

## Q&A Session

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**Judy Hong (Goldman Sachs):** So, two questions for me. First is the 90 billion to 100 billion IQOS target. So obviously, the revenue target you have given is kind of a 5% plus and this is a more specific target. So just wanted to get a little bit more details around a path to that 90 billion to 100 billion, either from a country mix perspective as well as a phasing standpoint.

**André Calantzopoulos:** Okay. First of all, in terms of country mix, as I said already, we want to focus on the markets we are in without excluding, obviously, new geographies. But the reason to enter a new country would be either a strategic or a very promising place, okay? We have obvious candidates like Turkey or the GCC or others, but once the regulatory environments are in place, then we can make the decision. We are working on this. And markets where the consumer readiness, at least in our current assessment, is a bit lower, probably towards the end of the period we will consider entering, but the focus is get the traction and the critical mass and then the growth in the places we are in, and that is the sufficient number of markets, okay?

Now the build, I cannot predict exactly. I think we will be there at the end of the period with a high degree of confidence. But we may have fluctuations. So the pacing is very difficult to predict, that is why we gave an algorithm that is five-plus. I mean, if we go faster, obviously, it is going to be more. If we are going to slow down in a given year, I guess you are referring to the fact that I said 10 billion is 2.9, so yes. But if you take linearity, that is what it is at. But we may have fluctuations or we have acceleration. So that is how I look at it.

**Judy Hong:** So second question for Martin, so 2019, so you talked about a better business performance and some tailwinds. So I guess, just from an EBIT growth perspective, if you have the elimination of the Saudi impact, then you have got incremental investments I think this year, \$600 million. In the past, you talked about \$300 million staying and the other going away. So should we think about the EBIT growth ex-currency in 2019 to actually be a better year versus 2018?

**Martin King:** My remarks about being a better year was a general statement about the underlying business performance. It is not really to call out any individual metric, and we are certainly not giving guidance for 2019 at this point in time. We do feel that there is good momentum in the business coming from the volume, coming from the broader range of geographies for IQOS. When it comes to costs, what we had said before was that about half

of the cost increase that we made this year are more of the infrastructure type that should be able to handle bigger volumes without scaling along with volume.

It does not necessarily mean that the increase will not be there at all, but they will be able to handle bigger volumes without directly scaling to the higher volumes. Whereas the other half of the investments were more along the lines of directly tied to the volume, whether it be commercial cost in the markets, etc., that would tend to scale as you grow your organizational focus on the heated tobacco unit growth. So I would not take it to be a clear statement about the size of the increase next year for cost, it is just to directionally show that our ability to scale volume is there without adding as much cost proportionally, as what we have seen in the past.

**Michael Lavery (PiperJaffray):** A couple of years ago, two or three maybe, you mentioned an incremental EBIT aspiration for IQOS for 2020. Obviously, on the volume side, you are ahead of what that would have implied at that time. But how should we reconcile this medium-term outlook with some of that thinking, and any update on what your thoughts are around an incremental EBIT view and just how to put those two together?

**André Calantzopoulos:** Well, first of all, if you look even at the outlook, going from five plus to eight plus, it shows some leverage between the two, okay, which, because we had to be build the infrastructure first, we assumed there will be more leverage going forward. Otherwise, I cannot get to this, okay, by definition. So IQOS, on an apples-to-apples basis, is accretive. The fact that we started putting things like R&D and everything and other things under this today, this cost existed in the business before, so it is not incremental cost. So to me, as we assume no share buybacks and no major changes in the tax, clearly, the EBIT is going to be commensurate, obviously, to the EPS. Otherwise, I do not know how we can engineer it, okay? So I think IQOS will be increasingly accretive and that is why I gave you the metrics that if I add 10 billion, it is \$600 million margin.

Now, some of that you invest it in variable but the rest should logically flow to the bottom line, okay? That is how I see it. That is why I gave you this, to give you a key. I would not take the marginal contribution to the bottom line because we have variable expenses as well, but a large part of that should go there.

**Michael Lavery:** And then just one other one. You had mentioned on the 3.0 generation of devices that there is the HeatStick recognition and it is more of a closed system. Can you just give a sense of where that is today and how much of an issue you found that to be, or if any?

**André Calantzopoulos:** Okay, first of all, just to clarify and I will pass this to Mirek. It is not 3.0 that has a stick recognition, okay, it is the next generation, okay? Because it is a bit complicated to do it with this generation. It is not a big issue today except for the known places in Korea, but Mirek can elaborate a bit more about that.

**Mirek Zielinski:** André answered the question.

**André Calantzopoulos:** Sorry.

**Mirek Zielinski:** I would put in the pipeline for both devices and for HEETS but it is not in IQOS 3.0 nor in Multi.

**Pamela Kaufman (Morgan Stanley):** I was wondering if you could discuss some of the differences in the rate of decline in customer acquisition costs across markets and what contributes to that across countries for IQOS?

**Jacek Olczak:** It is essentially the size of the infrastructure we have to put in place, having in the view what is the size of the total national geography. And then wherever I start, we will start with the one or two cities and the infrastructure is catered to the larger geography, that obviously will have an impact. And then I showed you, I think, Japan, Italy, Russia, if I remember. I think they are all progressing in some ways. So remember in the past, we have been saying that the path to breakeven in a given market, when I take all these cost – and also to bridge to the questions André had on, 'Is IQOS positive or accretive to PMI?' – the path to the breakeven on the market is essentially around the two years. So I have all of this investment upfront, there is a lot of fixed and comes the variable component, but within two years, in most of the markets, on a market level basis, we can make IQOS profitable. I mean, all the costing, including also what is coming as the allocations from the fixed cost component here, the R&D and so on.

So Russia, Italy and Germany, remember, from the chart is pretty aggressive improvement. I mean, Germany, which was expensive because it was first, and in Japan, it is not a cheap country to execute, frankly speaking. I mean, today we are paying \$20 for the equivalent of \$100 at the beginning. And actually, the numbers are much more scary because the first consumers we ever acquired, in these calculations, were in the range of \$1,000 to \$2,000. The first always cost you a lot, and I did not want to show the index from the very beginning because it will be very unfair, you know how far we went down. So digital plays a lot of role. More and more markets are coming first with the learnings from the existing markets, and this is not the learnings from the first few months, but the learnings from the first couple of years today. So it is a different approach. Digital helps tremendously, and I think with the further deployment in investment and deployment behind digital, we should reap the benefit even more. And to be very frank, our organization, when it comes to people, are much better than it was three years ago, including, frankly speaking, ourselves. I mean, our knowledge about that thing four years ago was a lot of hypothesis and today, we have a lot of conversations which are based on data. And that saves you tremendous amount of time and money.

**Pamela Kaufman:** Thanks. So, I guess, just thinking longer term, how do you expect the reduced-risk category to evolve over the next five to ten years? Obviously, you are focusing a lot on heat not burn, but you do have an ecosystem of products. And I guess, how are you thinking about the landscape fragmenting, or not, over time?

**André Calantzopoulos:** I believe that the category will continue to grow. I think products, at least from what I know from our pipeline, will increasingly get better in every platform. And also, consumers will be more accustomed to see these products around. So they will become more known.

The speed is difficult to predict but, as I said, it is a new category. There will be slower periods and acceleration periods. I see growth continuing. I mean, I gave, previously I think, in 2025, we could reach 30% of our total sales, I think, predominantly is going to be heated tobacco products, if we move to markets that are less ready for electronic cigarettes or other platforms, but I think we have the ambition to play a role in all the categories. As I said this

morning, because I got this question from investors, why we are so slow in entering the e-cigarette category? Because we wanted to feel comfortable that we have the first product, although not perfect, better than what exists. And then a pipeline behind with further improvements, not only in the delivery engine that we have now but in the liquids and the taste and the satisfaction. Because they are under the IQOS umbrella, and as I said, we are building a brand. And I do not want to jeopardize a brand. If I can compare, the rigor we applied in everything we did with Marlboro, we multiplied by two because before we do it in this category, both from a science and a consumer perspective.

Now, the good thing is, the infrastructure we have built can carry all the platforms because they are under the same name. So I do not need to have another store for IQOS e-cigarettes and another for Platform 3. And that is what the design we have done for the whole phase. So we do not need to repeat every time because we fragment ourselves, if it makes sense to you, from a marketing perspective. So that is what I see. I do not have a crystal ball to tell you precisely where we are going to be by year, okay?

**Mirek Zielinski:** There is one additional comment. I think the situation's very dynamic. There is no, today, sign that there is a silver bullet solution in one type of product or device which will offer to smokers one solution like cigarettes for many, many years. I think people will be going to different alternatives, like they smoke different type of tobacco products and pipes and cigars. Before this whole thing was consolidated, people are using different products. I think we added, for example, in UK, additional completely new dynamics to the market. We have now one brand and for e-vaper user who smokes, if he bought IQOS before, MESH, IQOS MESH, he is now trying the electrical device and he smokes. What will happen when he switches from cigarettes and he uses instead of cigarettes, using IQOS. What his preferences are going to be as far as electronic cigarette is concerned in this equation, nobody knows. Nobody ever did a study related to any electrical device offering alternative way of experiencing noncombustible tobacco. We are the first brand who offers both.

**Jacek Olczak:** I think if I may add, that is the overarching purpose of having all four platforms. And so far, we always talk Platform 1, 3, 4, maybe there will be Platform 5, 6, 7, we do not know this today. The issue is all of these platforms altogether should leave no reason for the smoker to stay with a combustible product. And now it depends on the preferences of the consumers under situations, daily, weekly, whatever, how I want to complement my use of the one main platform with something else because I feel better using this in that situation. So you might have a composition of an IQOS P1 with an IQOS P4. I can have the compositions of the P4 with the P3, P3 with the P1. Oh, maybe I will remain 100% loyal because my life or my needs are fully satisfied with one platform.

The benefit to the consumer is, instead of having different platforms, different manufacturers, etc., all of a sudden, they have one touch point for everything which they need around their noncombustible nicotine. They come to IQOS. They come to IQOS store, they have the IQOS care. They have all services and all the work and ecosystem which IQOS can provide you regardless on which platform you are because they keep you all together. And I think this has a tremendous value of how the ecosystem or how we build the ecosystem of this portfolio of products altogether with one common denominator. So I think we are covering the consumer needs to a 100% extent. And as I said at the beginning, from now on, the smoker,

the combustible smoker, has no reason of using the combustible products because I delivered you a fully integrated portfolio. André has mentioned there will be one day that the devices, which we still see today, different devices behind platforms, that the one day, they can all merge into one device. And the consumable will dictate your situations and involvements how you want to use it through one engine. And it is a completely different game. Both of them have the denominator that they give you a satisfaction, so I can comfortably migrate from a combustion, and very importantly, they are both scrutinized to the same scientific standards. So from now on, you have no trade-off of where you go. From the risk perspective, you stay where you should be, but from the other perspectives, you have the freedom of choice.

**Christopher Growe (Stifel):** I want to ask, first of all, if you take the incremental heated tobacco units you expect, which is, say, 50 billion sticks, and that would equate to roughly \$3 billion of marginal profit contribution using your math. Even if the costs are 30% variable or maybe more, it would seem like you have a higher profit contribution in your midterm guidance than the 8% growth you have alluded to. So I am not asking you to raise that number or looking for more, I am just curious how to foot that, or maybe it is that there is cannibalization underneath that at a higher rate or incremental cost you are not accounting for? I am just trying to understand that number in relation to the guidance.

**André Calantzopoulos:** Look, all you say is correct. And some of this will drip to the bottom line. What we established is something that is a base. And there will be fluctuations. What we suffered this year in the stock is because we made a forecast that did not exactly fulfill, or it may happen later and then everybody got excited, okay? So I am trying to say, this is something that reasonably, on a compound average growth, we can achieve. If we go above, we will go above, okay? Nobody is going to be upset about that. I also gave you the key to understand how this works, okay? Now there is no guarantee that in any given year, we will grow by 10, 20 or 30. But you understand more or less the dynamics and it is easier for you. And for me, that is how I would look at the business. Of course, our ambition is going to be different, okay?

And the other factor here, which we have not put in, is first of all, obviously, there is no volume related to the other categories here, but I found it is very premature to start, and there will be some interaction between categories, so I think take it as the bulk of all platforms. And the second is government interventions. Positive, I hope. I think today, we are still in the debate, as I said at the beginning and you know very well, in certain quarters, whether these products should be authorized, okay? But I think positive government interventions beyond recognizing that, from a tax perspective, it is a different product, is also the treatment and the communication to consumers that can vastly accelerate the transition. And that is where we see, as I said this morning also, the value of regulation based on what is happening in the US, because certain of the things that happened will have not happened with a fully regulated product that follows the process, okay, of pre-market examination and post-market surveillance from day one.

Now, I have not taken this into consideration at all, okay? On the other side, we may have, although I do not believe it, some changes in the tax regimes, and that is why you need to put all these in the equation, and I feel comfortable on what I gave.

**Christopher Growe:** I just want a follow up on one question, if I could. You gave some good color on the different platforms 2, 3, 4. My question would be in relation to Japan, how that market may be different and why, say, Platform 2, why you would not introduce that product in Japan as a means of essentially capturing more consumers? Do you see that as an opportunity to help raise the incidence of heated tobacco in that market?

**André Calantzopoulos:** Look, I think Platform 2 is going to be a helpful product, for sure. The problem is, especially in Japan, the product has to be absolutely perfect. As Mirek said very clearly, one thing you find in humid climates is sometimes because of the humidity, you have the tip ungluing. So we need to fix this problem, and we need to fix the propensity to ignite. There are solutions to that, but I do not want to go again in Japan, under the IQOS name, or in any country thereof, that we do not feel 100% sure that the product this time is perfect. And frankly speaking, although the rates of falling this is not dissimilar to what you find with people that forget to get their ash down, I do not think in this category, we can afford this. So we have to improve this. And that is a matter of principle. It may delay us a little bit, but that is fine. I think this product has a lot of role to play for more conservative people; it goes much closer to the ritual. We are also, in parallel, building manufacturing capacity. These products are very complex to manufacture, you need high precision. The machines we have so far, we are manufacturing but at a very slow speed. So we took advantage of this additional improvement to also redo the machines so we can go to higher speeds. That is the full logic of what we will do.

**Faham Baig (Credit Suisse Securities):** Can I also ask two questions on the three-year growth targets that you have set? Firstly, they are not that different from what you were previously guiding, four to six and eight to ten. And in line with the previous question and the new cost saving initiatives that you have outlined, where does that fit in the over 8% EPS growth algorithm? Because I would have thought it is incremental despite part of it being invested back into the business.

**André Calantzopoulos:** First of all, the previous algorithm was centered 5%, 7%, okay? But there is no volatility in this algorithm. And do not forget that this algorithm was also working for roughly 1.5% to 2% total market declines and higher pricing base, okay? All right, you need a volume behind the price. So I think this part of the algorithm, with the advent of RRP's and everything, you have moved a bit down, okay?

The second thing, again, our ambition is to get these costs out of the equation because a lot of our cost base so far has been very incremental. We brought new people in, we built coach teams in addition to our sales forces, and a lot of even variable costs that we have had to move them in because we moved fast. Now we can breathe and take some of this out. That increases your leverage, obviously, okay? So that is why I do not think we said it is 8%. We said it is higher than 8%. Higher than 8% mathematically means from 8% to infinite. No, I am not pretending it is infinite, but I prefer to give a line and go above rather than give you something else and say, 'But you missed it by 0.5.' That is the whole idea, okay? So that is what we stick to and we will see what the outcome is.

**Faham Baig:** I guess, then, the top line is also infinite?

**André Calantzopoulos:** I said mathematically, everything above 5 can be any number. Provided that we can make it to the 5, we are okay.

**Faham Baig:** Sure. But I do recall probably less than 12 months ago that you did say that the top line growth rate should be at least 7% in some years or you might even grow double digits. What has resulted in the revised number of 5%? In a nutshell, is just the slowdown in the Japanese market?

**André Calantzopoulos:** Sorry to correct you, it is higher than 5%. It is not 5%. Yes, 5% will be a downer, I must admit. Okay? So nothing has resulted. It is just I learned my lesson, and every investor in this room told me better give a number that you can make than dream, and then even if we have a slight delay, we will have problems. So I think we know there is volatility in this category, okay? And I try to build, and we all try to have confidence but build the volatility in. I think our ambition, as I said, is to do much better, okay? And we will see how things unfold. It's as simple as that.

**Jacek Olczak:** I am sorry, we do not look from Japan from such a short-term perspective. What I was trying to demonstrate is, yes, from a volume perspective-based total category, yes, the growth is lower than it used to be at 12 months ago. But, I think there is an increasing number of the consumers not only in Japan, and this is the most important, is the growing interest. When we will have to revise the ambitions, etc., is when we start seeing that the consumers are not interested. When you really hit the hard ceiling. I do not see this in any market, including Japan or Korea, despite the fact that there is some confusion in Korea, despite the fact that something happens in Japan, etc.

So for us, as long as there is a consumer, and the ultimate number of the consumers you have seen is above the 1 billion people, and then we are going to go after this whole thing. But we do understand that here and there, for whatever reasons, up to us, up to our performance, up to whatever regulators, we might have a slowdown. But I think the vast majority of the consumers today are indicating that, 'Look, I am willing to do something about smoking.' And then it is our job, as long as they cannot quit, we will facilitate their move to the non-combustible product. And I think in wherever we go, the HeatSticks are the core of the whole thing, okay? The taste, the satisfaction from the taste is unbeatable. And the people are coming almost close to imitation of our products. They cannot come close to what we have, and we have it. Yes, there are a few other things which we have to fix, different cohorts, different societal groups in the different countries will have different triggers, despite the fact that, 'I am aware and this is relevant. Well, I should do something about it?' We need to solve it. But from now on, I think I am pretty confident that category is going to grow up to the 1 billion consumers in the world. I think we are no longer discussing the fact whether that will happen or not happen. From now on, we are only discussing, 'Do I need five, ten years, 15 or 20 years?' This I do not know. This I do not know how that is going to come. But once we open the door, we will have to go. And so far, we have demonstrated that we have a true leadership in a product which fully converts people, and can I have all other product categories which also fully convert people, and I go after them.

**Vivien Azer (Cowen):** So Jacek, you just mentioned the need, over time, to solve for better cohort penetration. And one of the things that hasn't come up yet today is your plans for mainstream-priced heated tobacco unit. So first part of my question is can you just give us an update on timing and any incremental details on execution around a mainstream-priced HTU?

**Jacek Olczak:** The HEETS will go in Japan about the same time as we will be doing the rollout of 3.0 and 3.0 MULTI. And I said this is a mainstream taste, and the price will be mainstream as well.

**André Calantzopoulos:** Well, there are two prices in Japan, so it is not very complicated. It is not exactly multi-price markets.

**Jacek Olczak:** We are in the process of registering the whole product with the Ministry of Finance, and you understand the ritual which we have in Japan, and I have to follow the steps. So this will be a mainstream price.

**Vivien Azer:** Okay, perfect. I just wanted to make sure we are all on the same page there because then my real question then is, you articulated, André, please, with the revenue illustration, does that contemplate mainstream HTUs with any kind of significant share of your total volume target of 90 billion to 100 billion?

**André Calantzopoulos:** It does. But except for Japan, we do not have any current plan.

**Vivien Azer:** Could you elaborate on that at all? Like, as you think about penetration rates over the next 3 years, is this going to be meaningful in terms of portfolio mix?

**Jacek Olczak:** I am saying that, today, there is no other market than Japan, which would be at the stage we would have to introduce the second brand, if you like, in a portfolio at this stage.

**André Calantzopoulos:** More generally, as you know, we tried IQOS at different price segments to see if that makes any difference. And the answer is initially, it does not. Very, very little, okay? Because price is an excuse for consumers that are not convinced. It is not the real thing, because the first consumers that moved over to the category and the very vast majority can very much afford the prices where the product sits. Now as we always said, at a certain stage, once you get to the very mainstream people, you have to extend to lower-priced segments, so you increase the affordability so everybody can have access to the product. We felt that in Japan, we were more or less approaching this moment, that is why we do it. But I do not think, over the next year or two, we are at this stage in other markets. But if we are, of course, we will have the products to do it. We are also facilitating the consumers by offering 3.0 at a higher price and 2.4-plus at a lower price. So we try to make it as easy as possible for everybody to have access, okay? And that is the approach we take.

**Jacek Olczak:** We have to support this one. If you remember the data from, the facts from, Japan, IQOS and the consumables are, by far, the most expensive proposition in the category, and they do enjoy highest conversion rate. So André is absolutely right that this is not the price, which is the factor in the conversion at this stage. Once the initial groups, cohorts, etc., of the consumers are penetrated, yes, obviously, the price might become an issue, okay? So we are demonstrating to have a solution for this one. But unlike even what the competition is doing, that they are trying to come below IQOS significantly with the price both on the device and in some places with alternative consumables today, devices, etc., you know it, there is no correlation or definitely no causation with the adoption rates. And these adoption rates and the daily consumption, etc., is the outcome of this. They remain significantly below those of IQOS. But we know it is not the price. The consumers are not

switching to this proposition because of the price. So we better stay with this rather than start reacting to solving a price problem when there is not a price problem.

**Adam Spielman (Citi Research):** You have guided to about 50 billion incremental units by 2021. Is it reasonable to assume in very rough terms the increment is about 1/3 in Europe, 1/3 in East Asia and 1/3 in the rest of the world? Is that ballpark how we should think about the geographic sourcing of that?

**André Calantzopoulos:** This is a very good question to which I would love to be in a position to answer precisely. Today, we have Japan overweight. So I do not think that is the right view because I do not think Japan will continue being entirely overweight as all the other markets are growing. So I think European Union has to play a much more significant role, more or less, or even a bit more of what we see in the latest months, which helps the mix, by the way, from an economic perspective, okay, because Japan is – the net ex-factory prices are a bit lower than in Europe. So that is how I would look at it, but I cannot define with exact precision what the geographic split will be, but that is the way I extrapolate, but I may prove a little bit wrong in my three-year projection. I think, globally, the number is reasonable.

**Adam Spielman:** And then just to dig into Japan a bit. So baked into that assumption is, you are expecting growth from here. If I listen to Japan Tobacco and disaggregate their forecasts, they essentially say that your market share is flat or going down. Now, that is their opinion. Your opinion, based on your plans, I am guessing is, or you are implying, has real material growth in Japan albeit perhaps not as much as we saw in 2017. Is that fair?

**André Calantzopoulos:** I am sorry, what was the last part?

**Adam Spielman:** The question is, are you assuming growth in 2019 and beyond in Japan baked into that guidance on which you have said you are hanging your hat?

**André Calantzopoulos:** Okay. The short answer is, yes, we are foreseeing growth in Japan. The longer answer is, today, the products, the competitive products, in my view, are not helping that category, okay? So I hope better products will come in the market. If we look at the existing products, they have low full conversion rates for obvious reasons. And I think some of our competitors, the ones you referred to, recognize that they need a better product. That can only help the category because from what Jacek showed, we have a lot of interest but significant dilution as well of daily consumption. You have too much dual usage in the other products and some dilution in ours because it is natural if somebody experiments with another device than IQOS, they feel compelled, at least initially to use this product as well, okay? This churn will go away, but I think once we have better products, at least we can compete. And you need to know that today, we are not trying to get consumers out of competitive products. We are focused very much on acquisition of new consumers, to the opposite of some of our competitors that do exactly the opposite, okay?

Now, if we move the entire category, then it becomes clearly, with better products, a game of who has the best product. And that is how we see it. And how the market shares move, we will see, but clearly, the objective here is to increase the entire category with appealing products. As everybody said today, I think in general, I believe from everything I've seen and know in so many years in this product, we have the best understanding of this product

and across platforms and will always manage to get very good products on the market and compete. But I understand JT's position.

**Adam Spielman:** Then one final question. If I think of the global market, including conventional combustible cigarettes, as you said, you are now assuming 2% to 3% volume decline, so it is worse than it was. Why do you think it is deteriorated, so the global market overall?

**André Calantzopoulos:** It has been like this for the last five years, so I am using, more or less, the same numbers, okay? I mean, we all know the underlying reason has been ranging from pricing to societal pressure to many other factors, okay? So it is reasonable to assume that this trend will continue, at least to be on the safe side.

**Adam Spielman:** Okay, thank you.

**Jonathan Leinster (Berenberg):** Just to reverse Adam's question, actually. If you are assuming the same volume declines of 2% to 3%, that seems to imply that the sort of rapid growth of vaping is not going to have an impact on volumes. Is that broadly what you are assuming?

**André Calantzopoulos:** No, no. We need to start defining what we talk about. By 2% to 3%, I am counting RRP's and cigarettes together as a category.

**Jonathan Leinster:** Including vapor?

**André Calantzopoulos:** I have not included vapor in this number, okay? I think we need to look at the entire nicotine consumption eventually and define the numbers because we start confusing numbers here, okay? So in my numbers, let us call it total nicotine consumption that the trends are going to continue like this, but I have not included, in the total market, vape. Obviously, vape products, heated tobacco products and any other thing will have an impact on cigarettes. That is the whole purpose. But the assumption is, obviously, the dynamics of the market will stay like this going forward.

**Jonathan Leinster:** Another one, actually, on Japan as well. In the user economics index that you kindly provided, in Japan, the fully converted was sort of 121 against Marlboro. The occasional was sort of 82. But how did that look like if you are going to be launching a mainstream-priced IQOS HeatStick? On a unit profitability basis, is that going to be broadly the same as the full-priced one? Or does that mean those numbers will be slightly lower?

**André Calantzopoulos:** Well, if you go mainstream, and Jacek can chip in, obviously, there is some difference between Marlboro and a mainstream product like Lark or Mevius or whatever, okay, it is about \$12 difference. So you will still build, even if you are there, Marlboro combustible, if my calculation is correct. But definitely above the equivalent in the mainstream. By the same thing, Marlboro is different from Marlboro HEETS in Japan. It is a specific market, so that is how you are. I mean, there is a bit of ad valorem component in the HEETS, but roughly speaking, that is the way you should think about it.

**Jonathan Leinster:** Okay. Just lastly, just out of interest, I cannot remember this one from previous presentations. But approximately, what is your current manufacturing capacity for the HEETS? I think at the end of this year, was it not close to 100 billion? I cannot quite remember.

**André Calantzopoulos:** Yes, I would say it is sufficient for the volume we had because, as Martin said, one good thing that happened to us that amongst the slowdown in Japan is the fact that we got time to optimize machinery and process. So they started getting more productivity out of the same machines that we used to have, because for once in their lives since they started, they could stop production on a couple of machines and improve. So we can get more capacity out of existing machinery, and that is why also we foresee that we can replicate this in other places. And we need less capital expenditure at least for the next two years, maybe towards the end of the period. If volumes increase, we need to start increasing capacity again.

**Jacek Olczak:** Up to 100 billion we are covered comfortably. And I still think that what the operations have achieved so far in terms of the productivity output, there is still something they can achieve during this period. So we need to start building this. The second thing is we need to just be careful. When we said that the infrastructure is capable essentially to satisfy the 100 billion sales requirement, at the end of the period when it comes to financials now to the CAPEX, we may need to start investing for the next period, right?

**André Calantzopoulos:** 12 months ahead, you have to make the investments to get the machines.

**Martin King:** And keep in mind also that we have an array of products and that we need to prepare manufacturing capacity and make investments behind a portfolio, and you have to do it ahead of time. So that is why when I showed the CAPEX, I show it coming down. But if you do the math in there, there is still a reasonable amount of CAPEX to handle investments in RRP. And it is against different products. It is against the future capacity needed towards the end of the plan. And there are other investments that we need to make around software and around things like that. So do not just think it is purely manufacturing capacity for heated tobacco units only.

**Eamonn Ferry (Exane BNP Paribas):** Have you seen or heard anything or do you even think it is likely that we see non-tobacco players enter the heated tobacco industry?

**André Calantzopoulos:** That is an assumption you have to take, that there can be anybody that can enter the category despite the fact that I said it is a regulated category. You need to get infrastructure. But our assumption is new entrants can come from anywhere, not only from the existing manufacturers. That is why I said, if we see a promising technology arising, we will be ready to partner or acquire, okay?

**Eamonn Ferry:** And just another one. Cannabis, some of your peers seemed to have softened their stance about entering or not entering the marijuana industry. What is your up-to-date view on that one?

**André Calantzopoulos:** How many times am I going to get this question? Okay, let me make some general comments here. First of all, when you look at our view of looking at business, the priority is to do the work I have to do here, okay, and that is a full plate. Now if you look at any new thing, a matter of principle is, understand the dynamics of this category. Now this category, I do not know much, but it is very fragmented today. It is very embryonic. There is no differentiation. There is no branding, frankly speaking. There would be regulation that is going to come in invariably because it is not an innocuous product no matter how you look at it. And multinational companies, because I see announcements left

and right, have to take into consideration that there are countries around the world that have a very different view of this product. And reputational risk is an important parameter to take into consideration, because we are not only operating in the United States, okay? And in some countries, you can have serious problems if you are in this business. Another puzzling thing for me has been that we have a lot of people in public health and the anti-tobacco, the tobacco control community, that have remained enormously silent about this product. And I would love to hear their opinion on the category. Now having said all that, these are considerations; there is nothing today that makes me say this category is something we should be looking at, okay? Because also, we have many other priorities here, okay?

**Robert Rampton (UBS):** Two questions for me. The first question is in the incremental revenue you expect from cannibalizing combustible volumes, what is the implicit tax advantage that you are assuming? And then the second, if you could share the user economic index for South Korea or tell us how that compares to the other markets.

**André Calantzopoulos:** I am sorry?

**Robert Rampton:** The user economic index, which was provided?

**André Calantzopoulos:** I am not sure I know what this is. User economic index.

**Nicholas Rolli:** That is what Jacek showed.

**André Calantzopoulos:** Okay, sorry. The way to look at this, if you remember, the first hyphen I had, is to say if we look at incremental revenues from 10 billion units, that boils down to 2.9% revenue growth. That assumes current tax differences, okay? If you take 10 billion of combustible, it was, if I am not mistaken, 1.4%. That tells you the difference in net ex-factory prices, by definition, okay? The second thing you need to look at is, we assume today roughly an average of 40% cannibalization. That is roughly the projection. It may change because in some markets, much lower. In the markets we just started, much higher, okay? In Japan, it is obviously much lower. But I assume wholesale there to give you a number, 40%. So this is the number for the HEETS.

Now to that, you should add the revenue from the devices, but if you do the math, the loss of revenue from the cannibalization offsets the incremental revenue from devices, so it is kind of wash today. At current prices of devices, at current net ex-factory prices of cigarettes in the markets we are in, which is higher, by the way, than the average PMI if you do the math. So that is the way I would look at it. So it is a wash today. It does not mean it is going to be a wash tomorrow, but I wanted to give you a rule of thumb. Am I clear?

Now, on the other one, if you would answer because I am not sure if I understood.

**Jacek Olczak:** The index on South Africa?

**Robert Rampton:** Sorry, South Korea.

**Jacek Olczak:** I will not give you because I do not remember.

**André Calantzopoulos:** We can do it offline. I am not sure I got it either.

**Martin King:** The tax is 89% of cigarettes.

**Jacek Olczak:** It is much more attractive but I cannot give you the precise number. It will be in the range between Japan to Germany.

**André Calantzopoulos:** Korea, no, is close to Japan.

**Jacek Olczak:** Close to Japan.

**Martin King:** Slightly lower than Japan. So Japan was 100 to 120. In Korea, it might be 110, 115, something in that range.

**Celine Pannuti (JPMorgan Securities plc):** My first question is on Greece and Russia, especially Russia has seen such an uptick if I look in the months. So could you explain why you think those two countries are doing much better from an IQOS standpoint?

And then the related question is on Europe. You said earlier that you do not expect that you would need to have a moderate price point in HEETS because you may not achieve the same level as Japan. So how should we look at the European market evolving? And especially, you have done a lot of consumer research. How do you look at the duality of availability of the IQOS and e-vapor? Obviously, some of your competitors are thinking that e-vapor is a prevalent form. So yes, it would be interesting to have your view on that.

**André Calantzopoulos:** I will take Greece. And the short answer is because Greeks are wonderful people. They listen to what I say and they do it, which probably will be the first time in Greek history that somebody listened to somebody else. That is a different story.

**Jacek Olczak:** So other than that, I think, yes, Greece is, I think, a more sharing type of a society, not necessarily that they share what they have in their pocket, but they share when they know something. It is not gossiping, they share it. 'I bought an IQOS and I am happy and I will shout on the streets in my village that I got an IQOS, and I am the smarter Greek versus the others, which obviously are less smarter.' And then it pushes the pressure. I think André must have some Greek colloquial expression for these things, but this is more of the Greek nature.

I think also in Greece, we have deployed more of the omni-channel approach from the very beginning, omni-channel meaning that we have, earlier in the journey, talked to the consumers in the different channels, not just the one channel. We activated the converted consumers faster, so the word of mouth trigger, friend referring the first smoking friend, etc. I mean, that paved a lot of way. We use very intensively our own employees, the employee engagement. So all of this created much broader type of a push, if you like, in the marketplace. Plus, there is this receptiveness that once they get into something, they were very willing to talk about this whole thing, and it was becoming as important component.

Russia is a bit of a different story. It is very early days in Russia, you may not recall, but there was growth but they were not great, okay? And I have to admit that in Russia deployment, we did not stop, but we have to rethink and then reorganize and then restructure the whole approach, which we have, based on, at that time, learnings we have from other markets. Russia today is the most digitalized consumer journey, which we have in the many markets. And it not only obviously helps on the costs but tremendously starts creating a better experience across the different touch points in a consumer journey with consumers, and therefore, we have this fabulous response.

In Europe, conversely, we went more narrowly in the channels. So over the last few months, we start activating a lot of more channels in the communications of the product. And you can see this in the results, that the market and consumers are responding if we approach them

from a different angle. Europe is a little bit less digitalized than Russia because we are still unwinding the coach model, which served the purpose at the very beginning, but it creates a lot of bottlenecks and scalability, etc., okay? So I think the markets, which are now in Europe, it is not obviously a block type of a deployment. But markets in Europe, which went faster to liberate themselves from a coaching model and were more with the omni-channel, you could see how the progress they make. And the other markets are growing but it is a very linear type of a progress rather than something closer to exponential, so that is the differences.

I think when we talk about these learnings, we have these questions about, we even ourselves use the language in the next markets, we will apply the learnings. At retrospect, I have to admit one thing. Learning over one or two or three months, we think we are very excited that we learned something. It is not really the true learnings. The real insights are coming when we can have a longer type of experience in the market, have a lot of data sets coming from the market, and then start really concluding what was real, what was important and what at face value appeared to be very attractive, but at the end of the day, was not making a difference. So that is essentially the difference. We will have these differences in different countries. There is a correlation with more condensed type of a geography from density of population as it is obviously more helpful because the faster others can see people using the product.

I didn't show Switzerland, just for the purpose of time, in Switzerland, the progress is there but it is very slow progress. But it is difficult to find three people together in this country, right? There are always two people up behind the mountain. You do not see the people, right? If you go to the places like in Japan, we had initially, right, it does not matter. We just went to Nagoya and other cities, you immediately see a lot of people, okay? In Greece, they are very dispersed. But anyway, they talk to each other, so it does not matter where they live. They will gather at the one place, and they show it. So yes, we have these differences, and we also factor this in into how do we deploy this whole thing. Creating this first critical mass and giving a lot of assurance to people who are interested, they would like to try it. But I am not comfortable, right? I am not that person who is the first to bring the new trend, to change the color of the t-shirt, go over the fashion, etc. We need to somehow facilitate this trend. We will have these differences in many places.

**Josh Harrington (RBO & Co.):** I had a couple of questions relating to your organizational structure, so maybe this is for Jacek.

**André Calantzopoulos:** I am also involved with the organization, with all due respect. I am joking.

**Josh Harrington:** You are first Andre, always. A question about moving to a project-based organizational model, and what that means and what the rationale would be for that. And then the second one would just be what sort of metrics do you use for compensation at the regional and country level?

**Jacek Olczak:** So I will start with the first. It is a very good question actually. I should have talked about this, but I could go on and on with this thing. So combustible business has been around for the classical legacy type of structure, what they call, which is highly functional, right? So you have marketing, you have sales, you have finance, you have whatever, right,

back office, front office, that is very functional, which, it is obvious to handover points between the functions, etc., becoming a pain point. You can live with this whole thing because your cycles are different, right? So you can have more time to reconcile, the projects are take longer time, etc.

Markets, actually, today as of beginning this year, so February almost, are adjusting the structures RRP markets, okay? They are adjusting the structures to reflect the consumer journey. So we end up with essentially at the market level that you need to have a set of skills, which has some functional label. So I need the people who are finance, who are legal, who are HR, etc., but I have to organize them along what we really have to deliver, which is the consumer journey. And essentially, you realize that the people are being mixed naturally along the projects, which are to address the specific opportunities or pain points which is coming out of the consumer journey. So functional structure, which nominally we would directly would go today to our organic grounds, you still see dysfunctional structure. You go to the places like Japan, Russia and many others. You realize that the way people work is completely different, okay? They do not follow that, first, I cook something in a function, then I link it to another function then I have a product simultaneously is being generated, because the deal is that I want all competent people who can answer my questions over that decision. It can be implemented or not at the moment when I am discussing this. So it is not this handover from function to functions and everyone added something. They have to finish the complete project, the complete product, being a service, whatever, which is deployed at the same time. So that is project-based organization.

We will have to address the way we are compensating people, okay? We know, this is in our agenda. Today, all of us are being compensated by the same metrics essentially that the company is being assessed, okay? So we have all the targets, which are well known to you. They are disclosed in the proxy statement, and it cascades through the head of the regional business unit, okay? However, now when we go to the market, we will have to start recognizing that the different people should be rewarded for the different things because there have, simply said, there have to be more consumer metrics because this is what they are really doing rather than just the pure global type of a PMI financial metric. While achieving the consumer metrics, they will achieve inevitably the financial metrics, but the things which they can then self-assess, have I done my job properly or not, is the consumer metric. On a combustible business, this was okay to say you will be held accountable for share of market. Where exactly the share of market is coming from? And then how do I know the total market, okay? How do I know that what I have done really contributed to the total share of market, or the given brand or the total company. On the consumer type of the journey executions, I know exactly who has contributed to what experiences. We are searching for the consumer feedback at almost every stage of a consumer journey.

So I am in a continuous and constant dialogue with the consumer and I see, is it the pain point I am addressing, how fast I am addressing, how I should reward people for this. The sum of these parts is giving me my volume and, ultimately, the market share, revenue, etc. So I hope I answered your question, but this is something which we will have to still address, but this is not that important at this stage. It is the most important that the legacy structure, especially in the RRP markets, will start transforming into the structure with the backbone of the structures, consumer journey. The only reason why, frankly speaking, I have the

infrastructure in the markets now is to deliver consumer journey, right? So allow consumers to learn, to find, to try, to buy, to love it, to recommend, etc., however you interpret this. Everything else does not matter, and there is no single project which should be allowed, which does not have a relation or direct impact on my consumer journey. And my people should be allocated accordingly behind the different steps, if you like, of the consumer journey. The legacy structure of the combustible business is a legacy structure. It cannot hold this one because there is no consumer in a center, right? So we are trying to mobilize everyone. That is the consumer in the center, including, by the way, centrally – Mirek's product development team. Everything is now with a focus on the consumer.

**Mark Husson (Cedar Rock Capital Ltd.):** I wonder if you could go back to the vapor question more broadly, because there is a perceived price per stick advantage that vapor has. And it is almost certainly true that they have a tax advantage because tobacco will always be taxed, or something like tobacco. And the other thing is, the two sectors are sort of separate, but they rub up against each other, and they rub up against each other in the consumer's mind when you think about that. And we did hear from another player the other day who made a virtue out of having weak market shares in the combustible market. So as they launch their vapor products into markets, they would have less cannibalization, which is one of the issues that you have to deal with. And almost all the incursions from vaping, if you like, not just from the major tobacco company but others, do not have this incumbent issue or will not be having to deal with cannibalization. And also, they have probably a freer hand when it comes to price points as well and it is still a more mobile area of the marketplace. So that is kind of a very long question. But maybe you could talk about the UK, for instance. It is a very strong vapor market. You have IQOS in some parts of the UK, and I just wonder what your learnings are from trying to get people to take up the habit there.

**André Calantzopoulos:** Just a general answer first. I do not think there is friction between the two categories as much as people want to depict it. These are two different products. If you drink wine, an electronic cigarette is water with alcohol with a little bit of perfumes inside. IQOS is a diluted wine in terms of performance. All contain the same amount of alcohol, but it is not the same product. And even the alcohol delivery, you need a lot of volume in the vapor product. I am not saying that they will not improve. Maybe they get to beer, but for a wine drinker, it is not necessarily the answer. The work we are doing on any vapor products, because we think the category does exist, that can be expanded and be supplementary is, first of all, to deliver a technology that vaporizes better, but most importantly, is reliable and repeatable because it is automated in the manufacturing. Do not forget today, the electronic cigarette market has been rather free. It will not stay like this. It will be regulated. So having technologies where you can manufacture, not only reduce your unit cost, but you can demonstrate your aerosol is always the same from beginning to end is important to have. The second is to improve the taste. The UK is probably the market with one of the highest propensities of people to look for alternatives for all the reasons we know. This is not the case in many countries in the world.

So taste still plays a role in the immediate conversion of people. And I still need to see, including in our own pipeline, a product that can convert 70% of people out of cigarettes that is not containing tobacco. And I think we have researched electronic cigarettes even before the named competitor even thought that this category would exist, okay? So everybody is

trying to sell things, but I think we have expertise in certain areas, and we know how to produce these aerosols and liquids. The reason – I repeat myself – we did not put them out as IQOS at this stage is because I do not think we can call it solution, or the form of non-Chinese solution we had was sufficiently good. We cracked the code, but I do not think we will ever come to the taste of a cigarette as close as IQOS does. And if you talk to consumers, even IQOS that is very close, they complain about the taste. And the taste will never be the same by the sheer fact that you remove the carbon particles and all the carcinogens from the taste. So we will never match, we need to convince people to make the effort. Their effort is higher, obviously, with electronic cigarettes but is not insurmountable, okay? The proof is that there is a lot of people that did switch 100%, but there are a lot of dual users, a lot. And it is better than only cigarettes from a public health perspective but not sufficient. So I think these categories are there to exist and that is why I said we can compete, okay?

Now, the lesson from the UK is, IQOS is a very slow progression because it is impossible for a tobacco product to talk to people in the UK. Electronic cigarettes used to have total freedom, now it got more restricted after the European Union regulations, but you still have a lot of freedom to communicate, okay? So we have not seen big IQOS progress – we're only in London by the way, okay – but it is a bit slower. Now, we also have this product on the market and we will learn and we just put it on the market, so I cannot give you any serious feedback on how it performs. But for us, this is the beginning of the journey in electronic cigarettes. And I think we will continue improving this product. That is the idea we have. You are right, today, there is a difference in taxation, but I would not say because it is a tobacco product, we stay like this forever. I mean, to Mirek's point, the departing issue would be, okay, this is not cigarettes and we start decreasing. It should be zero, and we probably add something more based on the risk continuum. Now, this may be wishful thinking even over time for electronic cigarettes, okay? But as I said this morning, do not forget that as the category started, and I saw some mention from the competitor you mentioned that they have to normalize trade margins, this is not so obvious, okay? Because what happened is that with 30%, 40% trade margins as opposed to 14% in the UK for cigarettes and 10% worldwide, essentially, you introduced an ad valorem taxation of 30%, which does not go to the government but goes to the key accounts.

And I think why we have been very successful with the heated tobacco category is, because the industry established it, is to get the margins where they were, and I think that is not a small achievement. So, in a nutshell, I think there would be competing products. I know everybody has in mind JUUL here. I said it this morning. JUUL is the first e-cigarette that does marketing, okay? Some of the practices, we can discuss, but there is no technological advantage in JUUL, okay? I mean, anybody can produce the same. Actually, there are lot of launches in the US now that go along lines of higher nicotine. I think over time, as we move people out of cigarettes, then once you move to a lighter product, there is maybe space for e-products and even pure nicotine like P3. And in markets where there is this evolution, clearly, we need to compete differently or for moments in the day, as Mirek said. I can use IQOS, but in certain situations, I can use a pure nicotine product or I can use e-vapor products. So we are developing a portfolio to cater to all these needs, and that is what we are doing. And then everybody competes on technology, on science, on everything. That always enters the equation over time.

**Timothy Gamache (JPMorgan Asset Management):** Going back earlier, I think, five or six questions about the margins and incrementality and the upside, and I share that enthusiasm. But I just did not want to overlook that, on a reported basis, margins have not been going up as quickly. In recent years, foreign exchange is weighing on things, of course, and obviously, investments this year. And then coming out of Q1, there were lots of questions which you have to increase the \$600 million of incremental investment, right? So with that as sort of the backdrop and thinking about the downside and just trying to get your mindset, so I may lose you on the analogy, but in Ryder Cup golf terms, if I shot right down the fairway on the tee is the upside to the 5% and 8%, and then in the rough is the variability you are talking to for André, understandably so, and there would be some, and then there is some in the woods scenario, a combination of consumer and competition, excise, foreign exchange, government regulation, whatever it may be. Is the idea still to go for the green in two, and to go after that aspiration of a smoke-free future to manage the hole, shall we say, for shareholder returns near term? Just trying to get your mindset so that we can lay that one to rest.

**Jacek Olczak:** That is a very, very colorful way of asking the question. If you were a consumer-centric person, you will realize that none of us here plays golf.

**Timothy Gamache:** I could not come up with a Ferrari one, I am sorry.

**Jacek Olczak:** The only guy on the podium here who finds some time to play golf is Nick Rolli.

**André Calantzopoulos:** I said I believe this is what the future is. Now, we are not religious about the speed. We are pragmatic. If we see slowdowns, we adapt, okay? If your theory is that I am going to throw money endlessly and mindlessly for something that you hit walls, this is not going to happen, okay? We are real people here. But, I should not underinvest either. So the whole effort we make here is we do reasonable things. Do not forget that some of the investments we make help the business globally: organizing across projects, digitalizing internally and into consumers, interaction with priority to consumers, automating what you can automate. It is a golden opportunity to do it because also, to be frank, from an organizational perspective, that is the rally cry. We should have done it before. So it – whatever we go and do in the future, at whatever speed, this is helpful. Yes, it takes investments. You are building digital infrastructure, here is the gentleman here. You need to spend CAPEX, you need to spend money, you do not do this for nothing, okay? But rest assured that we do this with determination, but with pragmatism, okay? But I think the opportunity is there. Now you can think of 1 million calamities, including trade wars and everything, but that is fine. I mean, I think we have demonstrated sufficient flexibility in our history, and I know this is a worry because it is new. It is uncharted for you. It is uncharted for us. We all understand that. But there is always a flavor in the month of your worries. In the past, it was plain packaging. And before your generation, it was advertising restrictions. It was tax changes. Now it is JUUL. Tomorrow is God knows what. I mean, that is what business is for everyday guys, okay? You prepare the organization. You have adversity, otherwise, you would not pay me and this team here the money you pay me as shareholders, because if it was a breeze, probably anybody would do it. Let us be real, okay? But I have to do the organizational changes because these ones will serve us in whatever we do, and we do not spend money mindlessly. Maybe I would say not always, especially in the current

situation, the most optimal way, but sometimes optimization can come after, and that is what Martin was talking about. Now we can optimize certain things.

**Michael Lavery:** I have a question on the patent infringement lawsuit. And I just want to understand if you were found successful, if there is infringement that is found, would an injunction apply only in Japan? Or would that apply more broadly? And then a little bit related, are there any other cases against other products that maybe haven't been announced publicly?

**André Calantzopoulos:** As a matter of principle, I said we will defend our intellectual property, and I will not comment on ongoing litigation, if you do not mind, because it is ongoing now, so we generally refrain from that. But in whatever country, at the right moment, we will defend our intellectual property.

**Chas Manso (Société Générale):** A question on Europe. From your earlier comments, you are sort of saying that Europe has to pull its weight more in the RRP model for you. And you also mentioned that you are shifting from a sort of coaching model to more omni-channel, and that is beginning to pay dividends in Europe. But is that enough? What are the other major step changes you need to make in Europe so that it can pull its weight? And really, could you talk a bit about the big five European economies? How do you make a step change in the penetration in those? And how free are you to be truly omni-channel, given the regulation in Europe?

**Jacek Olczak:** Well, I mean, it is similar to the Italian sort of almost singular type of a channel and then you will have Spain and France that I think, we will focus now on Spain and France as we speak or kind of next year. I think we learned a lot from Italy we can apply. There is the difference in the countries: more and more countries are recognizing a product that is different to cigarette. But what we are missing at this stage, and this is needed from a consumer right-to-know perspective, is how can you change my ability to talk to a consumer, and this is very important in activating more of the omni-channel approach. So finally, we have discussions. I mean, there is ongoing dialogue of the regulators, the governments in a number of countries. I mean, we all have to finally solve it. I think it is needed.

I mean, it is the logic of why we should be able to talk about the heat-not-burn or IQOS in a different way than just because it is tobacco. So the whole legacy type of regulations, frankly speaking, are still governing IQOS. At the time when they were drafted, people said all tobacco products are equal. As I said, it is the differentiations on the product and then the regulatory regimes when it comes to the marketing type of regulations, what we will have to follow. And we will have different speeds at different places. But as André also had in his presentation, you have more and more evidence that there is scientific bodies in this country or the scientific parts of the regulatory bodies are first testing the product or validating the claims about the product, etc., or verifying the claims about the product, and do recognize, yes, it is a solid science, the product is different. It is better than cigarette. It is going to take time. But I do still believe that purely from a consumer perspective, I can repeat something to you seven times and you will remember what I said. If seven people repeat to you the same things one time, you will not only remember what I said, but you will build credibility around this, and that is your omni-channel. So I can intensify the repetition of the messages to the consumer, but I cannot add on the credibility of that thing because it is coming too much from narrow places.

And if you take consumers today, unlike maybe 20 years ago and if they are coming to the shop, shop is becoming so much transactional, even the things which were not considered as the convenience type of shopping in the past, I mean, today is rather inconvenient. Your time in a shop is 20 seconds, 30 seconds. This is your ideal, if I am not talking supermarket. And you are not going there to learn anything new. You go in there because I want to fill your basket, go through the checkout as fast as possible and get out of the place. So if I am constrained into this channel, I can deploy my people, I can deploy my communication, but I know that I can use 20 seconds, maybe 30 seconds at best for the consumer attention time. My people can approach the consumer in the convenience store and ask the most irritating person in a convenience store, 'Do you have five minutes of your time?' Nobody has five minutes of their time. Therefore, they went to the convenience, they wanted to grab something and get out. And my well-educated, well-trained people have an opening statement to say, 'Excuse me. Are you adult? Yes. Are you a smoker? Yes. Do you have five minutes?' Nobody has five minutes in this place. So we need to unlock this one because otherwise, we can make a progress, but we cannot really push it to the level which we wish to push it. So this is the work. In some countries like Germany, etc., yes, we have more sort of freedom, but also not the entire freedom.

The channel is technically open, but the content in the channel is still very much restricted, okay? So we will have to keep on unwinding. I think very important is that, yes, there is a science. It is a verifiable science. We keep it open. We share it, use a lot of scientific engagement. And people taking emotions out, okay, is it tobacco, they understand this is different tobacco, it is not the same tobacco. And therefore, you start pushing on these things. I think during this three-year period, you should see also the markets which are fully recognizing a difference of the product, difference in terms of entire package around that product. So it is not that the product is different because it is not combusted. The product is different, therefore, has a different taxation. The product is different, therefore, it has a different marketing restrictions, and so on and so on. And then you have a full set of regulations around this product in comparison to the combustible product.

André mentioned UK, I mean, it is a very convoluted, illogical completely type of regulatory thing. E-cigarettes can say here this. On e-commerce, on the internet they cannot. IQOS can say this on the device, but on a consumable cannot say this because it is the tobacco. Everyone tries to squeeze the management or governance of this category, into the legacy legislation. Now, this legacy legislation has been developed decades ago when the people were not even dreaming that you can have alternatives, and definitely not that you can have safer alternatives. It was not in anybody's mind when they were drafting this legislation. But now we need to unlock it and say, 'Listen, this is what is the right thing to do.' Consumers should have the right to know that there are better alternatives to smoking. If they cannot quit, they should try one of these products. I think it is becoming, in many places, essentially immoral that consumers do not have access to this information.

**Timothy Gamache:** Sorry, I just had two clarifications on Mirek's slide number nine, which was the first ever in vivo lung cancer study on smoking in mice, A/J mouse, A/J. I may have missed this, but just on the female mice, what is the IQOS low, medium and high?

**Manuel Peitsch (Chief Scientific Officer, Philip Morris International):** So that is the dose. That is the concentration of the IQOS aerosol in the test atmosphere, okay? So the

3R4F, which is the red bar, is the cigarette smoke, and that is delivered at the equivalent of 30 cigarettes per day. The low is 15 for the IQOS, the low equivalent to 15 cigarettes per day, the medium equivalent to 30 cigarettes per day, and the high is equivalent to 60 cigarettes per day. So in other words, it is always a doubling.

**Timothy Gamache:** That is helpful, thank you.

The other one was related to that. So there is a California-based research activist who is making a big deal about the original TPSAC submission. It was in a human study, I believe, about statistical significance relative to 3R4F, I believe, saying that only a few of the metrics met that at the time. Everything looks relative to air. This was one of the things that I was noticing. Is there a way to change the discussion? It has to be a statistically significant comparison to 3R4F? Or is there some way to say, 'Look, this is almost as good as air?'

**Manuel Peitsch:** So toxicological studies follow a certain guideline. The OECD guideline, in this particular case, we are talking about testing guideline 413, which is for 90-day subchronic inhalation studies. And these guidelines give a very clear framework in which you actually run these studies. So there is always to have to be a dose response. You always have to go to the maximum, just sub-maximum, tolerated dose so that you actually see how far you can push the exposure, okay? And in this particular case, as submitted to the FDA, studies where we compared those three doses of combustible cigarette with the three doses of IQOS aerosol, it is always a sham control, sham exposure that means exposure to fresh air in every one of those studies, okay?

So let us put it this way. The way some of those things are being published by the University of California is to basically take our reports and look for things that are different or higher than, for example, air, and then report them as singular events and make a big story out of them. In the two particular publications, one was about liver toxicity, they call it hepatotoxicity. And the other one was about lung inflammation and immune modulation, okay? In both cases, it is a cherrypicking of data from the highest dose of cigarettes of IQOS aerosol versus the medium dose, which is basically the highest dose of cigarette smoke. In the rat studies, the highest dose of IQOS aerosol is over 100 HeatSticks per day. The medium dose corresponds to therefore roughly 50 HeatSticks per day, which is equivalent to 56 per day, which is the highest tolerable dose for cigarettes. It cannot go higher with cigarette smoke. With IQOS, you can go higher. With cigarette smoke, you cannot. And then obviously, the next low dose down, it is at again half and half and half, okay? So a lot of the approach they have taken is to basically cherrypick the highest singular events that are not part of the dose response. Why do we do dose response? Because if there is an effect, the effect should grow with the increasing exposure dose, okay? And if they do not, it is a singular event that is part of biology because we are not machines, rats are not machines and we have a little bit of variation. There you go.

**André Calantzopoulos:** That is called, in science, studies with confirmatory bias.

**Adam Spielman:** So very quickly, under existing rules in the EU or the big EU markets, can you use digital engagement?

**Jacek Olczak:** In a different forms, in the different markets, yes. In many places, we can use the e-commerce either for the devices or for the devices and the HeatSticks, okay? Definitely for the devices. And then the digital engagements, there are different forms, either

I can use the web and I communicate to the consumers with a different form of a branded, unbranded content. Once the consumer is coming to my assets and registers with me, age-verified obviously, he is a smoker, etc., and I have the consumer then on my site with the consent that I want to receive, I want to learn more about IQOS, then I can start taking these consumers with a digital conversation, which is out of the public. That is one of the dimension. In most of the places, we can deploy the customer care services through the social media. So not using this by any marketing type of the things but if the consumers wants to, I do not know, have a questions, my device does not operate and when can I ask for the replacements, those sort of the things, we can enter into these discussions. It depends on the country regulations. We will take it into the private discussions. But I mean, at digital, in the sense that they are classical digital conversations, which we have.

**Adam Spielman:** And I suppose the other question is, baked into your assumption, the question is, as you think about the guidance you have given, the incremental 50, of which a lot has to come from Europe, are you assuming any movement in regulation at all? I mean, are you baking in an assumption that some government somewhere will be rational in your language? Or does this assume that they will maintain their current policy?

**André Calantzopoulos:** Well, as I said in the projection, we assume no positive intervention. Clearly, there is differentiation in the excise tax systems, that is clear. But we assume there is no accelerator today other than what we do or competitors do for the category. I want to be proven wrong, but that is the assumption.

**Matthew Grainger (Lord Abbett):** I wanted to go back to the part of the presentation where you had your eye on the ball.

**Jacek Olczak:** Which slide?

**Matthew Grainger:** The one with the ball, where your eye was on the ball.

**Jacek Olczak:** There are two slides with the ball.

**Matthew Grainger:** Either one, the general concept. So you walked through a lot of your established markets in the combustible business, the bigger profit pools. You have competitors have that have been spending more aggressively to build their business in emerging markets, that are at much earlier stage of development even from a combustible standpoint. I guess I am just curious, given the company's current strategy, the commitment you have made to reduced risk, public health, where does that type of strategic activity fit into the broader framework?

**Jacek Olczak:** Well, if I understand your questions properly, if I get the choice today to invest in a market where I am very small in a combustible business, would I spend the time today to continue opening that market for combustible portfolio or go straight with the IQOS portfolio? The answer to this is very clear. I would not waste my time for a combustible portfolio. So in a sense that from a geographical footprint perspective, I have what I have, I leverage what I have, but I do not see the route to the market by building the infrastructure and the presence in the market for combustibles in order later on to leverage that infrastructure for RRP, for me is very clear. I think it just does not make sense from any perspective. From what we are after in terms of the mission, vision of the company, and frankly speaking, because economically, it does not make sense. I have a much better

solution for the existing smokers in these places than any alternative combustible product, the existing product. And I think I should stay very focused on executing that strategy rather than bother with the combustible products.

**Matthew Grainger:** Okay. Just as a follow-up, when we think about your resource allocation and how the business is going to evolve over the course of the next several years, from a volume perspective or from an investment perspective, I guess, is the implication there that your business mix is going to gradually skew more toward developed markets or OECD markets?

**Jacek Olczak:** No. No, I know what you are after. No. I mean, we are working on a solutions also for the, let us put it that way, developing markets, which is solutions with regards to the product but also, solutions with regards to what solutions do we have for the trade? We have a number of the markets, which they have consumers are buying conventional combustible products on a stick basis, right? So we will need to find the solution how to address that sort of consumer actions or interactions with the product. So we are working on this thing. We are not leaving the developing markets who are underinvested from today's perspective in combustible alone. I mean, we have a plan and we are working on a strategy in Drago and Stacy's Regions, we are not giving up on those markets. But we need to work out the proper integrated plan, solutions, etc.

**Jonathan Leinster:** One, just going back to the regulation, the hopes that some of the European governments would change regulations. But has there been any movement in the sort of WHO or FCTC views in the sort of debate between harm reduction versus quit or die, given the scientific evidence?

**André Calantzopoulos:** Well, it is a slow move. But, I must say, on purpose I showed the slide on the war on the tobacco industry today and by WHO some time ago, actually, the convention for tobacco control to be precise. I think sooner rather than later, we see some signs, we recognize that just an adversarial or negationist position is not helpful and eventually removes credibility, okay? So what is happening today, to be frank, is still we have entrenched positions and, I would say, very strong criticism of people who tried to articulate positive views on these products. Now, that is a certain quarter. And to me, this is not sustainable, because at the end of the day, you can dislike profoundly Philip Morris, and that is okay, but you cannot play with consumers. And I think it is about time that people in the tobacco control community, or at least the ones that are still extremely skeptical about these products, they start putting the interests of the people who smoke in the center and not their own ideology and beliefs.

I do not think ideology has changed anything in the world and we have many examples of creating adverse effects. I think the confusion created regarding electronic cigarettes and regarding many other things, or the confusion that there is attempt to be created regarding IQOS, as the discussion we had between Manuel and you previously, I do not think that serves anybody. And I think people sooner than later will realize that they are going against consumer interests. And that is our job, to continue repeating and demonstrating that, that is the case, okay? Now, unfortunately, in some places, that influences government because they are also a little bit scared to come out and take positive positions. But we see the situation changing, okay? So our job in terms of our communications is not only to clearly outline the scientific base we have, but also kind of call and start calling the things the way

they are. I mean, in my career, I had many people saying, 'You must develop better products because your products cause disease and premature death,' because they did not believe that we will produce them. Once we produced them, they started saying, 'You know what, I cannot believe your science.' Now that the science becomes more and more evaluated, we move to, 'Oh, now I have, your marketing is aggressive.' So we go full circle we went for cigarettes. And I think it is about time we stop this nonsense.

**Jonathan Leinster:** And secondly, just being a bit more specific. I think you mentioned earlier that regulations had to change in Turkey and the Gulf before you sort of went in there. What specifically needs to change?

**Jacek Olczak:** As I mentioned, it is the communication aspect of the thing. So you will recognize that the product is different than the cigarette, and we can find that this is better than cigarette. How do I now fulfill my and everyone's duty that the consumer should know about? Many tobacco regulations are based on the fact that you cannot indicate that the product is better, right? You remember the descriptors, which were supposed to be misleading, all of these things in many legislations have been addressed. So if IQOS, in this case, is treated as a tobacco product, then I have a product differentiation without an ability of recognizing this at the communication regulations. I still cannot say that IQOS is better than cigarettes. So we come to the fact that everyone has established IQOS is a better alternative for adult smokers who cannot quit to cigarettes, but I cannot compare it to other tobacco products because the marketing regulations are not adjusted. So this is what has to happen.

I think it will happen, because it is just the fact that the moment when you recognize it as different, you will recognize it as better, you will confirm it as better. So what is in it for the consumer if I cannot share it with a consumer? And that is the big change. Now once they embrace, the regulators in a different country, truly and fully the concept of a harm reduction, then is the question, what is the role of a regulator in promoting or dis-promoting one category versus the other? And here comes the whole concept of a supply/demand measure, the taxation, etc., because there is a role for regulators to accelerate the change. You know it very well. There are product categories, which were found over a period of time to be bad, whatever was that bad from a public perspective; take the example of light bulbs, right, the life bulbs.

And over not many years, I mean, the regulators initially in the US and the EU have said, 'Okay, there is a technology, different technology among different manufacturers, but there is a technology which can replace high energy-consuming light bulbs with low energy-consuming light bulbs. And instead of waiting until consumers with some benefit savings, etc., we will move into that category, US, EU and followed by essentially many other countries outside these two blocks have passed the legislations, which was a hard ban on the sale of the higher-energy consuming bulbs. You get the same things in asbestos in the past that the moment when you had the viable replacement for asbestos in terms of a material when it was used, you ban one and you allow the other.

So this is just a very drastic but maybe it is also necessary advanced stage of this market intervention of the regulators. I know now that there is technology. I am sure that the technology is better than a previous technology. So in order not to wait now for reaping the benefits of harm reduction over 20 or 30 years, why do not I just cut it short and then

introduce that legislations three years from now? Always start gradually, maneuvering how much more incentive I give for the people, whatever this incentive is, to move to this product rather than stay with this product. I think regulators will know it very well. They have a lot of strings which they can pull in order to accelerate certain consumers' behavior. But to start with, this is all nice and beautiful, but until we have a full freedom to inform consumers about what is this product versus a cigarette, we are going a little bit in a cycle. And I am not talking of advertising a lifestyle type of that thing, okay? I am just talking the basics. Can I go and tell consumers, 'Look, this product is better than cigarettes because of A, B, C, D, okay?' And this is not a risk-free product. I mean, that has to be communicated very clearly to consumer as well. But it is not risk-free, but it is vastly better than what you are using today and therefore, make your decision. And the regulators will come to this thing.

Look, we have the developments. Many of you recall, it is a very small country so not maybe a lot of people are paying attention to New Zealand. New Zealand initially, the Ministry of Health came after us saying, 'You have to take IQOS out and this is not allowed because any form of other tobacco products are not allowed in the market.' We ended up, unfortunately, in the court. I mean, these things should not end up in a court, they should end up in a normal dialogue. We ended up in a court. The judge read the law and they agreed that, 'Sorry, this legislation was designed for a completely different purpose. The alternative tobacco, and the legislation's design, was purely for promoting other forms of a combustible type of a tobacco with all the consequences.' So fine, regulator was right. I do not want to have a proliferation of alternative to something, which is not great, which is not good, which is bad.

And now the court took the position that this product should be treated completely different. So you are abusing a definition or the purpose of the legislation. And actually, reaction of the Ministry of Health from New Zealand was great because they admitted, 'Yes, we have a different product and we have to deal with this differently.' Okay. I am hopeful they will come up with a good solution for the smokers in the country, in New Zealand, while recognizing, yes, there is a tobacco product but we recognize a completely different product. It is not combustion and there are consequences of being not combustible products and on top of this they have a dossier, they can look into our files. And I see it is not just the claim, it is a substantiated claim, okay? So they are not really making decisions with a lot of risk-taking. The risk is vastly mitigated by the quality of the science which the product has revealed.

We have countries which some, as André used the word, is a lot of ideology into this whole thing. But I think over a period of time, the normal reasoning behind how this decision should be made will come. I mean, you cannot deny the science and there is a modern science, and soon we will be confronted, hopefully, with FDA decisions. And from now on, the issue is becoming, we have a product and we cannot talk about this product to consumer. This puts us and everyone into very difficult, even from the moral, if not also legal, perspective in some countries because it is unlike in the past that you have alternative; alternative was not existing.

Today, do I have alternative? Yes, I do. Do you know that this alternative is better? Yes, I do, because I invested in science. So I know that I have a better alternative. So can I talk about this? Because there are people who continue smoking. And maybe today, they would

already move to this product if they cannot quit. We are getting over, I think, the next few years, you will see that this moral dilemma, which is created by the ideological approach by others, will start backfiring on them. And we cannot just say because we are not allowed, we will not fight for this thing. It is our duty to fight for this thing because we know what that product is, and we have an absolute duty to inform, with whatever possible means, every consumer in the world, this is a better alternative to smoking. That is the responsible marketing of this product, and not that because they did not allow me so I enjoy my combustible business. No, because I know I have a better product. Why are you forcing me to continue selling the product which is worse because this is the paradigm which we start operating.

**Chas Manso:** As a follow-on to that, is there an argument maybe for you to try to get FDA approval, modified claim approval or just the premarket approval for MESH or vaping products in that market, which would give you credibility outside of that market and maybe force the issue even more?

**André Calantzopoulos:** Well, we obviously will do the work on MESH, okay? We have done a lot of work with MESH already, so we are preparing the data set that can do this. Because you are right, today, nobody has ever submitted a comprehensive file on any vapor product anywhere. So there must be a premier and we will hope somebody else will do it once. But in any case, we have to do a due diligence, so it will be done.

**Chas Manso:** Okay. Sorry, and a second question on Japan? Yes. Japan, so you were saying earlier that you are suffering dilution because the product quality of competitive products is not as good as it could be, but you are not focused on market share. You want to drive the category. But they are diluting. Why cannot you do both? Why cannot you try and get some of that share from disgruntled consumers of competitive products?

**Jacek Olczak:** I do not want to leave the impression by the means that we are not focused on the market share in Japan. But by focusing on the market share in Japan, the share will not grow. The market share in Japan is coming from consumers who decided to buy my product and fully use and more and more use my product. That is the path to my market share. So this is what I tried to demonstrate in my part of today's session. So do not misunderstand me. This is not true that I am not focused on the market share. I want to grow that share. But the path is for the consumer. When we talk about the product, we have to be very careful. We had a product defect, which were from the user interface perspective, not from the quality of the vape which the consumer was inhaling, okay? So we stay very focused on the safety of the batteries, etc. By the way, we did not have incidents that our batteries have exploded because we pay a lot of attention that this is going to be a safe product.

So everything which would endanger the safety of the consumers and the risk profile of this product was absolutely addressable. We never compromised in any single moment in Japan on this. We did have problems with the user experience, user interface type of things, which were exploited by the competition, fair enough. That is the 3.0. That is the 3.0, that is the 3.0 Multi, which is coming in the pipeline of the next product. The core engine today delivers unbeatable experience compared to cigarettes for everyone. Ploom or Glo does not have even close to the conversion and definitely the consumption rate. What is happening is that when a consumer for three years essentially, almost, was left only with IQOS, especially if

you talk to the group of innovators and early adopters, and then comes the competition with claims, 'I am better than IQOS,' okay? And the nature of those people, of that early cohort or that people is, 'Yes, why don't I try it?' It is very obvious, right? I move to the category. Category was the single product. I want to try other products.

Now, when they try other products, it means that they cannot use two products at the same time, right? We do not have consumers like this. It is either they use this or they use this. So if there was a moment during the day when I said, 'Okay, I try the Ploom, I try the Glo, etc., obviously, at the time, they have to reduce the consumption or they do reduce the consumption of my own product. So I think we said it already earlier this year that I think the estimate for Japan is we might have lost in this dilution about a stick per consumer on average. On average, it does not exist but that is the calculation. So yes, we can get it back. I think if IQOS starts addressing some of the reasons why they went – one of them was consecutive use, etc. – I think we can regain from existing consumer base. It should be the accretion to the volume and obviously the share, etc. So we are after share, I am after share, I am very competitive but I understood one thing. I cannot move the share if I do not move the consumer. So I need to go back who is deciding how to use, when to use, into which extent use the product. Direct the resources, address the consumer, and then the whole thing is going to them. In a combustible business, it was a shortcut. We could talk about the shares and everything was in, and we did not have to go into the details of this whole thing for you in this business, not that we have the relations directly with the consumers.

Today, I know that this is a consumer by consumer, and you need to unwind the consumption if this is leakage to the competition because there were reasons why they are using competitive product rather than my product at a given time.

**André Calantzopoulos:** Look, I think, overall, it is what I tried to outline this morning and Jacek as well and everybody. As an organization, we are learning a number of things every day.

In Japan, the first thing we had to do this year was to change the way the organization works. That not somebody is satisfied that IQOS has a defect and we deliver within 18 hours the new product and that is perfect service. Mirek said, modern marketing anymore is not about putting about some poster somewhere, some advertising on TV. It is about every experience the user has when they interact with your product or with your assets, your stores, your shops, your everything. And for that, you need the focus from the central organization and that is what Mirek is doing, but also the executional capability on the market because it is impossible centrally to regulate every detail.

So when you put the team and you tell them, 'Now I want the consumer to have access to a replacement within one hour, that is a project.' Looking at the consumer perspective, it is a completely different way because if I am sitting in logistics and I sent Uber – there is no Uber in Japan – to deliver the product, it is a lot of money in my P&L. But if I look at the consumer lifetime value and the cost of acquisition, it is a peanut. So we are trying perspective in the way we work. And I think as we enhance user experience, we learned the hard way – because I must say we have disappointed a lot of people with the problems in Japan. Actually, we pissed off a lot of people. And it is a miracle that some of them stayed with the product.

Now we fixed the issues, but we did not do the right things to constantly be in contact with them. So we learned from that, and I think as we enhance the user experience with the new products, and also, by the way, we execute at the different touch points with the consumers and their assets, clearly, you differentiate yourself from the competitors. I said this morning, IP is a very strong foundation and we will defend it, but user experience is a competitive advantage. And I think we are ahead of everybody else in this field. We know the core product, we know the technology and we have the science. What we need to perfect as an organization is this user experience, which Amazon is after and all the companies that were native into this category from the beginning. And that is an endless process, it is not a thing you finish. It is a journey constantly.

So once we get to this point and we are trying to get as fast as possible, be it in the European Union or in Japan, I think naturally, the differentiation and the equity will continue building. That is not anymore about the way we build the equity of Marlboro. And for the people who have not followed this, because I was in the early days of Marlboro to have a reference here, it is not the wonderful cowboys only that built Marlboro. The single-minded approach of an organization to build one product, one brand for a long period of time and delighting the consumer with the means we had then at every moment. And somehow because of the restriction, we lost touch with this and we have to regain touch. And that is what we are doing. And I think that can give you a tremendous advantage over time.

**Thomas Russo (Gardner Russo & Gardner LLC):** One, I wonder if André could just bring us up-to-date with what is going on in China, if anything, that bears on our lives?

**André Calantzopoulos:** Not much is going on in China. That is a short answer.

**Thomas Russo:** That is it, a good answer. And Mirek, you mentioned that there is a life health insurance premium reduction that might be available for people who have made the conversion. Has that developed? And could you speak a little bit more about that?

**Mirek Zielinski:** We have been looking into this whole area for some time with different partners within the industry. They are aware of what we are doing. They know that we have science which we verify the way the risk is assessed. Today, in most of the countries, there is a risk premium for smokers. So it ranges whether it is compared to non-smoker or never smoker or the one who quit, but that stays within the range of about 100% premium for smoker versus non-smoker. So obviously, there are a lot of companies in this business which are trying to find opportunities for having people having better life and continue improving themselves while exercising, while having better diet or while abandoning certain unhealthy behaviors.

So I think we are kind of on the radar screen of companies and investing with our science. And one thing which we have huge advantage, which is conversion, and I keep repeating like a broken record that I do not think you will find any other product with a similar opportunity for this industry to look at because we have possibility to convert at the percentage, which I think, from the actuarial or statistical point of view assessing this is extremely high. 70% of people could quit who are approached. Obviously, that creates accretion. And the reason I mentioned it, because I think we have to all realize what I tried to say today that IQOS users are evolving many things. I can give you one example, which was really shocking to us. We had a musician who told us that since he's using IQOS, he's playing better music. And we

were thinking, is it a claim, or what is this 'better music.' So if you go into the scientific justification of this, if you go to Manuel or to Frank, who's our Chief Medical Officer, he will tell you his exhaling capacity, so maybe he's actually playing better music. Not that we scientifically substantiated it. Now if you enter that space, it means in time, there will be people evolving their behavior, looking at alternatives they never thought before. And I think they create for us opportunity to provide solutions, because we have them as a consumer. I mean, almost every day we interact with them in some form. And I think we will grow in actual knowledge about what they do when they are interested to look.

**Thomas Russo:** You mentioned that e-commerce was up 147%, I think it was.

**Mirek Zielinski:** It is so small in our times but yes, it grew 140% between last year and this year. It is not a small number. It is about 750,000 transactions. So it is new for us. We were always in e-commerce but the scale of this now is completely obviously different.

**Nicholas Rolli:** Thank you, Tom. Well, thank you very much, André, Mirek, Jacek, Martin. That does conclude the webcast for today, the end of 2018 Investor Day.

[END OF TRANSCRIPT]