which clearly one wouldn't want. But I think mechanistically now you're going to have a VAT and the duty system; it's just whether or not those duties are set at zero. So I think we can manage that, those impacts on the trading model. As Steve said, more of a focus on trying to avoid duplicating an entire regulatory system. We can clearly do it, but it would just incur additional costs to implement and then to maintain. But clearly, we will ready run multiple regulatory systems around the world so we can do another one. It's just it's a bit pointless from that point of view. We don't really get any value from it.

So and I think the general view would be that, hopefully one would see less immediate issues come January in terms of goods getting blocked of borders and so forth, particularly given the U.K.'s announcement that goods would be able to flow into the U.K., which affects us more on the raw material side.

So I think we're in a good place on the Brexit planning. We'd rather not have tariffs. We'd rather not have a separate regulatory system. But they are manageable, with a bit of cost if those come along

In terms of the OPEX side of things, overall, we were down about a million pounds in OPEX. You'll see that I have made an adjustment to the way we report the OPEX in the income statement just to make it a bit more consistent with the way peers report and so forth. That's just a flip between the cost of sales and the OPEX lines that you'll see on the income statement for those of you who are looking.

And the OPEX overall was down about a million pounds year on year. That's a function of the 15- to £20 million of savings that we implemented last year. Less the additional resource that we've reinvested in areas like China. It's a function of definitely a reduced discretionary spend around travel and exhibitions because clearly that's not happening at the moment.

And that is offset partly by the eco plant start up because obviously that creates a bunch of OPEX costs that we didn't have previously and the depreciation that we touched on earlier. Overall, we've kept a tight rein on operating costs, both in the same way on the investment side. But we're not slashing investment, this is the time to invest. We're also doing the same on the resourcing side that, where we can see opportunities such as China and digital China, we're investing behind that because it's the right thing to do now. And, given our model, we're a pretty lean operating model anyway.

Adam Collins:
Thanks, a lot.

Female Speaker:
Our next question comes from Martin Evans from HSBC. Martin, your line's open. Please go ahead.

Martin Evans:
Yes. Thanks very much. And just getting back to the potential for Avanti looking forward. Do you think in terms of its significance it's the equivalent to your Sederma deal years ago in Personal Care, in terms of giving you the critical mass you need and the potential or do you still feel on drug delivery that there's the need for another add on? And secondly, just in terms of the customer offering going forward that you can offer, the 3000-plus customers that Avanti given you or, as you say, your ability to scale up in their ability on R&D is that important? Are you a one stop shop offering to customers or doesn't it really matter in the world of pharmaceuticals? Thanks.

Steve Foots:
What Sederma brought to Personal Care was -- we learned from them and we were a very good Personal Care business before Sederma. And we learned a lot from them. They created penta-peptides and they had a brilliant R&D and marketing function. And we learned a lot from that. We're still learning from them now. In many ways there's lots of parallels with Avanti. Still early days, but we haven't got them on board yet. Just about to. But they have the potential to do very much the same, inasmuch that we'll learn from their pharma experience; they've got deep knowledge there and their R&D and track record in R&D over the last several years has been outstanding. It's excellent.

So it's great and they'll take us into areas that we either were not aware of at the moment or something we can leverage going forward. So it has the potential, I think, in six months to 12 months when we come back, who knows where it will be. It won't stop us doing more of those as well. We think there's other opportunities there as well that we want to look at, too. I think in terms of the customer base, the way to look at it, Martin, is we're trying to move to more pharmaceutical services.

So what you need there is you need a very good R&D base to that. You need to then have to scale up potential and preferably in your organization, which is GMP manufacturing. And you need to have a great selling function to take it to market. And we've got great selling function. Our operational capabilities are strong in this area. But we didn't really have the deep expertise in R&D. You triangulate around those three functions and this will bring a lot to the other two as well. So they are a very North American business. They don't have huge sales outside of North America and in parts of Europe.

So, we think from a selling point of view, we can get global reach that they couldn't get before, which is what we did with Sederma, if you remember. And I think just generally we will have more appeal to our customers and our future -- and our new customers because of that R&D, manufacturing, and selling strength now. We've become a real operator in this space and, of course, that's important; our job now is to create really terrific value from it, so -- when we think we can. So it'll be an exciting journey. It is definitely the most exciting acquisition under my leadership certainly at the moment, from what we can see. But that'll be proved out and borne out by results, and you'll hold us to that. And that's absolutely right.

Martin Evans:
Great. Thanks.

Female Speaker:
Our next question comes from Tom Wrigglesworth from Citi. Tom, your line is open. Please go ahead.

Tom Wrigglesworth:
All right, gents, thanks very much for the presentation. Just a quick one now. Just on that transfer from the R&D side of Avanti to the manufacturing, are the margins similar on the manufacturing side? And you've said that you can expand -- you can use your existing sites to manufacture some of their products. But is there a point at which you would then have to consider expanding that manufacturing capacity? And is that something that's, one to two years away or something as more five years down the road?

Steve Foots:
Yeah, good question. It's still to be proven because we're learning as we go along. It looks like the similar margins. I think the issue is not so much the margin, it's the capability to make it. At the moment, Avanti, it's a great business model, but it's not the perfect business model because, they can have a lot of these small scale, one kilo, maybe half kilo quantities, up to five kilo quantities, something in that area they can satisfy from their own plant. But anything beyond that, when you scale up, they have to outsource to another partner. So they lose. I think they lose a significant contribution when they do that. And clearly, we want to pick that contribution up. So I think it's not so much margin. The margin is still very high. I'm not sure if there's much change between that, but it's -- it's the losing out of the opportunity to scale up, which is very rewarding; that's the lucrative part, is the manufacturing of it.

And just to give you some feel for these things. We've moved along that continuum from consumer health is three, four pound a kilo. And some of the Avanti products are into

hundreds of thousands of pounds a kilo. So, you're talking about a different ballgame, which is greater. We'll certainly, once we got the selling global reach, we'll certainly learn how to price the product correctly in this space as well. Because, we think we are good, but we can be better. So I think that's going to be great as well. So, yeah, lots of good opportunities. But we just want to get them on board and really get them working with the rest of Croda. Jez has just got an additional point for you as well.

Jez Maiden:

Yeah. Hi, Tom. From the investment side it's one invested site in Alabama and then as it happens, we're already well into the expansion, obviously, of the main site in Pennsylvania, the Croda manufacturing site and then we have the two other sites in the U.K. and in Japan, and we have expansions already underway in those. So generally to just broaden the volume of the specialty excipients and drug delivery systems that we can do. So I think that's already part of our plan. And these expansions are typically between 10- and £20 million sterling each. So they're quite modest in the scale of expansions and things that we can cope with in the normal programme, really. And it's just about getting the capacity in place in time to make the market grow.

Tom Wrigglesworth:

Great, thank you both.

Female Speaker:

We have no further questions. Back to you, David.

Steve Foots:

Yes. Let me just wrap up. what I didn't do at the start -- and my mistake -- was to welcome David Bishop to the organization. Despite him being a Nottingham Forest fan, we think he's going to do really well for us. So you've all probably had conversations with him now. So use him like you did with Conleth and I'm sure you'll get the responses that you want.

But I think just in summary, a resilient performance. And I think more than that is we're investing in the business. We're accelerating our investment where we can. And we've got these refreshed strategic priorities, which I think are going to be very important to us over the near medium term to capture new growth. And, of course, we're investing in R&D and digital, but we're investing in acquisitions as well. So, we feel like we're coming out of this stronger than we were going in, and that bodes well, for certain, in the near and medium term for the group. So thanks very much for your questions. And we'll see you when we see you.

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