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# Deutsche Telekom AG (DTE.DE)

Capital Markets Day - Day 1

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## MANAGEMENT DISCUSSION SECTION

Unverified Participant>

Ladies and gentlemen, please welcome Hannes Wittig.

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**Hannes C. Wittig**

*Head-Investor Relations, Deutsche Telekom AG*

Yeah. Thank you, and welcome everybody. Welcome to Bonn. Welcome to our 2018 Capital Market's Day. So as you know the bad news is that we're going to bombard you the next 24 hours with a lot of information. The good news is we only do that every three years. So, hopefully, it's okay and we also thought about like how can we top the royal wedding. So I'm not sure how we're going to match the FA Cup Final and all these like benchmarks that we have to meet -beat.

So we tried to provide some excitement. Outside, we have a [indiscernible] (00:00:45) machine, which is German for a horizontal drilling machine, and we have a few other things like MIMO antennas and so on, we'll show you later to make a trip worthwhile.

I also welcome those who follow us on the webcast. And moving on to the serious part, you will have to please take notice of your usual disclaimer, our usual disclaimer that we have in the presentation. And I want to give you an overview of what we have planned for the day. And then I give you an overview tomorrow about what we will do then.

Today, we start with Tim. Tim will update you on our strategy. He will give you an overview of his priorities and explain our growth story. We think it's quite a unique growth story and we're very excited to grow on both sides of the Atlantic now, and to have a very robust outlook. Then comes Dirk, Dirk Wössner.

By the way, they all sit over here, the management team and there's lots of people from Deutsche Telekom in the back who have worked on this and it's their strategy and they come to follow this with you. And Dirk will talk about our German growth story. So he will also address, we don't have an elephant in the room you know literally, but we have one that everybody knows about the German fiber question. Now fiber is healthy, so we have some salad as well.

We have Adel then, Adel is our new Head of T-Systems. Dirk and Adel basically joined at around the same time beginning of the year. But they did their homework before I will introduce them in due course, Adel will talk about his plans for T-Systems followed by Claudia, who will talk about our technology and innovation. She is a well-known face to you, and she will talk also about our industry-leading IP migration, innovation and 5G and what our plans are here.

Tomorrow, then we will have T-Mobile from the U.S., our Europe segment, which is vying this T-Mobile for growth leadership. And our Group Development Unit headed by Thorsten Langheim. And Thomas, finally who will bring it all together in the financials. Some of his charts you've seen already this morning in the presentation that we have distributed. And so with that program ahead, I'm looking forward to spending those 24 hours with all of you. Thank you for coming here. It's great to have you.

And next I want to welcome on this the stage Tim, our CEO. So Tim stage is yours.

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## Timotheus Höttges

*Chief Executive Officer, Deutsche Telekom AG*

So you think the dividend is still small, you think we should spend more money for investors in the future. I promise you we will do better. First, I promise you a booklet on top of the dividend, which you get after the end of the day, 238 pages. I can tell you this is benchmark for the industry about our strategy.

Second, I promise you as an additional dividend, a great barbeque tonight. And thirdly, you get this cool sneakers on top of it. Is that a deal? Okay.

Guys, very well welcome to Deutsche Telekom's headquarters here in Bonn. I hope that you have a great 12 hours with us, over the next day. I hope that you feel the hospitality, and let's say that we are really excited having you all here, and I even like to welcome the ones who are not with us today, spending their time on the webcast and joining us.

This is a big thing for us, I can tell you. It might be one of hundreds of you, but for us this is really a big thing. It took us months to get it prepared, to think about things, and I can tell you it is not just only talking to you. It is for me even that relevant talking to insight. Because you know a Capital Market Day helps us to bring an organization onto a track for a long-term perspective.

And so, it's not just a commitment and a pitch for you to convince you that Deutsche Telekom is something special in the telecom market, which is anyhow difficult market, but that this is even more for our people that we make commitments and that we have to walk the talk thereafter. So this is a big thing for us and it took us a very intensive discussion.

What I'm talking about today. The first thing I want to talk about, let's say, what drives us, what we believe what we have achieved, and then we'll talk about, let's say, an update about our strategy, honestly a little bit boring, because we keep on track and then I will talk about the commitments. Every detail of my presentation will be, let's say, detailed out by the teams sitting there and I don't want to say hello to all my guys here sitting around. Then there's only one guy, which I want to especially you know say hello to this morning, which is Srini, because he's turning 34 today. So, Srini. Happy Birthday, Srini.

So, relax. I hope that we do not have only working session. It should always be a little bit fun. When I came into the office and I'm now more than 12 years Board Member, but became CEO. The question was what are things which are important for me, what are the ones, where I want to focus on and we discussed them in depth with Thomas and some other guys on what should drive us and this thing is I think the basis of what we are and what we're doing.

The first thing, we are dedicated network investors. So, if you want to understand me and us, understand that the core of everything what we're doing is the network, maybe less Internet of Things, nice digital gadgets around it, very much focusing on the network, put your money where your mouth is.

Second, stay focused, very focused portfolio approach, and saying this is core and this is non-core, a focus on the geographics. We have said, we're not going out of our footprint and we stayed in our footprint till the entire time. We even haven't looked into the opportunities of Myanmar, of South America, of Africa. We are just focusing on the area, where we want to strengthen our strength and a very restrictive capital allocation.

The DNA knowing that it's the biggest [ph] scarce (00:08:14) resource on investor, on infrastructure is money.

Thirdly, passion about customer experience. Guys, there was a time even investor base, where everybody was talking about we become the Amazon of the Telco industry, the online service portal for our customers in the future. Yes, that's true. We have to be more online in the way how we are serving customer to make it easy. But this is only one part of the equation. There is a very strong value in the [ph] customer (00:08:49) intimacy, which we are creating with our shops, with our service centers, with the maintenance, with the [ph] field process (00:08:57), with the people on the ground being there. And we have to mix that.

Dialogue marketing is something which we have to strengthen our thinking keeping the relationship – I mean, because the moment where we have an interaction, the moment we create loyalty and we create higher value, and this is a mathematical, it's a commercial equation.

Fourthly, a best breed team with entrepreneur's spirit. You've heard me talking about between the bureaucrats and the billionaires in Barcelona, there is this group of CEOs and teams sitting on that small kind of castle at the Rhine Valley and being the kings of their kingdoms and they always wanted to treat this than rather thinking becoming a minister of something bigger and the other billionaires would – don't care about any kind of things, they just move on and make their money. And somewhere in between is where we have positioned our thinking, where we have positioned the way how our team is running, where we're coming from.

Second, the generation shift. Telcos are getting old, especially the incumbents, so while can we get new fresh blood on that one. Look Bayern Munich lost, but it's a good example for us, because it's anyhow our favorite team. There is a strong DNA of German blood in this team, the Thomas Müller of this world, the [ph] Neuer (00:10:32) of this world, but there is a best-of-breed international into that one. I can tell you three years ago, five years ago, this company was not even close to be as international as it is today.

And I come to that, the combination of best-of-breed for technologist around the world, bringing them into our company is something which is driving success in the future, which is driving differentiation of our company.

Leadership and winning mentality, I think if you want to be leading you have to be thought leader on certain areas. You cannot be thought leader everywhere, but you have to be a thought leader and you have to create a culture of a winning mentality. This company is not defensive. They always want to put us back into this defensive mode. You're the bad incumbent. I tell you, we are not in this position. We do our thing and we do it our way.

Vectoring and super vectoring is just one example on how we're doing that. And if you go to [indiscernible] (00:11:39) and if you talk to the commitment of the people in our organization in the U.S. and in our organization here in Europe, I can tell you we have improved by more than 30% points over the last year with regard to the pride of what you do. You cannot do this job without pride.

And the last thing is walk the talk. Very German, very German, say what you do and do what you say. This is something, where we want to stay for. And these were the five paradigms of let's say the overarching strategy, which we have to say, we have to stand for something for the outside world to be let's say shaped in a way and this was driving us into growth. And I can tell you if one of you would have told me. In 2014, Tim you're the CEO in the first five years of your tenure, growth in every single parameter. I would have asked you what you have smoked. So this is now what I can show you looking hindsight and that is let's say what we have.

We have a revenue growth of an average of 4% and EBITDA growth of 5%, the free cash flow growth of 11%. And we have a CAGR of our dividend growth by 9%. The commitments were significantly lower especially when it

goes to revenues and when it comes to EBITDA, 1% to 2%, 2% to 4%. The free cash flow [ph] was positive (00:13:16) despite the fact that we invested more into infrastructure and we were able to increase our dividend by €0.05 every year.

Today, we announce that we feel so confident about the track record of this year that we are committing to €0.70 for the 2018 annual year being paid in 2019. So the last puzzle of the Capital Markets Day 2015, which is let's say what are you paying out for this year on the your dividend commitment, is something we're going to state already today and not by the end of this year.

This profile of growth was not only driven by the U.S. and you know that. If you look at the profile of the three big segments here, you see that we had a shrinking business in Germany, which is back to growth, here now excluding DFMG, which we took into group development. You see the European revenue increasing by 0.5% and you saw the first quarter on revenue and even EBITDA with a [ph] 2 (00:14:30) in front of growth. So an even accelerated momentum and you see this outstanding performance of our U.S. operation.

2015, I would say 50% of this group here, told me sell the U.S. as fast as you can. And we didn't, because we were convinced from a network perspective, from a market demand, from a customer service perspective, [ph] fine (00:14:57) position is the right thing to stick to this isn't. And I do not want to go into the track record of this one, [ph] Mike and Neville (00:15:01) are talking about that one tomorrow morning.

We supported the growth by customer growth. Okay. I hear your market healing is good, managing your back book is the most important thing, right, but without growth on high street you will even not convince your base, you always have to show that you are strong with innovation on the street and the high street as well.

We've grown our German base by 2.5 million customers, we've grown our European base by the same magnitude, and we have grown our U.S. base by 11 million customers. This is on a subscription basis, on a [ph] SIM (00:15:46) card basis at market level. If you look to the service revenue market share, we have gained service revenue market share in Germany, the gap between Vodafone and us has never been bigger as after the first quarter.

Second, we have grown service revenue market share in 2017 in our European markets and U.S. nothing to talk about. This was outstanding performance when it comes to service revenue market share.

Without service revenue market share, without new customers, no growth. On top of that, there is a price. If you want to convince a customer in our industry, and our industry is not as smart as your industry, not as complicated. Sometimes even you know simple, because if you do not have a network connection, forget about everything what we're doing. The basis of everything what we are doing is connectivity, connecting people, that they're able to participate in digital life.

So if you don't have a network, you can make the biggest marketing, it's not going to work. You can shout loudly. So we always said, we are investing. And we invested, you saw that, we started with 10 billion, now we are at the vicinity of €12 billion and you see the spectrum on top of that, maybe the 600-700 megahertz spectrum in the U.S. which we put on top of that in 2017, up to €19 billion of investments. And despite a CapEx to sales ratio and we might challenge us for this, which is 2 to 3% points higher than of our competitors.

We were able to grow the free cash flow from €4.9 billion to €5.5 billion in the same magnitude. The price is high, but the award of it is even great, 95% LTE coverage, 80% vectoring coverage in Germany, the same magnitude of LTE in the European markets and in 8 out of 11 countries, we are the leading infrastructure on mobile.

I do not have to talk about Germany. In the last consecutive five years, there was not a single drive test, which we haven't won. So every network test goes to us and just yesterday or the day before OpenSignal was published and gap to Vodafone is significantly largened when it comes to data connectivity. Please have a look into that one. This is the strongest argument for our customers and the moment you have this differentiator you get more ARPU. You can have a higher price.

In the U.S., same thinking, invest into the infrastructure, invest into the network, €40 billion over the time – over the last five years into this equation. Now we have the best position on spectrum. Now we have an LTE rollout, which is covering 320 million PoPs and now we have a network which is speed with this VoLTE usage and other things, what is much better OpenSignal test one and others than the one from Verizon and AT&T.

Mentality, bring me awards. There was an event here in this hall, where we said guys bring me awards. We want to be the leading European telco, you have heard that, but leading doesn't mean by size. Who cares about size? Leading means how you do things.

If Hannes has to do this event here the Investor Relation, I'm not expecting a good event. I'm expecting from him that he's doing in a leading mentality, the best Investor Relation Meeting, which you can get, nothing else. There's no other place than number one. And this is what we taught these people. So bring me awards whatever you do, whatever you do in your company get the first prize.

And I was not aware about what's happened in this organization. I can tell you everybody is working on it from the award for sustainability of Germany to the most ethical company in the U.S. from the P3 test drives to the best service awards. Are we there on all relevant topics? No. But I think this is creating a mentality in the organization. It's creating an attitude of striving for better and I do not want to go into the awards. The network awards are outstanding, 9 out of 11 countries we are leading the best mobile network in Europe. And if you're committed to a network, if you believe in the network, I can tell you this is a strong proposition which we have.

The T is the second most valuable brand from Germany in the world, whatever you take of the service. BMW is the number one in most of these comparisons, but second is the T, it's Magenta, it's what we talk about in and the company. This is a strong value. It's an intentional one, but it drives things and the same has to apply for service awards and for this customer satisfaction. U.S., I can tell you Net Promoter Score, it's unbelievable. Germany and other countries, we still have room for improvement.

All this coming together with a disciplined capital allocation, so how we are looking [indiscernible] (00:21:51) please challenge us later on that one is to say, we have to be very disciplined with the resource we are managing.

First, I mentioned already invest in footprint. We were not going out of the footprint during the last years. We stayed where we were and we were investing here. Put your money where your mouth is. We said we do not want to be distracted by too many business models. So, wherever we are, we want to operate as a converged company in Europe. So we were putting money on UPC, on Tele2, on BT and other companies to form converged business models in every region where we are operating, even in areas where we couldn't acquire, we have formed MVNOs also with Orange in Poland and other markets that we have one single business model.

Best is if you have one single focus point. It might be the wrong one, but at least in this one you are great. You're doing the right thing. Then rather being all over the place and trying to be the Internet guru, trying to be the Internet company, trying to be a bank and whatsoever, we are not on these businesses.

Invest in innovations, in a different form as we did before, we formed TT Capital Partners. The current status of the first fund, which is closed, is an internal rate of return of something around 70% 7-0 and we are ready now to open up the third fund – sorry the second fund with third-parties. A lot of external parties that now want to participate in this fund to co-invest with us on this one. And I can tell you this is not because we are great corporate, it is because it's not a corporate.

This company is not owed by DT. It is owned by the management. The majority is in their hands. In every deal they're doing they have to put their private money and if they earn the carry, they can make even more money than myself. I don't care.

So we create platforms where people can work totally entrepreneurial, compared to the past and I can tell you it took us almost one-and-a-half years to go through all the compliance, through all let's say the governance requirements that we are able to put €2 billion into DT Capital Partners and let these people manage that in a company, which is not owned by us.

Buy out minorities, some hedges were always trying to find out whether we're way in or out. We were always looking at the right opportunity to buy them. We bought the Czech. We bought Slovakia. We bought OT shares recently. So there are parts where we strengthen our control and realizing opportunities to grab more equity and we funded that by divesting non-core activities.

Look if you criticize us, there are a lot of things to do, but I have not read any kind of criticizing around M&A at that company over the last years. We should question BT maybe it was not the right assessment and I'm not happy with the development for us as Deutsche Telekom as a shareholder. But if you look the value creation of Strato, Scout, t-online, this were amazing transactions from a value creation and I think even the Sprint transaction was appreciated by the community. I think we have a world-class M&A organization in Deutsche Telekom.

And the last one is which you maybe not have seen. Three years ago excluding the Toll Collect risk. We had legal risks on our balance sheet or not on our balance sheet, but at least [indiscernible] (00:25:58) by something around €2 billion to €3 billion except one single case of this has been cleaned up.

And last week, we cleaned up the Toll Collect case, which was a potential threat for this company of €9 billion as a total, where we owned 50% of this [indiscernible] (00:26:22) 45% of this challenge. So I can tell you I'm very happy and proud that Thomas and the team were able to take this risk out of our focus as well. This was distracting us. It was eating up €60 million of legal costs. It was a political disaster. So, we were able to sort that out and clean it up. And this is even something that we do not have additional legal risks as we headed three years ago.

Now, this is my summary of the last years. And I do not go into this one. You know the green ones, compare them with the old [indiscernible] (00:27:07), which you have on your table. What are the red ones? Two things, we invested more into infrastructure than we originally thought. I know that you're not happy sometimes if we increase our investments. But I think it was worth doing it from the differentiation, which we are gaining in all markets.

And second, we were not able to reduce the OpEx and the magnitude as you were expecting. We achieved almost half of it what we promised last time. And there are two main reasons why we haven't achieved it. The first reason is the IP migration, isn't ready yet. It's a six- to seven-year program. It will take us another one-and-a-half years to accomplish all of them but the benefits out of that IP, knowing that we are very well ahead with our IP migration, is not fully monetized yet.



The second thing is the IT and the automation within the organization. The complexity of our legacies IT and the complexity of how we are operating, we were not able to simplify it in a way as we originally thought. And this is coming with higher indirect costs, both from a workforce perspective, but even from internal cost perspective. So these were the two ones, where we haven't fulfilled our promises to you guys and we are there about that one.

Moving on to the next thing, where are we now and where are we going from here, and let me start again with some general remarks, because giving you numbers is nice, but you should understand how we as a team are thinking and what we have learnt on the journey so far.

The first learning we have had was convergence works and our customer loves it. Churn, Net Promoter Scores or TRI\*M significantly higher in the converged offer family than the single ones. So convergence paying off not only from an ARPU perspective, it's even paying off from a customer satisfaction perspective.

Secondly, dialogue marketing, dialogue marketing is a must. We have to reinvent the way how we think about approaching customers. Omni-channel and thus digital is everything is not the answer. [ph] Customer (00:29:58) intimacy is staying relevant even in the next future. There will be not every company becoming an Amazon. And even if you're trying to become an Amazon, we will anyhow not be as good as this company. So what's the differentiation in the customer intimacy and the servicing orientation which we have?

Thirdly, network leadership pays off. To have an advantage on the network is an advantage even from the commercial perspective. M&A is a valid option for growth, meaning that we could supercharge the U.S. transaction by going for Sprint. Meaning, if we don't find a way to go into a fixed mobile converged on an organic basis, that we then even acquire UPC and others.

If you would ask me, are we in M&A-mode these days? The answer is simply no. All hands on deck to get three deals [ph] into dry as we say in German (00:31:04). We have the [indiscernible] (00:31:06), we have the UPC and we have the big thing in the U.S. And on top of that we are investing at the peak level. So therefore there are no big M&A planned, but it was just a valid lever to improve our portfolio going forward even to divest activities. The last 1% is the toughest and with IP, we're just experiencing that. We have to learn and we have to manage that.

And last but not least, people make the difference. Companies have to change their skills. Our company has to change their way of being more international, best-of-breed in the way of to differentiate, it's a global business and not a local one. And last but not least, we have to even re-innovative, bring younger people into the organizations.

So what's the strategy going forward for us? Before I come to that one, just a question about our – where we stand, our point of departure. We are a German company and we are the leading European telco and we are positioned now in a Transatlantic combination. This is what Deutsche Telekom is about.

We are present in the strongest economies in the Western Hemisphere, Europe and the U.S., 90% of our activities, of our revenues are in AAA countries, and by the way we have selected even the European markets, which are not AAA out of this list. So 90% are in this less risky environments, which is very relevant for Telco for infrastructure investors. We have a very well balanced profile between growth in the U.S., supercharging the growth with Sprint and a yield profile in our European economies and we will give you a free cash flow guidance for non-U.S. business later on.

We have a great team onboard and we focus always on the local entrepreneurship. If somebody says in the U.S. we left T-Mobile, because it's an American brand. This is the best result we can get, because we have to operate

entrepreneurial in the countries than rather trying to manage a centralized organization. We deeply believe that the power has to be on the ground in the countries.

In the future, this company will have 130 million customers in the U.S. and 130 million customers on the European side. It will have €13 billion of EBITDA on Europe and \$22 billion EBITDA on the U.S. side. So it will be a very balanced portfolio. It gives us the opportunity to select commercially where we invest the next dollar or the next euro.

The Sprint deal is unbelievable opportunity for us. And guys you can kill me. I have worked seven years on this with Thorsten and some others. I'm so convinced about that combination, convinced from a customer perspective that we could really supercharge our position; convinced from a spectrum position; convinced from an economies of scale; convinced from a synergy perspective; convinced from a partnership position with Softbank, I'm totally convinced from this transaction. And this is not only something which is creating value for you right now. This will create value for Deutsche Telekom in the next decade. The value creation from this transaction for Deutsche Telekom is significant and it will create a player, which is on eye level in the top of the league of world.

Take the Chinese guys out of the equation for a moment. We are system-relevant in the western world, both on the U.S. and in the European landscape. And this is even a value, if you are playing a role like this, and we have a great governance in the way how this deal is structured.

It's not that we are now exhausting our balance, exhausting our debt capabilities, exhausting let's say the needs which we have in Europe to facilitate this transaction. The way how the deal is structured, the way how it is organized, is in a way that it's robust balance sheet and a clear control and a full consolidation. These were the three tasks, which we had in mind by approaching Softbank and the partners.

What are the three main directions of our strategy for these global businesses? Leading customer experience, leading technology and network and creating productivity for our business customers, very simple directions.

Do we have a right to win on these? Let's start with the first one. On customer experience, we have to create a differentiation towards our competitors. We provide the one seamless T-connectivity, converged connectivity to our customers. The CONNECT app is in the market being tested [ph] 4-star plus app (00:37:13), which you can use, which is easily selecting for you the best connectivity, fixed line, mobile, hotspots, and [indiscernible] (00:37:22).

We're in a beta test and we will scale that up very, very soon. It's a great app. You do not have to be concerned that your infrastructure, which you're using right now is slower than the fastest capabilities or possibilities, which are around. We have built the European Aviation Network. We will start with British Airways, soon and Lufthansa as others are following, we have the only network in the air 75 megabit per second. The last piece, that people are not connected is getting connected over Europe.

We offer leading FMC propositions. We have increased our ARPUs by €9 in Europe and €6 and €8 in Germany. We have more than 6 million customers. In the U.S., we are the Un-carrier and we can supercharge the idea of the Un-carrier, a proven concept, and we have to digitize the living rooms. Our customer service is continuously improving and we said last time, we going to reduce for instance our complaints by 50%, the results are even higher in some areas.

What are we doing going forward in this one. First, our FMC household penetration in Germany and Europe should double from 21% to more than 40% and seamless connectivity [indiscernible] (00:38:58) is not only a tariff,

which is integrating mobile and services, who is selecting for me the fastest data connectivity automatically on my mobile phone or on my device. Coming home and switching from mobile to fixed line automatically without losing the call.

I can use my entertain service with the same look and feel on all devices which I'm using from T. I have an identity which is enabling me for all the channels, mobile, fixed line wherever I'm getting connected without having a long registration or complex [indiscernible] (00:39:38). And we have customer touchlines who are aware and enabling us to support this integrated proposition.

Customer service, I make my points already. We give us even tougher targets with regard to contract resolution and rate of complaints in general service, I'll talk about that later on and in the U.S. where we have established a team of experts where our customer service people own a P&L which is unique in the customer service where nobody has it.

Normally service people are just there to clean up. Here, they own a P&L. It's a model which we want to extend beyond the U.S. footprint because the results speaks for themselves. Net Promoter Score 35% points and customer satisfaction 74 can tell you none of the telcos in Europe has even a relation which is close to this number.

Second, dedicated network investors. We have a proof point that we are – we have skills and a good D&A on network investments, and therefore, we want to roll out infrastructures beyond what we have today. We will push fiber rollout. We are not pushing [ph] CAPA (00:41:02) guys, you know that. We are only investing into fiber, and this is not since today, already since quite a while, and that is how we built this huge fiber network which we're already running by 480,000 kilometers in Germany and 230,000, I think, in Europe and we go beyond that.

And the enabler for all this kind of super [indiscernible] (00:41:26) but even beyond that, fiber [indiscernible] (00:41:28) is the IP network, which we have built. It's already helping us today big time. And on top of that, we are driving 5G and edge computing with a special focus on the EDGE. And Claudia will talk about that one later on.

We keep on investing into infrastructure. In Germany, we extend the cells from 27,000 to 36,000 and we have already increased our run rate from 500 cells per annum to 2,000 in Germany. Loopholes at the [indiscernible] (00:42:10) in the countryside is something which we have to address in German environment. Europe from 40,000 to 47,000 cells and in the U.S. from 61,000 beyond that because we want [indiscernible] (00:42:26) where they haven't built a 600 megahertz and 700 megahertz infrastructure yet.

Let me spend a sentence on Germany, deeply dive onto that one later on. The problem which we have, we are at the center of this question. On the one side, you are sitting there, and you're concerned enough, what the heck are these telcos doing, how do they earn their money back, what are the political leaders deciding on wholesale access, what is the regulation investing next time, where is my money going and when do I get my money back, what is the return on capital employed of these investments, what is the competitive landscape in Europe going forward. There is a reason that this industry is so low traded, 15 year low. I'm fighting for that to improve the situation, but I understand your concerns.

On the other side, you have the public and political demand. We want to be leading edge in the gigabit society, 100% coverage by gigabit by 2025. That's the political demand in the countries.

The third one is the competition. The competition says we have up to 400, Deutsche Telekom has only up to 200, so they make a raise on speed despite the fact that it's not relevant. At the end of the day, the thing which counts

is that all the data servers are working, but you have a competitive environment of how many horsepower somebody is offering, whether you need it or not. And the last dimension is the most important one, what do customers need, when and where.

So, if you are telco CEO, or one of our guys in the management, I can tell you every day you sit on the other bench. You are getting turned around in this environment. So, we have to find an answer, which is creating clearness and transparency around that one. And I think this is something which we deeply discuss. The first thing we said is, if you want to have fiber, fiber, fiber everywhere – by the way interesting cable operators like that we invite fiber to the home especially in areas where they are not investing because then they could easy get with wholesale access and offer for these areas as well.

We have said, no, we do vectoring and super vectoring and guys this was totally right. Commercially, it was right, it was right from cost and demand. The people are voting with their feeds, 718,000 new customers in the first quarter, and this is now I think the fifth or sixth consecutive quarter, where you had more than 700 customers, so 1,000 customers in a quarter on this new infrastructure. We go in the [ph] countryside (00:45:24) areas, and we will have 80% of all customers of all households with up to 250 megabit by the end or by mid of next years including the other carriers, 95% and we won't stop.

This is the build-out which we are driving. We will not go into something else, we will finalize first bringing the investments to the millions. This is the idea which we are driving. 95% including a whole buy of 250 megabit per second, and I can tell you this is significantly reducing churn, the moment where you have more than 50 megabit per second, why should you go somewhere else.

Then we go into the second step and the second step is going then for the FTTH rollout, which we started already. We have to build the efficient fiber factory, and we are now extending the fiber from the cabinets and from the streets into the houses in a very efficient way. That's why we show you the technical equipment outside, because the trenching is one of the technologies to significantly reduce the costs. That said, we are ramping up this efficient fiber factory that we will build two million households [indiscernible] (00:46:47) from 2020-2021 onwards for Germany. This is our contribution.

Now, this is not solving the monetization issue. And we do not know exactly under which kind of regulatory parameters we're doing it. So therefore, we're saying we are only investing under the parameter that we are earning an average rate of cost of capital of 7.5%. This is the threshold. If the [indiscernible] (00:47:22) is improving the landscape, we can even invest more. If it's reducing the investment-friendly environment, we will not invest this amount of money.

So, we now trying to balance political demands, regulatory environment, and the monetization need, which we see in front of us. The envelope for this build-out, including mobile and including the IT transformation, is exactly the same magnitude of what we are having today. So, we are peaking on this level on our own investments.

Europe is another story, because it's easier to monetize, because the costs for deployment are significantly lower. Srinu will talk about that one. The only thing [indiscernible] (00:48:19) like to mention here, even here, we do the same stuff going forward, [ph] we get a lot of – let's say supported (00:48:24) some of the countries like Greece and others, and we will drive even here our improvement of fixed mobile convergence including fiber to the home. But in all of the markets, we're pursuing and pushing an integrated story. We have fixed mobile converged incumbents and we have challenges on this [indiscernible] (00:48:46).

Next topic, regulation, what we are fighting on, what are the topics which I'm addressing in part and you have seen the coalition agreement and you have read the text. And every day, we read again and again that the political environment want to improve, want to improve the details of the framework for the fiber build-out. They want to go into an [ph] extensive (00:49:19) regulation, they want to consider into – in holidays that even say there are new models of subsidization, which they're driving and they have €10 billion to €12 billion of remedies of subsidization money which they made available for the [indiscernible] (00:49:44), and we will under our framework, under our commercial terms, we will apply for this money. And we'll skip that, we can talk about the regulation environment what we are driving these days later on. I'd like to move onto the business side.

The business side, very straightforward, and we have proven points of the Internet of Things where we're generating more than \$300 million revenues already today. We have a high success rate on the Mittelstands and the SMB market in Germany. Are you aware that our German Mittelstands business is growing by 4%, I cannot even imagine a time where we were even close to this run rate. And industry wide, the analog services, which we are losing due to cannibalization, are substituted by IT, which is coming on top. Cyber security solution, the big business and our global connectivity, with SD-WAN service, ngena, is something where we have proof points that we have a right to win.

Going forward, even here, it is based on an integrated network, fixed and mobile connectivity plus cloud, software application, IoT, vertical solution businesses in an environment which is secure. This is the business model which we are driving, and by doing this, we are able to increase the revenue from €6 billion to €6.5 billion. With the Mittelstands [indiscernible] (00:51:29), remember the Mittelstands [indiscernible] (00:51:32) was something we showed you last time and a revenue increase from €3.2 billion to €3.6 billion in the European landscape. Same story, same strategy going forward.

[indiscernible] (00:51:49), and this one is a special animal. And the only thing what I want to say right now because Adel is coming to that one later on, is we have three pieces of it. Telecommunication core business, €2.2 billion. This is an almost stable business where we are mainly following our German customer base across the globe with connectivity.

The second piece is a very exciting growth piece, digital solutions, IoT services, and SAP, they are all growing entities and growing businesses. Some of them double-digit. And classical IT, dedicated SI solution and management, infrastructure service and private cloud is the problem child in this portfolio. We are working on a restructuring program for that one, and we are working on something which is the best solution from a value perspective and an EBITDA. This is explicitly not excluding a potential sale.

So we are considering all options. There's nothing to talk about today, but all options are valid ones as long if they're helping us to increase the profitability that we have a cash contribution for the [indiscernible] (00:53:12) entity, latest in 2020, which is positive and that we have a revenue increase even in this unit. Every unit has to grow, and there is no excuse for a negative free cash flows of one of the operations.

These three pillars following a two underpinned streams. The one is safe for growth investments. If we want to stay on this magnitude of investments which we are pursuing and if we want to close the [indiscernible] (00:53:52) benchmark gap which we are having, the way of doing it is saving, committing €1.5 billion reduction of indirect costs within our base excluding U.S. €800 million in Germany, €400 million in Europe and the rest about systems and GHS. These areas are coming from personnel-related costs but they're coming as well from areas of IT automation, real estate, from areas of reducing external workforces and procurement gains, which we are targeting, and Thomas will talk about that one later.

And we will accelerate the digitization of the company, the digitization of touch points, simplifying the product, simplifying the way how we do our IT services and the way how we export our data and how we run real-time operations in a better way, especially in the network infrastructure. Commitment here one target or one KPI that we are aiming for that the amounts of requests solved by our digital channels and the app are going up to 70% in Germany and higher than 50% in the European footprint.

Aside of that, this cultural transformation has to move on. And I think it has a value that over the last 12 months, we have entirely renewed the operational team in our organization with Adel Al-Saleh for T-Systems, Srin Gopalan for Europe and Dirk Wössner for Germany. But what I want to stress here is this best of breed. If you go here in just some names, Data Governance Omar Khan; Omar Tazi [indiscernible] (00:55:57) Alex Choi, the former CTO of SK Telecom; Campbell McClean IT architect, we have on all levels, trying to get the best experts across the globe and bring them into our footprint because we think it is [indiscernible] (00:56:16) talents and we have to get the best and smartest people on board to drive leadership and to drive this leading mentality and leading attitude.

So therefore, there has been a strong attempt over the last years and which is going on on the internationalization of our company. And on top of that, the drive of the cultural transformation, which we are driving here, and we will talk about tribes later on, we will talk about pool organizations, we will talk about the design thinking. We will talk about the moves which we are running within the organization. So a lot of changes culture wise which are going while we're sitting here.

New asset management and investment models. I think we have talked about the group development area [indiscernible] (00:57:05) present about the idea behind that one. Innovative spin-out, so we are not building it in the companies like Mobileedge (sic) [MobileedgeX] (00:57:14), a company, which is based in the Valley. We will drive growth and financial investments through our investment vehicles, which are outside of telecoms corporate world. We are creating new flexible incentive models, which are more tailored to the business success than they ever were in the past, creating based on value for instance in the [ph] Dutch (00:57:41) environment and we are driving agile developments and pool organizations to be more flexible and more productive in the way how this organization is set up.

All of this has to come at a very sustainable and with a high corporate responsibility on what we are doing. We stick when it's tough. We stick to our 20% reduction of CO2 footprint. Most of the people outsourcing their energy problem to us because the moment our cloud business is growing, the energy consumption is on our side. So, if we want to do the cloud business, IoT services for customers and at the same time reducing our CO2 footprint by 20%, I can tell you this is a contradicting target.

We will have a procurement across the globe, which is falling all the sustainable standards. We have this human right discussion about the organization of unions and alike across the globe including the U.S., coalition freedom and other services which we are applying. We have a high social engagement across societies, which we are driving as Deutsche Telekom and a lot of areas, just to give you an example on the €160 million, which we have in our Telekom Stiftung focusing on MINT or STEM as we say it here. We have 340 refugees just employed here in Bonn or in Deutsche Telekom, and we have just invented the digital ethics standards for artificial intelligence as the first telco in the world.

This is, let's say, our ambition. Three Pillars, leading customer experience by one connectivity, which you call fixed mobile convergence, and a perfect service, which we call [indiscernible] (00:59:45). A leading technology with an integrated gigabit network, which is the basis of everything what we're doing, the center of our strategy, enabling customers to create productivities for digitization with secure ICT solutions and big IoT.

Funding this program by safe for growth investment program, which is reducing our cost base by €1.5 billion, in a way which is more agile, which is more digitized, and which is working even faster, as it is in the past. This together leads me to the following commitments.

Group revenues growing from 2017 to 2021 by 1% to 2%. Group adjusted EBITDA growing by 2.4%. Group free cash flow growing by 10% going forward, and we change to a new KPI, which is the guidance for adjusted earnings per share, which has to go to €1.20 by 2021. Currently, we're in the vicinity of €0.85 or whatever. The return on capital employed has to be bigger than the [ph] VOK (01:01:10), a big thing which we never had and which we achieved. This was my main topic on 2012 Capital Markets Day as some of you might recall.

The group cash CapEx is peaking and stable for this period. No additional funding needed. We anyhow cannot spend more money these days, because the capacity is at its limits. And we will have a shareholder remuneration, which is following or reflecting the growth of the adjusted earnings per share going forward.

Why are we going for earnings per share than rather to free cash flow, feedback from you guys, because the consolidated free cash flow number was not the key, first of all which we own if you have a U.S. entity which we own by 42%, this gap of consolidated free cash flow is even enlarging and they are our reasons, Thomas will talk about that later on again.

The floor remains at €0.50 per share and for 2018, we commit a dividend of €0.70. What is in the case that the U.S. deal is taking place, which we are expecting. We confirm revenue, EBITDA, free cash flow targets, ROCE, cash CapEx, indirect costs and the shareholder remuneration going forward. For the free cash flow and the adjusted earnings per shares, there will be a slightly dilutive effect in 2021 and 2022 expected. These are the targets going forward, and we will discuss, let's say, all the details in the upcoming.

My last statement, why should you invest into Deutsche Telekom? What is special at Deutsche Telekom compared to other telcos? First, we have a unique footprint. We have a transatlantic presence in the world leading economies, Europe and the U.S. In Europe, we are the converged leader. Nobody has a better fiber backhaul, a fiber infrastructure and a bigger FMC footprint. In the U.S. we have an outstanding mobile position which we can supercharge. What we did with MetroPCS we can do at an even bigger scale. This is a unique opportunity on both angles to differentiate.

Second, growth profile. Tell me another telco, which is growing a 95% of its markets in Europe. 95% of its market [ph] strength (01:04:06). And we given a commitment even beyond that because the systems is giving you growth commitment here as well. We have untapped value potential. It's a negative but the positive as well because we have it. Our cost position is giving us the opportunity to get reduced by €1.5 billion and the digitization is something which we anyhow will accelerate, which is giving us another shift or push on productivity.

Fourthly, it's very easy to understand us. We are not in content. We are not in search engines. We are not in banking. We are not in markets which are very highly volatile. We are very easy to understand, very easy. We talk about connectivity at the heart of the western hemisphere and we have a track record of being very disciplined in the way how we manage our portfolio and doing an M&A. And last [ph] but not the least (01:05:13) we have a new team, a hungry team being onboard with international leaders around the world with a winning mentality. And I hope that we can convince you from that one during this Capital Market sessions. Thank you very much.

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Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Thank you, Tim. That's inspiring and a lot about transformation, a lot about growth. And unfortunately, a little bit behind time now, so we'll have Q&A for about 10, 15 minutes now. We will have another round with Tim tomorrow. And, of course, he will be around all the time anyway and we will also have all the Q&As for all the segment presentations. So when you, in terms of the Q&A, you have a speaker in front of you. You need to press the button, if I give you the turn and then you have to press the button again after you finish. Now given that we're a bit late, let's have one question each, so start with Polo.

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**Polo Tang**

*Analyst, UBS Ltd.*

Q

Yeah, it's Polo Tang from UBS. Just a question in terms of fiber, what feedback have you had from the German government in terms of your fiber rollout plans. And then connected to the fiber rollout, do you think that rolling out FTTH to 2 million homes after 2021 would you need to do something sooner if Vodafone is pushing with DOCSIS 3.1 [indiscernible] (01:06:51)?

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**Timotheus Höttges**

*Chief Executive Officer, Deutsche Telekom AG*

A

So the first thing is we have communicated that what we are doing, first that we are doing super vectoring for the 80s and for the 95%. We have communicated that we are now accelerating the business parks, 3,000 business parks. We are in discussion with all, let's say, the communities talking about the subsidization of the rural areas. And just yesterday 80% of Bavaria is granted into all direction and beyond that one.

So, I think the situation on how we are building out the network is something which is recognized. [ph] They've (01:07:37) not had any negative voice of saying this is not enough or whatever, yet, even though no press on that one, I think the most important thing is what we see is the moment where you have a bandwidth beyond 50 megabit or 100, there is no complaint anymore. But there is a certain area and Dirk will talk about that one, of areas which are not covered today at all or with very low connectivity, and this is the prime era of political anger, because these people they have a right of data access and they cannot use [ph] or participate in the digitization (01:08:11).

Our plan was and is made under the assumption that we keep the market share, which we have today, and that we are able to continue with the growth in our service revenues on the fixed line side. So this is, let's say, our assumption. So we have anticipated in which areas, where we have to invest first, in which areas we have to build our infrastructure and where we had the losses. We have anyhow and [ph] I have (01:08:45) talked about that under the corporation model, Dirk will talk about that one in a minute. So I think the market reaction is something which was behind our strategic assessment and you saw that in our, in the four dimensions, which I showed earlier, it's part of the story. We expect that we are not losing market share within this timeframe.

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**Dirk Wössner**

*Member-Management Board, Deutsche Telekom AG*

A

And there's no news from Vodafone by the way, because, there's no step-up in their plans or change in their plans relative to what they said in September, under the latest deal announcement. So, maybe next question from Andrew over there, Andrew from Goldman.

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**Andrew Lee**

*Analyst, Goldman Sachs International*

Q



Thank you. It's Andrew from Goldman. On your slide on the balancing complexity kind of got to the top of the issue and investors are struggling with at the moment. There's a lot of complexity. And investors are really concerned regulatory support for growth is going to be [ph] poor (01:09:47), the political influence is going up.

So what – you've balanced the complexity over the last three years, what gives you the confidence that you can balance the complexity over the next three years and maybe to give a more a less broad question, what's your level of confidence in your ability to deliver growth and returns over the next three years compared to the level of confidence you had when you did this three years ago? Thank you.

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**Timotheus Höttges**

*Chief Executive Officer, Deutsche Telekom AG*

A

Look the first thing is, you should ask the same question to Dirk later on, because he is taking a major role in this environment. At the end of the day, I think always that not fake news are happening, it's always you know tangible effects. You have to be predictive and [ph] reliable on what (01:10:32) you're saying. I feel sorry that we weren't able to fulfill until 2018 the 95%. But, you know, it took us one-and-a-half years to get the regulatory approval for vectoring and super vectoring. Without this long approval phase, we would be in a totally other political situation the government then could have said, we accomplished the 50 megabit per second.

So, this is something which I feel wherever we come, people know, when we're saying, we're investing, Deutsche Telekom is investing. It's not something messing around or looking around, Dirk should talk about, let's say, some big, big [indiscernible] (01:11:11) recently won and which is quite encouraging.

The second thing is, that the government and the political leaders understand, that they just cannot sit and say build fiber. We sometimes think we are biased in our assumptions, but these guys are very reasonable and they understand that. And even sometimes they question me, by the way why are you [ph] building (01:11:37) rural areas, why [ph] you're not (01:11:38) overbuilding cable? Now, for us, this is not only a political decision, it's mainly a commercial decision. Because in this areas, we have very high market shares and we do not want to lose this market shares [ph] on prospectively (01:11:50). So, this is this – this argument about that one.

And the third one is I think we are, there is a reason that fiber hasn't been deployed in Germany so far, as it is done in other countries. And people understand that independent from the political speech, there is a reality, which they have to accept and they have to change the setup for this environment. And, look, I'm anomaly pessimist and my glass is normally half empty, because I think this is the better surviving strategy.

But I can tell you wherever I go, people have the good intension, the good intention to help, you know investors for fiber to get a better setup. It's a complex undertaking as you know from all the powers which are working there, but you know with a good reasonable [ph] argumentation (01:12:46) with not messing around with political commitments, with being in a very intense dialogue, spending a lot of management time with leaders and convincing them with experts, who are supporting this this way going forward. I think there is in Germany, always you know a listening ear.

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**Hannes C. Wittig**

*Head-Investor Relations, Deutsche Telekom AG*

A

And Mathieu, your question please?

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**Mathieu Robilliard**

*Analyst, Barclays Capital Securities Ltd.*

Q

Thanks. Good afternoon. Thank you. Mathieu Robilliard from Barclays. I had a question about your CapEx guidance. Since you've given a very long-term guidance, one would expect that by 2021 [indiscernible] (01:13:35) started rolling out elements of 5G network, I want to understand how much was embedded into that. And more conceptually I was wondering if in Germany and maybe in other markets you feel that some parts of the network need to be mutualized or you think you have the [ph] scale (01:13:50) and the will to do it on your own since you put so much focus on network as a differentiation?

[indiscernible] (01:13:56)

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

Yeah.

A

Mathieu Robilliard

*Analyst, Barclays Capital Securities Ltd.*

Thanks.

Q

Mathieu Robilliard

*Analyst, Barclays Capital Securities Ltd.*

Do you want to say something?

Q

Timotheus Höttges

*Chief Executive Officer, Deutsche Telekom AG*

No, no. I just said, the mutualization is a French term, so I wasn't like sure. Yeah, you're familiar with it.

A

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

No. It's good. But look the – for us, network development is not something that we say, okay, now this [ph] box (01:14:15), then this [ph] box (01:14:16) and then this [ph] box (01:14:16). This is, you know, everything is integrated in a kind of – in a consistent [indiscernible] (01:14:22).

A

In most of the markets, in Europe, U.S. and in Germany, we have a backhaul – fiber backhaul network, which is a big enabler. If you deploy now the sites, we know that most of the sites are something which we could enable. We have the biggest [ph] tower core (01:14:40) and we talk about that later on, and that [ph] tower core (01:14:42) have 55,000 sites in Europe.

So, this is part, the 5G plan and the rollout is included in the CapEx envelope, which we have laid out.

Mathieu Robilliard

*Analyst, Barclays Capital Securities Ltd.*

Yeah.

Q

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

And maybe this is something Claudia should answer in detail later on about how much of as we want to do this, is part of the antennas and the infrastructure, which we deploy there.

A

## Timotheus Höttges

*Chief Executive Officer, Deutsche Telekom AG*

A

And as for the mutual decision, Dirk will talk about later about how we – the variety of approaches we have, but of course we are open for joint ventures. We have a joint venture with [ph] EWE tower (01:15:22), they are open to use infrastructure of other players, where they have deployed it. It's all part of the finding the right solution. Germany is a very complex country. They have lots of answers for that. Let's have another.

## Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

A

I think our build-out plan to be very clear, if we are now 20 years out of regulation and we have a market share of 40%, how can somebody expect that we are building now 100% of the infrastructure?

Nobody can expect that, by the way it was political will that we have now this market share which we have. So, if we now take the 95% or 80% of the vectoring, plus the 2 million, which we deploy, after eight years we will have fulfilled our 40% already. So we are, let's say, fulfilling.

Now in 2030 the entire country would be fiber to the home-deployed, if everybody would invest at the same magnitude as Deutsche Telekom. So therefore, I think what we are saying here is, we take our duty, we take our role and we manage our customer base and we manage, let's say, our business case, which we are able to run here.

Now, this is that work what we are doing. Now, we have to see what the others are doing around it. Mutualization, the partnerships is an incremental part of what we want to do, because we will not be able to build 100% network from Germany. So we need the partnerships. And the reason why we are saying we need open partnerships is that we are not or nobody is forced to overbuild. Dirk will talk about that one that we're willing to offer access to our infrastructure in exchange to the access to the other infrastructure. And there should be something, which we deliberately negotiate with the partners and that is a new concept, which we are now bringing to the regulator and to the political authorities, because of the [indiscernible] (01:17:20) deal is just the beginning of an even bigger cooperation idea, which we have for Germany.

## Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Okay. Anyone with question that doesn't relate to German fiber? Dhananjay?

## Dhananjay Mirchandani

*Analyst, Sanford C. Bernstein Ltd.*

Q

Hi. Good afternoon. It's Dhananjay with Bernstein. And my question is related to the level of ambition that is embedded in your outlook. Effectively the outlook is same if you go back to the Capital Markets Day, three years ago. Although your investment envelope has grown and is likely to stay at elevated levels specifically in Europe, it looks quite conservative or unambitious from the outside. What am I or what are we missing here?

## Timotheus Höttges

*Chief Executive Officer, Deutsche Telekom AG*

A

Look, I think – I feel it's quite ambitious what we're doing here. [indiscernible] (01:18:10) coming from. Five years ago this industry was entirely shrinking. Our business was shrinking, including the U.S. Now we are growing in all

the business areas, which we have and giving the commitment for even the future for all our business being in a growth momentum, I think this is good.

If you believe that we can do more, we will do more. We will do everything you know to get more out of this organization than – or the maximum out of it, what is possible. But I think this is a very robust and realistic guidance. I'm very confident that we are with a track record of the last year that we are able to deliver on that one going forward.

I see what the commitments of other telcos in Europe are these days. They're even less ambitious than what we are doing without giving you names on that one. So, I think this is a robust statement going forward for our European footprint. And if we can do more, we will do more.

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**Hannes C. Wittig**

*Head-Investor Relations, Deutsche Telekom AG*

A

Good. Guy.

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**Guy Peddy**

*Analyst, Macquarie Capital (Europe) Ltd.*

Q

Yeah. Hi. It's Guy Peddy from Macquarie. I promise not to ask about fiber, but we've gone through the entire presentation and I notice on your charts that BT hasn't been mentioned once nor is it colored in the UK. Should we read anything into that or is it just the case of the fact that because that's a peripheral asset perhaps. Thank you.

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**Timotheus Höttges**

*Chief Executive Officer, Deutsche Telekom AG*

A

Okay. I did mention a lot of things in my presentation. So BT is one example, which we have to do later on [ph] in Thomas's (01:19:47) deep dive, he will talk about BT and how we see the situation there and how we are moving on. I don't want to talk too much about BT here publicly, because it's very difficult to be a major shareholder and the BT board member, so we leave it to [ph] Thomas (01:20:07) later on to talk about that.

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**Hannes C. Wittig**

*Head-Investor Relations, Deutsche Telekom AG*

A

Okay. And question Jakob, and that's the last one for Tim, sorry, and we make sure everybody will get plenty of opportunity.

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**Jakob Bluestone**

*Analyst, Credit Suisse Securities (Europe) Ltd.*

Q

Hi, Jakob Bluestone from Credit Suisse, and I had a question on your new distribution policy, and you sort of explained the dividend side of it in quite a bit of depth. Can you maybe just elaborate a little bit on your willingness to do share buybacks, which you mentioned in the release? What are the circumstances, where you would think about doing buybacks and is that something you would also consider doing in a deal scenario, where you highlighted that EPS and hence DPS could go down? Thank you.

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**Timotheus Höttges**

*Chief Executive Officer, Deutsche Telekom AG*

A

Look, the first thing is, again, we are doing this shift from free cash flow to earnings per share for purpose of greater consistency. There were a lot of debates with you guys talking about, okay what is the percentage contribution of free cash flow coming from the U.S., coming from Greece and other countries. What is the proportionate free cash flow, and is the proportionate free cash flow reflected in the dividend payout ratios, which you have laid out in the past.

Secondly in the U.S., the share buyback program has to be reflected in even in our dividend policy, because we cannot do a free cash flow – share buyback in the U.S. and at the same time paying out the same dividend, because the free cash flow is at least in its KPI in the way of [indiscernible] (01:21:46) transparent not changing.

Going forward, I think the earnings per share and most of the companies are focusing on earnings per share and adjusted earnings per share, is reflecting the ownership of the assets, which we have. And having 42% of a bigger U.S. asset, I think that should be reflected even in the main KPI, which is addressing the payout.

Now that said, we have two scenarios. Scenario A, the U.S. deal comes, then we have said we have an earnings per share logic going forward in the way how we are letting you contribute on the [indiscernible] (01:22:31). Second scenario, the deal doesn't come through, which we don't hope. And then we are clearly committed to the share buyback program.

We have the 2, 3, 4 program to €2, billion, €3 billion, €4 billion for share buybacks the U.S., and then this program stays intact. So then there will be share buyback considerations in the U.S. In Europe if you talk about the free cash flow guidance, which we have given for that one and with the earnings per share growth which we see, I think we would more focus on the dividend than on a share buyback program for Deutsche Telekom shares.

So this is, let's say, in a nutshell what we have in mind. I think in both scenarios, shareholders have an advantage. They get the huge contribution from the U.S. going forward, plus the synergies on the one side. And on the other side, we have a share buyback and the dividend earnings per share development on the [ph] other (01:23:36) side. So, but anyway, we will talk about that anyhow later on with Thomas, and we thought very intensively about – on this guidance from the perspective of a shareholder.

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**Hannes C. Wittig**

*Head-Investor Relations, Deutsche Telekom AG*

Yeah. Thank you, Tim.

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**Timotheus Höttges**

*Chief Executive Officer, Deutsche Telekom AG*

Thank you very much. Enjoy the day.

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**Hannes C. Wittig**

*Head-Investor Relations, Deutsche Telekom AG*

Thanks. So, in Germany – Thanks, Tim. We talked Germany already a little bit. And, now we have Dirk, who runs the German business since beginning of this year. I think he has magenta in his blood. He ran the German wholesale business in the past, and he is, I would call him, the father of the contingent model. So which I think most of you know and run the German sales and then he ran away to Canada to lead the consumer business of [ph] Rogers (01:24:28). So he has seen cable operator from the inside, which I think is quite a good piece of know-how to have, now he is back and this is wonderful. So, Dirk, please, the stage is yours.

## Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

Thank you, Hannes, and I'm very happy to be here. Talk to you and to be back in Germany and with magenta, I indeed have a big portion of magenta blood. I've been out of the business for last three years but I've actually joined Deutsche Telekom in 2002. So I've quite a history in the company. And I'm very excited to be back here in Germany not only because I'm seeing that actually the market and Deutsche is back to growth but also to talk to you about the opportunities that we have going forward and how we approach issues like for example fiber rollout and I'll come to that as part of my presentation.

So let me just give you a couple of the key messages about Germany that we're going to talk about in the following presentation. And I think first and foremost, we operate in a market with stable growth and that's very important coming from Canada, which is very fortunate market in growth. I can tell you it's a good environment to work in a growth environment, and again, Germany has returned to growth and we are very well positioned in this market.

Secondly we extend to – do we intend to extend our lead in customer experience, and B2C, we want to expand convergence, drive our more-for-more approach in mobile, leverage our superior mobile and broadband networks. And last but not least also use our best-in-class service to drive lower churn.

In B2B, we want to further extend our leadership in that area, building on strong ICT solutions and fixed line as Tim said earlier, we will deploy super vectoring and then reallocate our CapEx for an FTTB and FTTH rollout to drive revenue growth and address specific political concerns that we have. And we propose as part of that a fair wholesale model, access model to that infrastructure.

Thirdly, in mobile, we'll extend our mobile network leadership. Tim mentioned this morning, we are one again open signal report on German mobile coverage by far, and we will build the foundation for a 5G leadership in that area. And last but not least, we will drive efficiencies through automation, leaner operations, retirement of platforms and also benefiting from finalizing our peer leading IP migration. And we're confident that we will achieve €750 million of annual savings, indirect cost savings by 2021.

So let's do a review first of where are we, what have we achieved in the past years. And as you can see here we've achieved our revenue goals. Looking at mobile service revenue, we're well on track to hit the growth here both on our wholesale revenue, stabilization on a wholesale revenue overall to stabilization of our revenues over the past years.

The one area where we fell slightly short with our broadband revenues, which are slightly behind the anticipated growth that we've achieved there, but again if I look at the last year, that momentum that we have gained there is very, very good. Our EBITDA performance is slightly worse than expected. This is due to a weaker margin performance mainly driven by the problems that Tim also mentioned earlier about the IT transformation and about driving efficiency out of our operations through better support on IT.

But based on our 2018 guidance, we will deliver EBITDA growth at the lower end of our 1% to 2% guidance range. Because of higher than expected CapEx however and that was mentioned also before, we have not reached our adjusted cash contribution goals, instead we reported a negative CAGR here. The main reasons here are greater than expected public subsidy programs as part of the fixed network rollout and some regulatory delays in our near shore vectoring deployments. And we invested also successfully in our mobile networks and following the 2015 spectrum auction.

Now, looking more specifically at some specific drivers, mentioned that mobile service revenue having grown on a CAGR of 1%, again was a positive dynamic in the late 2017 and now into early 2018. Broadband revenues also with a CAGR of 1.1% and specifically here now regaining a bigger share of the net adds, this is the net add share in 2017. Again, if you look at the end of 2017 and trends in 2018 already, those netted shares are even better than the ones that you're seeing here on the chart.

And last but not least also our wholesale business in many areas actually a business of shrinkage. For us, it's a source of growth. We've been able to grow our wholesale business over the years by 1.2% on CAGR. All that then delivering into as I mentioned earlier an EBITDA growth of 0.8% annually in that period and again with a strong exit as you know in 2017.

If I look at the German market overall, what's our projection going forward, where do we think that market will go in, as I said, in the summary, before we believe it's a healthy and stable market environment that will enable growth, and looking at wireless, we believe that in wireless there will be growth driven, A, by comparatively low penetration rates with other markets and also relatively low data utilization, which right now is around 1.9 gigabytes per user per month. So we can grow in the mobile area through data monetization and increase penetration.

On the broadband side, again, we also believe there will be growth coming both from – sorry the broadband – penetration rates was on the broadband. The 78% penetration rate on broadband obviously not on [indiscernible] (01:30:54) north of 120%. 78% growth rate in a penetration rate in broadband. So higher broadband penetration will be one of the drivers and secondly, migration to higher broadband speeds as part of our expansion of our networks, we will be able to provide much higher speeds in areas of low or medium speed today, and that, again, will be a source of growth for us.

That all in a stable macroeconomic environment GDP growth forecast to be about 2.3% and also in a more stable regulatory environment, and one good sign there is for example of the important VDSL bitstream access rate has now been confirmed on this level until 2022. So we've a stable anchor rate in the wholesale business for the next years where we'll support this growth that we're seeing on the broadband business.

And we are uniquely positioned in this business. Tim mentioned earlier, our brand is second only to BMW in the German market. We're very, very strongly positioned, we're a market leader in wireless, we're market leader in broadband, we're market leader in convergence. We have 3.6 million customers. We actually invented this here in Germany. We win all of the relevant or most of the relevant networks test in mobile, 95% to be correct. We have 80% of our sites connected to fiber and we are perceived as innovation leaders with services like StreamOn or EntertainTV.

So those are the starting point from which we start and why we believe that we are actually uniquely positioned in the market. So what does that mean going forward and how does our strategy fit to the overall corporate strategy that Tim has just explained and you see the framework here. And we believe that there will be four areas where we want to actually dive in and drive the growth.

First one will be the lead in customer experience. Secondly, leading in business, continue the strong growth momentum that we've shown there. Thirdly, leading in technology, solving the issue of how, what's our progression to an all-fiber network and how can we build out and strengthen our mobile network position, and last but not least what we call value transformation, driving efficiencies and digitalization through our organization.

Now, going a little bit more into detail and looking at leading in customer experience, what are the four growth drivers that we will address here, the first and most important one being convergence. Expanding our converged household penetration with MagentaEINS, very strong brand here in Germany and driving that success story that we've seen over the past years. Secondly, standalone mobile, really continuing on a lot of the success that we've had in the past with our multi-brand approach and more-for-more. Broadband, TV and wholesale, leveraging, as I just said, our better networks, our network expansion that we're having and the unique propositions that we have here and last but not least, service driving lower churn and continuing to have low churn on the back of best-in-class service.

Now going to this in more detail [ph] what does convergence mean (01:34:16) and what does convergence really deliver for us? And what you see here is the results and the success story of Magenta ONE that we've done actually on the left hand side, so you see the real numbers. So €9 per Magenta household in additional revenue and that is after the discount that we've given of [ph] €10 of the (01:34:36) commitment discount. You see significantly lower churn for our converged households and you see significantly higher customer satisfaction. So what we want to do is actually, expand the story, continue the success story and go in our penetration of broadband households from today 18% up to 30% in 2021, and at the same time, driving a higher share of our revenue from converged households.

Talking about mobile, I talked about the more for more strategy that we've deployed and a multi-brand strategy. The German market is a fairly segmented market. So you have segments of customers, who are very willing to pay for quality, you have other segments of customers who are very, very cost conscious, really, going to discount. So the way we look at this market is saying, well, there's actually, very simplified three big segments. The one is what we call the premium segments, customer really looking for quality for service and [ph] being (01:35:39) willing to pay. This is presented mainly by the primary brands and actually, we are the market leader in this segment.

We want to continue to build on this leadership position with innovative services like StreamOn, Unlimited and others. We want to differentiate through our handset portfolio and pricing and also through our channel presence that we're having.

There's a second segment, the smart shopper segment, we're very well-positioned in the segment, again, with a distinct brand Congstar, very, very online-focused brand, north of 50% of our acquisitions, [ph] there (01:36:14) are truly online. And we have build-yourself tariffs and innovative offerings here. And again, we believe we're very well-positioned in this segment.

The third segment of the market, which we call the discount segment, our strategy there is basically, have a decent [ph] presence (01:36:32) there, regard on – look on revenue stabilization and balanced channel presence. Now we've executed the strategy for the last couple of years and again, we'll continue in this strategy going forward, even making our brands, our sub-brands more distinctive and their value propositions even clearer for our customers.

Again on mobile, as I said earlier, we're looking at innovation and more for more. Innovation means gives us the opportunity to say, hey, there's something new and at the same time, monetize what we've introduced. So the first step we've done a couple of years back was to say, we'll go to a much simpler portfolio and [ph] SMNL (01:37:12) tariffs, simplify the portfolio. Then, on the back of that use additions like StreamOn to actually then get customers to upgrade and to go to the higher end of the tariffs. This has been very successful. StreamOn has landed very, very well in the market with over 1 million customers now being on there.



We then introduced things like Magenta XL, the first unlimited tariff in the German market et cetera. And as I said before, we're foreseeing continued revenue growth in the mobile market. We actually expect a CAGR of 2% in the coming years, and you all know, we've shown 3.2% in the first quarter of this year.

Going to broadband, why are we bullish on broadband, why [ph] do we (1:38:01) believe that we can continue with good broadband growth. The first one, as I said is, bandwidth increase. And Tim mentioned it earlier, right now, if you look at the numbers 2016, only 33% of our customers were able to get more than 50 megabits per second. We're currently about at 60-ish percent. By the end of 2019, 95% of customers will be able to get more than 50 megabits per second, many of them, actually, vast majority of them at 250 megabits per second as speed, again, that includes some wholebuy potential. And with that speed comes lower churn. There's an inverse – high inverse correlation, as you can see here, between broadband churn and broadband speeds that are available. Hence, we believe that will drive lower churn, it will make us more attractive in the market even against cable propositions and as you can see right now, people are voting with their feet. We are actually very well positioned, even with higher bandwidth cable offers.

And TV again is another supplement and I'll talk to that now, which is our TV proposition. We believe TV as a core of our broadband and growth strategy. We will play the role of a content aggregator, but with smart investments. So we're saying we have a good strategy here. We have good exclusive content, which we bought Handmaid's Tale, others things, we're going into own series productions, but not an enormous amount of investment, yet with smart investments in certain things. We've developed a brand of telecom sports, which drives exclusive sports on basketball and ice hockey and others.

And we're certainly also improving the platform having the most advanced and best platform that there is in the market. And as you can see on the chart here, we are currently the only major TV operator, actually, winning customers on a net basis in the market. Going to wholesale and again, we are continuing to believe that our wholesale business will grow and the growth in the wholesale business will come out of two core growth drivers; A, subscriber growth and that subscriber growth will go in line with what we call high bandwidth footprint expansion. So we believe there will be continued subscriber growth for the foreseeable future in wholesale and at the same time, also, ARPA growth on our access business, why is that mainly driven from ULL into bitstream migration, so the customers who [ph] are going to (01:40:37) migrate from passive ULL infrastructure into active BSA and that will drive, again, ARPA growth and as you can see that compounded, that leads to about 2% CAGR on our wholesale business.

Talking about service and how we will use service to reduce churn and also drive a leading customer experience? Well, a lot of that will be about using modern technologies, agile approaches, using big data analytics to be proactive about the customer interactions that we have, using and leveraging self-service where it makes sense. Yes, we will have one app. Yes, we will have a lot of self-services that we'll make available on the app and our aspiration is actually to drive 70% of customer interaction [ph] as a result, (01:41:30) 70% of customer requests through digital channels going forward. And also, seamless service that we deliver focusing on pain points that our customers have and massive reducing the number of complaints, we today already have reduced our complaint rate from 5% down to 4% and that's of all total contracts. We believe we can drive it down another 75% to 1% in 2021, and that will drive a significant increase in customer satisfaction.

Going from the consumer business and how we lead there in the customer experience to the lead in business productivity in our B2B business and I am particularly proud of what we've done in the B2B business.

As you know, three years ago, we launched, what Tim called, the Mittelstandsinitiative 2.0, so the German medium-sized business initiative [ph] for especially then (01:42:22), as you know, that is the powerhouse of the

German economy. And we've actually been very successful in driving growth in that area. And remember, we are a market leader by far in the communications sector in that segment. We've grown not only in our core business i.e. in telecoms, but we've also grown in businesses like IT solutions, business connectivity, or security and we've added €300 million in revenue in those past years.

And going forward, we believe we can add another €0.5 billion in revenue into that business continuing in, what we call, the Mittelstandsinitiative 2.0 by further growth in mobile and broadband, offsetting some of the inventory losses and hard migrations that we're facing with the with the IP migration business, continuing with innovative services on M2M and IoT and again, supporting agile work and cloud solutions through those. That will be a massive amount of growth, again, in this market and we're well on track to actually hit that going forward.

Moving from what we want to do in consumer and what we want to do in business to lead in technology. What are we going to do in technology? How are we going to address the issue of our fiber rollout? How do we deal with corporation and co-investment models? What does that mean for our mobile network and where we will we drive network innovation? And starting with the discussion we've just had, what's happening on fiber build-out in Germany, and what you can see on this chart is, on the left hand-side is what we call the finalization of our vectoring and super-vectoring rollout. So by the end of next year, we will have completed all of our fiber-to-the-curb and super-vectoring rollout. And what you see on the left-hand page is the coverage that we'll achieve with that, 80% household coverage, with vectoring 70% of households with super-vectoring by the end of 2019, introduction of super-vectoring already this year and by the end of this year, already 15 million households being available with super-vectoring on up to 250 megabits per second, and then also leveraging some of the potentials of alternative network operators on, what we call, wholebuy, i.e. serving our customers through other people's active infrastructure, something we've started to do in areas like Cologne or the northwest of Germany.

Now, on the right-hand side, you see how we look at the German broadband landscape. And you see – on the X-axis, you see coverage. This is the coverage of all the households that we have in Germany. On the other axis, you can see the bandwidth, i.e. how much bandwidth is available in the market in Germany in those households. And that picture shows our estimate of how this is going to look like by the end of next year. And what you see here is that obviously, you have certain amount of fiber to the home and building built-out today already, you have a cable area about, as you know, two-thirds of the footprint and then, you have a second area, which we call the outside of cable area, but where you actually have a vectoring and VDSL available, so minimum 50 megabits per second available. And then, lastly, there is, what we call, the white spot areas, which is the areas were actually only ADSL is available, so 16 megabits and below, many of those areas actually only having five, six or even only 1 megabit per second.

Now, this is how we look at the landscape and partly as Tim said, a large chunk of the population already by next year will have access to very high bandwidths. And we believe that will quench a lot of the discussion that's going on today and will allow us to grow on the broadband. However, on the political side, obviously, there is an issue here that the quality of living conditions, as we call it [ph] and the German Constitution is not (01:46:32) given by having people who are disconnected from the digital world.

And hence, looking at how we look at fiber rollout i.e., going beyond 2019, beyond what we have planned, we said, you have to look at those areas more differentiated. First, the first and foremost pressure that's there, you have to address business areas. So business parks that are around in Germany, many businesses are there, they don't have the connectivity that we need. So, we have committed and we have communicated and already doing a rollout to those business parks.

We will have 80% of those business parks connected in the early 2020s and this is already going on today and will address again a big issue about the [ph] Mittelstandsinitiative, as I said earlier, the heart (01:47:20) of the German economy.

Secondly, from a political perspective, the white spots are very, very important areas. There is a lot of the noise and the pressure in Germany is coming from exactly, those less than 5% households by the end of 2019 who will be white spots. We will address that white spot issue. We believe this will be a subsidy program by the government. Those programs have been going on for the past years and we believe there will be significant subsidies available to actually, [ph] build-out (01:47:52) in those areas and we will compete for these subsidies as we [ph] today (01:47:57) mentioned in Bavaria as we do today with VDSL. Hence, we believe a significant amount of the investment there will come from public company. And then, the largest part of our investments we'll be spending in what we call the cable area and outside the cable area in areas, where, for example, we have good business opportunities, because our market shares are low, where we have been overbuilt or where we believe the rollout economics are very, very beneficial. We'll do this, not only alone, we're open for cooperation and co-investment models.

Tim mentioned earlier EWE TEL, many of you might not know them, but they're actually the largest alternative network provider in Germany with their own network. So this is a big guy in Germany and we have collaboration with them. We've presented it already and we'll notify to the cartel authorities as we speak.

Going from there, what does that really mean collaboration? How does it work and how will you let others share on your networks? The first, as I said, joint ventures. We will do joint ventures. EWE TEL is, if you want, our hallmark piece, the ones where we want to try how this works. We will jointly roll out an active network. We will share that infrastructure and then, we will jointly have access to that network [ph] shift (01:49:20) sharing the investment and the risk that is there.

Secondly, we are ready and willing and we do that already today, rent passive parts of the network, be that ducts, be that fiber, et cetera and with many municipalities, we're in discussions today. We don't have to build, we just rent that infrastructure that is going on in a lot of the projects already and we'll intensify that going forward.

And last but not least, as I mentioned earlier, we are ready to buy access where infrastructure already today exists with a very fair and open model. Again, we have models in place today and we'll intensify that going forward, allowing us and, if you want, in a form of commitment model to actually, share and benefit from infrastructure that has been built from others.

In the cases, where we operate and own the infrastructure, we will be open. We will be open for others to use this infrastructure, as we have been on our copper network. However, there's going to be slight differences and there's been some very good indications of the regulatory authorities that say, hey, guys, we understand that the regime for fiber investment needs to be different from the regime for copper. Hence, we understand that there's a higher degree of risk and we understand that risk sharing needs to find a different form.

So the model that we're proposing basically, separates a fiber-to-the-home or building network into two large parts. The first one we call here A, if you want, the connecting network until basically, the border of your – of the [ph] lot (01:51:00). We call that – that network we will rent out as part of a co-investment or a commitment model as you know them today. We'll ask for a small upfront investment and then, we will rent out on the form of a bitstream access for a monthly fee, depending on the size of the commitment that we've bought and where we are.

Secondly, and this is different from the models we have today, the network from the border of the [ph] lot (01:51:30) into the building and into the individual apartments, we will actually ask for a co-investment individually per line that will be connected. Those costs in a fiber-to-the-home network are actually a substantial part of the cost of the network and we will ask somebody who wants to use our network to share that kind of investment in a very fair form, and hence, they are sharing part of that risk and reducing our exposure that we have there.

We will also insist that if somebody wants to have access to our fiber network, we get access to their network on reciprocal terms and we're willing actually to buy network capacity on the model that we're offering and that gives us a high level [ph] and (01:52:20) degree of trust that we believe this is a fair model, which has a good chance of being approved by the authorities.

What does it mean for the rollout? What do we plan in terms of rollout? First, and Tim mentioned it earlier, we're not going to invest [ph] in differentially (01:52:34). We're going to look at the investment, we're looking at rollout efficiency, we're looking at the payback that we're getting. And just to give you a figure of about where we are, we're talking about a €1,000 per home passed. That's our average of the averages. Again, if you look at some of the areas in the white spot areas, so the white the – what I showed you earlier, where we have no coverage, cost can go up to €3,000 to €4,000 per home passed. But again, we believe that the vast majority of that will be subsidies so that even there our investment will not surpass that number.

Secondly, we're looking at a smart area and technology mix, where are we going to build out between B2B areas, competitive areas, fiber-to-the-curb areas and white spots. So, we're really selecting the white spot where to invest and we'll also use an efficient technology mix. Yes, we will use FTTH and we will use FTTP, but we will also start to use wireless-to-the-home as a complement to our fiber network. And Claudia will talk later more about how we're going to do that and what potential do we believe it has. We believe it can be an accelerator to our rollout. We believe it's actually, feasible for 20% to 30% of homes as long as you have obviously fiber close to it, because the backhaul will need to be done on fiber.

Already also talked about smart cooperation and co-investment models and then, again, how fast do we roll out. And we've mentioned earlier we're believing we're ramping up to 2 million households per year in the year 2021 and with ramp-up, we mean we will not start in the year 2021, we will start significant investments into fiber-to-the-home as soon as we have leeway from the end of our fiber-to-the-curb rollout, which will be in 2019. So in 2019, already you will see us investing into fiber-to-the-home and you'll see significant numbers again ramping up then to the 2 million in 2020.

And again, that is the plan we talked about how we do that alone and secondly, as part of our partnership models that we have out there. Then, going from the broadband networks and the fiber networks to mobile. Mobile, I talked earlier about we want to maintain our network leadership, we want to make sure that we can command a price premium for the service that we're giving and hence how could we do that.

We already have today 80% of our sites connected to fiber, we'll continue a significant rollout of our sites, 27,000 today, Tim mentioned earlier, we will roll out approximately 2,000 sites per year going up from 500 today, again, those are macro sites, on top of that, the small cells that [ph] we'll (01:55:26) be using and we'll continue to roll out our LTE Pop coverage, we're today market leading and we'll even improve that going forward in 2019.

What are we going to do to make sure that not only coverage is good, but also the speeds [ph] are there (01:55:42). We can maintain our speed advantage, as we said, the one obviously is about spectrum, the secondly, obviously is about the number of sites that you have, the fiber backhaul that we're using, new antenna technology with massive MIMO, again, Claudia will speak into that [ph] mixing in 5G, delivering high speeds to

rent (01:56:03) customers and also tuning our network and understanding in a much more customer-driven way of where are the network pain points.

So, we're very intensively looking at specifically highways and railroads, where do we have the necessary performance gaps, where do we have call drops, how [ph] can we (01:56:21) quickly invest and understand and tune our network so that our customers network performance is even better than the one that we have today that also obviously, is not only outdoor, it also includes indoor technology so that we can maintain our leadership as we've said.

We will obviously be in 5G. We want to be market leader in 5G. 1,000 times higher network capacity, Claudia will talk about this, lower latencies, higher speed, increased efficiency that we have. The potential not only for innovative solutions like campus networks or things that we do in the [ph] harbor (01:57:02) an Hamburg or other areas, but also then our ability to serve wireless-to-the-home faster, maybe cover gaps where we can't roll out fiber as fast as we want to or roll out to certain areas, which aren't directly covered by that. We believe again, there's a significant case for that for us going forward on that area.

If I then go from the mobile networks, we talked about network transformation. Now, talking about value transformation. Value transformation, how are we going to manage to take out €750 million in indirect costs and we're looking at basically four areas that we're working on. The first one is automation. Automation using data analytics, smart processes, we believe we could take out about €300 million. Operational excellence, things like predictive servicing, understand where problems are going to happen; maintenance, less compliance, reduce the number of complaints; process automation, another €250 million. Platform retirement, switching off [ph] old (01:58:08) platforms, we talked about IP transformation earlier. Again, we will be finished with the IP transformation on the consumer side by the end of 2019; on the business side, by the end of 2020. There will be significant savings, not only coming then, but they're already coming today, but they're being offset [ph] by (01:58:26) some migration efforts. But we will see the benefits of that flowing in this timeframe.

And last but not least, the change of the way we work. We talked earlier about one of the issues why we did not deliver all the savings we promised in the last Capital Markets Day was issues we had with IT transformation. We believe and we've started to embark on a different way of delivering IT, taking significantly lower risk, delivering significantly faster at lower cost using agile technologies and changing the way how we operate in the company. And we're going to go through those elements in a little bit more detail. And talking about automation and automation for us as is a lot about bots. Creating bots, we today have 1,500 bots operational already today, handling 35 million transactions already in 2018 or we'll be handling in 2018, handling 20 million transactions today. We believe we can massively scale this until 2021 and we're investing heavily in that area.

Now these bots don't necessarily directly interact with your customers. What we're also looking is obviously, what we call AI and digital assistants i.e. the direct interaction machine to human that we're using for example, in chat bots or an IA (sic) [AI] (01:59:47) support chat. You can see we do today about 300,000 transactions where probably, us, again, there seeing a huge potential going forward, and we're using innovative services like field service apps, et cetera, where customers are actually able to track the technicians that are coming, making sure that there's bigger efficiencies, that they're prepared, that we don't miss appointments et cetera.

On operational excellence, improving our service processes, €250 million that we believe we can say. The one is obviously, providing [ph] forms of (02:00:22) digital interaction with customers that will be our app, but also we have native web pages that we use today where we believe our customers can, as I said earlier, do about 70% of their requests digitally direct if they want to.

Data analytics, understanding better what is happening, where our problems are occurring, how can we make sure that we address an issue when it's emerging maybe even prior to its emerging or right after it has emerged, creating a lot more transparency and guiding our teams and processes by that.

Training of experts, looking at service quality and really focusing on first contact resolution and to understanding that we do not reiterate problems or [ph] permeate (02:01:05) problems in our organization, but get them right the first time, we're aiming for over 80% of that resolved on the first day.

And last but not least, investing into product quality. Product quality being at the core of our customer experience and really, focusing on getting the flaws out of our product and we're creating and focusing on now dedicated end-to-end teams who will look at product quality. What's our ambition? Just looking at complaints, as I said earlier between, 2016 and 2021 to get – reduce the number of complaints for example by over 84%.

Platform retirement, we've talked a lot about IP migration and Tim earlier talked about the example of the BNG transformation. Without getting too technical what you can see here between the legacy architecture above and the new architecture below is significantly simpler. It's not only significantly simpler, it's more scalable, it requires less interactions and hence, it's much easier and cheaper to operate than the legacy infrastructure that we have today. That's part of our BNG migration [ph] what (02:02:15) we've done so far.

Also, we will change our IT architecture and we are already doing that. We are going to micro service oriented architecture, open source software, much more smaller, manageable pieces of software changes than the big programs that we have done. In the past, we focused a lot on a decoupled architecture that actually allows us to be more agile in the way that we operate and we have introduced and are introducing significant amount of agile and DevOps methodologies into our operation.

Talking about organization and lean and agile that will mean change to organization. It will mean change to the way that we operate and again, we're embarking on this already now. We will consolidate management functions. We will reduce the hierarchy of our organization to focus on accountabilities and fast decision-making. We will introduce a much more product oriented [ph] tribal (02:03:15) organization, a new form of organization that looks at end-to-end quality and features of our products and we will build skill-based chapters. So a much more agile organization and easier to change and deploy organization than we have today.

We'll also significantly invest into agile development base on our software and products on that, improve our time to market by those, by early and fast prototyping, strong usage of AI and data analytics. And then, obviously, that will mean reskilling a large part of our organization, introducing this agile methodology. And we've already created an academy for that, we've created training programs and we're in the midst of actually that interaction. And our aspiration is to significantly enhance and enlarge the number of projects and development projects that we're doing using agile methodology and flexible delivery.

Now what does that mean, if I summarize all of that in a financial outlook, we are looking at revenue growth over the next years of above 1%, translating to an EBITDA growth of 2% to 2.5%, with stable cash CapEx and stable special factors, cash, then, hence, delivering an increased cash contribution of 4% to 5% annually.

If I look in more detail, what does that mean on all the other aspirations that we've given you? Again, growth in mobile service revenue of 2%, broadband revenue CAGR of 3% to 4%, Magenta ONE share – or MagentaEINS share of our broadband households of around 30%, growing our B2B business by €500 million until 2021, ramping up and with ramping up, I mean not starting, but ramping up to a 2 million per year run rate in fiber rollout and reducing our indirect cost by €750 million and that's the end of my presentation.

I thank you very much and I'm looking forward for your questions.

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## QUESTION AND ANSWER SECTION

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Thank you, Dirk. I guess there won't be any questions left on German fiber now, which is sad. I got the – just got the hang of it. But we have about 20 minutes for questions now. Maybe start with Fred over here.

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Frederic Boulan

*Analyst, Merrill Lynch International*

Q

Hi, thanks. It's Fred Boulan from Bank of America. Firstly, just trying to understand a bit your strategy on 5G and the wireless broadband, so what do you mean by this synergetic rollout with fiber-to-the-home? So do you think it's a technology that could replace fiber rollouts in a large scale in rural areas?

And then, secondly, to [ph] rebound (02:06:13) a bit on Tim's comments around retail versus wholesale. So, you have 40% share in broadband. Your – obviously, your wholesale share is much bigger [ph] obviously (02:06:22). So when you look at your long-term where you want to be on the 10-year view, is the philosophy to deploy as per your [ph] retail share or you want (02:06:30) to retain a very large share you have in wholesale, which basically, means rolling out much more than your retail share in terms of high speed broadband? Thank you.

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Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

Okay. Let me answer those two questions. So 5G and again, Claudio will go later into 5G. For wireless-to-the-home, you will need a fiber fairly close to the home. So it is not a technology that will allow you to cover hundreds of meters of area where you don't have fiber. So we believe it complements the fiber rollout. But for example, it might be an easier way to cover certain areas where you don't have direct fiber-to-the-home, but you can go closer to the home and then to the last mile or the last meters on a wireless technology. It might be actually, that we are planning to roll out fiber in an area, we have fiber already there, but the last meters of the next wave of the rollout will be out for another six or nine months and if customers are there and want that technology, it might be worthwhile for us, it might be in some areas, we're not sure of what the demand is. We'll start with wireless-to-the-home and then we'll see. And again, it also depends on getting some experience on what does [ph] it actually work (02:07:38), it will need line of sight. Where do we really have line of sight, how does that work? There will be some questions there. Hence, to your question is it going to be the solution in rural areas? We believe it's not necessarily a standalone solution for rural areas, because you will have fiber closer, but it will be a great complement to a fiber roll-out that you're doing now, that's for the first question.

Second question, retail versus wholesale. Again, I look at this as network utilization, that's the most important part for me, if I built a network or I have a network with a lot of fixed costs, I want to make sure that it's being utilized. A lot of the fiber rollout is very difficult to do just on your own just with a retail brand. So that's from my overall perspective, so I prefer a highly utilized network. Secondly, obviously, I want to make sure that I get a fair return on what I'm having, i.e., wholesale pricing needs to be okay. And then on the third one, I'd probably prefer retail over wholesale if I have to. But that then is probably a tertiary degree of what we have. So we still expect that wholesale will be there. And to get the network utilization, but again, we'll also strive from a retail perspective obviously, to get a higher market share.

Frederic Boulan

*Analyst, Merrill Lynch International*

Q

So you'd be comfortable in the long-term if you [ph] would (02:08:47) have a significant base of your retail customers on this wholebuy regime where you actually don't own the network or the core assumption is still that you want to own your network?

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

Okay. So that's a wholebuy question – a follow-up question on wholebuy. Right now, I mean, we're a network company, as Tim said earlier. We'll feel a lot more comfortable if you own everything. However, we also understand we won't be able to own everything. And there are actually, fiber networks today existing and rolled out for example, in the city of Cologne, where we probably don't want to roll out another network. Now, what commercial agreement we have to have if we go on a long-term partnership with them, we'll have to see. But as we said with – earlier with [ph] Aviator (02:09:31) we're very open to long-term partnerships where we might not exclusively own the network.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

And also Tim's point with the 40%. Tim, you correct me if I [ph] misrepresent it (02:09:39), but it's a 40%, is our retail share, correct. But there are other players out there who have market share and they don't invest. So it's a point, we're making a point, right. Why look at us? We are doing more than our fair share in the end. We will do a lot more than our fair share. That's the point. Okay. So next, I have [ph] George (02:10:00).

Q

I was just wondering, the 2 million homes a year that you announced, is it fair to assume that that's on a consolidated basis, so all this co-investment arrangements could end up actually being much more broader rollout over time? And based on that, I just wanted to understand from a regulatory framework, what you're proposing now with EWE? Is this preferable to what you're seeing if you go on a rollout standalone? And regarding the last few meters, is it possible to give us an idea how much of the total investment would be those last few meters? Because then, obviously, the co-investment becomes relevant for those that haven't invested. Thanks.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

So that was actually three questions, I'm trying to answer them. The first one was the 2 million homes per year right now assumes our collaboration with EWE TEL. It does not assume any others on a larger scale. We assume some wholebuy, it does not assume any others on a larger scale that we're having. The second question is over to – the second question was your framework with [ph] EWE (02:11:15). We believe for two reasons, it's important. The one is, it's an innovative approach of how to build fiber in a country, in Germany, and we believe we will have to go in these collaboration models. Hence, we're saying this to us is a master case or a sample case of how collaboration could be done. We believe it's actually – the government looks at this very positively, because they're basically saying, well, this creates coverage rather than us overbuilding each other, [ph] build the (02:11:42) a larger area together. That's the framework behind it. We have presented this to both the cartel authorities and the regulator. And again, this is in the middle of a process. I don't want to go on details, but so far, we have received some quite positive remarks in terms of the allowability and the possibility of this deal. Is it preferable to a standalone rollout? Yeah, if I had endless money, it would not be. I don't have endless money and



plus, also don't forget, this [ph] EWE, just (02:12:14) to take that example, is a very strong brand up in northwestern Germany. So if you roll out alone and you have to go against a very strong local brand that has a local network, it's much easier to go together and you can afford the network economics and I think that's their reasoning as well.

I think and let's also be clear, the model that I've proposed to you here as our wholesale model is also the model that we would be using in that joint venture with EWE. So we are deliberately discussing that with them and we're saying we believe that should be the market model in Germany. As to your third question, how high is that co-investment to the last mile? It is significant. Now, this is an average of the average of the average. So I'm not going to go into individual numbers, but if you look at those last miles, there are quite high costs in the fiber-to-the-home network. So, yes, we will ask people who want to use that network to actually share a significantly larger part of the investment risk than they're doing today.

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Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Okay. So I have Ulrich next. Ulrich Rathe [ph] there (02:13:18).

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Ulrich Rathe

*Analyst, Jefferies International Ltd.*

Q

Thanks very much, Ulrich Rathe from Jefferies. I would like to explore this hurdle rate, the 7.5% a bit. Is this calculated as a standalone number or does that have opportunity costs in there in terms of losing revenues on copper and gaining it on fiber? Or how is this actually calculated? Because it looks like a relatively high number for a fiber-to-the-home project, so I was wondering how that sort of [ph] meant. (02:13:45)

And related to that, does it actually make sense to set a hurdle rate for FTTH at all? Because, I mean, ultimately, it's almost a bit of [ph] a cost (02:14:00) of remaining in business over time, right. So the idea of sort of to set a quite high hurdle rate for the next generation technology that will probably come anyway seems to be a bit artificial. So I was wondering how you rationalize that? Thank you.

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Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

Okay. So two things, again, in times of limited opportunity or a limited CapEx that I have available, I need to make sure that I'm investing my capital there, where there is the highest opportunity, setting a high hurdle rate. By the way, with a significant risky investment that we're talking long paybacks here, we believe is actually prudent and I don't think it's out of proportion if I look at other markets. How do we calculate it? Again, this is a calculation where we obviously, take into account the future of our copper network, what would that happen. But it's not a total case based only on retaining the business that we're having. Hence, I think – I believe it makes sense to set a high hurdle rate to prioritize the investment right. Secondly, the wholesale models obviously, will have to be based on the rate that you're using to calculate, these are – in a fair wholesale model that I'm using, I have to share that risk and that share is expressed in the rate that we're having here.

I think those were the two questions. Yeah. Is that idea of setting high hurdle rate for next generation technologies artificial? We know we have to build fiber over time, the only question is how fast you have to do it and again, in times of limited investment, I want to make sure I invested there, where there's the best case first.

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Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Okay. I have Akhil next.

Akhil Dattani

*Analyst, JPMorgan Securities Plc*

Q

Yeah. Hi, good afternoon. Two questions please. Firstly, I just wanted to dig a little bit into your EBITDA guidance that you've provided. I know it's quite rare for companies to give mid-term targets, but I guess, just trying to understand the operating leverage and cost assumptions, guiding to 1% revenue CAGR over that period, there's cost cutting, [ph] they're trying to deduct some (02:15:58) further direct cost reductions. I guess trying to understand why there's [ph] not (02:16:02) more operating leverage in terms of the EBITDA performance that then translates from that. So what are the other assumptions? What's really within that that we should understand? And I guess, specifically, there's a lot of excitement around digitalization in the sector. So I guess keen to understand why that doesn't drive greater EBITDA growth performance.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

So again, I think this is – we've talked about indirect cost savings, we've talked about revenue growth. We haven't talked a lot about direct cost. We don't believe that the direct cost will necessarily go down that much. So we're taking some prudence on the direct cost line first. Secondly, also, we talked about for example, our business area that we're moving from classical telco revenue into IT revenue. Now the gross margins on those revenues are significantly different. So there's going to be a margin dilution, if you want, just from the change in the nature of the business [ph] we are (02:16:52) doing that we've built-in.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Yeah. I mean basically it's about being – remaining – keeping some flexibility in the marketplace, right. So that is a good thing to have. Okay, Emmet?

Emmet B. Kelly

*Analyst, Morgan Stanley & Co. International Plc*

Q

Yes. Thank you. Just one question, please, just sticking on the cost thing. Can you talk a little bit about labor costs in Germany, how much of your revenues are consumed by labor costs and what the outlook is for this line in terms of employee numbers, cost per employee, just some big picture thoughts, please?

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

How much of our revenues and labor cost...

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

How much of our costs are labor costs. I think it's about half of our indirect costs. Thomas will talk more about it tomorrow. So if you find it in his presentation then, and I mean the drivers are the decline and – but on – against that is the inflation in wage cost. We've just had a new two-year wage agreement, the average rate is in line with historical wage agreements about 2% plus. So to the extent that we will reduce head count more than the 2%, the total labor costs will come down. So that's [ph] why it (02:18:00) it will come down, yes.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

[ph] But let me be specific (02:18:01), we don't disclose right now, the breakdown, I think Thomas will do part of that tomorrow for the group. Obviously, there is a significant amount of the savings related to labor cost. And again, these are net savings, as Hannes said again, there is a labor cost inflation against that. So there is significant reduction in head count or in cost in that plan as well again, we've done things like that in the past and again, Thomas will talk about this, a little bit more tomorrow.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

But the plan is basically backed up and comprehensive, so the cash flow guidance for instance, encompasses all the special factors that pertain to it. Okay, so we have – well, we actually had a bunch of those guys, so we have Sam for now.

Sam McHugh

*Analyst, Exane Ltd.*

Q

Yeah, thanks for the question. [ph] Well, (02:18:43) I guess we just heard that CapEx in Germany kind of your 2014 expectations ended up missing where you thought you'd be. What gives you a bit more confidence that these three years ahead the CapEx won't be higher again? And perhaps that's more of a question for you, Hannes, actually.

And then, just secondly, what is the €4.2 billion assume in terms of co-investment? You mentioned already one of the plans, but are you assuming a bit of flexibility [ph] on other stuff? (02:19:04)

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

So on the second part of the question, the EWE CapEx, and I think we've discussed that previously, is not part of the €4.2 billion, however, we don't assume any other [ph] collaborations as we (02:19:16) or large co-investment schemes as we said that today. What does it make [ph] or that (02:19:22) we missed the target, I think it's about being disciplined.

Again, we are, in my belief, in a much better network position now than we were in 2015. Our networks are competitive for the foreseeable future. Again, if you go 250 megabits per second and you go against a cable network, we tend to miss the fact that the cable network is a shared network.

If you look at the size of the cable segmentation here in Germany, we actually believe that there will need to be significant investment on side of the cable companies into segmentation efforts to actually come close to a stable performance on that. And hence, we believe that we are on the mid-term, very competitive with the network we have and the fiber investment, as you know, is a much longer-term investment, however, it takes a long time, so you have to start early.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Okay. [indiscernible] (02:20:10) question.

Ottavio Adorisio

*Analyst, Société Générale SA (UK)*

Q

A couple of question on my side. Ottavio Adorisio from Société Générale. The first one is on your last mile – [indiscernible] (02:20:23) investments, you highlighted a plan that make a little sense. If somebody wants to use your network, should co-invest with you.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

Yes.

Ottavio Adorisio

*Analyst, Société Générale SA (UK)*

Q

But the problem is that, of course, this is a very tricky segment of the network, because they are highly regulated. So, this, nobody invests with you and you got the 2 million FTTH each single years. After five, six years, you got 10 million. How are the regulators going to look at that one? It means that nobody will come in, [ph] can (02:20:52) access this household? So, would like just to get a [ph] bit an idea about your talks to (02:20:56) regulator. You really – you would be left off the hook about this 8 million to 10 million over five years of FTTH, even if no competitor will co-invest with you at the start..

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

Okay.

Ottavio Adorisio

*Analyst, Société Générale SA (UK)*

Q

... the first. The second is on 5G and mobile.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

Can I answer that one first? Answer that one first?

Ottavio Adorisio

*Analyst, Société Générale SA (UK)*

Q

Go ahead please.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

Okay. So, I think it's very – we're talking – everybody here talks about being willing to invest into the market, even United Internet is out there and we're willing to invest. Now, you're saying, well, let's share a part of that network investment for a customer that you want to connect, co-invest with us and then they're saying we're not doing it, but we still want you to invest that share and then we want to piggyback on your investment. I think that's a very difficult argument to make, number one. Number two, by the current regulation, we cannot be forced to invest for somebody else.

Ottavio Adorisio  
*Analyst, Société Générale SA (UK)*

Q

Yeah.

Dirk Wössner  
*Member-Management Board, Deutsche Telekom AG*

A

So we have to share if we want to, we have to share an existing network, yes, under current regulation. To then force us to build somebody for something else, I think it's even constitutionally quite difficult. And then think of the dynamics that we'll make and I think our reaction would be, well if that is the network that wouldn't be – oh that is the regime, there wouldn't be a fair share of the burden. Then you could talk about maybe higher bitstream prices, et cetera, et cetera, but I don't think that's the right way going forward because you have to have an investment-friendly regime in Germany, if you ever want to cover this country with fiber-to-the-home without spending billions of public money.

Ottavio Adorisio  
*Analyst, Société Générale SA (UK)*

Q

Yeah. Even if nobody is forced in this, \$2 million is already in the plan. So you're going ahead anyway, so all this \$2 million, the condition of the fact that you want the regulator to tell you that?

Dirk Wössner  
*Member-Management Board, Deutsche Telekom AG*

A

So, let's be – and Tim said that earlier. We're not going to build \$2 million independently of whatever regulatory regime...

[indiscernible] (02:22:42)

Dirk Wössner  
*Member-Management Board, Deutsche Telekom AG*

A

That is not going to happen. We are confident by what we're hearing from [indiscernible] (02:22:48) coalition contract from what we're hearing out of it that the government has understood, A, the regulatory regime for fiber or the regime for fiber has to be fundamentally different from the one we use in copper. Copper infrastructure build 100 years ago versus something you build today has to have a different regime. We've had that. There is many public statements on this from government officials and even from [indiscernible] (02:23:10). So we believe, yes, that it's going to be more investment-friendly regime.

Secondly we're saying we're willing to buy fiber networks at that price. We're willing to pay other people exactly the same amount and that amount is cost based. So we're not saying – the issue you have is more like the average of the averages, so it doesn't become too complicated. But the issue of the last miles cost base, so we're saying, hey, you share that part of it and I think it's extremely fair in the approach, that's going to be very difficult to argue against that. Again, you never know. But let's be very clear that we believe our commitment to that rollout is based on a fair regulatory regime, which protects investment. Doesn't necessarily have to be the one that we're proposing. It's our proposal, but it has to be fair and encourage investment.

Ottavio Adorisio  
*Analyst, Société Générale SA (UK)*

Q

I'll pass it on the second. I've already taken a lot of your time.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

Okay. Right. So, Robert.

A

Robert Grindle

*Analyst, Deutsche Bank AG (UK)*

Robert from Deutsche Bank. On your guidance, have you baked in lots of wholesale revenues from Vodafone? That will be pretty high margin stuff, perhaps that's related to a previous question. And as the CapEx shifts next year from FTTC to FTTH, does that have any impact on your engineers? You have to rehire or anything like that? Or can you just redirect those engineers?

Q

And then, the last one is related again to previous question. The special factors being flat, is that effectively business as usual within special factors or are there some special factors going up and some going down?

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

So let me come to the three, the guidance – you've seen our guidance on the wholesale numbers that were part of my presentation. So we're not anticipating significant loss of the revenues to fiber. Again, when Vodafone bought Kabel Deutschland, one of the big cases is, we're going to migrate all the wholesale customers that we have back onto the cable platform. Now, you've seen the performance of our wholesale business over the last three years, so nothing has happened. We're not saying nothing is going to happen, but we believe that our platform is attractive enough and sticky enough, so it will continue to grow our wholesale revenue. That's number one.

A

CapEx shift from FTTC to FTTH. Now, this doesn't happen overnight. Right? So we're not – we stop today and then roll out tomorrow. That's also the reason why – if you want to get to two million households in 2021, you have to start practicing and getting your organization right. That's why we talk about a ramp-up, and hence, we will gradually shift our engineers. Again, a lot of the work that's being done specifically in FTTH is digging civil work. So we don't dig.

We have higher companies to do that. We have to do some changes in planning resources and those kind of the things. We have to do specifically skill sets also, I think, more on the IT space, but that is baked into our plan. And as the special factors, I would refer to Thomas for more details. But in the German plan, there is no other things than what we just said.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

In fact, we have those machines out there but we also are doing fiber right now. And we also have a demo later today that Claudia will talk about and then later, we'll demonstrate our German CTO where we show how we – the fiber factory is innovating and how we want to do it. So, it's a big part of doing it efficiently. So, can I have your question? Sorry.

A

Steve Malcolm

*Analyst, Arete Research Services LLP*

Yeah. Hi, it's Steve from Arete. Can I just come back to Robert's question and just ask whether in your forecast you've baked in the Vodafone Unity deal completing and if you have baked it and it hasn't made any change why

Q

are you so opposed to it, first?. Secondly, on your B2B revenues, I think you're [ph] receiving (02:26:37) €500 million in your revenue, which is about 3% growth over the period, which is in fairly stark contrast to most other B2B markets we see. We've got cable trying to take share, Vodafone building 2,000 business parks. What gives you such confidence that you can generate that sort of growth out of your B2B division? Thanks.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

So, as for the question, again, look at the time it will take and we're looking at horizons regarding your Vodafone question. We're looking at time horizons it will take to complete a transaction and once you've completed a transaction to really then have a significant effect on for example, our wholesale business. We don't expect that in foreseeable areas within the next two years. I think that's the one.

The second thing to your second question, why are we so opposed to it, again, this has to do with market dominance in the TV sector and with blocking access to building associations, using that market dominance in the TV sector. And as you know that the access to in-house cabling and in-house networks will be a factor in the speed of the FTTH rollout. And hence, we believe it's unfair. We believe it should not be allowed from a German perspective. And so, we're coming from the broadband market and we believe we would have – we have great opportunities in that area and we want to be sure that there is fair competition.

To your second question what gives me the confidence that we can grow on B2B. Well, we've grown in B2B. Again, our market share in B2B if you look at the telco business is way north of 50%, and it has been way north of 50% for the last years I can remember, and we're still growing. So what's happening in B2B right now and everybody says, we're going to go in SMB business. Well, going into SMB business if you don't have stores and if you don't have a sales force out there and say, I'm going to go in online approach into B2B only does not work. So we have been very successful in leveraging our distribution footprint and leveraging our network performance and network superiority in really getting ingrained into the business.

Secondly, if you look at areas – and people don't appreciate that on our B2B business. They're saying, Dirk, IP migration is going to come, all your PBX business is going away. Our market share and the PBX business historically was 20%. We have a network PBX now – in our network, we have PBX now. I can take all the other 80% market share that I have there with the solution I have in that market. So we believe there're significant growth opportunities in the classical business. And then secondly, we're entering into the IT business where we complement a lot of the solutions specifically in small business space and we bring them to those customers, and that gives us the confidence why we believe we can grow.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Okay. Other question from – [ph] Chuck, (02:29:26) are you still – it was answered? Okay. Sorry.

Q

It was partially answered. It was also the question about the wholesale business and if you expect your outlook to be affected if the deal goes through and if bitstream has to be offered by Vodafone Unity.

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

A

Okay. I think I've just answered that.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Yeah. Okay. So over here, next.

A

Christian Fangmann

*Analyst, HSBC Trinkaus & Burkhardt AG*

Yeah. It's Christian from HSBC. I've two questions actually. The first one on your savings, the €750 million. What are the costs to achieve those? I mean is that a net or a gross number? I mean you're investing in IT platforms and all that, so that takes time and probably some money? And then secondly, on the whole by the 15% if you do the math, that equals around six million homes. So I wonder next to, let's say, NetCologne and few others, where are these coming from? So that seems to be a very high number to me.

Q

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

So to your first question, this is a net number, important. So this is part of our – so the investments needed to make for example in the IT side are part of the IT guides that we've given. I've mentioned about special factors that were stable and special factors as well so that numbers a net number. Secondly, on whole buy, where is that now? If you look at the big whole buy players in Germany, there's two things happening. A, there is a couple of players out there. By the way, they're not the Vodafones and the Unitymedias and those guys. They usually are local players like NetCologne and Cologne, M-Net which is a Munich-based fiber company.

A

There's [indiscernible] (02:31:01) which is the largest one in Germany. And there is multiple smaller local network companies. Many of them public, private partnerships, just pseudo public entities that are building fiber to the home. And hence, we're seeing fiber to the home and fiber to the curb. And this has happened over the past. There was a part of the vectoring decision as you might know. We had to give up some areas because the vectoring was won by somebody else and those areas we're losing or we have been or are losing our vectoring footprint, there we will go on all whole by as well.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Great. Thank you, Dirk. So we did get through quite a bunch of questions. Sure there will be many more, but Dirk will be around and also this evening and in the future. So thank you very much. In future investor events...

Dirk Wössner

*Member-Management Board, Deutsche Telekom AG*

Thank you.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

...of course. We're not going to hide him, okay. So, good. So we now have time for a coffee break. I think realistically if we can't use that to make up time, so it's 15 minutes. Also for those on the web, we'll be back in 15 minutes from now, but I would really urge you to stick to those 15 minutes because although we take a lot of your time, we also have a lot of stuff, so please be back. Okay? So enjoy your break. Thank you.

[Break] (2:32:30-2:32:39)



Okay, let's try to be a bit Germanic also in terms of our time management. We are back, also back with the webcast. And maybe people can take a seat now, so you don't miss out on the demos in particular that we want to have, show you later. And as I said the famous [indiscernible] (02:33:00) that is the privilege of those who have made the way to born too later to see.

So welcome back everyone. Now, we're moving on to T-Systems. I think it's fair to call it our problem child. Okay? Now, it used to be problem children. Okay? Now we have a problem child. So it's – and I think we can get that child into a good place too, and because we have Adel. Adel does not sing or maybe he does, but he hasn't displayed his skills yet to us, but he rocks. So Adel he's got a plan. right? Adel, welcome you on stage.

Thank you.

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## Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

Thank you, Hannes. Thank you. I've been called a lot worse than a problem child before. And for those who are anticipating Adele to show up and sing, I apologize. Obviously, I'm not as good looking and certainly can't sing, because if I start singing, I think, I won't survive here. But anyway, with all seriousness, we do have a business that needs quite a bit of transformation. And, I know, many of you in the audience are thinking, look, we've heard this story before, we've seen different plans, there is skepticism about why do we have even a business like T-Systems? And, I think, that's all justified, to be honest with you. I do believe that this is a business that promised and underdelivered and it needs to change.

So if you give me some benefit of the doubt for the next 40 minutes to explain to you why we believe this time it will be different. But more importantly, I think, I will attempt to explain to you what is T-Systems all about, because it's not one thing. And very few actually understand what do we actually have underneath the covers.

So we'll be very open, transparent, and show you exactly what are we going to do about this business. So, first of all, we are in the process of transformation. We are a business that has struggled for multiple years, struggled in terms of top line growth, struggled in terms of delivering on our commitments, struggled in terms of generating free cash flow, and when I show you the results compared to last Capital Markets Day, you'll see that we fell short on many promises that we made.

However, it is important to highlight that, through that period, there are some highlights, important highlights that are important for the future and they are – we've invested – invested heavily in growth areas, which I will share with you in detail and why we think they're important, including all IT. And also we've addressed some of the risks in the business even before I show up here, especially around large problematic contracts, which has been a heavy, heavy burden that the business had to deal with over the last three years.

Second, we do have a portfolio that's not one thing, and I will get into that in a lot more detail. We have things that are very close to Deutsche Telekom core, telecommunication solutions. We have new growth areas that do have connections to Deutsche Telekom because of the network affinity in these solutions, and then we have IT systems or solutions that are not as close to the core of Deutsche Telekom, we have that portfolio. Now you may ask me the question, why do you have it, I can't answer a lot of question, the fact is, we have it, and we have a plan to transform it.

Third point is, what I'm going to try to convince you is the core of our strategy going forward is around transforming that portfolio from the areas that are struggling today that had negative contribution to our value to

things that are new as well as protecting our core, which is the telecommunications core. Now to achieve that, we have launched an ambitious transformation plan and I am confident when you go for the transformation plan, you'll understand it is different from what we had before. We have four initiatives that are critical to address the business challenges.

And then finally, we are committing to a financial plan that will get this business back to growth. In the second half of 2019, we'll see top line growth, and by the end of 2020, we see positive cash contribution from this business. That is our outlook for now.

So let's start first reflecting what did we do in the planning period that just fell behind us. And what I've done is, whoever has the books from the prior Capital Markets Day, I pulled out one chart, which was trying to summarize the strategy or the master plan as we called it before, right. And this basically said, we have segments of the business that we need to address because they are bleeding. We have new areas we've got to go grow and we have to address some of the investments that we haven't been doing.

And I'll be extremely honest with you, when I go through my story, it is not very different at the top level. It's going to be different how we execute the plan, right, because the plan wasn't wrong. What happened though is, we didn't execute as well as we should have in order to achieve the plan.

But, there are things that we did achieve. So, for example, we stopped significant number of contracts that were contributing negative cash flow to the business. We addressed three very large contracts that were damaging the business and basically masking all of the good things that you could have. We had a run rate of about €100 million losses in selecting a handful of contracts over the last three years per year. We've invested heavily in growth. So, we addressed some really important points that, if we were still in the middle of it today, I tell you, it would be a lot harder to be able to stand here and be confident in the direction of the business.

But, there are things, obvious things we could have done better. First of all, execution of the transformation plan, especially around costs. I do not believe we addressed the fundamentals of the costs of the business, the challenges that we have. And we are in a different business in multiple segments that requires us to be agile, fast, have operational excellence that delivers 5% to 10% improvement every year, and we haven't done that. When you look at how we manage the business, our approach to what we sell and what is the strategy around our portfolio was weak.

And finally, when you look at our organization structure and you've heard Dirk kind of talk about this. It is old style, legacy kind of structure that actually prevents us from executing the plans that we have. So that's an honest assessment of what can we say we did okay and what are the things that we actually should have absolutely done better.

If you look at our scorecard, it's not a good story. However, I do want to highlight one thing that's important, which I believe is one of our USPs, and that is our customer satisfaction or TRI\*M. We scored 88% (sic) [88 points] (02:40:51) in last year. And one of the things that I was going through when I decided to come to T-Systems is to understand, look, what are the strengths of this business, and obviously you have to look at what do your customers think of you. And if you look at our TRI\*M score of 88% (sic) [88 points] (02:41:08), compared to competition, we are in best of class. And yes, you can go and ask our clients, and I'll tell you that, majority of our clients would tell you we absolutely value the quality and consistency of T-Systems' delivery.

Financially, we did not hit the numbers that we committed. Our revenue was minus 1.5%, our EBIT margin was 1.7%, and our cash contribution was not where it needs to be. So, we'd like to forget that as quick as possible and

move forward to understand where we're going to take this business. So, let me walk you through, first of all, the business challenges that I believe in simple words we need to address. Right, I'm not going to make it very complicated because the problems are typically not complicated.

So, first of all, we have a revenue problem, and the revenue problem is both the mix of portfolio that we have where we had fairly large declines in our IT business, classical IT, and I'll show you what classical IT means in a few slides. We had stable performance in our TC business, which is our core networking solutions to our enterprise clients, and our growth areas are growing double-digit. And the problem was that we could not make up the decline of IT in the new areas, and therefore the business was declining minus 1%.

In addition to that, our sales organization set up was not the way it should be set up. It was highly fragmented across what we call divisions and therefore was very focused on very specific solution rather than thinking about the broader T-Systems lacking the tools and the agility that the sales organization needs.

Second, the loss-making contracts, we've talked about that. Look and I've been in the IT business for many, many years. And losing contracts, no matter whoever tells you that it's not a normal thing, it's actually a very normal thing. The problem for us in T-Systems was the magnitude of these losses and the length of that magnitude. Three years of €100 million-plus is not normal, and we believe that is behind us. The reason we believe that's behind us because we've implemented a very robust risk management that gets involved very early in evaluating the deals and stay with the deals all the way through the early implementations, which is really where you lose money.

When you get to stable ongoing delivery in a 10-year contract and [ph] third year (02:43:56) you typically get the contracts to a stable position. Some vary in how much you make, but you get them stable. It's that early period that you need to be very worried about. And finally, and I don't think we've been talking very openly about that before, our cost structure needs to be addressed especially when it comes to overheads. We have too many layers, we have too many managers, we have too many executives which makes the organization extremely complex, not only slows you down, but creates an SG&A structure that's just not affordable and not what we need to be. So those are our challenges. These are the three challenges that we need to address. But I also want to very quickly go through what are the foundations that we strongly believe in in T-Systems.

First of all, marquee clients, we serve every DAX 30 customer in Germany, every single one, we serve 100 of the Fortune 500 customers globally. And we're not only – I'm not just saying we've got a little project going on with these clients. I'm talking about mission critical applications, that if we don't deliver, the clients can't run the business. Our top clients have renewed [ph] our (02:45:15) relationship with us way beyond 10 years. These are important assets to have. Our network both from an asset point of view, skills – network management skills is an asset for T-Systems. Our breadth of portfolio gives us an ability to cross-sell and upsell clients that not all of our competitors have. Our skills and expertise, the German engineering that we keep talking about, and I again from experience is pretty impressive. When you look at what we do, what kind of problems do we solve, and how deep do we go, and then the investment in the growth areas, and the committed employees that we have are also assets. Now when I joined here, I started reaching out to the employees and created a little bit more of an engagement program to get people engaged much more into the transformation journey. I now have had more than [ph] 200,000 touches (02:46:15) from the employees coming back wanting to be engaged in the journey that we're going to in T-Systems, and that is absolutely an asset to be able to leverage. So, challenges and platforms to build on, so what are we doing. So, first of all, before I get into our new strategy, our new plant, I want to give you a real open description, what is T-Systems, what exactly do we do. So, if you just bear with me for a few minutes, hopefully, this would be very helpful for you as you think about T-Systems valuation and why do we have some of these things.

So, first of all, a third of our business is what we call TC core. This is telecommunications services. This is the enterprise network, VPNs, managed services around the enterprise, UCC. This is really core to Deutsche Telekom, and we focus here on German clients and German outbound clients. So, we're very selective in where we go, and how do we penetrate the market opportunity.

Then, moving to your right, is the next business, which is what we call classified as ICT. This is the business that we do with certainly German government, federal, and state and local as well as some of the European entities. Most of this business is network and I'll show you the numbers of each one in a few slides. So, it's also very close to what Deutsche Telekom is all about. Obviously we've invested heavily in IoT. IoT always starts with connectivity and managing devices that is very close to Deutsche Telekom core, and what we need to do, but we've also built an integrated IoT stack that we can deliver to our business clients to accelerate their digitization, and I'll show you a breakout of IoT and how big it is, and why we think we can be a player in that space, also not too far from Deutsche Telekom's core.

Security, we've created the security business what about two years ago. We have 1,400 experts that deal with 6 million attacks on Deutsche Telekom's infrastructures per day, per day. We are now the leader in Germany when it comes to security, because we put this team together and started selling those capabilities to our clients. Our ambition is to actually be a leader in Europe. This is highly demanded area where people are struggling, especially as they expand the number of connected devices, expand the partnership networks and open up their businesses to new models.

Then we have road charging, and I think many of you know road charging because we had this road charging legal arbitration that we've been working through that, we have now good news that's now put behind us, but we are one of the leaders in road charging in Europe. It's a business that generates double-digit EBIT margin. We're obviously the leader in Germany with the truck tolling. We're leader in Belgium. We are one of the providers for EETS, the European Tolling System, and we're seeing quite a bit of demand, because a lot of national initiatives are ramping up in terms of putting tolling in the roads in different European countries. So, it's not that greatly connected to what our core is, but it is a business that's done very well for us growing double-digit on the top-line as well.

As we get to the right, we get more IT, so digital solution is a newly created area where we put 4,800 consultants that do different things around digitization. And they offer services for front-end digitization of clients, backend, new business models, robotics, changing business models, and I'll show you some examples of what we do here where we believe is a huge opportunity in the market place.

Public cloud and public cloud managed services is an area that you probably think of just having the OTC, the Open Telekom Cloud, that's our alternative for the hyperscalers for Germany based on Open Telekom Cloud, but in addition to that offering, we have been building what we call a multi-cloud managed services, where clients were going into AWS or going into Azure who have private clouds in their infrastructure are beginning to struggle on how to actually optimize and how to manage those networks going forward. It's a big business. We've seen a lot of wins especially over the last six months that accelerated our investment in this area.

SAP, you may wonder why do you think it's a growth area and I'll explain it later, it's a big business for us. We are the leader in Germany in SAP both infrastructure and application management, and there is a dynamic in the marketplace that I'll explain a little bit later that drives the growth of that capability.

And then finally, the area that we struggle with the most or have had the biggest difficulties is what we call classical IT. And in classical IT, we have two things. We have what we call managed infrastructure services, think of it as hosting private clouds, application management, and we have classical or dedicated system integration works. So, this is legacy applications that big clients have that continued to need to be upgraded, continued to be managed, but that's a business that has very little growth potential going forward. That is the area, the classical IT where we had the big losing contracts, and that's the area which has been driving the decline of the overall T-System.

So as I said before, T-Systems is not one thing, but it is a combination of these assets, and what I've presented to you just now is actually the new way of us looking at this business. It's not the way we looked at this business in the past. And I'll explain more why we've done it this way.

Okay. Now when it comes to strategy, so first of all, as I said we are a business under construction, and we have three key areas that we need to address. Remember revenue obviously the losing contracts and cost and with – to address those, we launched an ambitious transformation plan the first area around portfolio is focused on why do we have the products that we have and where do we make money. So that portfolio initiative is focused on that, rationalizing, making sure that we're investing in the right areas as we go forward. The second area is how do we get our revenue back to growth? How do we get our sales organization to deliver 6 billion of signings every year, because anything below 6 billion is not going to allow us to grow. That's what that initiative is focused on.

The third initiative is around delivery integration is to understand what is our end-to-end cost of delivery and how do I drive it down? Because today, it's is not acceptable. We need to do better. And the last one around cost – overhead cost. So let me walk you through each one in a little bit more detail. So the first one I already introduced to you which is changing the way we think about this business and this team is – it is the largest change we're driving into T-systems. It's changing how we actually manage, track, and invest in this company going forward. Where in the past, we were looking at divisions that was more or less a combination of client groups, now into what really is the offering. Why are we in this [indiscernible] (02:54:38)

And we actually for the last six months, and to be honest, it's been going on much more than six months, because even I showed – before I showed what people were thinking about how do we get into a better understanding of where we make money, where we'll not make money. But over the last six months, we've rationalized the portfolio that we have through four lenses. We looked at the market opportunity of every offering that we have; we asked the question, can we compete? Do we have the capabilities to compete? And if we don't have the capabilities, can you build them? Can you build them versus the competition that you're dealing with? Do we have the right to play? Will people give us a chance? And finally most important is, okay that's all good, but can we make money? And through that lens, we have rationalized already multiple things that we're going to stop doing and things that we said we're going to invest even faster and I'll show you in a second.

Based on that, we have a clear strategy. We have a clear strategy around the company on how we want to transition, how we want to drive this company, we are restructuring as we speak into these portfolio units and we have already deployed a new management system that manages the company in a different way versus what we've done in the past. And then you've seen the portfolio already, but let me give you some numbers. So, if you think about the numbers first, our TC core, our growth areas and our classical IT, it's about a third, a third, a third. So the core IT, the core business is about €2.2 billion, our growth area is about €2.1 billion, and our classical IT is about €2.5 billion. So the size of our growth area is becoming relevant. If you look at some of these sizes, the classified business €400 million, we are the leader in classified business especially in the networks in Germany and in some areas in EU. If you look at our digital business, the new business we just created a couple of months ago its €400 million. If you look at our SAP business, it's €0.5 billion. You can talk to any analyst around the SAP

and they'll tell you we are the leader in Germany. And we're number two, number three in Europe. And I'm talking comparing to the big players and not picking here, compares to IBM to Atos, to DXC. So some of these businesses have real good scale. And if you look at their performance, historical performance you'll see that TC has been stable, growth areas by nature were coming from low bases are growing high double-digit. And IT is the one that's been declining minus 1%, minus 2% which is what hurt us. And if you think about the future, we don't believe the dynamics changed, the only thing that's different here is we do believe there is an opportunity in SAP, and I'll show you an SAP breakout in a second, why we think that's the case.

So we have a portfolio. We're not one thing, we have to protect the core. Some of our growth areas already have scale, others don't. And if you ask me, are you going to be successful in every single one of these things? I'll tell you very quickly, no. But, if we're successful 60%, 70% of these it will be fine. You don't ever hit 100% of everything you try.

And in the IT business, we have already decided, for example, we decided we're not doing end user services anymore. That was a €400 million per year business. When I first showed up here in January we were supposed to bid for a very large deal, multi-billion euro deal several years, end user services, we said, no way we're going to start today by saying we're not going to go into businesses that don't generate value for this business. We're looking at also other areas in the IT business to make sure that we get out of them or create a partnership somewhere where we are not the ones to make it profitable in the future. So that is the first thing that we've done, right; a change, a fundamental change in how we think about the business and how we manage the business going forward. And let me take you through a few examples. So Internet of Things because I said there's a few areas that are close to us as a core as Deutsche Telekom and others are not, so Internet of Things. This is a multi-billion euro business, everybody is talking about it. But for us obviously it starts with connectivity, connecting the devices. But not only connecting the devices, we have IT, and how to actually manage these devices. How do you turn them on – turn them on? How do you turn them off? How do you measure them? Can you track them? Can you enable them? Can you disable them? Can you connect them? Can you integrate them into different? That's the start. That's the foundation. That's very important to us as Deutsche Telekom.

On top of that, we've built an application layer and we built development layer, and a data hub to be able to do the data analytics. Now, we are not talking about creating and developing applications. We're are talking about having the environment that we can install in our B2B clients that can convert their applications into IoT business models, and drive that growth for them. It's a defined approach rather than highly customized and highly fragmented approach going forward. You've seen, we've announced a partnership with Microsoft, so part of our solution in the IoT is based on the Azure platform, shown on top of the connectivity of the Azure platform, but we also have a version of the solution that's based on cumulocity which is a less complex, more simplified model that we can sell to smaller clients.

One of the customer examples here, and I can't share the name, is a company that deals with office and commercial real estate restoration from water damage and fire damage. And they have 20,000 dryers that are out in the marketplace that they bring to the apartments, they bring to the commercial sites in order to dry the premises from water damage, 20,000 dryers. Their issues being power consumption and leaving these devices, dryer devices much longer than what they need to or sometimes showing up with maintenance crews to remove them much earlier than when they're ready.

We've equipped all of these devices with sensors that connect the devices from a maintenance point of view, but also measure the humidity, the temperature of the environments that we are in. We're able to reduce their power consumption by over 25% and the efficiencies that we put together for them in their operations was significant.

This is just an example of how we deploy our IoT platform with connectivity, with measurement devices connected to their applications in order to bring them business value. And we have a few other examples that you see.

The second is, security and I've already talked about security. This is big business for us. We believe we are very well positioned because of our expertise on what we've been doing to protect Deutsche Telekom. As I said before, we deal with 6 million attacks per day. We have experts that put together different solutions with partners that look at the network, look at Level 1, Level 2, they look into your IT infrastructures, they're able to monitor, they are able to analyze the attacks and they are able to remediate the security attacks that our customers deal with. If you haven't seen our security operations centers, our SoC in Bonn which is one of the largest in Germany, I encourage you to go see it, because it's like Star Wars, right. You've got all kind of monitoring about all of the traffic in the world and different attacks that we're dealing with and our clients dealing with. And here our customers don't like us to disclose their working with us, obviously for obvious reasons. But Linde Group, which is open to that, has totally outsourced their security to us. So they run in our SoC. We have Level 1, Level 2 security. We look at their networks. We look at their IT infrastructures. We are the one responsible to make sure they're up-to-date and remediate any attacks that they have penetrating their environments.

Next one is digital solutions. Again, a multi-billion business, everybody is talking about digitization but everybody lacks resources to be able to do it. This is a business that's already €400 million for us growing double digit. And if I show you – and I'll come back to examples about the scale I'm talking about. This is 4,800 consultants and they're not one thing, they're broken into frontend, digitization work, they're broken into backend, they're doing robotics for our clients, they're developing strategies on how to enable them to get into the digitization roadmap. It is a business that we feel very confident with especially in Germany, our ambition here is Germany. And it's not only used for large enterprise clients, this is the same team that supports our German Mittelstand, in their digitization journey, because that is where the skill is actually even harder to get.

SAP – look SAP, as I said before €0.5 billion business, the market for us has been us, we've been flat in the past, but SAP has a major push to go to S/4 HANA, and they are driving that conversion, and we're going to ride on the back of that. You've seen multiple times announcements, we're very, very close with SAP, I have personal relationships with multiple board members. There's huge commitments on both sides because we have the skills, we have the reach in the marketplace not just in Germany, but in the select countries that we are to be able to help them with this transformation. And one of our leading truck manufacturers in Germany selected T-Systems to actually take them to that S/4 HANA journey. And this tells you who we are when it comes to that kind of space. So, that is the portfolio.

I'm not going to talk about that because that's just demonstrates the SAP numbers. But that was the portfolio, and how do we fix sales. So the first thing we did, we integrated our go-to-market from a divisional structure into one team. We believe it's really important to have one team divided into segments, we have a team that focuses on in Germany end-to-end, we have a team that focuses on public sector end-to-end, we have a very strong team that goes after automotive. We have a team that covers international markets but they're all one organization, lessons learned, tools et cetera to be able to drive the efficiency. And our goal for that team is to sell the entire portfolio. Now that team is supported by sales specialists from each of the portfolio. We've got a team that covers the relationships that finds new clients, that brings in the specialists that can go very deep in each of the area that's required depending on the customer situation. Obviously what we need to do is get our signings back to \$6 billion.

We had a really difficult few years in terms of signings. We need to be at \$6 billion minimum, and I'll tell you, we've seen already in the first quarter, we're beginning to see early good signs that that integrated team can drive a good success in the marketplace. So I'm confident that as we enhance the tools, as we change the processes. For example, one of the simple things we did, any deal that was less than €100,000 required multiple signatures

in the organization that's loaded down dramatically. We gave that authority down to the manager and the seller to be able to do it real-time. If it meets certain criteria on margin, an excess standard you don't need to come to anybody, you can approve it. And the volume of these smaller deals, deal with are thousands. What we want to accomplish is increase our face time from about 5% in front of the client today, yeah, 5% to 25% by the end of 2019. The third area that we need to look at is delivery, and it was not clear what is the actual cost of end-to-end delivery when I came here? When I asked the question, tell me exactly what does it cost for me to deliver a server to the client?

It wasn't clear because the delivery team was also divided into multiple pieces. There's some delivery with sales, there was some delivery in factories, there's some deliveries in what we call points of production. We didn't have a deliberate strategy of where deliveries should come from.

So that is an area where we started driving very hard, we integrated the delivery under the portfolio units. We see an opportunity to drive €100 million of savings through standardization [indiscernible] (03:08:26) and automation, and using the right tools. We also see a significant opportunity in right-shoring deliberately our delivery.

We have already declared that we have four strategic delivery centers in the world, four. Yes, we'll have local delivery teams but they're going to be more client specific, closer to the client, but in terms of scale, volume, four. Germany, of course, we'll be in Germany. Hungary, well you already have more than 5,000 people. Slovakia where we have about 4,000 people, and India, we are going to build India. Today we have a couple of hundred people, by end of the year we'll have 1,000, and our drive is going to be have be to have enough people in India to give us the good mix of delivery across – we need all of them, it's not one play. But now we have a deliberate strategy and that also can get us a €100 million of savings.

And then finally to the overheads, and you can't hide from this that no matter what we do in all the other areas we have to address the cost of our overheads in the company. And I said, in the beginning, we got too many managers, we got too many layers, too many executives, it slows us down because every manager wants to manage, naturally. So our goal is to go from eight layers in the organization to five. We're going to drive a significant reduction in our overheads, that's going to deliver over €100 million per year savings. So that is a must for us as we go forward. It's not an option besides the other areas that we talk about.

Now in addition to these streams in order to drive successful transformation you have to connect it with a changed management process. You can't just stand up and say I'm going to change, I want to do this, you got to take the people and the managers with you. And we launched an ambitious, cultural as well as changed management process that includes educating our leaders. We selected 200 leaders in the company. We started creating specific education including workshops [indiscernible] (03:10:47) to explain to them how to change. How do we want them to behave? How do you execute the plans? We also picked five business principles where we said these five business principles we must live by, everybody in the organization, client at the center of everything we do.

IT and technologies is a critical component of our transformation, teamwork and collaboration, operational excellence. Every year, you got to be better. Every year you have to be better. So it never stops. And of course our people make it happen. So we've got a lot of engagement with our people through communications and through web seminars with town hall meetings, et cetera. So we believe that in order for us to get to the plans that we have laid out, we need that cultural and changed management transformation program as we go forward. We also cannot forget the lessons learned from the past. And believe me we looked at them very carefully. We looked at why did the revenue growth did not do what it did, right. Then what are we doing different? Loss making contracts and making sure that the risk management is robust enough to make sure it doesn't repeat. We'll have



challenging contracts in the future, no question, but don't let them drift into the neighborhood that we've had for the last three years. Too little automation, not enough offshoring, all of these ideas have been built into our transformation plan and every time we go through a review, every time we go through the initiative, we ask the question, are we using lessons learned, are we really making change, is it real, is it tangible or is it just? We're feeling good about it because we're doing something.

So let me try to bring this all together and try to conclude here. So first of all, one thing I'd love for you to remember here is, T-Systems is not one thing. And I don't believe it's appropriate for us to look at T-Systems and say it's one ailing thing because we have some exciting things that we're working on, and we have core of our business that's been stable for a long period of time, and we have some exciting things in the core too. Tim talked about ngena, software-defined networks, and software-defined wide-area networks that we're developing, and we're very excited about that, all IP migrations et cetera.

We have changed our go-to-market approach, and gave our sales leaders and our sellers a lot more excitement and energy to go, really be sure of themselves in the marketplace through what we've done in the organization. We have scale, right? As an organization that's almost €7 billion. It gives us the ability to build scale in India as an example, very quickly we'll go from 200 people to 1,000 people in eight months. Right? Spend marketing appropriately, being able to invest in the areas. The scale [indiscernible] (03:13:47), and then what we have is a portfolio that is leveraging the strength of the company and allows us to up-sell and cross-sell especially from the businesses that are struggling to the businesses that are growing. For example, our IoT offering, we go to our clients that are very good with us. And we show them, and we're always at the table. We're always at the table. Now do we win or not. That's a competitive situation, but we're always there. If we were not there, and you'd be knocking on the door, they wouldn't let you in. So, our strategy in a nutshell and yes, you're going to say, it's not very different from before, but I want to convince you that how we're going to execute that this is different. The strategy is about shifting our portfolio from where we are today, a third, a third, a third into an overweight, and into our growth areas. We do that by protecting our TC Core, making sure that that business continues to be strong transitioning to SD-WAN areas as they come, transitioning to IT, get it back to growth after those transitions, investing in the growth areas, while we're managing our classical IT down, and of course, addressing the cost issues that we talked about. And through this strategy, we are open for bigger structural moves. Now that we know exactly what we have, we know where to invest, we're open for partnerships. We're open for M&As. It is not something that's closed in front of us, but our priority is to make sure we execute the plan that I showed in front of you, and we'll be open for the – like end user sales that's stopping it. We're looking at partners to be able to take the business, that's normal, part of the portfolio management.

So, summary of the cost savings, you've seen that, I'm not going to go through that, right. Delivery has quite big contribution and overheads. And if you look at our financial outlook, what our commitment is our revenue is going to be slow in terms of growth because we have that dynamic of IT coming down and growth areas trying to catch up. You'll see that our EBITDA growth is 5% which we have not shown in a long period of time. We have built enough CapEx and special factors in our plans.

We have enough, we believe both a combination of two cash elements to be able to drive that transformation plan, and what we're trying to deliver what we will deliver is a positive cash flow contribution of this business to Deutsche Telekom. And the model in the midterm ambition is 1% revenue growth. It's margin, EBITDA margin, EBITDA growing at 5% every year. EBITDA margin between 8% to 10%, and positive contribution, and we're going to retain and maintain that [indiscernible] (03:16:43) rating above 80%, which is where we've been over the last five years. That's it. That's the story. So, I hope you understood the difference between where we were and where we're trying to go so with that, Hannes?

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Very good, no, you – you stay there. Okay. So, we have about 10 minutes for Q&A now. And but Adel will be around as well in the evening so we can have follow-ups so start with [ph] Lawrence (03:17:16)

## QUESTION AND ANSWER SECTION

Q

Thank you very much for the detail on the business. And could you give a little bit of a color on the competitive dynamics as they developed over the last three years. Clearly, in some areas I suspect there is more competition. I think understanding how you are going to perform will be heavily dependent on what the competition is doing in those areas?

Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

A

Sure. So, let me go through kind of segment by segment, right, because it varies across. In our TC core, as I said before, our focus is on German, and German outbound clients, and we have pretty good position in that. So, when we compete against BT Global Services or AT&Ts of the world or Verizon of the world because we have such a large component of Germany in the i.e., we're part of the solution for them, we tend to be very competitive. When we drift and have less of Germany content, then it becomes more difficult for us to be competitive, so we're very selective about how do we go after clients that don't have big German footprints. Obviously, we're developing ngena, which is SD-WAN solution that gives you a different dynamic, right but it's targeted at clients that actually are open for standard solutions rather than complex custom configurations that they need to run their business.

In the classical IT, look, we've struggled to compete. This is one of the reasons why we didn't deliver on the plans before because the competition was much stronger than what we predicted, especially around price. Now, we tend to be very strong in Germany, and you've seen some of the latest, we won Sparda Bank, which is the largest outsourcing deal in Europe to-date, and we competed against all the competitors that you would know. It's a deal that – obviously multi-year deal, but I was very comfortable with the margin that we have for that deal. So, if it is close to us, we know the clients well, then, we do very well. And we are in that similar position in a few European countries. Outside of that, when we stretched ourselves before, which we did in the past, we struggled. So we're trying to make sure that we're focusing on the right markets, but where we do have the scale, we have the capability we're credible to be able to compete.

Then, in the growth areas look at Verizon, in security where extremely comfortable, competing because it is an area that's still not close to commoditization, and requires quite significant capabilities and experience, and we're really good about pulling together solutions with our partners the likes of Cisco's and Symantec, and people like that in order to present to our clients what we need. So there is of course, IoT is very early. Everybody's trying to figure out what's my business model? How do I compete? How do I scale? I don't think we have a disadvantage there we have some interesting IP that we've developed in managing the connectivity and managing devices that our competitors don't have, and the stack that we have announced with Microsoft, with Azure. You'll see Microsoft was very excited about having that because of the entire solution that we can build to the market, but it's early, it's very early.

Cloud is a tough market, public cloud, right. OTC is beginning to get traction. It took a lot longer than what we thought and we positioned it as an alternative to AWS or to Azure because these guys you know on a scale level you know forget it. They are at a different – on a different planet if you will. But there are many clients in Germany that say I want my data to be in Germany. I am not comfortable for the data to be managed by a non-German company. And you know we had a win like the European Nuclear Agency that wants to put all their data with us, right. We are actually managing all of their infrastructures for their testing and for their R&D et cetera. Nordea Bank that came and put their investment data and investment applications in OTC that we're worried about putting it somewhere else. So you have things like that positions us well, but it is an extremely competitive market. So, it varies dramatically depending on the offering, but the market is competitive more and more as you get into areas of IT and we feel – and it's competitive in the network as well, but we feel very comfortable with the assets that we have that we can compete well.

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Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Okay. So, question from [ph] Andrew (03:22:03)

A

Q

Yeah. Thank you very much. Just a question, as best as you can, could you give us an idea about the margins of each of those buckets of business? And then, second question, could you just talk about how the buyers, the CIO those at the top of your chart are buying? Are they buying piecemeal and using a pick and mix approach or do you get the benefit of having the business in the traditional telco side of things when you're selling IT? Thank you.

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Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

So, I won't break down each margin. That's not something we do. But, look, I'll ...

A

Q

Can you give us an idea?

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Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

... I'll give an idea. So, in the – the TC business is good margin, it's a double-digit margin for us. Good business sustains the margin for – it's been sustaining it for multiple years, right. And as I said there, the revenue there is flattish because of all of the dynamics of all IP migrations and things like that. Our IT business is single-digit margin. It's a business that – and it's a mix of things, right. So, we have for example a private cloud business that's beginning to grow very well in that classic IT and has double-digit margin. But then, we have traditional hosting where it's very competitive, and it's eroding, and you have end user services that low – which is why we said look, we're not going to do that business anymore. And then, the growth areas, look it's very early, so security is delivering very good margin, beginning to grow. We have scale, SAP double-digit margin. But, the other areas are early because we're piling up investments. We are putting big investments in IoT. We're putting big investments in cloud that dilutes the margin obviously today, because we're investing ahead of where the business is, and then finally, road charging double-digit EBIT margin that we feel very comfortable with.

A

Q

So is the direction of revenue trend dilutive to margin?

Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

A

Not if you look at it over the last multiple years, because these businesses that we are investing in today are beginning to get into positive margins. Security, last year was half of the margin that it is today. This year as they got the scale, because we gave them a lot of scale before they had the revenue, and they have revenues catching up. IoT some of the new projects we're seeing has very good margin, whereas the old projects that we did where we had large investments, and not enough revenue were – so we believe the reason we get EBITDA to growth is that, that balance starts shifting more and more to the growth areas with good margin. And we address the IT margin head on with the cost savings and of course the overheads reduction is also going to contribute to the margin.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

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And also don't forget something like IoT actually, it's close to [indiscernible] (03:24:53) right now because it's a startup phase, and also this year we've stepped up the IT – IP migration here. So if you look at actually the guidance and wonder why EBITDA is down year-on-year in the guidance is, I think it's basically due to those two things and the investment in those, let's say a specific growth businesses there'll be always investments in growth business, but we think is a bit of exceptional year-on-year development. So it gives us confidence. So – yeah, we have sort of [indiscernible] (03:25:26), so [ph] Ulrich (03:25:26) and I think that's probably the last one because we have to sort of shift gear and move on to Claudia, but we'll – we're around. So [ph] Ulrich (03:25:39)

Q

Yeah, thanks. And there's this joke that if you put an idea to a German manager, the first question they'll ask is not whether it makes business sense, but whether it needs works council approval or not. So what's your experience with how your plans sort of dealing with the works councils and the unions, and to what extent do you see risks in the execution of your plans as you have sort of laid them out today with regards to sort of getting the buy in from that side of the business? Thank you.

Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

A

Great question. The social partners are part of our fabric, right, in Germany and it's not new to me right because I've managed European entities before. I'll be very honest with you, I would be a lot faster if there were no work councils, but that's not the case. So we're working with them, and part of my onboarding, I spent quite a bit of time with their social partners to understand their view, and they're all in support of getting T-Systems to be a healthy business going forward. So we are working together. We're trying to find common solutions and common ground, and we're very careful about not compromising in the areas that are critical to us. So we're making it work.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Thank you, Adel.

Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

Thank you.

A

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

So, great to have you.

A

Adel Bedry Al-Saleh

*Member-Management Board, T-Systems, Deutsche Telekom AG*

All right.

A

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

And let's wish him good luck.

A

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

So, okay. That brings us to the last presentation for today before the demos, so the last speaker presentation with Claudia. She is heading the segment, Technology and Innovation, you remember her from the last Capital Markets Day. And she will talk about the All IP migration, where we stand on that, about 5G, what our thoughts are and our IT strategy that we've mentioned before and innovation. So, she's got a lot of stuff to go through, but I'm sure she will do that now very effectively. Okay?

So, Claudia, can we please have you on stage?

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

Thank you, Hannes.

Ladies and gentlemen, good evening and welcome to the pre-dinner technology session. Before we start, let me reemphasize. We connect people to the opportunities of today and tomorrow. As Tim said, we are truly passionate about customer experience, enabled by technology leadership and our technology and our networks are the basis for everything and that's what drives us and that is what drives me.

Coming to the key messages. Number one, we are entering actually the final stages of our superior production model. While we have learned some lessons on the way, we can largely confirm the financial and customer experience benefits which I outlined at the previous Capital Market Day (sic) [Capital Markets Day] (03:28:53). On 5G, we will leverage our modernized SRAN and superior fiber backhaul to lead in 5G. Within an overall stable CapEx envelope, we will focus on smart speed and capacity upgrade, fixed wireless access and selected new business areas. Number three, we shifted towards a more agile approach to IT transformation which will accelerate digitization with upside on customer experience and lower cost in accordance with the promised savings. And last but not least, we have proven innovation in the market and we have a compelling innovation pipeline going forward for consumer and the business.

Coming to the details of the review. My main message here is, we stick to our course. We stick to our course while we learn on the way. We don't run business in zigzag. We believe technology leadership requires a long-term perspective with year-over-year consistent excellence in execution. What you can see on that chart, we achieved most of our ambitions. Having said that, in some areas, we are slightly behind our plan or modified our approach. Let me highlight those.

On IP transformation, we originally wanted to complete them until end of 2018 everywhere. We completed them entirely in all Eastern European countries. Greece will be finished by end of 2019. This was an intentional postponement to refocus CapEx on access. And in Germany, as Dirk mentioned before, we will complete the IP migration for the consumer business in 2019 and for the B2B business by end of 2020 due to less radical approach to forced migrations.

Remember, we are talking about a six to seven-year program. So, the slight delays are not in the order of magnitude that we doubt that we will complete the IP migration within the explained timeframe, and we are well ahead of our peer groups when it comes to scope and speed.

Regarding Pan-Net, we set up the infrastructure and migrated selected services, for the more complex services, we modified our approach. And on the last item, while we are undisputed integrated network leader in Germany and in Europe, we are somewhat behind our original timetable regarding the very fast Internet household coverage in Europe, yet we have a future-proven build-out plan going forward.

Let me summarize some of the lessons learned, just to repeat. The superior production model is actually our factory, the networks, the IT, the product platforms. And it consists of four components, the All IP migration, the pan-European network, the integrated access networks and the digital transformation. In the All IP migration, we continue to be peer leading in two dimensions. Number one, in scope. We are actually simplifying across all network players and we are not talking about PSDN migration only. Number two, in speed, because we have completed or are close to completion in all major markets and we clearly see customer experience benefits and financial savings.

On Pan-Net, we modified the approach. We focus very much on cloudification and virtualization and centralize, in addition, when it accelerates time to market. On the integrated networks, our leadership in integrated networks creates the basis for our FMC differentiation. Our superior fiber backhauling creates a competitive advantage for 5G. And as Tim mentioned before, we have mobile technology leadership in Germany and in 9 out of 12 European markets which creates a better customer experience which we can actually monetize. On the digital transformation, we shift towards a more agile approach, with upside on customer experience and lower cost. And overall, we confirm the Capital Market Day 2015 (sic) [Capital Markets Day 2015] (03:34:08) gross savings of €1.2 billion in early 2020s, as well as customer experience benefits.

Coming more practically to the customer experience benefits. Let's assume you move to a new house or apartment, what you do is you take this router. The Speedport Smart 3 or any other router, you plug it in the wall and off you go. So, there is no longer the need to fill in your credentials in a very cumbersome manner and the result is significantly increased customer satisfaction and what you can see here, we have in Germany 38% fewer tickets in provisioning. The simplification of our aggregation network called BNG migration was also the necessary condition for introducing our 200 MBit per seconds product super vectoring. So, new super vectoring or vectoring without that BNG migration. And what you can see here, we are going to have 15 million homes past with super vectoring capability by end of this year, going up to 28 million by end of next year.

Talking about our integrated network leadership, here you see all the prizes, no, not all the prizes, actually we won much more prizes, but many prizes we won actually and it shows a very consistent picture, we love our networks. I love our networks across the entire footprint. And we have a very fantastic fiber backend network and fiber backhauling. For instance in Germany, the fiber backhauling rate is 80%, climbing up. And why is that cool? Fiber backhauling allows to upgrade capacity flexibly, cheaply and fast to whatever level you wish. And we really believe it's a massive competitive advantage when it comes to 5G.

Talking about our strategy and ambitions going forward, it covers three areas. Number one, lead in technology, that is integrated network leadership and mobile network experience leadership, Dirk has talked about it, Sridhar will talk about it tomorrow, so I will not repeat it. And the other aspect is smart 5G leadership. The second item is value transformation. In addition, to continue to finish the superior production model, we focus very much on broadband innovation that drives productivity and efficiency in addition to a modified approach for our IT transformation, which I will explain. And last but not least, the last chapter is about innovation for consumer experience and business productivity. I will give you some hints about the most promising pieces in our pipeline.

Starting now with the super-exciting topic of 5G. We are and we will be 5G innovation leader and 5G execution leader within an overall stable CapEx envelope. How that? We are focusing on three areas which have different economic rationale. Number one, key capability. As you know, 5G is a significant speed and capacity upgrade, speed by factor 10, capacity by factor 100 and 1,000 depending. And why is that? This is driven by the combination of more spectrum denser networks and more efficient technologies. The implementation of that capability will start in areas of interest, which is cities, hotspot areas or cities or industrial parks. Why does that make sense? Because a 5G overlay network is more efficient than 4G only from around about 2021 onwards if the current traffic predictions hold true.

Number two, a very specific application area of the speed upgrade of 5G is in a stationary environment, fixed wireless access. I'm talking here about gigabit speeds on higher frequencies, mainly millimeter waves and fixed wireless access here will be a complement to the fiber-to-the-home rollout in urban and suburban areas and why does it make sense? Depending on the topology, it has actually significantly faster time to market and it's more cost efficient.

Finally, 5G is not only about speed and capacity upgrade and IoT, it is also about new capabilities like extreme quality of service or low latency. We believe that more on the mid-term horizons, more products and solutions will be enabled by these capabilities which will create revenue potential more on a mid-term horizon.

Starting with the first area, mobile capacity and speed upgrade, which is normally referred to as enhanced mobile broadband. Where is that coming from? First of all, new spectrum will be available, 700 megahertz and 3.x gigahertz. What is so exciting about that? More spectrum will be available on the market than ever before and the spectrum comes in huge blocks which enhances efficiency. The massive capacity upgrade is actually created by the combination of the so-called massive MIMO antenna technology with 3.x gigahertz spectrum.

A LTE MIMO antenna has typically two, four or eight antenna elements per antenna. A 3.x gigahertz massive MIMO 5G antenna has 64, theoretically a few hundred antenna elements per antenna. And by the way, on an antenna with a very practical size, around about 35 centimeters times 78 centimeters. Why is that? Pure physics, the higher the spectrum, the smaller the antenna. And via very efficient technology called beamforming, these antennas can actually change the form of the beam very quickly via software. So, what is important to note here, due to the laws of physics, the higher the frequency, the lower the propagation range of the signal, the smaller the cell, yeah, and the lower the frequency, the larger the cell. In other more practical words, lower spectrum bands are more suited for nationwide rollout than higher spectrum bands, pretty logical, right?

So, what does that mean practically? We get ready for 5G to leverage future efficiencies. First, we increase the number of sites in Germany by around about 2,000 sites per year and in Europe by 1,000 sites per year, plus we will add small cells in addition. That cell densification will start in these areas of interest like cities or industrial parks and we will leverage the SRAN which we just modernized in Germany, so it's 5G-ready and our superior backhauling.

The right side of the chart actually shows the cost curves which we predict. It's actually the incremental business, our capacity and the – here measured in euro per megabit per second and the blue curve shows the theoretical cost curve. If we would just continue as LTE-only and traffic would grow as it does. The magenta curve actually shows the cost curve for a 4G network with a 5G overlay network; and 5G overlay network means here 3.x gigahertz massive MIMO in these specific areas of interest. And what you can see here that from around about 2021 onwards, the network with a 5G overlay is actually more efficient than a 4G network only, assuming that the traffic grows as we expect.

Another interesting application area is fixed wireless access. On this chart, you can see the results of a trial we did in Germany. Here, on 60 gigahertz, and assuming you have fiber in the street, you can actually put an FWA antenna on the street pole here and a smaller antenna that is, by the way, this one here at the outside of the window of a house. And we have tried that in suburban and in urban areas, and what we could actually see is that it can provide a gigabit speed. Actually, this trial even a 3 gigabit speed here. And we trialed it on 60 gigahertz and on 26 gigahertz. As I said, it enables gigabit speeds and of course the number of households depends on the distance between the houses and on the frequency which we use. What is important for you guys to note, our fixed wireless access technology is designed to be at least as competitive as cable. So, it's designed to be at least as competitive as cable and what are the benefits?

First of all, depending on topology, the initial CapEx demand is 30% to 50% lower than with FTTH and it has faster time to market. It cannot be implemented, as Dirk already mentioned, in every topology. Why is that? Because it's millimeter waves and when a big truck goes in the way or you have a big tree, the connection would get interrupted. This is why you need to have a specific composition of the antennas, so that one antenna can take over, so it can only work in certain topologies. But then, it has that CapEx advantage and it's faster time to market. It requires less underground construction capacity. The equipment is, by the way, reusable and we believe that the biggest advantage is that we can actually de-risk the fiber rollout. As mentioned before, around about 20% to 30% of all households where we have fiber in the street are actually suited for that type of technology.

Coming to new business models. We distinguish between solutions that require new 5G capabilities like [ph] latency edge (03:47:16) or quality of service in locally confined areas, like campus networks, and those where that capability is required everywhere. By the way, we believe that product innovation will first happen in these locally confined areas. One example is a campus network. A campus network combines enhanced public coverage with private indoor coverage and IoT. So, this is what is already relevant today, and you can do on 4G.

But our business clients tell us that they would like to tailor and configure the networks to their needs on a daily basis. And what would be even greater for them, if they could have an autonomous factory. How would that work? Today, when you have an assembly line with robots that need to interact, you have to pre-program the entire chain. The result is that from time to time, it stops. And then, you need to restore it in a cumbersome way. If we implement an EDGE cloud and have low latency connection on that campus network, that can be done fully automatically. On other words, please expect the autonomous factory to happen much earlier before we have autonomous driving.



By the way, another interesting use case for locally confined area is information augmented vision. Just imagine you would get on your glasses contextual information in real time, for example, a surgeon in an operating room images of the patients or a technician in a factory visuals which explain the task while he needs to use his hands or imagine your kids playing a superbly enhanced version of [ph] Pokémon GO (03:49:22) in a locally confined area in a city. So, just to give you a flavor, what beyond the efficiency cases, yeah, could be an outlook.

Where will that lead to? We believe that on a mid to long-term horizon, the real-time economy opens boundless opportunities. Why is that? Today, we all experience the Internet via apps and browsers. So, instead of looking at a map and reading information when going to a city, we look at Google Maps and then we go through the city like that. In the future, we will experience connectivity via these glasses, lenses, earplugs with simultaneous simulation or smart clothes.

Today, storage computing power and algorithmic intelligence is either stored in a device, a PC, a smartphone, or a car, or in a central data center. In the future, all that will be stored in EDGE clouds deeply embedded into the network. And the advantage of that is that you can offload storage and computing power from your device into the cloud, or the advantage is that you can steer the factory automatically. And today, connectivity is mainly described by coverage and speeds and in the future, it will be differentiated also by quality of service and latency. So, while nobody knows in detail what the business models will be, I nevertheless wanted to point out where it's heading to.

Coming to the next chapter, value transformation. As Dirk pointed out, we intend to ramp up the gigabit rollout to these 2 million households per annum under the conditions explained by 2021. That means for the technology team, we need to significantly increase our productivity and efficiency. One aspect to do this is automated fiber planning which increases planning productivity by the factor two. How do we do it? We have special cars that take 3D surface pictures from the streets, put the results into a point cloud and then we apply machine learning and out of that, we get an automated passive line planning and we will start with that in Q3 2018 and we will show you later tonight how this is working.

I also wanted to draw your attention to one of our most promising research projects. Normally, when operators talk about virtualization, we are talking about virtualization of core services, but we all know the bulk of the CapEx and OpEx is in the access. So, here, we have successfully started to decouple software and hardware components in the access which would have two effects: number one, reduced component prices; and number two, a much higher degree of automation. If it works, and I assume it's going to work, it will disrupt the OEM ecosystem. So you could ask, Claudia, why are you telling us, because we are now in discussions with other telco operators, leading telco operators and the tech companies to drive industry in that direction to bring down the network build-out cost.

Beyond productivity increasement on the network, I also need to highlight the IT transformation, because it's the big enabler for many of the things we intend to do. And indeed, we have modified our approach along three dimensions. Number one, from trying to have a big bang approach and then migrating the customers from the historic system into the new system to a portfolio approach, I will explain that. From having more than 90% in waterfall to coming towards a much more agile approach and from relying very much on traditional capabilities to a more comprehensive skill transformation.

Here are the details of the portfolio approach. In the past, we pursued a big bang approach, which didn't work. The historic IT architecture was built according to our processes with applications that were built single purpose with a very high level of point-to-point connection and a high degree of coupling. And in addition, more than 90% of the delivery was done in release containers with waterfall methodologies. And now, we have shifted to a

portfolio approach and that means, precisely, some very important areas we are building entirely greenfield [ph] in agile and it's scrum (03:54:52) outside the legacy which is the fiber production system, which is the retail FMC product and the B2B FMC product.

In addition, we have started to decouple the different layers of the legacy infrastructure and, in particular, we decoupled the customer touch-points from the rest. And last but not least, we have started to modernize. By the way, modernization means instead of building applications for just one single purpose, build micro services [ph] and RPs (03:55:27) that can be reused. So, for everyone who is not interested in IT, what does it bring, it actually brings a significantly reduced delivery time, it mitigates the implementation risk, yeah, because it's no longer a big bang, and mid-term it also reduces costs due to the reusability of the services.

More practically speaking, what you can see here on the left side is that the initial investment for the portfolio approach, more precisely for creating reusable services, is slightly higher than building applications single purpose, logical, right? But over time, it gets cheaper and the typical payback is around about two to three years.

What is the impact of the IT transformation? The average delivery time for applications gets reduced from 18 months on average in 2017 to 6 months in average, with just a few weeks for the agile part. We, of course, enable the process efficiency and the IT spend in the planning timeframe will be reduced by €200 million. So, that's the impact of the IT transformation.

Maybe I should add one thing, the first thing which I did when I took over the role as the Technology and Innovation head was to hire a new CIO, Peter Leukert. He actually successfully transformed the IT of two major banks and then, we added the Chief Architect of Airtel to his team who successfully completed the portfolio approach at Airtel. So, in other words, we really have the guys on board who know how to get this done.

Coming now to the topic of B2C innovation. You all heard about EntertainTV, about the hybrid router and Smart Home. So, I'm not going to repeat that. We recently launched our so-called CONNECT app. Without any advertisement, in a short period of time, we got 1.4 million users in a few weeks and rating of the app for the iOS version of 4.3 and for the Android version for 3.9. So what does it do? As Tim mentioned before, it automatically detects the best connectivity for you whether it is the mobile network or a VLAN network and it also provides for us very relevant data to actually understand customer experience in detail, yeah. In the long time, actually that capability will move into the network. We recently launched that.

Tim talked about the Inflight connection. So, let me just highlight another thing which we are going to launch this year. This is the Smart Speaker. This Smart Speaker will allow voice control of telecom services at home, mainly TV, voice telephony, and Smart Home and we will integrate services of local partners like banks and retailers. One advantage for the banks is that for instance, in Europe, you're not allowed to do banking transactions via voice if the server is not in Europe. So that's one of the advantages here. We, by the way, believe that voicification of all our services is a mega trend. Yeah, what the mouse was for the PC in the 1980s is actually the voicification of the interface today.

Another new product we are going to launch is actually TV for everyone. Everyone means every potential customer who does not have a Deutsche Telekom access product. Yeah, so the over-the-top TV offering in Europe for Europe and for Germany also this year.

But we are not only connecting humans, we are also connecting things and machines, making things and machines smarter. We launched Narrowband IoT in eight countries. We have 200 different projects with

Narrowband IoT applications and we have Smart City projects in 10 cities. One of the important areas is actually predictive maintenance.

Over here, we have a sensor, a sensor like that gets installed at the surface of a bridge and it actually measures corrosion, humidity and cracks and sends that via Narrowband IoT to a central base station and again via data analytics you can actually predict what might happen to the bridge. By the way, we believe it addresses an urgent problem, I learned that for instance in Brandenburg alone [ph] every tenth (04:00:58) bridge can no longer be repaired economically. Yeah, so it really solves road construction problem which we are having here. So, in addition to that, we just launched our AR maintenance product which we will also show you tonight. And, as I said before, we are interested in and we explore the campus networks, connected drones and energy management.

Now, I talked a lot about actually what we do, but probably the biggest differentiator is how we do it. And one super-important element of what we are doing here is, what I would call, cultural transformation. One aspect about cultural transformation is global excellence. The technology and innovation team is really, I believe, a great case for global excellence and diversity.

We have hired Alex Choi, who was the former Chief Technology Officer of South Korean Telecom and he now runs Technology Innovation and Research. I mentioned already Peter Leukert whom I hired to run the IT. Walter Goldenits with whom I worked in Hungary. He actually did a good network transformation there with specific attention to productivity and efficiency. He runs Technology Germany. We have JC – Jean-Claude Geha from Ericsson who understands how to do outsourcing very well and we have Omar Tazi who is a serial entrepreneur who has worked many years in the States and France and in Africa, just to give you a flavor.

In addition to that, we are actually driving a comprehensive skill transformation. We met all the people in the technology area in what we call future-proven capabilities in IT and network technology and in innovation. And what you see, of course, is that while overall the number of people goes down, there are some capabilities where we need far more people like coding and architects and others like managers far less. We have actually reduced the organizational hierarchy levels in the innovation functions by 45%. From October onwards, 50% of all our people here in the technology and innovation functions will no longer work in rigid line organizations but in tribes, and the technology organization in Germany has started to implement DevOps.

Now, I need to say, this is really what drives me and what makes me passionate about the job here. So, I mean, we transform the networks to All IP and gigabit. We will lead in 5G, we drive the IP transformation and the product innovations with such a team and such a cultural transformation. And I have to tell you, I think that is really cool. I say that as a business leader, as a tech freak, as a physicist, yeah, as someone who has magenta blood, but is impatient enough because I've worked many, many years in the global technology industry, I say that as a curious human being and as a parent who loves to work on this continent, so I think it's really truly cool to have the task to transform the networks and IT with such a super-cool global team, yeah, and to actually show what we can really deliver here.

So, after that emotional side comment, let me come back to the mid-term ambition. So, what do we commit to? Number one, we ramp up the gigabit rollout in Germany and Europe to the numbers Dirk explained, Srini will explain tomorrow and needless to say that we commit to that, and of course commit as a technology team to implement the necessary productivity enhancement measures to get it done. Number two, we commit to continue our mobile network experience leadership in Germany and in Europe. And number three, we commit to 5G innovation and execution leadership.

On the IP transformation, we commit to complete in the timeframe, which means Greece in 2019, Germany B2C in 2019 and Germany B2B by end of 2020. And to the IT transformation, which means the significant reduction of the delivery time from 18 months to 6 months, and the IT spend reduction I talked about.

Last but not least, technology is always super-cool when you can look and feel. So, therefore, my team has built up three demonstrator sessions for you. Number one will be about the automated fiber planning. Number two will be about fixed wireless access and the 5G new radio antenna and massive MIMO. So, you can actually really see when you look at the antenna where these efficiencies come from. And number three will be the EDGE cloud team and actually we'll show you the advantage of combining an EDGE cloud with low-latency capacities. And for those who love big stuff, yeah, you have these wonderful trenching machines on the way over to the dinner location.

And with that, I think my part is done, and Hannes, we'll go to the Q&A, right? Thank you.

---

## Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Thank you, Claudia. Great stuff. So, we've got some cool guys from overseas and we got Walter and Alex you will see in the demos and on the way [ph] there the scuba machine (04:07:38) or horizontal directional drilling machine as it's properly called. Thank you.

So, we will now do the Q&A. Here we have 15 minutes, 15 minutes. Okay. So, Akhil?

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## QUESTION AND ANSWER SECTION

### Akhil Dattani

*Analyst, JPMorgan Securities Plc*

Q

Hi, Claudia. Just had a couple of clarifications, some of the charts that you showed us. You had one chart where you were showing the cost of delivery in the megabit data on LTE and then how it changes with 5G. Can you just help us understand why is the cost underlying going up over time pre-5G? So, is that spectrum constraints and what are the kind of deltas there? And then we think about 5G, the cost falls, but it doesn't fall hugely. What are the assumptions or what are the things going on there firstly?

And then the second thing, you've talked about automated factories and warehouse and things like those. In Germany, they are considering auctioning regional licenses, what are the conversations going on there [indiscernible] (04:08:42) jeopardizes the opportunity at all? Thanks.

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### Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

To the first point, the costs go up. If you assume that the traffic grows annually by 45%, and then it will be at some point in time more expensive to upgrade a network where you have eight antenna elements per antenna than adding as an overlay a network where you have these 64 antenna elements per antenna. That's the main reason for that.

On your second question, we actually are in discussions with everyone to create a situation where we end up having a really investment-friendly environment for those, actually, players who wants to roll out 5G on a larger

capability, yeah. Because as you said rightfully so, otherwise it's a little bit cherry picking and starting with the most promising opportunities.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Yeah. But, I mean, there's a bunch of German industry companies that have expressed some interest in this for campus networks. If they do it themselves, then we won't do it, but I don't think it's particularly efficient to do that for them, and also it's not efficient for the country to fragment the licenses.

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

Yeah. Plus what we also see, I have very strong relationships to many of these [indiscernible] (04:10:02) and others that specifically when we offer something where we combine private coverage with publicly enhanced coverage, yeah, the combination of that networks and the hybrid network and the capability to tailor that, yeah, so that you as a local network operator can really tailor that. There is something where our customers tell us that they actually trust in our technical capabilities to deliver, yeah, but I also expect, Hannes, as you said a certain learning curve on things, right?

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

I think so.

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

Yeah.

Akhil Dattani

*Analyst, JPMorgan Securities Plc*

Q

Can I just ask one thing just to clarify on that? On the 5G cost falling and it not falling maybe hugely, just maybe a really quick clarification, I mean, how does the cost of delivering capacity on small cells which you're talking about compare to macro cells? Is there a very big cost differential given how early on we are in the small cell deployment phase in Europe?

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

Yeah. So, you have to take two things into consideration. You have on the one hand the efficiency gain in the antenna which drives down costs, and then you have on the other hand, the smaller cells and needless to say, the smaller the cells, the higher the cost, yeah. Of course, implementing a small cell is cheaper than implementing a macro cell, but overall the cell densification is what usually drives the CapEx up.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Yeah. Very good.

Josh Hallett

*Analyst, Redburn (Europe) Ltd.*

Q

Hi. It's Josh Hallett from Redburn here. Great presentation, by the way, and I love the enthusiasm. So, I just wanted to ask you, you talked about the rollout of 5G and fixed wireless access, do you think it's realistic that you could have multiple mobile operators building that sort of infrastructure in the same area or is it going to be – have to be shared infrastructure?

**Claudia Nemat**

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

So, on principle, everybody could build the antennas, right, in the street. So, what you need to have is the fiber infrastructure in the street, yeah, and whoever does it, yeah. And then, of course, you can build up antennas as you wish.

**Hannes C. Wittig**

*Head-Investor Relations, Deutsche Telekom AG*

A

But, we have lots of situations like this. Tomorrow, we'll talk about our tower business, right, so we share infrastructure, right? We have a vibrant third-party business. We have provided backhaul for people. We do all these things and that's efficient, the contingent model is the same.

On fiber, we find similar solutions and we talked about reciprocity earlier. So, I think you will always have a mix of owning and not owning in a large country such as this, but we will surely be quite front-footed and I think we have a bigger budget than some other people out there.

So, I think, Christian, you had a question or it's been answered.

**Christian Fangmann**

*Analyst, HSBC Trinkaus & Burkhardt AG*

Q

No, it's still there.

**Hannes C. Wittig**

*Head-Investor Relations, Deutsche Telekom AG*

A

Good.

**Christian Fangmann**

*Analyst, HSBC Trinkaus & Burkhardt AG*

Q

Thanks. Yeah, my question was a small topic mentioned earlier the OTT product that you mentioned, so that a TV product has been rolled out to every customer that basically does not have a DT product. So, could you maybe elaborate a bit on that one?

**Claudia Nemat**

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

So, it's actually so that you can use content we are normally offering on EntertainTV in an over-the-top product, yeah. You can also – and you have, today, our product, you can use it at home or you can use it on the move on your [indiscernible] (04:13:22), but that would be a product where you could just – you install the app and use a significant share of the content. Of course, it depends in detail on the content, right, on a normal [indiscernible] (04:13:32) without having the full monty at home.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Yeah. Okay. Dhananjay?

A

Dhananjay Mirchandani

*Analyst, Sanford C. Bernstein Ltd.*

A quick question on the All IP transition, which complexities did you underestimate in your All IP transition in Germany and, I guess, the hidden question is why are you confident that you're going to be able to get it done in the next couple years?

Q

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

So, actually, we learned a lot on the way. I think the biggest complexity was actually in the end, when it comes to the forced migration and, as Tim said, the last 1% is the most difficult one because it's in order to clean off something completely, you need to move the customers out, yeah, and that is a big complexity.

A

So, why are we confident? Because when we look at how many – I get interrupted, right? When we look at the current speed of implementation both on the consumer and on the B2B business, right, so and if we extrapolate that now going forward, we are actually pretty confident that we get it done, yeah, mainly because we accelerated massively already throughout the last one or two years, right, and the BNG migration, which is...

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

[indiscernible] (04:14:44)

A

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

...yeah, we started, of course – we started, as you know, with all the smaller countries, yeah, and we completed the IP migrations in the small countries even for the complex business because they also have nuclear power plants or they have airports, right? So, we learned a lot in the smaller countries very much. And then when we moved over to Germany, we got over time pretty efficient in implementing the B2C business. And now, we have here with Adel, a joint task force, right, in convincing the more complex business customers to also move to that technology, yeah. But it really took a time, I have to say, in particular with regard to the more complex customers before we really got the argument right.

A

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

At least, it's better than Berlin Airport, Dhananjay, but it's...

A

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

Yeah. That's cynical.

A

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

...that's very cynical, but it's – as you know, it is a six, seven-year project and we have a little delay, but that doesn't mean we have – see problems there we can't complete it.

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

Yeah.

A

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Okay. Ulrich, again?

A

Ulrich Rathe

*Analyst, Jefferies International Ltd.*

Yeah. Thanks very much. I have three questions. The first one is a clarification on...

Q

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Only allowed two, sorry.

A

Ulrich Rathe

*Analyst, Jefferies International Ltd.*

Okay.

Q

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

Okay. Go ahead.

A

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

It's okay.

A

Ulrich Rathe

*Analyst, Jefferies International Ltd.*

The last one is a very simple one. I promise.

Q

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

Okay.

A

Ulrich Rathe

*Analyst, Jefferies International Ltd.*

FWA, and on FWA, just to clarify, to understand this correctly, in a situation where you are dealing with an MDU that has a sort of front apartments and apartments at the back of a building, the ones in the back of the building, you couldn't service with this technology, if I understand correctly how this works.

Q



Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

So, what I mentioned is the challenge with microwaves is, if you have something hard in between, a tree, or a van, yeah, the connection gets interrupted. The way we solve it is actually via triangulation to use more than one antenna to actually bring the required signal into houses. But what we have also learned in our trials and we trialed it really in different topologies, yeah, in these dense urban and suburbans that indeed it does not work in every topology, yeah.

This is actually why we're saying, yeah, when you look at these different topologies, around about 20% to 30% of the households in areas where you have fiber around are actually suited for that. If you have too many walls in between, then even triangulation wouldn't help you to address that problem.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Next.

Ulrich Rathe

*Analyst, Jefferies International Ltd.*

Q

Okay, thanks. And second one would be, coming back to this regional 5G, [indiscernible] (04:17:15) campus projects and some of the corporates, is there a big reduction in provision and complexity in the 5G equipment that would make it possible for, say, some sophisticated IT department to deploy this? Is that a big step change because I think at the moment, carrier-class equipment wouldn't be – these guys couldn't handle this sort of stuff, right? So, I'm just wondering is this actually realistic that they go and buy licenses and then build a 5G campus network in their factory?

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

See, from our experience, there is one thing to actually provide an IT solution or even alarm and to provide such an optimized mobile solution. So, we even see that within Deutsche Telekom within the different units who have more of these mobile capabilities at the IT and the network capabilities. So, my assessment is it's not completely easy to build locally confined compass network which will have over the long run these 5G capabilities. Really, this would be my honest assessment. Nevertheless, that does not suggest that there are people who believe that they can't do, right?

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Yeah.

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

So, let's see.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

We had lots of WiMAX networks being built or Wi-Fi networks, local networks. I mean, these kind of things, localized networks, have existed for a long time.

Maybe, Robert once more.

Robert Grindle

*Analyst, Deutsche Bank AG (UK)*

Q

Yeah. Just, I also struggled with the 4G, 5G charts. Just to ask whether that chart is on the like-for-like from a spectrum perspective or are you sort of assuming that the 4G has higher cost spectrum? And then my question is...

A

[indiscernible] (04:18:58)

Robert Grindle

*Analyst, Deutsche Bank AG (UK)*

Q

...thank you. Thank you. Don't be frightened. [ph] I forgot, I wasn't saying that (04:19:04).

Yeah, my second question is, yeah, you made it very clear what the advantages of having IP and the benefits to customer services et cetera within country. But do you think by having the multiple networks All IP, you actually did demonstrate scales by having multiple countries All IP, did it help you introduce NB-IoT or the TV service across multiple countries by having All IP?

A

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

So, I start with the last question. First of all, the biggest impact from the IP migration was actually happening country per country. The major lessons learned was that we got smarter as we went ahead. So, we didn't duplicate mistakes, so it was more around learning, yeah, from other countries and then implementing that into Germany.

Coming to your point on the pan-European network, what we see here, the major benefit was actually an acceleration towards cloudification and not cross-market cost synergies, yeah. So, it was more around you can accelerate the cloudification approach and then, of course, you can implement certain services across the footprint. For example, [indiscernible] (04:20:22) and now we are actually discussing to have one TV solution for Europe. But, it's mainly about time to market and getting smarter on the cloudification approach rather than having cross-country cost synergies.

Right. So, what was the first question, Hannes?

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Okay. The first question was, he said, how do we assume that 4G costs will go up...

Robert Grindle

*Analyst, Deutsche Bank AG (UK)*

Q

Yeah.

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

Yeah, the spectrum? The spectrum. So as I mentioned, we would assume that in order to do that 5G capacity upgrade overlay, we would need to have like everyone else 3.x gigahertz spectrum for doing that.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Okay. Last question from Emmet. Sorry for today because we need to move on to the demos and the dinner, very important, it's been long. Emmet?

Emmet B. Kelly

*Analyst, Morgan Stanley & Co. International Plc*

Q

Yeah. Thanks very much, Hannes. I've just got one very simple question, which is on the use cases for 5G. I've seen a lot of presentations from Qualcomm, from Ericsson talking about the different use cases of 5G, and I guess, when we look back on 3G, I guess, the most exciting application was probably non-SMS data. When I look back on 4G, it might have been mobile video. What do you think the most exciting use cases for 5G? What can really move the needle for Deutsche Telekom maybe 10 years from now, is it Smart Cities, is it massive IoT, is it autonomous vehicles, or just any big picture thoughts?

Claudia Nemat

*Member of the Deutsche Telekom AG Board of Management, Technology and Innovation, Deutsche Telekom AG*

A

So, first of all, on our planning horizon, the most exciting pieces are really the fixed wireless access and the smart capacity upgrade, because that is actually what drives the business case and I find that important to note, right? So, it's not based on a revenue assumption which might happen in the year 2020. Having said that, I get actually very excited on a mid-term horizon about all that opportunities which require low latency and offloading storage and computing capacity into a cloud. All use cases you can think about that. That is on a mid-term horizon, which would actually be an autonomous factory, which would be information augmented vision in a locally confined area whether that is enhanced gaming in the consumer area, or whether that is the technicians who need to use their [ph] hands, all that (04:22:44). So, I do believe they will evolve like that.

When you think about 10 years from now onwards, I mean, the good thing is that probably not many of us might be here. So, I can predict something, but I'm really superbly excited about the possibilities of the real-time economy, yeah, even though I cannot tell you what is the killer application for that, yeah. Because in the world where we were coming from, we got used to information being spread large scale, but now we move into a world where information gets created even larger scale. And somehow in a very automated and natural fashion, see, I would compare it – so, you forgive me for the last philosophic remark, I would compare it more with a human body, yeah. And in the human body, you have your natural senses, you have your neurons who are very different and tuned to a certain sense and you have your brain and what you will see is little brains distributed everywhere. The clouds, the sensors and the connectivity, so fantasy is wide open. But I truly believe the real-time economy in 10 years from now will look very different from anyone who could actually predict it.

The important message here, as you are the analysts here, is that we are actually getting prepared for that, yeah. And therefore for us, it is so important to do the 5G rollout economically viable in an overall stable CapEx envelope, but at the same time get prepared with our EDGE cloud for the future, yeah. And this is by the way why we founded a company called MobicEdgeX, which actually was a community of developers and tech partners, we'll develop micro services to actually test that out, yeah. So, real-time economy is for me the name of the game, even though nobody knows what exactly that will look like.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

A

Fabulous. So, we have a plan and we have a vision. And also, we want to leave something in the back for the next CMD in whatever or however many years' time, it's not been decided yet. Thank you, Claudia. But you can stay here, I'm just going to do a bit of housekeeping and then we do the demos and Claudia is basically the one who is in charge, although she won't present herself those demos.

Hannes C. Wittig

*Head-Investor Relations, Deutsche Telekom AG*

So, before we go to the demos that Claudia has already sort of teased and shown, we want to say good bye to the guys on the webcast. Tomorrow, we will start again at 9:00 A.M. sharp with our T-Mobile team and they will share with us, I guess, their 5G vision as well, they have a few of those.

Now, after the demo sessions, importantly, we will go to the evening event, it's across the big courtyard there. So, on the way, you will pass the horizontal drilling machine and the trenching machine. So, it illustrate that fiber in Germany is about digging, and it doesn't come cheap and you need to invest a lot of money for it and that has its benefits and it has its negatives, but it also has its benefits. I think that's the right...

[Abrupt End]

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Company Name: Deutsche Telekom  
Company Ticker: DTE GR  
Date: 2018-05-25  
Event Description: Capital Markets Day - Day 2

Market Cap: 63,327.40  
Current PX: 13.30  
YTD Change(\$): -.814  
YTD Change(%): -5.768

Bloomberg Estimates - EPS  
Current Quarter: 0.250  
Current Year: 0.965  
Bloomberg Estimates - Sales  
Current Quarter: 18306.000  
Current Year: 74848.917

## Capital Markets Day - Day 2

### Company Participants

- G. Michael Sievert
- Neville R. Ray
- Hannes C. Wittig
- Srinivasan Gopalan
- Unverified Participant
- Thorsten Langheim
- Thomas Dannenfeldt
- Christian P. Illek
- Timotheus Höttges

### Other Participants

- Robert Grindle
- Sam McHugh
- Frederic Boulan
- Ottavio Adoriso
- Steve Malcolm
- Jakob Bluestone

## MANAGEMENT DISCUSSION SECTION

### G. Michael Sievert

Good morning everybody. All right. They told us our job was to wake you up this morning. Are you feeling awake? All right. Good. It is such a pleasure for us to be here with you today to talk about T-Mobile U.S. And this is – this – I guess I'm getting to be a T-Mobile old timer because this is the third Capital Markets Day since I've been a part of the company, since John Legere came in 2012. And we're so delighted to be able to talk about the future of our business.

Now, before we get started, there is – the legal disclaimer is not even going to be shown. There it is. Please, everyone, I'll just stand quietly while you read this. This is very important. There will be a quiz later. Tim has promised prizes for people that pass the quiz later. So, that's all for you. Listen, this is – happens to be the five-year anniversary of the Un-Carrier.

In May 1, 2013, we came together with MetroPCS to create the new T-Mobile as we know it today. And when we were here in 2012, we talked with you about our aspirations for that combined company, when we would launch the Un-carrier. And it was two months after this visit within 2012 when we decided to become the Un-carrier and really made our initial declarations about how we would change wireless forever in the U.S. industry.

We shared some aspirations with you then. We said that we could do 3% to 5% revenue CAGR over the next five years. We said we could do 7% to 10% in EBITDA. We said that by the end of the five years, we'd have EBITDA margins in the 34% to 36% range. We were back together in 2015 and updated all those things. We said, no, actually it's 7% to 9% CAGR in revenues. 7% to 10% EBITDA holds. And what's happened is we've delivered 10% revenue. We've delivered 37% was the EBITDA margin last year. We're delivering 13% free cash flow growth CAGRs over the last five years. So, what's happened is we set a number of aspirations for a combined company. We updated them in

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2015, and we've delivered on every single thing that we've promised this market.

In fact, every quarter, we provide guidance to the business. And Braxton's able to take people through the business and future cast on a number of metrics. We're 20 quarters in to being a public company now, and we've never missed a quarter when it comes to the aspirations that we set on an annualized basis. Every single annual commitment that we've made to the Street, which we've updated successively throughout each year, we've met or exceeded by a lot. We've never decreased those commitments as we update them through the year. We've increased them or reiterated them. And then, at the end of each year, we've come in at or above.

And I say all this for a reason because we're here again today to make you some promises both about stand-alone T-Mobile and about the combination with T-Mobile and Sprint. And it's important for you to understand our track record when it comes to those promises. We take them very seriously. We take them personally, and we're here to give you some bold predictions for the future for our company. It's all based on what has been and what will continue to be a major growth story that is about serious differentiation in our market as the Un-carrier. And the growth by now should be pretty obvious.

We had 33 million customers when we talked to you in 2012. We now have 74 million customers in this business. That's 20 quarters in a row, where we've led with total net adds in the industry across all categories. That's – where we've had 1 million or more per quarter. That's 17 quarters where we've been the overall leader in the market. And now, out of that 74 million, which is double where we started, not only is that total impressive, but underneath it, categorically, we've led in the different categories.

So, this is probably my favorite slide in the whole deck. I'm just going to stop for a minute, while you soak that one in. What this one says is that over the last five years, we've been able – in postpaid phones, which is where the vast majority of the customer lifetime value sits, our performance has been 16.2 million customers' growth. The sum total of Verizon, plus AT&T, plus Sprint, plus now Comcast, has been 1.3 million over those same five years. We've garnered 93% of all industry growth. We've done that by porting positively, by driving new growth in the industry, by catalyzing, switching in the industry. And we're obviously very proud of it.

We've done it with a differentiated brand, which I'll come back to in a minute. But it's not just been postpaid phones, the most valuable category. We've also led in prepaid, 6.5 million overall prepaid growth during these five years against the entire industry of 2.0 million for more than 80% total industry growth in the category over the last five years. That's Verizon, AT&T, and Sprint, including there's subordinate brands like Cricket and Boost all totaled up have grown by 2 million units over the last five years.

We got an early start in this strategy with MetroPCS in 2013, when we shared with you our aspirations. We rapidly expanded that brand, forced the rest of the industry to follow, and the results speak for themselves.

Now, a big piece of how this has come about has been churn, and this is probably the metric I'm most proud of on the last five years of performance. Churn in the U.S. market has come down categorically, but we've performed disproportionately mostly due to the network which we're about to tell you about the performance and the results that we've been able to deliver across this network, but also due to a real breakthrough in our brand, our sense of who we are as the Un-carrier, and in the way we handle customers with our innovative team of experts' concept.

In 2012, when we spoke to you at this meeting, that quarter, we had 2.5% postpaid phone churn. Last quarter, we had 1.07% postpaid phone churn, and we see continued opportunity for major improvement in that metric as we go forward.

Obviously, the result of all this has been financial numbers that have been industry leading in terms of their growth rates. Our service revenues have been 75% growth, nearly doubling over the past five years. Our total revenues have doubled to \$40 billion through 2017 over the last five years. Our net income has gone from – what was obviously a very negative position in 2012 to a significantly positive position, and we see major opportunity there. Similarly, with cash flow, a major opportunity, which we'll come back to. And EBITDA has more than doubled, 129% overall growth since we shared with you our aspirations for the future back in 2012. All of this is based on an underlying set of differentiation, and that differentiation really is built fundamentally on the network.

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Neville, tell us...

## Neville R. Ray

Great. Thanks, Mike. So, hell of an exciting slide behind you right now. But six years ago when we were here talking about the future vision for this company, we had really not started anything on LTE. And much of that growth and the excitement, the tremendous Un-carrier story that we've rolled out the last six years has been down to our ability to invest at an incredible pace in this network. So, between Mike, John, Braxton, and Tim, the financing and support of this company has been second to none, I think, globally.

We've invested \$40 billion in this network over that five, six-year period. That's a statement. But we've also rolled out the technology at an incredible pace. So, that map behind you now, that's our map. Those of you from the U.S., that's not the Verizon map. That's the T-Mobile map. And that was our vision and goal when we started this journey five years ago. To finally level the playing field in the U.S. marketplace. Take away the coverage differentiation that AT&T and Verizon had not just built their brands upon, but had built their businesses upon and the strength in the margins that we look at.

## G. Michael Sievert

[indiscernible] (00:08:23).

## Neville R. Ray

I got to do this all again for you because it's kind of – well, this is a big thing of pride for me obviously.

## G. Michael Sievert

This is my new favorite slide in the whole thing. That one.

## Neville R. Ray

And so there's a lot of the U.S. That's over 3 million square miles of geography on that map there. By the end of this year, we will be at 2.5 million. And that's exactly in pace and in line with the major competition that we chase from Verizon.

Now not only is the network very broad in its coverage, it's also very deep. We've laid down an incredible layer of LTE. We've been adding to that recently with the 600 megahertz spectrum that we purchased last year. So that was an \$8 billion investment. Chairman of the FCC has told me he's never seen spectrum rolled out as fast as what he's seen us do with 600 megahertz. We are rolling that spectrum out at a furious pace in the U.S. That's the big, big major component of our plan as we move through the balance of 2018.

But our network is also the fastest in the U.S. and has been for four years-plus. So, that's an incredible achievement. It's driven by the fact that we have the leading LTE network, the most advanced LTE network in the U.S. We have been the first and the foremost to launch all of the key new capabilities and features in LTE Advanced, be that MIMO, QAM, carrier ag, you name it. And that's how we've been able to drive this tremendous performance in terms of not just coverage, but speed and capacity. And we continue to maintain this lead. Hold this slide in your memory, and you'll see what is in front of us as we move into this combination with Sprint. Average speeds in the U.S., you can see us leading about [ph] 30 megabits (00:10:09) per second, and what we can do going forward in this combination is incredibly exciting. We'll show you that in a second.

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## G. Michael Sievert

So, think about these numbers for me. I want you to bear in mind what Neville just said about the network performance and the business performance. We just talked about industry-leading subscriber growth that blows everybody away. Revenue growth up both at the service level and the total level, that's industry leading. In fact, we've pushed our competitors into declines in service revenues.

Overall, performance in EBITDA and cash flow that are very, very significant, and we're very optimistic about the future, and all of that is with no benefit at all yet in our business from the major investments that we've made in 600 megahertz. Think about that. We've taken you on a journey where we would spend billions of dollars, \$8 billion on that spectrum, plus major investments prior to that in spectrum, and now we're spending capital to roll out that 600 megahertz. There's exactly no business benefit yet.

All of the goodness of those investments we've made together are still in front of us, and we know how demonstrable that goodness is because we saw it on a much smaller scale with our 700 megahertz rollout that we began in 2014 and 2015. Now that that's nationwide, it's been a major game changer for us to have that small slice of low band in places around the country about 270 million pops. This is nationwide and it's deep, it's huge, it's game changing because it's both broad and deep, and exactly none of the run rate benefits are in the results that we shared with you.

So, let's talk about some aspirations for the future. This was our guidance at the beginning of the year, which was 2 million to 3 million branded postpaid nets and \$11.3 billion to \$11.7 billion in EBITDA. We've subsequently updated that. It's now 2.6 million to 3.3 million. EBITDA is \$11.4 billion to \$11.8 billion for the year. And you'll see a footnote here that due to an accounting change, the actual EBITDA guidance is now in a range of \$11.6 billion to \$12.3 billion. There's a new revenue recognition rules in the U.S.

So, we're being hard on ourselves. This drives EBITDA up a little bit. But apples-to-apples, the old way of thinking about revenue recognition, the guidance is \$11.4 billion to \$11.8 billion. CapEx remains \$4.9 billion to \$5.3 billion. And the CAGRs that we previously expressed around cash flow still hold all the way through 2019.

Now, I will tell you, we have a developing story on cash flow beyond 2019 that we're very, very excited about. It's too early to share it with you, but obviously, this business is at a really interesting turning point through our journey. We've been making such massive investments in growth, including the 600 megahertz that we just talked about. And we think we're poised now to translate into serious, serious value creation for our shareholders.

As a part of all that, we announced a buyback program of \$1.5 billion late last year and began executing that. Our board of directors has also approved a \$7.5 billion additional buyback program that I know Tim spoke to about yesterday. That's \$9 billion. And this is in our stand-alone case. And so, in the instance that we do wind up standalone, we'll get back at these buybacks for at least \$7.5 billion more. That's the part we've already approved at the board level, and we'll watch as cash flow develops and see what makes sense there. We're very committed to this program. We think it's a nice way in this phase of our company's history to begin to return value to shareholders.

So, let's talk about that stand-alone strategy for just a quick minute before we switch and talk about our aspirations for the combination with Sprint. Obviously, everything that we're talking about is based on a major, major differentiation that we've created in the market as the Un-carrier and people sometimes ask us, what's this thing really about the Un-carrier, is it about prices, is it about value, what is it?

And [indiscernible] (00:14:07) essence being the Un-carrier really what it means is being a company with fame, fame around being obsessed with customers. That's the bottom line. And I just wanted to report to you that it's working. Not only in all those financial numbers and growth numbers that we talked about, but in some metrics that should give you confidence about the future, things like what do customers really think of our company.

Right now, we are hitting all-time highs when it comes to customer satisfaction, Net Promoter Score, how we're measured for in J.D. Power and other comprehensive studies of satisfaction. Not just all time highs for T-Mobile,



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all-time highs in the history of the U.S. industry. In fact the most recent J.D. Power score that we garnered 828 points was the highest score they've ever given to any company in our industry ever.

Our NPS score is 1.5 times AT&T and Verizon's Net Promoter Score. Our Net Promoter, when we've interacted with somebody at retail, its 65 points when. When we've interacted in care, its 58 points. These are record highs in the history of our industry. So, we're really happy right now with this covenant that we have with our customers. We've built a brand that's based on trust. Trust in the customer that they believe we've got their back, we put them first, we treat them right; that's what all these Un-carrier moves we've done have been about. Yes, we're a great value, but one thing you'll notice is that value has been translated in terms of how we care for our customers. What they get when they invest in a relationship with us because our pricing through this period has been relatively constant.

In fact, we continue to outlook relatively constant ARPU plus or minus 1% or so this year. And so, this has not really been a story about pricing so much as it's been a story about what you get in this relationship with T-Mobile, and what you get as a company that's got your back.

Now, that's the foundation. That's the overarching strategy. Underneath it all, of course, is this network performance that Neville just reminded us about, and this is really about a network that has gone from, as you saw in this chart a few years ago, being a network that was catching up to a network that is second to none.

We won't stop until its best. In between those things, there is three simple strategies we're executing on. Taking this Un-carrier differentiation to more places and more people, we call that Un-carrier everywhere, number one. Number two, going beyond the smartphone. I showed you how we've kicked everyone's ass for five straight years in smartphones, both postpaid and prepaid. But we know the market is shifting. It's converging. All content and communications are moving from their linear formats to the Internet.

The Internet is going mobile. We have to be positioned to take advantage of this converging world. That's beyond the smartphone. And finally, simplicity and digitalization, yeah, these are actually one strategy not – I'm not cheating here because they're highly related.

In order to have a digitalization strategy in this industry, first, you have to radically simplify everything about your operation. And I'll just touch on each of these briefly. First of all, when it comes to Un-carrier Everywhere, it's about two things. And you've heard us already talk about the geographic expansion part of this.

This has been a big part of our story over the last two years. We decided to invest in a major expansion in distribution to match that major expansion in network that Neville just reminded us about. We've gone from 3,100 stores in 2013 for the T-Mobile brand to 5,300, massively expanding our footprint. We now serve about 265 million Americans with retail within the footprint of our retail stores out of 325 million total Americans, so about four fifths. I used to call this strategy going from two thirds to three thirds. Now, I have to shift it. We're going from four fifths to five fifths of the market with T-Mobile. MetroPCS expansion has been even more rapid. We moved from 4,500 stores to 11,000 stores nationwide for our MetroPCS brand.

But the thing I want you to look at is this chart on the side. What it basically says is that throughout our history we've been generally speaking a business that has been concentrated in urban centers with younger people, millennials and with ethnic groups. That's been our strength, about 22% overall in urban areas relative to our overall share of 19%. By the way within our 19% share, our share of postpaid phones sits right now at 16%. So, I just showed you over five years we've taken all of the growth in the industry, all of it, 93%.

But the result of that is a 16% share. That shows you how far from behind we were coming a few years ago. But it should also show you how much opportunity and runway this business still has in front of it. 84% of the customers are still with the other guys and they're coming to us at record rate. That 90% growth I talked to you about isn't just a five-year CAGR. It was our Q1 2018 number as well.

So, this growth story continues right here right now as we change this equation and where we're investing is some of these areas where we've been very underrepresented in the past. For example, business, we have a 4% share in enterprise, 4%, 96% of enterprise customers are with someone else. So, obviously, we've been investing big time there.

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Last quarter, business was 20% of our postpaid net nearing all-time highs. We have a 9% share in business overall because we're doing much better with smaller businesses.

Suburban, we're focused on suburban prime customers. Right now, we're experiencing prime credit rating attached at activation, some of the highest in our company's history as we push further into the suburbs with this distribution footprint I talked about and also with offers that appeal to large suburban families.

You may have heard about our push into older Americans, empty nesters over 55. We launched last year an initiative called Unlimited 55 plus where we went after empty nesters with two or less lines with an incredible offer targeted marketing and investment in the community, a brand statement that isn't patronizing to people like commercials with a great, big – with big phones with big buttons as if baby boomers and above don't understand technology. This is the industry that invented the mobile world we live in now so they need to be treated with respect. We've learned how to do that. So, we're having record numbers right now. In fact, 50% year-over-year growth with this segment.

Military, earlier this year we launched T-Mobile ONE Military. And you might think, boy, that's awfully specialized. But remember, this is for military active duty people, veterans, and their families. That's a market that's more than 50 million in size in the United States when you include all that. We're killing it with military right now. It's fantastic. We have an incredible brand building with this audience. It's very important also for us to make sure that we share our values, that we care about this audience. It's important to people in the audience. It's also important to people in smaller towns and rural communities that resonate strongly with this message and with these values that are important to us as a company.

And then smaller towns. By the way, 40-plus-percent of Americans live in smaller towns and rural areas. Our share there is 7%. And what we're doing is not just expanding the network into these areas, but getting involved in the communities sponsoring the high school football teams, getting involved in local charitable initiatives, local – highly localized marketing, and making sure people understand that we're here, and we're here to stay. So, the point of this chart is to make sure you understand that, yes, we've been killing it for the last five years, but we're more excited now, right now, about our upside than we've ever been.

Beyond the smartphone, the second piece, it's about a number of things, but one of it – one of the pieces is about making sure that we start to play in the converged world that includes people's homes, and we're going to talk more about this in the context of the Sprint combination in a minute. But obviously, media and content is very important. It's highly important and more relevant on mobile devices than it's ever been. We saw this a long time ago.

We were the first to set data free for music back in 2014. In 2015, our major innovation called BingeOn was announced, which changed the game completely when it comes to online consumption of video because it optimized video traffic. Major advantages to network payload, but even bigger advantages to customers as we became the first company ever to allow video streaming on mobile devices at no extra charge.

In 2017, we took it further with Netflix On Us, our exclusive partnership with Netflix that gives family plan customers on our flagship T-Mobile ONE offer, Netflix for their family at no extra charge, indefinitely. Not a promotion, but a core part of our offer.

And then finally, our acquisition of Layer3 TV and our forthcoming launch of a T-Mobile-branded TV services that will combine traditional types of TV thinking with cable channels along with over-the-top Internet content, social-media-fueled content into one experience on your big-screen TV that's more integrated with your mobile life than it's ever been before. So, we're excited about that.

And then finally, 5G and IoT. And we're going to talk more about this one in the context of the deal, and you'll understand why it's so important to our company as we come together with Sprint. But obviously stand-alone, we have aspirations here as well. 600 megahertz, our plan is to put 5G on our 600 megahertz layer and make sure that we're ready for the IoT world, but also ready to power smartphones nationwide, coast to coast with 5G, something our competitors are not doing.

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And finally, investing in technologies and capabilities and solutions beyond the smartphone, things like our SyncUP line of products. We've launched that last year, late in 2016. We've already done 750,000 units of SyncUP DRIVE, the first product of many to come under that sub-brand.

The final strategy in our stand-alone game plan is simplicity and digitalization. And this is really about radically simplifying everything we do in this business, so that we can simultaneously bring up the experience for customers and bring down our costs. The center of it is our flagship offer, T-Mobile ONE, which radically simplified our offer structure and centered everything around one core offer that includes everything. But also we're rethinking how we go to market in both retail and care.

Not going to stop and take you through the details, I'll just tell you that for retail, the strategy is to remove the friction in this industry in switching. So many people would consider joining T-Mobile. They've heard about our brand, but they're like, man, that seems like a whole weekend of my life. Can't you make it easier? The answer is yes and we're making big investments in how our retail works and how it's connected with digital to make that happen.

And then finally, in care, making it easier for our customers to get service. I want you to understand that this innovation we brought to market, called team of experts, is so massive in terms of a discontinuous way of doing business from our past that we are simultaneously experiencing right now, the highest customer satisfaction rates in our history, as measured through care, and the lowest cost to care for postpaid customers in our history, the highest satisfaction rates and the lowest cost of care happening right now simultaneously. So, we'll tell you more about that later if you're interested.

Okay. Now, let's talk about the big elephant in the room, which is this announced combination with Sprint. We made this graphic, I like this part. There it goes. We are so excited about this. We announced this just three or four weeks ago. But as Tim said yesterday, we announced it after – as a culmination of years and years and years of work. I want to congratulate the team for getting this far. We have a lot of work ahead of us. But this is a big, big moment.

I want to congratulate Tim, and I especially want to congratulate Thorsten for the incredible work of bringing all of these parties to the table together, who've always known that if the circumstances were right, we could unleash massive, massive value by bringing these companies together. And that value release is all based on a proposition centered around network that I want Neville to talk about in a few minutes.

But this company is going to be big. It's different than combinations that have been proposed in the past. Remember in 2011, there was a proposal for AT&T, the number two, to purchase T-Mobile, the number four, and thereby create the number one. That didn't work out. Everybody is up to speed on that, right? And it didn't work out for – obviously for government regulatory reasons.

This is about the number three merging with the number four to become the number three. But at number three, that is so much more prepared to compete over the long term in the future in a rapidly-changing marketplace dominated by 5G technology with landline, wireline, media, video, and wireless, all converging into an industry that rapidly is leaving all of the former separate industries behind.

This company will be prepared for the future and that's really what it's all about. Everything about it from a – it is premised on supercharging, what we just told you about, supercharging the Un-carrier. This thing that has made us so differentiated and so special in the market has taken to an entirely new level. We will be able to bring a level of competition into the face of AT&T, Verizon and Comcast, Charter and others sustainably over the long haul based on a premise that when you put these networks together, you get something really special.

As we stand here on the precipice of 5G, when you put Sprint and T-Mobile's network capabilities and assets together and create one network based on the T-Mobile network, you don't get one plus one equals two. You get a multiplying effect. And that's what I want Neville to talk about in a couple minutes.

But first, I want you to understand that this is something we're doing not just because it's going to allow us to bring competition and hurt the duopoly, but because it's going to unleash absolutely amazing value for our shareholders. We've already told you that it's \$43 billion in net synergies just on the cost side.

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Now, obviously, there are lots of opportunities for revenue synergy here around new businesses that we can get into that we've begun to size like tackling home broadband and bringing meaningful competition for the first time into home broadband. That's a massive opportunity. Video being expanded rapidly due to this combination, a massive opportunity, 5G private networks for enterprises, IoT commercial opportunities, lots of revenue opportunities, zero of them are in this \$43 billion synergy number that we've shared. It's mostly network, \$26 billion of it is based on network synergies, but obviously when you bring together two big companies like this, there are sales and service synergies and there are back office synergy. So, overall, net of the cost to achieve \$43 billion. And that obviously results into a company that over the long haul has very impressive aspirations.

We think we can take the pro forma revenue picture from \$75 billion, \$76 billion which is the current pro forma combination to \$100 billion in the longer term picture. Service revenues we see ongoing growth in wireless service revenue of 2% to 4%. So, we see \$70 billion within the planning period. Adjusted EBITDA margins we see growing into the 45% to 47% range in three to four years because we'll still be consuming the cost to achieve.

So, one thing I want to make sure you understand this 45% to 47% margin is net of the cost to achieve, which are still being spent in the three-year picture add another 4 to 5 points in that timeframe on a gross basis for our margin when you put aside costs to achieve that are still being spent in year three. So, big, big opportunity for margin expansion, which we see in the 54% to 57% range in this business model.

And then obviously a massive, massive opportunity to unlock cash flow as we start to achieve by bringing together these assets we start to achieve some capital efficiency, which is part of the synergy picture. Capital cost avoidance based on the superior spectrum position of this combination is a big piece of it. So, let's talk about the network that makes all this possible.

## Neville R. Ray

Thanks, Mike. So hopefully, the industrial logic – [indiscernible] (00:31:06). There we go. We're in the 5G world. So, hopefully, the industrial logic of what Mike talked about is very clear to you guys. We're going to take two networks and we're going to take all of the customers, a 130 million and put them on one, and then that whole cost and expense stream that exists on the other network goes away. Simple math, right? That's how you generate \$40 billion in synergies. The lion's share of it coming from the fact that there's one network there that we don't need.

So, finally, you have the cost structure and the scale that the duopoly has today. So, our opportunity in front of us when we combine the spectrum assets and the network assets of these two companies in the way that we intend to do it is we will create not just a great 5G network, we're going to create hands down the best network in the United States.

So, for me, from Capital Markets Day six years ago to today, to stand in front of this group and tell you that we now have within our sights in a small period of time the opportunity to take T-Mobile to the leading, leading wireless network in the United States, one of the largest and strongest markets in the world, that's what this opportunity affords us.

You saw the spectrum assets come together if you were watching the slide behind. 5G is about incredible capacity and capability. We'll talk about that a little more in a second. But we have already, as Mike mentioned, we've been rolling out 600 megahertz, and that's going to allow us to put down a 5G layer coast to coast across the nation. Nobody else is in a position to do that. AT&T and Verizon don't have fallow low-band spectrum to put 5G in touch the entire U.S.

We also have millimeter wave assets. We may need some more, but millimeter wave deployed in the right environments, urban environments and dense urban environments, is a great capacity [ph] adjunct (00:33:05). The many other exciting piece in the middle, Sprint has, as we all know, a lot of 2.5 gigahertz spectrum. That's kind of classic right down the middle of the road in terms of mid-band 5G as it's now being defined globally. In Europe and Asia, most companies are chasing between 2.5 gig and 3.5 gig spectrum. There isn't any of it in the U.S. that's available today.

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There is going to be some, some CBRS that will come next year. There's talk of some C-band coming out of the hands of the satellite guys. For the 2.5 gig asset that's there with Sprint, it's an incredible opportunity. Today, it's our LTE network. What we can do as we bring these two companies together is free up that 2.5 gig spectrum for an incredible layer of 5G capability. That's an amazing, an amazing opportunity for us to finally make that 2.5 gigahertz spectrum sync.

The biggest challenge that Sprint has had is they haven't had the network with the density and the coverage to really make that 2.5 gigahertz spectrum work. We have a much larger and denser network, and that 2.5 gigahertz spectrum on the T-Mobile network is going to perform incredibly better in terms of its coverage and also the capacity that you can realize from that.

So, if you think about this combination, it's an unmatched set of spectrum assets that we're bringing together. AT&T and Verizon are going to try and compete against this behemoth that we can create here with millimeter-wave spectrum in the 5G space. That's an incredibly tough challenge. The U.S. is enormous, right, and we all know millimeter wave is limited in its propagation and capabilities. It could take them years and a gazillion dollars of investment to play [indiscernible] (00:34:56).

So, timing is key here. The ability for us to put these assets together at this foundational time as 5G is being [ph] birth (00:35:06) in the U.S. marketplace. With the scale and breadth of these assets, it's incredibly unique, but also incredibly exciting. We have the financial scale to do it, and we have a leadership team that knows how to do this stuff, and I'll talk about that a little more in a second.

So, let's give you a quick preview of what this network can produce. So, there's a lot of discussion, this is

very important, regulatory argument about how the combination of these two networks. It's not one plus one equals two. You'll see, as this chart rolls out, on the left-hand side, you'll see one plus one equals six or seven.

So, why is that? Well, we're going to increase the density of the network so there's more sites, we're going to put all of that spectrum on those sites, and then we're going to drive much greater spectral efficiency with the rollout of 5G. And the compounding nature, engineers in the room, this is intuitive to you, but explain it through sites times that spectrum, times the spectral efficiency, we can create enormous capacity. This is incredibly important. We can drive a volume of capacity into the U.S. marketplace for wireless services and fixed broadband and other services unseen in the U.S. marketplace.

So, if you look at what we can produce, what we produce today, that's the little 3x bytes a month sitting on the left there, look at what we can do by 2024. It's an enormous capacity shift and growth. And then speeds, I referenced on the right-hand side, you can see the 30 megabits that was up on the chart earlier on. So, average speeds, we can take that 15 times faster, faster over 400 megabits per second average speeds. 30 sounds like really, really old news to me. My goal and sights set on orders of magnitude greater in terms of speed and performance. This is just two dimensions of what we can do when we combine these assets together, incredibly exciting.

Okay. So, Mike has touched on much of this already. I'd like to think about 5G as this arc of use cases, and we know over on what's your left-hand side, fixed broadband. That's going to be definitely an opportunity for us to go into that market, figure out the places where we can disrupt, not everywhere nationally to begin with, but clearly, the broadband market and the home market in the U.S. is far from monolithic. There are lot of places where there's very, very poor quality of service and very little competition, goldmine for us to go on attack.

We know on the right hand side the world of the Internet of things, much talked about going to be a clear area of growth and opportunity in the 5G space, and we're going to have some unique coverage and capability to go after it with our low band layer. And then I get super excited about the big piece in the middle. What's going to happen in this wireless space. If we were sat here 10 years ago when we said this is what's going to happen in LTE on your smartphone we all got it wrong. We got it wrong.

These are massive video and e-commerce platforms today. Something, we never saw coming. And with the capability that we will now put into these networks with 5G how consumers use and digest wireless services is going to

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dramatically change over the coming months and years and 5G is going to enable that with many of those use cases that you can read on the slide in front of you.

Okay. Last, but not least in terms of how we're going to do this. I want to tell you we know how to do it. If I go back five years ago, we were talking about how we were going to combine MetroPCS and T-Mobile. And many people said how on earth are you going to do that? It's a CDMA network and a GSM network. Well look at what we delivered. Our track record is just incredible on what happened there. Rapid consolidation of the two networks, migration of the customer basis, an incredible over delivery on synergies plus 40%, almost \$10 billion in synergies delivered and churn not a factor de minimis.

So, we know how to get this done. This is a whole process of not – I'd like to say not network integration. It's about migrating customers onto what we call the anchor network that minimizes disruption for one set of customers. You build out capacity and capability the landing pad for the migrated base. Sure, there were some of the Sprint sites we need to keep that makes sense. We'll densify the network, then we migrate. And we have a much better starting point with Sprint than we did with MetroPCS. The MetroPCS customer base was CDMA voice-only. There are 20 million-plus customers with a fully compatible handset over on the Sprint side of the house. So, when we [ph] build (00:39:40) out our capacity and we're ready to start migrating, we already have a huge number of Sprint customers that can move across. Now, I'm massively simplifying what's obviously a complex process.

But I'm standing up here to tell you I know how to do it. I have a team that knows how to do it and we've done it. And the scale of what we did in Metro, believe it or not, when you break this whole Sprint business down, you break it down market by market, the scale of what we did with MetroPCS in many of those major markets was comparable, if not larger, than what we would take home with Sprint in terms of the size of the customer base and the sites that we have to work on in terms of decommissioning and upgrading. So, we have a plan. We know how to go, execute it. We're getting ready to go, do this thing. Now, we go, take it through the regulatory process.

So, a quick wrap slide here and I'll rattle down these and then hand back to Mike. So, this world of convergence is upon us. 5G is going to open up any number of new business opportunities for us to go, chase. We haven't even realized the benefits of the network we have in the ground yet. Now, we're talking about a massive, massive upgrade in terms of what we can deliver going forward.

We're the only company that can make this happen in the U.S. at the pace and scale that is really going to introduce 5G and allow the U.S. to maintain a leadership position in technology, incredibly important for the U.S. administration. That message is resonating very powerfully in D.C. with all the visits that Mike, myself, John have been making over the last two to three weeks.

More importantly it supercharges. Everything Mike talked about in the first half of our presentation today was about our own carrier, right?

And what we've done and delivered over the last five years, we're going to take that and scale it in an incredible fashion and take it forward. We are not going to sit back on our laurels. We're going to take a far more aggressive customer proposition into the market. Better prices, better service, better quality, you name it in all dimensions, and we have a track record and a history of doing that.

We have a ton of credibility in the corridors of D.C. and in the government and with the U.S. consumer that when we say we're going to go, do something, we actually make it happen. We believe we're confident in job growth, economic stimulation, in any number of dimensions, this is going to be an incredible opportunity for not just our customers, but our employees, our shareholders, and everybody within the business.

It's a very, very compelling story. It's resonating very well in D.C. so far. It's early days, very early days, but we've had a whole series of very, very strong meetings and very productive meetings, and we're very confident in the outcome of the regulatory process.

But, Mike, let me hand it over to you.

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## G. Michael Sievert

We'll, I'll just add two things to what you just said, because one thing I love is Neville's clear-eyed view on this opportunity, and he gets asked a lot, and we have been over the past three weeks. How are you going to integrate these networks? And he said it a minute ago, but I'll just reamplify it. He says I'm not, I'm not going to integrate them. We're going to migrate the customers to the T-Mobile network, and we're going to use the assets to make the T-Mobile network an order of magnitude better than it's ever been.

And we can break down the numbers for you on that. But that's our integrated plan. It's not Neville's plan. It's our integrated plan with the Sprint management team. This is something we know how to do because we did it on Metro, and it's a winning strategy that's so different from what has come before. And it's also part of what unlocks this massive synergy.

The second thing is people say, hang on, 5G, are you really saying only because of this combination, will there be 5G in America? And the answer is no. No, we're not saying that. Of course, AT&T and Verizon are doing 5G. A standalone T-Mobile and Sprint will do 5G. But what this is about, what Neville just told us about is an opportunity to create a broad and deep nationwide 5G.

In the critical early years of the 5G innovation cycle, something that absolutely will not exist without this combination. Think about it, standalone T-Mobile will go broad with 600 megahertz and have 5G everywhere, but we won't have the depth for the kind of game-changing performances that Neville just told us about. 450 megabits per second, that [ph] wasn't (00:43:59) one of these [Obscenity] (00:44:00) peak theoretical speeds the industry likes to spew. That is our actual forecast for the average, the average – actually, the median, to be more specific, speed, nationwide on speed tests within our planning period, not a dream or an aspiration, but a plan, well, that's something that can only happen when you bring these two together.

Meanwhile, AT&T and Verizon have made it crystal clear that what they plan to do is millimeter wave, sporadic 5G in some neighborhoods of some towns with incredible performance in a few isolated places on the map. That's not the kind of game-changing 5G strategy that the U.S. economy needs.

So, let me just wrap up by saying thank you for the opportunity to tell this story. I hope you understand after this brief talk that we're excited. We're excited about two things and we hope you are too. Number one, we're excited about the standalone prospects of this business. We always have them. And hopefully, I laid out for you why we are and the opportunity that we see ahead for T-Mobile as a standalone company. We're as excited about that as we've ever been, but we're even more excited about the prospect of bringing these companies together and unleashing an incredible value opportunity on top of that, of billions and billions of dollars of value creation that we have a clear-eyed plan on how to unlock.

Now, last fall when the deal didn't happen, we told the market, look, we are only going to do this deal or any deal if we're confident that we can get it done, that it's going to unleash incredible value for American consumers and it's going to deliver incredible value for shareholders. And those set of circumstances didn't all come together last fall. They did this spring. And so, we're confident in our standalone prospects. We're confident that this deal is going to get done, way more confident than we ever could have been last fall for a number of reasons. And we're confident that when it gets done, there's massive value creation.

And we'd love to open up a discussion about all of that. And because of that, I want to welcome to the stage the famous birthday boy, [ph] Nils Paellmann (00:46:04).

## Hannes C. Wittig

Okay. So, I was so excited this morning ahead of the day and ahead of what these guys had to say that I forgot a bit of housekeeping. So, this is the book, the encyclopedia that for politically correct reasons, let's then call it the Bible or anything like that, but it's basically available from about [ph] 12 PM (00:46:35) over there. Right? And, secondly, [ph]

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shuttles leave at 1:30 PM (00:46:38). So, in the interest of getting it all through, so I had to insist on the strict timekeeping. Sorry, Nils, I assure we could've listened to you much longer.

Next, it's my pleasure to announce Srin. Now, Srin joined us one-and-a-half years ago, so compared to Dirk. And [ph] Adel (00:47:00), he is like a veteran of this business. T-Mobile, hard act to follow, right, but not for Srin. So, Srin, the stage is yours.

## Srinivasan Gopalan

Right. Thanks, Hannes. So, no pressure there. Right. Before I start, just a couple of points I'd like to make. Look, quite often, Europe is a bit hard to understand as a portfolio. There's 11 countries, each of them is kind of individually small. Yet, when you put it all together, it's close to €4 billion in EBITDA. One of the things I want to try and do today is give you some transparency into the portfolio, how I think about it and, really, what the future of that portfolio looks like.

The second thing is I often read the European business being referred to as the rump European assets. One of my objectives today is to convince you and get you to my point of view on why I don't think it's a rump, but it's actually quite a prime-cut.

So, with that in mind, let me kick into a brief summary of the story on Europe and then, I'll talk about each of it in more detail. The thing about the European portfolio is structurally, it's an incredibly sound portfolio. It's largely converged. It's got really good assets. And, I think, the paradox of Europe is a group of strong assets have underperformed financially, no question about that. And I'll come back and talk about what's driven that underperformance, some of it is internal, some of it is external, but we'll spend some time on that.

So, you've got a strong portfolio, which certainly, over the last 18 to 24 months, you can begin seeing signs of a turnaround, you can begin seeing some real strength and the portfolio beginning to perform in line with the inherent strategic strength that it has.

As we look forward, I strongly believe that you will see the prime-cut emerge instead of the rump, because what we've got in place is a clear plan to take the strong portfolio forward by driving convergence, turbocharging convergence with aggressive fiber build-out. And I'll talk about why the economics in Europe are different from more developed countries and pulling that all together with a really differentiated experience.

On the business side, we, again, have an advantaged position that we can build on in a world of greater digitization and IoT. And on the cost side, this is one of the places where, in the last four years, we've been very disciplined. And you'll see going forward, there is still substantial potential to drive costs down in this business.

So, when you put that all together, you get a financial outlook, which is a growing business. The amusing thing is one of the first and one of the few German words I learnt is one that's Tim's favorite, it's called Wachstum, which I've learnt with time, means growth. So, I think the story I'm about to tell you is the story of how the European portfolio really starts punching in line with its strategic soundness and creates real Wachstum for Deutsche Telekom.

So, before I jump into the plans for the future, let me start with a quick recap of the last four years. Look, bottom line, our financial performance has been disappointing. Across pretty much every metric, we've seen a decline. I'll come back and talk a bit more about what's driven that.

But from a portfolio and inherent asset quality perspective, we have seen strengthening in some significant areas. Claudia talked about it yesterday. Tim talked about it. We are now network leaders in 9 out of our 11 markets in mobile. We have pushed forward on our fixed investment, not to the extent that we had hoped for, but most of that was because of regulatory delays and vectoring in some of our markets, but we have pushed forward on our fixed portfolio.

And in terms of customer experience and importantly, in terms of diversifying into areas that provide more sustained growth like TV and B2B, we have seen significant progress. And I'll come back and spend a bit of time on TV and B2B in specific. So, a mixed bag, but a continuation of the [ph] feel (00:51:49) of a strategically sound portfolio, not really translating into sustained earnings growth and actually, declining in terms of its financial indicators.



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Now, before I talk about the story in more detail, let me spend a few minutes just giving you the transparency I promised on the portfolio. And a lot of this – when I joined 18 months ago, I think I spent about four days in Germany in my first three months. I spent my first three months traveling extensively across my geographies to get a real understanding of what this portfolio was like, actually, talking and meeting sales agents and call center folks to get a really deep understanding of what this portfolio was like. And let me talk you through some of the things that I learnt, which gives you a greater degree of transparency into this portfolio.

So, if you look at this portfolio, it covers 115 million people in economies that are growing at between 2% to 3%. And our assets are converged leaders, which are our big converged assets, where on average, we have 55% market share in fixed and 45% share in mobile. That's actually almost 70% of our EBITDA.

And when we close out the deal in Austria, it'll actually look like more like 75%, 77% of our EBITDA, will come from strongly converged assets.

And in our non-traditionally converged assets actually, by end of June, July this year, we will have access to convergence in all those markets as well largely through wholebuy, mixture of wholebuy and own build, I'll come back and talk about that in more detail. But essentially, we will be converged in all our markets with the exception of Albania and more than three quarters of our earnings will come from markets where we are converged leaders. Structurally, and I'll talk a lot more about this in terms of the value that convergence brings not just in terms of customer satisfaction, but also in terms of what it does to the market itself.

So, we're in the right geographies. We have broadly the right assets and this is a big one for me, which is it took a while for me to appreciate what Deutsche Telekom and the [ph] T-Mobile (00:54:23) brand means in these economies. We have substantial meaningful scale. So, if you look at the size of our business in these countries, we are bigger than the sum of Vodafone, Liberty, Orange and Telekom Austria. Broadly, the way these markets split up is we're about a third of them. The four and other international players are another third and then, you have local players who are the last third.

And what's been happening with time is, a lot of the local players have got consolidated or you've seen erosion and there is enormous power in the [ph] T-Mobile (00:55:02) brand and driving it across this footprint.

Now, not just are we relevant from a narrow sort of telco perspective, but we're incredibly relevant to these economies and societies, and I'll come back and talk more about that. But we are almost 2% of the GDP of Croatia, 1.6% of the GDP of Greece. In a lot of these countries, we're not just the largest telco, we're the largest company.

And our involvement in these societies and economies goes beyond traditional telco. In pretty much all our converged leader markets, we're either number one or number two as an [ph] IT, (00:55:41) ICT and system solution provider.

Now, why is some of this relevant? Look, I spent a lot of time in Asia. And in Asia, we went through a phase where the penny sort of dropped to regulators, governments and societies, that there was a huge opportunity for these countries to leapfrog by going straight into mobile Internet and almost bypassing the desktop computer-based Internet. And you saw societies as a whole, regulators, governments get involved in driving that.

I'm seeing a similar thing play out in the Central and Eastern European footprint. There is a real appreciation of the opportunities that digital and digitization can bring to these societies and the opportunity to do a similar leapfrog using digital technologies.

The reason our size and our system relevance matters is we can play a huge role in these societies and economies in enabling that to happen. And that would create a really positive environment both in terms of how the society looks at us, but also in terms of how governments and regulators work with us in making this happen.

Now, let's get to the slightly more depressing bit, right? So, a really strong asset, system relevant. Reality, you value us today at a 4.9 multiple. Now, in part, that might be due to country risk, but I suspect a large part of that is because of the left-hand side of this where we've seen EBITDA decline by 3% and cash decline faster than that. And so, while a lot of our peers are valued at 6.3 times, [ph] our (00:57:31) some of the parts is at 4.9. And that's, like I said, in part,

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external factors, but also in part, our performance.

There are several things that have driven that performance, but before I dig into that, the good news is we now have real evidence that this is beginning to turn. Our revenues grew for the first time last year after a while, and that growth has continued into quarter one this year. Our EBITDA decline slowed down last year. And for the first time in a while, we saw year-on-year growth in our first quarter EBITDA. And these are the first signs really of what I believe is a sustainable inflection in the direction of this business, because it's not like we almost grew, we grew at a healthy 2.5% in overall terms. In organic terms, adjusted for FX, we grew by 1.6% in terms of EBITDA.

Now, why did that happen? At the heart of it, our markets are back to growth, and that helps enormously. After years of decline, our mobile markets, in the countries we operate, are back to growth. The second half of 2017 saw a slightly dizzying 3% growth. Now, the reality is, at least, 1% of that is because of Roam Like at Home, because my countries are net receivers rather than net givers, and so Roam Like At Home worked well in terms of the top line, we still have an EBITDA hit because of costs. But in terms of growth, it certainly helped. But, look, even underlying this, there is a healthy 1.5% to 2% growth that you can see now coming through in our mobile markets.

Two fundamental drivers to it, one, the washout of the MTR-based cuts. Now, the MTR cuts actually had a deeper second-order effect beyond purely the loss of revenue. They also created instability in market pricing. Now, a lot of that has washed its way through the system. The vast majority of our interconnect cuts are done, and we're now at really low levels. That's driven some of the growth.

I think the second bit is coming back to the story I was talking about on digitization. What you are seeing across our economies is a substantial growth in data usage, whether that's on the phone or whether that's on the fixed line. And what we are seeing is a strong appetite for increased data consumption which shows up as revenue growth. So, that's good news one, which is our markets are turning. Now, in a market that's begun growing, we have actually, over the last three quarters, outgrown that market as Deutsche Telekom.

What's driven that? Fundamentally, a return to commercial momentum. Now in the mobile business, the maths of it is pretty straightforward where we have about 30%, 31% market share. Historically, our net add share was somewhere between 10% and 14%. That's back up at 29% to 30% now. We're getting our fair share of this market, and we're doing that without discounting or driving down price structures in this market.

We're doing that by using our fundamental strengths, the quality of our network and convergence. I'm going to come back and talk a bit about convergence. But let me spend a minute talking about quality of our network. The fact that we're the best network in 9 out of 11 markets, now, that's great news, but we've got to be able to monetize that, and that's really what we've started doing.

What does monetize that mean? That means, firstly, increasingly a lot more about advertising and what the brand stands for is going out and claiming the best network. We're not embarrassed about talking about it. Secondly, our own confidence and the mindset we've taken to things like pricing has been driven off. We are the quality leaders, therefore, actually creating sustainable more for more. Now, I know more for more has often felt like a bit of a myth in this industry. But I'll give you the example of Hungary.

We relaunched our entire tariff structure in Hungary in about August, September last year. Hungary over quarter four and quarter one, we're actually seeing greater than 5% service revenue growth driven off a restructured portfolio, driven off our confidence [ph] and be the best network, and driving uptrade (01:02:01) towards greater data consumption, which is riding the broader wave of societies that are data-hungry in their vision of digitizing. So, it's a combination of commercial momentum returning without – not at the expense of pricing, but [ph] riding (01:02:18) the quality of our network, and really beginning to utilize our inherent strength in convergence.

So, we've seen almost 80% growth in our consumer convergence revenue in the last year. We've seen about a 20% growth in our business convergence revenue. And here's where convergence really kicks in. We saw a 13% drop in churn. Now, when you pull all of that together, you've got a mobile business that's really beginning to [ph] motor now (01:02:50) in the context of a market that is also beginning to grow, and it's [ph] motoring (01:02:56) not at the expense of pricing, but driven by convergence and network quality. That's been a big engine of the growth.

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The second big thing that's kind of driven some of the turnaround is beginning to address our trouble spots. Historically, Poland, Romania, we had issues. Now, let me give you a bit of a story on where we are in those trouble spots.

Look, when we have EBITDA trouble in a telco, and this is like kind of a bit teaching you guys to suck eggs and I'm sure you're well aware of it. But the worst thing you can do is go out and try and solve the EBITDA problem. What you have to do is, take a step back and make the fundamental investment in fixing the underlying problem.

I've been in this industry 10 years now, but the story repeats, which is, you start with fixing the experience that results in higher NPS. That moves with time to greater employee satisfaction because the frontline believes that they can sell your product, that with time, converts into positive thoughts, with time, service revenue market share and then EBITDA moves.

Let me tell you the story of Poland. A year ago, our NPS was minus 12, which was number four out of four players. Our NPS, right now, is plus 12. And we are kind of close to number two in terms of our NPS. What has that resulted in? And a lot of that was driven by a big network claim on the back of actually having the best network in Poland which we do and the tests prove that.

What has that resulted in? In the Christmas quarter 2016, we had 160,000 port-outs and about 60,000 port-ins. Christmas quarter 2017, we had 100,000 port-outs and 145,000 port-ins, right? So, our port-ins more than doubled and our port-outs fell by about 50%. What is all that converting into? Now, Poland is notoriously hard to look at service revenue numbers because of accounting. But when you look at the first quarter service revenue, we have gained anywhere between 0.5% to 1% market share year on year depending on the way you look at the accounting. And Poland is on path to a turnaround, which has helped drive the stability and the growth in earnings.

Romania, my sense of Romania has been about three to six months behind where we are in Poland. But Romania is a fun market because we're in a similar place to where Mike was when he started the Uncarrier play.

Now, a lot of the trouble in our Romanian business has been the erosion of the fixed line profit pool. Now, that's done or bottoming out. Our stakes in mobile are reasonably small. We're actually a small mobile player. And there is a massive profit pool that Orange and Vodafone are sitting on.

We are going after that as an Uncarrier, right? And we're converged Uncarrier, which is very, very compelling, because we have a large fixed line network to cross-sell into and we don't have the heritage of a large base on very high ARPUs that people like Orange and Vodafone have in Romania.

And so, Romania, quarter four this year – or quarter four last year, greater than 5% service revenue growth. Quarter one this year, greater than 5% service revenue growth. So, our troubled assets are on the [ph] mend (01:06:27). Are we done as yet? Are we seeing stable EBITDA and growing EBITDA? Not as yet, but that will come in 2019. [ph] Just (01:06:33) like I said, it takes a while to make these turnarounds happen.

And Austria, where from our perspective, we preempted a directional move of a degrading market by going ahead with the UPC acquisition. Hopefully, we'll be able to complete that over the summer, but that would have preemptively addressed a potential area in our portfolio where we could have seen what happens in mobile-only markets which is a steady degradation. So, that's really been the heart of the revenue turnaround.

On the cost side, again, we've seen a sharp inflection. So, from 0.8% in the net cost reduction, we saw a 2% cost reduction in 2017. What's driven this? I think a combination of two things. One, from a central or group perspective really redefining our role to be much more like a private equity team.

We see our role in the European [ph] HQ (01:07:34) as being a small team of highly qualified experts who obviously monitor performance, but also exist to allocate resources, and probably most importantly provide expertise to the countries. And expertise comes from having experienced people who've been there and done that.

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Convergence, big center of what we want to do and work with the countries on. We actually have now someone from the most advanced converged market in Europe, Portugal, André Almeida, who runs our convergence from the center. And therefore, when André sits down and has a conversation with the CEOs, it's not a theoretical conversation of here's how you could do convergence, it's, I've been there, done that, here are my lessons. Let's now drive this stronger.

Similarly, on the app, we're rolling out one app across our entire footprint. The person who runs our app is the guy who used to run the app for me when I was at Airtel in India who scaled the myAirtel App from a million active users to 25 million to 30 million active users in six months. Again, [ph] Jonathan (01:08:41) brings a certain credibility and experience which, when you have a portfolio of 11 countries, is critical, because the way you're going to drive the critical strategic initiatives is pick two or three, get the world's best of doing those two or three and get them to work with the NatCos to make this happen rather than have an army of project managers at the center. But that cultural shift has enabled us to substantially slim down our headquarter organization.

At the country level, again, what we've seen, what we've been driving is a change in mindset. Historically, I've seen a bit of the manage-the-decline mindset, which is, let me explain to you through a compelling PowerPoint waterfall why the right answer is that we will decline. I think what we've seen happen over the last 18 to 24 months is a shift from that to saying, our job as the NatCos is [ph] great (01:09:38) execution and a desire and hunger to grow.

Now, that's been achieved in part through cultural change, in part [ph] through (01:09:49) actually getting in a wholly new set of people into the countries, into the management teams. And a combination of all of that has created this environment of what we want to be and what we want to be famous about, is delivering a great experience to our customers, driving growth in our countries, and becoming a smaller, leaner, more focused organization, which is why you've seen the inflection in costs. So, that's some of the factors that have driven the green shoots off the turnaround in Europe.

I will now spend a few minutes talking about how do we build on this, how do we take this forward. So, the heart of our strategy is completely consistent with the DT strategy across the group, which is leading in customer experience, especially through driving convergence, leading in technology across mobile and fixed, leading in business productivity, and value transformation. I'll spend a few more minutes on this in detail.

Let's start with convergence. Look, convergence, from an economic perspective, is a no-brainer. I totally agree with Mike, which is customers don't care about whether it's fixed or mobile. They care about getting all of their services in a seamless manner from one place. The reality is in Europe, like Neville said, you don't have the fragmented broadband situation. You also have less spectrum than you do in the U.S. So, fixed line will continue playing a big significant part in convergence.

But the economics of convergence are a no-brainer. Big churn reduction, substantial ARPU increase, and an increase in customer satisfaction. But what gets me excited about convergence is not the first-order economic effect. It's the second-order effect in terms of what it does to market structures.

Let's take a look at this, right? Look, I've somewhat been burnt by probably having worked in the two worst mobile-only markets in the world, UK and India. But for me, there is a joy to convergence which is about creating private markets, which escape the volatility that open market mobile often has. So, take the example of Slovakia, 48% of our gross adds, this is gross adds, it's even higher when you think of net adds, 48% of our gross adds now come from convergence, from selling mobile into our fixed base, which suddenly substantially reduces my exposure to volatility and drives greater stability into my business. Close to 20% of my Slovak mobile base is now converged. That's the base. That's not fresh adds.

So, when you look at convergence, for me there's obvious first-order economic benefit, but there's an even more compelling private market effect that convergence creates, which is why we want to really step on the gas on convergence.

We would like to have greater than 50% of our households converged and over €1.7 billion in revenue from convergence in 2021, and the heart of doing it, a big part of doing it is the go-to-market execution and this is what we've learnt in the last 18 months, which is why our convergence revenue has grown so much.

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A lot of this is about simplifying the customer offer, figuring out how you incentivize the frontline, getting the right household data [ph] match (01:13:17) so that you understand who has which product. And all of that comes – will come together in the next four years to further accelerate this. Now, the real turbo boost for convergence though, especially in our converged leaders, in my mind, will come from some of this ambition, but will really come from an aggressive fiber build-out and I'll talk about that next.

I talked about the ambition in these societies to become gigabit societies. When we look at our converged leaders and that's really Greece, Hungary, Croatia, Slovakia, we have a unique opportunity to aggressively expand fiber. We want to move from 17% of our households passed in these markets with fiber to close to 30% and that involves almost a tripling of our fiber rollout rate and I'll come back and talk about that. But why do we believe in this? Because, one, there are unique economics to fiber in Europe. Two, there's a lot of societal, and regulatory, and government support for this. And three, we're in a unique position to do it.

Let me talk through each of those. The economics of fiber, now, in most of our markets, our ARPU's aren't that different from developed Western European markets, but the cost of fiber is, as long as you're going to between 25% and 50% of households and not going deep rural with it, is about €300 per home passed. Even in the case of a copper overbuild, I'm looking at 7 to 12 years payback on fiber, which is pretty compelling economics.

And if you look at, is this all kind of [ph] slideway (01:14:58) you look at Slovakia, we're continuing to expand our fiber footprint and our utilization of that, despite a substantial growth. You can see we went from 390,000 households to 490,000 households over three years. Our utilization is still staying in the high-20s and that economics is very sound. It also creates the basis then for even more powerful convergence.

From a societal perspective, there is a substantial demand in these countries to drive forward with gigabit societies and their substantial appetite to support us. Now, this does phenomenal things for us as a brand when we work with governments and societies to actually move them forward. Last but not least, couldn't anybody else do this? The answer is probably not, because laying fiber in these countries is operationally hugely intensive, takes a lot of experience and know-how to get it right.

Also, we are uniquely advantaged in that we have mobile, so our economics are superior, all of which adds up to a compelling case for building out fiber across these countries. Now, I go to the next bit, which is sort of convergence at the center of our strategy. What about countries where we don't have our own network? Now, the way I think about convergence is, I think, there are two central factors that drive convergence.

One is nationwide presence, because it's very hard to drive convergence if you're only present in one small pocket and two is owner economics. Now, how do you get to those in these countries? Now, I think it is going to be country-specific, but a broad rule is we will get the nationwide coverage or have already gotten the nationwide coverage with good wholebuy deals.

And then we add on top of that, owner economics, either through M&A or FWA/FMS and combine those two to create a compelling convergence proposition. Let's take the example of Austria where we have a nationwide wholebuy deal. We also have a very strong FMS play, which will evolve into FWA as we move more into the 5G world. And then we top that off with an acquisition, which helps give us owner economics.

Czech, the answer is going to be slightly different. We actually have a really competitive wholebuy deal, thanks to the separation of CETIN and O2. We are actually market leaders in net adds in quarter four in Czech. As a mobile-only player with a wholebuy, we are the number one net adds player in quarter four in Czech. We will support that with selective own build in the big cities of fiber. And that along with potentially some opportunistic M&A of the smaller players will give us the footprint that we want.

Poland, this is the market where convergence is probably moving more slowly. And in this market, we have now a wholebuy deal, a letter of intent, which will convert into a proper deal over the next couple of months with Orange, which gives us access to the largest fiber footprint. We're in no hurry in this market, because convergence isn't kind of taking off. The wholebuy deal gives me enough protection anyway. And then, we look at opportunistic M&A. We

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already have a really substantial FMS business, especially the rural areas, which, again, will evolve into FWA as we move more in the 5G direction.

So, that's the strategy for markets where we don't yet have a fixed line presence. Now, when you pull all of this together what we're looking at is an increase in our – almost a tripling of our fiber rollout rate from 250,000 households a year to 750,000 households a year, with an increase in capital expenditure from about [ph] €92 million to close to €300 million, which is about a €200 million (01:19:02) increase in capital expenditure.

Now, I'll come back and talk about where we want to be is a flat CapEx envelope. So how do we fund this [ph] €200 million? (01:19:12) Three big sources and we're already proving out a lot of this. One, we think – one is the obvious kind of shift from vectoring, just fixed line money shifting from vectoring to FTTH. The second is mobile capacity optimization.

Now, we've had a really – mobile capacity is one of those things where if you add capacity on the average, you're almost always exactly wrong, because typically it's 5% of [ph] cells (01:19:38) which account for 80% of your congestion. The question is how well can you predict where you will see congestion? How well can you actually target your capacity in those areas?

We've had some great experience in Hungary where we run the world's fourth best network. Last year, we continued to be the world's fourth best network after peaking out between 30% to 50% of our investment in capacity, purely by using big data and advanced analytics to target where we added capacity. We see that again across our footprint as a place that will help us fund fiber.

And then, there's the whole issue of our IT model, which again I'll spend a few minutes on where today or historically, a lot of our CapEx has been absorbed by large scale BSS, OSS transformations. We are making a fundamental shift in that model towards a much more agile world, which will free up CapEx.

Now, none of this [ph] am I (01:20:34) including what we're seeing a lot of already, which is conversations with the government, because we're so central to digitizing these societies, on the use of EU subsidies. In several of the countries, we're in conversations with governments where we're seeing a lot of appetite for a tax-to-CapEx trade which is, we will reduce the levies on you as long as you give us [ph] one on one (01:20:58) – euro for euro, the same money back in terms of investment in the country in capital expenditure.

That collection of things is what makes me confident that we will see this expansion even in the context of a flat CapEx envelope. So, that's a lot of the convergence story. Now, how do we pull all of this together beyond technology into a compelling customer experience? The heart of that for me is reinventing our IT, because at the heart of delivering our experience is a much more flexible agile IT system.

Historically, like I said, we've spent a lot of our time in the trenches working through legacy systems. We have now moved to a new model. We are creating a digital overlay layer which is something we call HAL, the homogenized API layer. That is now live in – across Croatia, Poland, Czech, Slovakia, we'll go next month, Hungary, we'll go after that. So, across our footprints, even if we have different BSS and OSS systems, we will have a homogenized API layer which then starts giving us the flexibility to create real service differentiation on top of it.

Let me give you some examples of that. So, the one app which is built on top of the homogenized API layer will fundamentally change our service experience and the way customers interact with us. Now, having lived through the whole Jio story in India, I'm compelled with what an app can do and what digital can do in terms of fundamentally changing the customer experience. And our ambition is to get to greater than 50% penetration of the app, if not higher. Just to give you a sense, in Greece, we're already at 40% penetration of the app and we started 12 months ago, right?

But it goes beyond the app. One of our ambitions as a converged player, and Mike talked about it, is customers don't care about fixed or mobile. They want to be connected everywhere. In my house, for example, I know the Wi-Fi is weak in some rooms. But the minute I go home, I'm on Wi-Fi. And, actually, I get bad reception where my mobile network would be better.

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Now, all of us are used to the Starbucks experience, where the Wi-Fi is quite often poor, right? But you switch on to it automatically. Now, wouldn't it be great if what your phone could do is automatically direct you towards the strongest network and latch on to that.

Now, one of the things building flexible IT gives us is the ability to overlay on top of our products as part of our app, seamless connectivity, the ability to always move to the best network. That's the stuff which we think when we put on top of our assets will give us meaningful service differentiation.

Now, pulling that all together, right, which is we've got great assets [ph] or (01:23:53) an increasingly flexible IT, how do we then move that forward to total differentiation? Greece is probably our best example of this. We are the incumbent, but the number one on customer satisfaction on mobile, fixed and TV. And that's because we've pulled all of this together with a strong focused brand. And to Tim's point yesterday, it's not just about the digital.

The only person anyone allows into their bedroom is our technician. They have to be incredibly well-trained. We have to invest in that and we have to make sure this whole area of combining the digital with the human comes together. And Greece is kind of our benchmark on how we drive that and that is something we will replicate across our countries.

If I move forward into the B2B part of our business, our B2B position is pretty unique. In our small businesses, we are the largest player across both fixed and mobile. We have a huge opportunity now to convert that into cloud leadership. A lot of small businesses are hungry to go digital because they see the value. They see the saving. It makes a real difference to their lives. Instead of being for a server, if I could have Office 365 hosted in the cloud, that means I have more money to spend on my business.

We believe we will drive convergence in these markets not just the fixed and mobile, but drive cloud on top of that. Already 14% of our converged customers also have a cloud offering. We believe that number will scale substantially in our small businesses.

In our larger businesses and public sector, [ph] when (01:25:36) I talked about are our strength in system solutions and ICT, there is a big opportunity for us to leverage that not just into IoT, but also smart cities. Smart cities in Europe is not a concept or an idea. It's real, this €2 billion of EU funding for smart city deployment including IoT.

In 2017, we actually generated €55 million of revenue from smart cities and our ICT skills and our relationship with these large customers as well as how central we are to e-government and digitizing societies puts us in pole position to really drive this forward.

I'll now move on to cost and how we continue on the journey we've been of driving down costs. Our target is to take out close to another 10%, 9% to be exact of our indirect cost in the next four years. Now, in part, that will just be the good stuff that's already been happening in 2017 and 2018, and pushing that forward will give us a headwind. But there's also three big pieces: simplification, digitization and the right organization.

Now, if I talk about simplification, Mike talked about it, we have got ourselves into an incredibly complex industry. We need to be ruthless about simplifying our tariffs, processes and platforms. We're already making progress on this in Greece and Hungary. The numbers you see there are real estimates based on the work we've done in Greece and Hungary. We think we will take out between 60% to 80% of tariffs. We believe we will take out more than 50% of our process variations, and all of that will have a huge knock-on impact in terms of the level of customization of our IT systems.

Digital, talked about this already, but driving digital hard and moving more and more of our touch points to the app and the app is not just the app itself. It is almost the spearhead of simplification and creating a more agile, flexible IT stack, which then allows us to drive greater self-service and greater digitization of our processes, which is where we think the real savings lie in this.

And last but not least, organization. Now, I've talked a bit about the mindset and why we saw an inflection in our cost savings. We will continue driving that by establishing the right organization between the center and the NatCos. There's also a large unexploited potential, which is our leverage in terms of size and scale.

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Now, this is not leverage in terms of size and scale in terms of producing products across countries. Claudia talked about that. We think the bang for buck there is actually cloudification and virtualization and to a limited extent, cross-country product production. But we put Czech and Slovak together and ran it as one company, and we saw a huge saving, not from common production, but from common infrastructure, which is by reducing the number of servers, reducing the number of data centers, pulling together our infrastructure and leveraging our scale and we think across organization and cross-border leverage, there is a significant opportunity for us to drive down our cost structure further. So, if I pull a lot of that together, our commitment is [indiscernible] (01:29:16) in Europe again. We will grow revenue by greater than 1%. We will see our EBITDA grow by between 1% to 2%, cash grow by between 2% to 4% in the context of a broadly stable CapEx envelope.

And to give you a little more flavor of this in terms of the drivers, its convergence and therefore, the size of our FMC revenue, it's digital and the app penetration. In B2B, it's exploiting our fundamental strength, all of which converts into profitable midterm growth. And hopefully, you're beginning to write about this as the prime cut rather than the rump of Europe. Thank you.

[Break] (01:29:59-01:31:09)

## Unverified Participant

Okay. All right. So, a few people still refreshing themselves, which is what you need for the final leg of our marathon here, so also welcome back to those on the Web and now we have actually a world premiere for you. Many of you have heard of the legendary Thorsten Langheim. But few of you have actually seen him and he really exists as the you-know-who of global telecoms. So, it's a huge pleasure to welcome him. He runs our Group Development Department. He looks after some very exciting assets like the towers, like our global portfolio; that includes T-Mobile, BT and here, also looks after the Netherlands.

So Thorsten, the stage is yours.

## Thorsten Langheim

All right. Good morning or good day to all and everyone. It's a pleasure for me to speaking to you today although I'm scared to death. This is something, when I joined Deutsche Telekom in 2010, I negotiated with Tim and the board that I never have to do this and finally, I'm here. But the good thing is, I only have two slides for you because you get the key messages on this slide here and then you know what Group Development is about.

And then I just leave you with this one here and just look at it and I'm now open for questions. I think that says it all, from my perspective, gives you the picture of the moment when we, in the T-Mo U.S. boardroom, approved the transaction.

You see all the guys that were very instrumental and important for the deal, you see Mike. You see John. You see Tim. You see Thomas. You see Braxton and you, obviously, see some of the headlines. It's a monumental deal for us. And it's, as Tim had said, he has worked on this for seven years. I think we have been constantly in deal mode on this one. We had a lot of discussions in the past and I'll come to that in a second.

So, what is Group Development and why am I presenting here today? It is kind of a very important group within Deutsche Telekom, which was in existence already since 2010, but it had no assets at the time. So, the middle part, the M&A and portfolio management, is obviously the heritage of what we are doing here.

We are the guys that have the same DNA like you. We are in this for some reason together, whether you are an equity analyst, a sell-side, buy-side or a specialty sales guy or an investor and it's also the reason why I like to be here today because, I think, I'm talking to myself because what do we enjoy? We all enjoy a few things, which is predicting the unpredictable. What I mean by that is we have a tough job, haven't we? Who in this room at the beginning of this week has predicted that the IT stock price is increasing by 50%? Who in the room has predicted that the T-Mo U.S. share



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price, based on the announcement of our transaction in the U.S., goes from \$63 to \$56? Who in the room has predicted that after the wonderful year 2015 when we all enjoyed kind of 7.5 times EBITDA multiples for MNOs that we are now at all-times lows in 2018?

So, I think we share the same depression. We may lead to same things in the morning, whether it's [ph] Keval Patel (01:35:17) or whether it's Mandeep. That's the first thing that I need when I wake up in the morning to read a little bit about the sector and to be cheered up that Mandeep things, February, March, thinks that we've hit the bottom. So, that's the reason why I like to be here today at the first instance.

The same DNA which I said is Group Development is all about the stuff that you are doing on a daily basis. It's about capital allocation. It's about risk-return. Of course, I have, to a certain extent, provide the analytic framework when these gentlemen's – that are very powerful and they're very convincing, arguing that they want to get the extra euro or extra dollar or extra pound invested in the company and we have to make sure that this is not on a first-come-first-serve basis, but that the risk-return works out for us. Of course we have many opportunities to invest and actually, we have, as you've seen, invested a lot of money.

So, this is about risk-return. But I also try to bring something to DT, which you learn when you are working on the private equity side. These guys are not smarter than corporates. They are smart, absolutely, but they have one tool kit that is always working, which is alignment of interest between a shareholder and a manager. And so what we are trying to do here is to create this alignment of interest. And so, you will hear me a lot of times saying something like share the gain and share the pain. You will hear me talking about someone needs to have skin in the game if you want to invest, and that is what this group is about.

We are – as you see on the left-hand side, we are responsible for our investment management, which can be sometimes more active or less active. Of course, in the case of BT, we are just a small minority shareholder and we monitor and observe. In the case of T-Mobile U.S., we are the controlling shareholder and very much focus on capital allocation, how it fits to our own dividend policy and our leverage and, of course, M&A. And sometimes we are also very active managing our assets, as in the case of Deutsche Funkturm or T-Mobile Holland, we actually act like a private equity firm within Deutsche Telekom and carve these assets out to have a different steering applied and to create alignment of interest between someone who wants to see a return on these assets and the managers that are running these companies and I will explain in a second what I mean by that.

And then on the right-hand side, you see we are also responsible for Deutsche Telekom Capital Partners, which is much more than just our venture capital investment firm. It is investing in special situation. It's a governance harbour for some of the growth assets that we have and everybody here in this room remembers and knows how challenging it is for a traditional telco to invest in tech. We have seen a lot of headquarters in London focusing on technology, on OTTs investing in this area. And so, this is one part of us [indiscernible] (01:38:40) what we do in-house is using DT Capital Partners as a hedge for our traditional business, investing in stuff that you, usually, as a telco manager, don't really understand. Of course they have different characteristics if you, for example, would acquire an asset in the OTT space.

Of course, we are proud that our portfolio management has worked. And as you know, as an investor, you need to be more right than more wrong. And hopefully, you are more right on the stuff that matters and more wrong on the stuff that is smaller and doesn't really matter. The key thing on which I personally spent most of my time over the last seven years is certainly T-Mo U.S. and the success, not only on the operations, but also on the shareholder value, speaks for itself. I don't think that you find, in the telco industry, any other comparable case that has generated this amount of value for us.

And then obviously, on the other hand, let me be frank and open. You sometimes make mistakes. And as I said, we are in this together. I've seen a lot of very smart investors in London and we got it wrong on BT, of course, and I'm happy to answer a few questions on this at the end.

On the other hand, also look at two smaller asset, not significant in size, but very important for us as we have embarked on this huge investment program over the last three years. As Tim has said, we are very convinced that we need to invest in convergence and that we need to have investment in our networks. And as Mike has said or Neville, we've

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invested alone \$40 billion in the U.S. How – have we done all of this by, at the same time, keeping our rating in place and keeping an attractive dividend out there? Small divestitures like Scout and STRATO also played a role in this.

Keep this in mind. In 2012, the management team of Scout wanted to do an IPO. We had about €100 million of EBITDA. Bankers were pitching €1.2 billion, €1.3 billion, at the end, [ph] was handholding (01:40:55) by DT Capital Partners by the team, we generated €2.6 billion for an asset that had €100 million of EBITDA in 2012.

Same story on STRATO, which we took on in 2014, where we generated €700 million of proceeds, overall kind of €3.3 billion for €150 million of EBITDA, there's 20 times and that helps you a lot on your balance sheet. So, there's a little bit of a track record. And let me explain a little bit the T-Mo U.S. story.

I don't want to bore you on the whole story again looking back into the history, but it's important to understand how we approach our portfolio and how we look at it. It gives you a glimpse how we may act in the future.

Keep in mind, I remember when I joined in 2010, 2009 at this time, there was a famous annual shareholders meeting at Deutsche Telekom, then Mr. [indiscernible] (01:41:51) said something really right. He said the biggest overhang on the Deutsche Telekom stock is T-Mo U.S. and I have no idea where you guys want to take all the money that is required in order to invest in your company.

Keep in mind we lost 2 million customers. Keep in mind that we had the weakest network in the U.S. and keep in mind there was no [ph] passwords (01:42:12) to get to the damn spectrum that was needed in order to improve our network. So, what did we do? We tried to sell it. And obviously, we picked the best for us with most of the synergies, which is AT&T.

Now you can say at hindsight, oh, my God, I'm very happy that this hasn't happened because we got the break fee, the famous \$3 billion cash break fee, but what was much more important than this – than the cash, it was the mid-band spectrum that we got in order to improve the network.

We love the U.S. for one reason – for many reasons but, in particular, for one. If you have spectrum in the U.S., you have it forever. There is not someone coming in five years and says, oh, by the way, we want to reacquire the spectrum and there is a new fourth entrant that get that spectrum almost for free, not happening in the U.S. So, we got this very important spectrum, but we had one problem. We hadn't had the money at Deutsche Telekom. We are always close to all-rating band. We have a lot of investment needs. We have a very broad portfolio. So we did something which I call self-supported scale. Internally, we use the word de-risking, self-funding kingmaker asset as a kind of mantra for us. So obviously, we use the break fee, we used the spectrum that we got, we sold our towers for \$2.5 billion and then we did something which you see as a kind of DNA of – or the M&A playbook of Deutsche Telekom, which is the reverse merger into MetroPCS.

Why is it our M&A playbook? Why are we doing transactions these ways? You see EE was contributed to BT. You see again a transaction that's happening right now where we are not coming like Comcast. It was a huge bit cash for an asset, we put it together for two reasons on this basis.

And by the way, Tele2 and T-Mobile Holland is exactly the same. I would have loved that Tele2 is a listed business. It's not, but it's all about predicting the unpredictable. We want to have risk sharing. We want to share and be equally happy and equally unhappy if you do a deal because you may wake up in two years' time after a deal and you can do whatever you want to do on due diligence. Nobody is foreseeing that Ofcom is starting a war with you and it is a tricky thing here in the telco industry. You cannot, like I'm used on the private equity side, predict cash flows. It's really a difficult thing.

On the other hand, we are in an industry where we have to invest a lot of money with a payback sometimes for 30 years. So, MNO playbook, we did the reverse merger into MetroPCS. We kept the money in the company and what was very important and nobody really picked this up, it was – it's kind of funny if you look at MNOs. You're kind of hooked up on dividends, aren't we? We are just looking at it. What is a dividend? What's going for? It's interesting to see that I am coming from an industry which has been kind of labeled as short term. I think the capital markets are currently very short term, of having very short-term perspectives of things that are happening.

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So, you have to pay a high dividend. But can you imagine that we would have done a major turnaround in the U.S. of – and we come from €106 billion of free cash flow even in the worst years of T-Mo U.S., this company generated about €1.5 billion of free cash flow, even more so when the customers were fleeing and saying then to the market, by the way, in five years, it will all be better.

The interesting thing is, if you have a public-listed company, for example, if you look at the TDC case, the stock price is inflicting the minute when the decline in revenues decelerates. And the big benefit that we had in the U.S., of course all these guys are fighting for money, for capital allocation. The big thing that was helping us in the U.S. to have confidence in investing more despite having negative free cash flows for years in this company was that the market understood what was coming. Stock price was increasing, gave us more confidence to invest in the U.S. and then that allowed us between 2013 and 2015 – 2013 and 2017 to invest about \$15 billion alone in spectrum.

And there's Mike. Mike is absolutely right. I don't get the \$56. What a wonderful asset that is. We just bought \$8 billion of low-band spectrum and we just got much more spectrum than we ever thought on the basis of this price because we got lucky in terms of timing, the big guys weren't really there. And this is beachfront property for generations to come.

So, significant investment program and where we are today with this wonderful asset. Yeah. You can be – you basically have, in my view – so, I just say that for me, this is a \$70 stock right now, with the free option to a much higher value if the deal is going to be approved. And that's what we have and I don't understand why the markets are valuing it as they are valuing it. That's what I mean, was kind of short-term, is nobody wants to wait for 12 months, it's kind of oh, it's debt money for some period of time. We have everything in place.

We have shown to investors, to ourselves as an investor and T-Mo U.S. that the capital allocation policy of this company, moving from a high growth stock to something that is generating returns for shareholders, not only on the stock price, but also on rewarding shareholders via share buybacks or maybe in the future dividends, it's already in place, \$9 billion is coming in our way and that's the reason why I like this company so much.

Tell you a little bit about the story behind it, that's my favorite one over the deal. Ross and Rachel, it's kind of funny because this is now – today it's called Big Bang Theory. Only the people that are over 50 like myself still recognize it. But Ross and Rachel is T-Mo U.S. and Sprint coming together. I remember when I joined in 2010 I had two discussions at the time. One was with AT&T, and the other one was Sprint. They were unrealistic in their kind of value expectations at the time, so we took – the deal was with AT&T, but I can't tell you how many times we had affairs in this period of time with each other and with others. This is kind of mind-boggling.

I think the reason why I look much older than I am is actually that I think since 2014, I have worked tremendously on [ph] M&A deal (01:49:01) situation. This is Ross and Rachel today. You can pick who you want to see is Ross and who is Rachel. In the middle is Joey, quite clearly how you're doing. Yeah. So, he was – it was on the day when we announced – when we agreed on the deal, on that Friday before we announced it on Sunday, and obviously at that time subject to board approval and one of my favorite pictures.

One thing about capital allocation on our site, we can be patient. We don't have a 300-year plan, but we have a plan. And sometimes, as you know, as investors, it's the best deal that you do is the one that you don't do. Obviously, we have been approached many times on this asset, and we said no. My favorite one last year, and that's the reason why I'm not really like too much being on stage, is when you basically read in the press or on Twitter that you are about to board a plane to Tokyo, which happened in November last year.

While Tim, Thomas, myself, we have not even booked the flight yet, saying Deutsche Telekom flies to Tokyo to safeguard the deal. Yeah. It's a little about the publicity and how much we have worked on the deal.

It's clearly that the operational success has delivered the value success. And, I think, what is important to see, we move from a kind of minority shareholder in this company to someone who was close to 50% and was the proxy that we get on the board. We have 69%, but it is not about conglomerate building. The reason why we wanted to be leading this is to have no ambiguity if we want to go for the synergies, no haggle and dime, what is the right brand, where do we build out the network or not, what is the anchor network. We just wanted to have one guy in the room taking the decisions.

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And then just to have a glimpse on the right-hand side, keep in mind it's kind of interesting for me to see over the years there's a European market with a lot of questions to convergence and then the question obviously comes up when is it going to happen in the U.S. And you don't really see that in the U.S. right now, but what you see in the U.S. is this is an unlimited market where data growth is coming. So, what do you want to have in this market right now? You want to have the best pipe.

And just look at the spectrum position, just look at branded subscribers, two things to learn from this. We would have the best pipe, as Mike and Neville have outlined to you, but we will also know finally if this deal is going to be approved overcome one of the biggest issues that we have in this €350 million pop market, which is scale. Our margins are, of course, much lower than the bigger guys. It's like as you know, it's like a jumbo. You service the same, but [indiscernible] (01:52:03) 40 customers instead of 100, it depresses margins.

And then just have a look at market cap, which may tell you that oh my god why should this company have a market cap on a combined basis of €72 billion, while the two other guys have this amount of market cap.

It's not 100% analytically correct. As you know, there are some other businesses in there, but it gives you at least a direction that the €43 billion of synergies that we are seeing are really very convincing from our perspective. I also learned one other thing, while being an investor. Once in an investment committee, I was talking very enthusiastically about an asset and then some very senior guys said to me, hey, Thorsten, you cannot turn chicken shit into chicken salad.

And you need to be honest if you want to get money. And so, T-Mobile Holland in 2016 has not been a chicken salad and I want to be open about this. This is a very difficult market and we have the [ph] triple whammy (01:53:07) at the time, and we lost customers. So, volume was coming down. We tried to recoup it via price decreases so ARPU was going down. We had a forced entrant also contribute to it.

So, we lost market share and we lost profitability quite significantly. And this was also the time to add insult to injury when we try to sell the company because this is a mobile only market that is fully converged doesn't fit into our long-term strategic beliefs and we couldn't sell the company for a decent price.

So, at that time, the board asked me whether I could take on responsibility for that. And I said, yeah, I love it. I said – no, I didn't say I love it, but I said okay, we need to apply a different toolkit here. And let's run this as if we own it to the kind of price at the private equity firms in 2016 put on the table.

Let's create alignment of interest we see with the managers. We have an equity incentive scheme in here, but again, keep in mind share the gain, share the pain. There's one other sentence that people always forget. In order to share the gain, you have to have skin in the game. We have 125 people in this company that have invested in it, that have invested in it. And they will lose some money if we don't achieve a certain valuation, which is basically the valuation that we got on the table from PE plus a capital charge for managing this company because there's capital that is allocated to these managers.

On that base, it's kind of interesting you get a lot of good guys on board because there are lot of people that want to be working entrepreneurial, and they want to put their money where their mouth is. And so, we got a new team in there. We obviously in this market looked at our competitive advantages, disadvantages, and we went unlimited. Obviously, cost cutting is much easier as said than done. But if you have a team that has stakes in the companies, this is an easier discussion that you have, that I've learned on the PE side.

And the most important thing that we did was obviously we derisked our unlimited strategy with the capacity outsourcing deal, capacity improving our outsourcing deal with [ph] Huawei (01:55:25). They took this as a big chance and say, oh my God, we want to do this, we want to show DT what we can do. And it gives us a very good pipe. In fact, we won the network test for the last two years. In fact, I think we have been ranked as the [ph] best network (01:55:42) just recently. You also see that we apply our M&A toolkit.

So, we carved out the towers, very important, they are not part of the derisked Tele2. There is a lot of value arbitrage. There are a lot of guys that are very eagerly looking to acquire Dutch towers, and we have this put inside. We acquired

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out of the VodafoneZiggo transaction a few fixed assets and we now have 200,000 customers on it. So, where are we today? I would say, we have been on intensive care and we are now at rehab. But we are not out of the woods.

We won the last six quarters. Keep in mind, there's a lot of people mix this up and say, oh, this is like T-Mo U.S. a challenger? No. We are actually a premium player in this market. We have to protect our back book and the market structure is obviously quite different to the U.S. And as Sweeney is absolutely spot-on. You initiate a turnaround not by just cutting costs and hoping the EBITDA will save you.

You have to work on your top line and that is what the team is doing, new tariff design, trim up from 62 points to 77 points in Holland over the last 24 months. NPS, we are number two, moved up significantly, and that's where we are. I know that especially, Tim, got almost a heart attack when we introduced a €35 unlimited product.

I think the Dutch guys get the best deal in Europe. It was our network and our network quality and speeds in the whole of Europe in order to regain momentum in this market. Having said that, it's in rehab because the market structure it's a very interesting case study of looking at it because it may give you a glimpse of how many markets may look like in the future.

So, what you have there is two players with 90% more, more than 90% broadband market share. This is a flat country. Everybody is used to take his mobile phone and use the next Wi-Fi connection. It has a very low mobile data consumption despite having the best mobile networks. It has the toughest net neutrality rules, so things like music streaming couldn't get done. And then, again, add insult to injury, it has most of the – the highest fixed wholesale-access pricing that I have seen here in Europe. That's the reason why we now said, okay, we need to have a creation plan that goes beyond operations, we need to have a market structure improvement, and that's the reason why we announced the Tele2 acquisition in December and obviously have been very busy on that.

Again, the same M&A playbook. In the interest of time, I just want to move on quickly. You would say, Thorsten, you are a bad negotiator if I would just have said T-Mobile Holland is our only asset in Group Development. Of course, I said to Tim I also want to have a good asset. It's to just counter the hard work on T-Mobile Holland and I think I got a wonderful asset in this portfolio, which is, as I always say, it's sleeping beauty.

It's the number-one German tower operator with 28,000 sites. It has things that we don't see on [indiscernible] (01:59:00). There's no regulation. It has a cash conversion of 80%, it has 60% EBITDA margin and it has secular growth. And on top of it, if you look at it, I love German engineering. It has a database that is second to none. We know where every tower, not only ours, but also the other guys are in Germany. It took me six months to prepare the tower sale in the U.S. in order to put all the lease agreements together. In Germany, you just put it into a – look into a database. So this is certainly a wonderful asset.

And there is a huge opportunity also in the European marketplace. You see that it's very fragmented. In the U.S. there you have a different market structure and keep in mind that [ph] Chromecast or SBA (01:59:48), these guys have tripled market cap over the last years.

So what is surpassed for Europe? Maybe too early to tell right now because I'm in studying mood. You have seen that DT Capital Partners has co-invested with one of the smartest and best-run tower companies in Europe with Cellnex to acquire all of Sunrise towers. And we were in there because I wanted to learn from the best and why they are running this so successfully. But on the other hand, keep in mind this was a service function of Deutsche Telekom [ph] – of T Deutschland (02:00:23). And now we've taken it out of workbench and this has created, if I put my DT hat on it for a second, a lot of good dynamics because CapEx becomes OpEx. You have to justify if it becomes OpEx much more the investments that you are doing.

And then, on the other hand, TDG woke up and said, oh, I'm paying for some revenues that I'm – or services that I'm not going to have to pay for because I'm not using it anymore. It's kind of really interesting thing that is helping us a little bit to increase the efficiency and this is kind of our plan.

So we are now at 2.0. So we have a new team and this team has been picked with a view of diversifying the revenue stream, of going for colocation much more than we have done in the past, of looking at other opportunities that we

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have, of building a small cell expertise, of building expertise around e-mobility, which may be part of this asset. And, obviously, we negotiated with Dirk an arm's-length MLA and that is in place. So we know how we interact with each other.

What may come in the future is I'm sitting on two other asset portfolios, which is Holland and which is Austria. Let's see what we want to do with that. Maybe we put this all together. We have an e-mobility infrastructure, very excited about that, where we utilize our assets. And the question is, do we want to create a European TowerCo or not. The only thing that I can say today is what we don't want to do at DT is sacrifice our long-term network leadership capabilities in Germany for some kind of short-term value arbitrage. That's certainly not going to happen on our side.

DTCP, a few sentence on this one. As I said, this is much more than you may think a kind of venture capital firm. There's lot of assets under management. It has already been very successful since 2015. We make money and it's an autonomous group. Tim is right to mention [ph] KG (02:02:43) is owned majority by the management team, share the gain, share the pain, have skin in the game. We haven't lost money with it. In fact, we've made very interesting returns so far from the exits that we have generated. The portfolio looks good and it has a close interlink.

We put one of our best guys on this in order to make sure that we are going for two things that are important for us as DT. We want to have a technology edge. This guy knows DT best. [indiscernible] (02:03:12) my sidekick on the M&A side for many years. He has been an investor, like most of you, he has worked at a hedge fund and he knows tech. We're investing a lot of money not only in the company, but also in the people that are working there because they should understand and develop the credibility and the judgment for us making acquisitions in this area.

And the thing that I've never understood is the following one: there were a lot of successful OTTs like Spotify knocking on the door saying, can we have a revenue share deal. This is a team that should look at this stuff and say, maybe we don't do a revenue share, maybe we'll just take an investment for that.

And so I'm very excited about that for the following final reason, which is that we just are in the final discussions with someone else who says, I want to give you some more money because you are successful. So we want to build a new fund platform. I don't want to always come to Christian or to Thomas and say, give me more money because our investment rate is now increasing every day. We have a very successful team that is working in three locations. Why don't we have a buy-in venture fund – equity fund of the telco industry in Europe? And you may now ask yourself, what does it mean?

The interesting thing is in Europe nothing scales really. If you build an IO3 solution in one area, you may have to go to many different telcos in order to generate something which is more meaningful as opposed to [indiscernible] (02:04:52) where you have 350 million PoPs. But we are thinking about creating a fund where other telco, maybe not the ones that are overlapping with us, are also putting some money, and then we have a bigger scale because we want to do more meaningful investments with a team that is basically measured on the success.

Financial outlook, our commitment, as I said, we are representing about €900 million of EBITDA, as we will grow the top line by 3%, EBITDA growth of 3% to 4%. Obviously, we will invest a lot. That's the reason why the cash contribution is shown here on a normalized basis, given that Dirk is trying to defend and build out the network leadership in Germany.

But this is one metric for me. The most important one is this one here. And this is my – I call it [ph] Bundesliga Tabelle. This is the one that if I ever would come back on stage the only slide in three years that I want to show you and then I hopefully have on these red bars much higher values than today. That's my commitment to you, that's my commitment to the board to work on our portfolio and to increase the asset values as we have done in the past.

Thank you for not booing me from the stage. I'm open for your questions.

## Hannes C. Wittig

Thomas, great pleasure to welcome you for the wrap-up of the financials, what it all means, and the stage is yours.

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## Thomas Dannenfeldt

Yeah. Thank you, Hannes, and welcome to the finance presentation. What I'm going to do is I'm going to summarize what you've heard in the last 24 hours basically from all the colleagues and add some bits and pieces from my side as well and then hopefully give you a comprehensive overview of the financial profile you can expect.

Obviously, summarizing I was prepared for everything what the colleagues said. I know there was no surprise except one. The last presenter, Thorsten, gave me a big surprise. I wasn't aware about the first thing he's doing when he wakes up in the morning is reading [ph] Keval's (02:07:09) reports. I have to say, the first thing, Thorsten, I do in the morning when I wake up is say, good morning, darling, to my wife. Think about it. Sorry [ph] Keval (02:07:19).

But other than this, I think it will be relatively easy to sum and roll it all up because Tim gave you guys yesterday already a kind of preview on what you should expect and a lot of things of growth rates you would see of directions we're going to give is nothing else than continuing what we have started in 2014 and what we have achieved so far. So we'll talk about the review 2014 to 2018 and then the growth profile looking forward.

And let me start with the key messages in the first instance. I think they're pretty simple and easy straightforward. A, is we expect leading growth in key financial metrics, and that does mean we see all of our segments growing on the EBITDA side from next year on. And that's supported by better revenue trends but as well by a higher cost discipline. And the DT ex-U.S. business, we guide with a CAGR of 2% to 3% for the upcoming years. So, that's, first of all, on the – on that message.

The second part is obviously related to the first one, which is cost discipline. We will deliver our cost target, and we'll come back to that in more detail in a minute, because, obviously, some of you might challenge that position as we haven't delivered the €1.8 billion we promised last time. So, why this time? I'll come to that in a second.

We're confident and bullish on that one; a, because there is huge tailwind we have and – by digitization and also by finalizing the All-IP migration which is anyway going-on on one hand. And on the other hand, we have used the time, the last use, to prepare ourselves also in terms of managing the head count situation, especially in our German footprint, to have enough flexibility once the workload goes down also to reduce what's needed.

The third key message, I think, is on the ex-U.S. CapEx and investments. And the first element is it will stay on a high level. You all know that, and Tim said it yesterday, we are network investors, and you can't expect profiles like this on a CapEx level from us, will never happen. Never say never, but not as long as I am here. Joke. No, it will not happen. Just want to test whether you're still awake. Will not happen but it is a continuous investment profile you see. But CapEx will peak this year and I will show you more detail and greater detail later on what to expect.

And then, which is important to us as well on our debt policies. It remains unchanged. We had a discussion four years ago whether to change it because, at that time, we have the expectations that we would grow – we would turn from it, declining asset into a growing asset. And then the question was shall we stay in that framework or change it, for instance, loosen the leverage, comfort zone a bit or so?

And we decided that that not to do it. Now as we have a broad operational basis for growth. We again ask ourselves, so we change it or not? And the answer is again the same. There is no change. And what's important to us to maintain the undisputed access to the debt capital markets in the future as well.

So shareholder returns Tim was clear on that one as – yesterday as well. For 2018, we will propose the €0.70 because it's still related to the existing old policy and timeline of 2014 to 2018. And from 2019 onwards, we're going to change in the following way that we oriented ourselves and reflect much more on the growth rate on the adjusted EPS. Then, the free cash flow, again I'll come back to that in a second as well and that all assumes no deal in the U.S. first of all.

And then obviously, number six is if we get the deal approved, which we all believe will take place, because there are so many good arguments in favor for economy and the country. Obviously, we're going to supercharge the whole profile. So, we have two versions always to think through, one the standalone which is a good one and the other one is the supercharge one which is the even better one. So that's basically where we are in terms of the key messages.

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Before I dig deeper into those contents let me use some minutes just to review what we have promised three years ago, actually in 2015, and what we have delivered and whatnot and what the learnings from our point of view are on that one. So, basically, we've given two pages more or less or three pages: one was the finance strategy for the debt and the equity side on that; and then secondly, the key financial profile. I will run you through those.

So, first of all, if you look at the middle part, I think it's a no-brainer or maybe not, low-risk portfolio profile hasn't changed. The reason why it's quite simple, we said three years ago, we don't want to go shopping across Europe and then enhance the footprint. We're going to invest in our footprint. And so, clearly, the low-risk portfolio profile is still existing. And on the portfolio management, I think, Thorsten gave a wonderful presentation on how we think about it and what we have achieved so far. I think that we're fine on that one.

On cost transformation, it's a red. It's quite simple. It is, as Tim yesterday said, it's a half full or half empty glass. As roughly by the end of 2018, we will have achieved a synergy of 50% of the originally proposed €1.8 billion net reduction.

For me, the glass is half empty, to be very clear, and the key drivers here have been two, threefolded. One was and, again, mentioned by Tim already yesterday, the IT and our approach to change especially in the German environment. And partly also, Srimi mentioned that in the European environment, change IT infrastructure especially in OSS and BSS with big bangs. And it turned out that it's not a good approach. It worked well on the ERP side, but it doesn't work obviously on the BSS and the OSS side. And that was a big driver.

The second one is the delay we have in the all-IP migration in some parts. We originally guided to finalize the whole thing 2018 in Germany and in Europe. Now, we see Greece is really at the end of 2019. We see Germany and the mass market 2019 and B2B. So, we're a bit of delay in there, and obviously they're related to that, some of operational costs coming with it during that timeline.

But on the infrastructure transformation, that's the reason why we see yellow here. The concept is right, the way we're doing it is right. It is simply, we just have underestimated how long it takes and what the efforts are to get, Tim yesterday said, the last percent is the most tricky and difficult one to get the last X percent, a single-digit percent of the platform. So, we have kind of delay in there, but that's basically where we are I think on the middle part, which is related to portfolio and operations.

On the debt side, you've heard yesterday and today people being enthusiastic about and rightfully so. Standing here like Mike talking about and never about a U.S. nation, which had no LTE coverage and now has a fantastic LTE coverage with our network, \$40 billion plus because there was also spectrum and some of CapEx and spectrum.

You heard Srimi talking about roughly 95% of LTE penetration in [indiscernible] (02:15:14). You heard – and so on, I can keep going. And all those investments have been spot on along the line of our strategy. So, it does make sense to do it, but obviously you need to manage that equation as well. And I remember three years ago I looked into your faces when we said we're going to manage the auction in the U.S. We're going to invest heavily with do, do, do, do and we keep that, that policy intact. At least 50% of the faces at that time were telling me, you might believe that, we don't. So, I think it is – was important to us and it will stay important to us that we have always that investment, that continuous investment to strengthen the future growth profile on one hand, but on the other hand, make sure that we get the green dots here as well.

And then on the equity side, on the divi, I think quite simple, quite easy and straightforward. We delivered on what we said there and also on the element of divi in kind where we got more and more feedback that – very many investors don't like it. And we always said once the incentive auction in the U.S. is over, we're going to stop that instrument which we have done. So, that's basically the framework we laid out three years ago and what we delivered. And now, the operational KPIs, looking at them, I don't run you through all of them. You know them. The only deviation we had is on CapEx where we invested more, especially in the German environment. You're all aware about that, and you knew that.

Just a word on the bottom right-hand side on the special factors because it's coming up again and again, again. That was our guidance or my guidance three years ago on the special factors on EBITDA, and I would come back to the special



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factors cash later on as well. And as you see, there is a green dot on it. It simply does mean we are declining. It doesn't mean it's completely going away. It's still high. Don't get me wrong. It's not like I believe that that is a good number. But what we're saying is there will be a continuous decline in that one and that will keep going. As I said, I will come back to that in this – later on in my presentation.

And obviously, it was not only the revenue but – and EBITDA, CAGR, we've guided and delivered upon, but also – which is as important as the delivery on the CAGR is that you keep investing while you grow. It is relatively easy in our industry to optimize a one or two-year cycles. Sometimes, you can even optimize a four-year cycles on a financial basis. But what you really need to do is make sure that the growth rates are sustainable. You keep the momentum. You keep going even after like here, a four-year period of time.

And this is why we put a lot of money in CapEx and investments within our footprint in the U.S. and outside the U.S., as you can see here in spectrum but also in customer growth. Srinu mentioned we significantly put money in also for a certain period of time to ramp up again to the minimum fair share. We need to have on our net add sides, in transformation any way, as you know, but also innovation like, for instance, in the U.S. where we see Layer 3 obviously consuming some money to make that successful and happen or IoT.

And ultimately, as I said already, we delivered – and that the free cash flow guidance and the [ph] DB (02:18:48) growth related to that and outperformed our peer group during that period of time, as you see here on the right-hand side. So, ultimately, a lot of ticks in the boxes, two of them not and that's nothing else than a clear marker for us to focus and concentrate more on them where we have failed to get them into a better shape.

2018 to 2021, what's up now? Before I go there content-wise, let me spend another minute on why the heck are you talking about 2014 to 2018? It's history, forget it. It's done. Nobody cares anymore. And I can tell you, our view is different for – actually for four reasons. One is by doing that reviews, you have seen with my colleagues and here, we remind ourselves and our organization. What we have said where we have delivered against and where we have failed and where we have failed, what the reasons have been to learn from that to make it better next time to focus more on that.

So that is why it is important for us to look at that. The second one is I think clearly the message you can rely on us. Whatever we tell you it is super important to us to deliver that not in every detailed KPI. I'd tell you now from the detailed KPI said you have later on in your book which are hundreds and hundreds of KPIs, we will not make them all but we will make the most important happen. The most important for you guys happen, for our market position, towards the customer and towards the capital markets and it is important for us to have that kind of detail because as it continuous external but also internal discipline driven by laying out those details.

The third one which is from my point of view the most important one is there is – what I said is we haven't built the financial growth of the last three or four years at the cost or by burdening the upcoming years. So there is no underspend in spectrum. There is no underspending in CapEx. There is no underspend by creating big [ph] back books (02:21:10) in the organization. That's extremely important only if you do that you can sustain growth rates, you have guided for four years for seven to eight years and that's basically what we're doing.

We won't change the growth rates on EBITDA, on revenue, on free cash flow. We just keep going like we've guided last four years and it seems that yesterday already in the overview Tim gave. And one – obviously one key element here is the free cash flow which is with the same CAGR guidance driven by two elements, A, the U.S., you heard the guys talking already.

And then for the non-U.S. part, for the ex-U.S. part, you see that growth here in as well driven by A, an EBITDA growth, B – and I'll give you a more detailed view in a minute; B, by, as I said, CapEx peaking this year in a stable perspective looking forward; and obviously, C, demographics helping more and more to reduce special factors; cash, still being in a vicinity of €1 billion or so, details coming later, but seeing that declining. So that is the support we see on the DT ex-U.S. side.

What I'm going to do is spend the next five, six slides on DT ex-U.S., because you've seen the U.S. story, I think you're all aware about that. But what I'm trying to do is bring everything what Dirk said, what Srinu, Adel, Claudia and what –

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and Thorsten said in one box, so to say, and I call it DT ex-U.S. and make you aware about what's going on there.

So, first of all, EBITDA. What has happened with EBITDA? I remember well, when the last Capital Market Day is 2015, the only numbers and figures we had there was 2014. And 2014 over 2013, we had a decline in each and every segment of the EBITDA side. And at that time, people started to think, yeah, maybe the U.S. can turn around, but what we said is we're going to turn around the U.S., then Germany, then Europe and then [indiscernible] (02:23:07).

And basically, what you see here is that we, A, guiding a CAGR of 2% to 3% for the DT ex-U.S. EBITDA of coming years. That exactly, that order has taken place, by the way, because we've decided also to use CapEx with the same logic and order in terms of focus. Germany was first there. And you see the guidances we put in here per segment we gave to make you better understand that this growth pattern on the EBITDA side, DT ex-U.S. or DT is based on a strong U.S. and a strong ex-U.S. business. And if you unpeel this ex-U.S. business, it's not only Germany, it is Europe, it is group development, and it will become next year to [ph] systems (02:23:56). So, there is a broad base of that dynamics taking place, and that's very important for us in terms of our future perspective.

And then, obviously, the magic question about the CapEx. As I said already, CapEx will peak this year and the outlook we given here is around the vicinity of what we have seen in 2017. So, you will not see that but a continuous path, but, clearly, this year is peak year.

And I don't run you through all the reasons why we ramped it up from €6.3 billion to €7.9 billion. I think, to be honest, from my point of view looking in hindsight, I wouldn't do anything different. The only thing we need to do better and be more successful on is the CapEx efficiency, but not the areas we're investing and the way we're investing.

So that's basically on the CapEx side, then if you look at free cash flow and let us run through, we had the EBITDA, we had the CapEx. Maybe on the EBITDA, a few more words because yesterday there were questions already about – on Dirk's presentation about how does that cost reduction, how that might work out. Let me talk a bit about the cost reduction here.

It was mentioned yesterday by Tim, €1.5 billion is the number and the amount we are targeting here. Let me be very clear, net cost reduction. I know there have been questions, is that gross, is that net, as always, it's quite simple, it's net. So, obviously, there are headwinds against that.

So, [ph] if – give you (02:25:27) an example, if we assume €0.5 billion of that €1.5 billion of net OpEx reduction in internal workforce costs that assumes we need to do gross more because we will also see wages going up over time. So that's the whole logic. And basically the result of that gross minus – that headwinds minus the gross reduction offers then that net figures, which is €0.5 billion on the indirect workforce costs. It's €0.3 billion on the external – not in the indirect, internal workforce costs, it's €0.3 billion on the external workforce costs; and it's roughly 50% like €700 million on the non-head-count-related OpEx.

I think talking about the head count-related part, let me clarify a few things. First of all, we feel good about the opportunity to ramp down workload and demand for work, so to say, by digitization kicking in by simplifying, and I'll come back to that also in a minute. So, Srini was talking about it, Dirk was talking about it, Adel was talking about it, and Claudia as well. So, there is kind of natural tailwind by that development taking place to helping to ramp down the demand for costs.

But the key question I get always and I understand why is, okay, let's assume you get your demand for work done, can you get the people off the payroll or not? And we seriously have concerns that you can't do in the German environment. So what we have done is – and we started that journey some years ago and Christian was one of the big contributor and driver here is to early enough get people into schemes like, for instance, partial retirement schemes, early retirement schemes, for instance, people agreed to work for three years for less salary. That's what we call the active phase of it and they have three years. They don't work, but they still get the same level of salary and then they also payrolled. So we have already 13,000 people where we have personal agreements worth. They will leave the company and be off the payroll within that time line, we're talking here from 2018 to 2021. That's secured because there is so to say a contract, the written contract and signed contract between the company and those people. That's number one.

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Number two is we have about the flexibility of the workforce. Number two is on the external workforce, we have roughly 10,000 people where we use suppliers to do work for us, for instance, like fewer technicians or like customer service or other areas. So obviously there is different and another way of creating flexibility that once the work goes down you can also realize that savings on the P&L. So we're still pretty confident and bullish about once the work is done that we get that already realized then in the short term and on the P&L side.

And then you have the other 50% which is non-head count related. And just give you, on the next page, a few examples of what that is. For instance, one example where I'm personally in-charge and my role is real estate cost is €250 million decline next four years, which is basically two elements. You reduce the amount of either office space and office floor you use or on the technology side remember the chart. I think it was Dirk yesterday showing the chart on [ph] PNG (02:29:03) migration where you had very many [ph] servers and then finally you have one server (02:29:04). It's simply you don't need that space anymore. And then you compress what you need and then you either stop renting buildings, if they're external or you're selling out buildings.

So that's one part and the other one is facility management costs where we had a change in the supplier last year. So from next year onwards, we will see the new supplier and the new contract kicking in and we know what kind of savings will come from that contract. So there is a 250 million ticket. We're very pretty much confident that this is – bullish that we're going to deliver that. Another one is the shared services. The simple way to look at it is last time, I told you for finance, HR, procurement, we're going to – instead of having a shared service per country, we're going to have one-shared service for the whole footprint, meaning ex the U.S., that is what we have established. Our current run rate is €100 million to €200 million for that [ph] whole (02:30:03) period of time of savings. So, we'll just keep going and that's what you see here on the efficiency of shared services.

By the way, combined with the ERP platform supporting it is – has a standardization level of above 85%. So, if you compare that to the standard SAP product, so we're just utilizing what we have established there already and then we have purchasing costs and various categories. So we feel pretty good about all that non-head count related stuff that will kick and support the cost savings.

But what we want to do is as you've seen that charts with a lot of green boxes and the two red ones, one was the cost, we've put an extra focus on the whole thing to make sure that we don't miss the board again. And that is a program we call fit4future. Sometimes we call it fit4fun. And now, seriously, the approach is every board member is personally involved there. So, the whole board is sitting together on a regular basis and discussing what works, what doesn't work, what to change, what happens in their own segments and how to leverage, that was in the group and make use of that in the other segment and so on.

So there is a very personal involvement of the top management team in here. And the focus is and it's very much along the line what Srini said, the focus is not get the costs out in the first instance. The focus is get customer experience up. Because we do know if you do that right, if you get the customer experience up, you get the costs down. Because one of the reasons why we have higher costs is complexity, the way you get your experience up with a customer is simplifying. And believe me, that's one of the reasons why we have that top three activities on simplification going on.

As Mike said, if you just try to digitize complex environments, you either fail or you fast-forward – sorry for the wording, the [obscurity] (02:32:07) you're producing to the customer faster. So, you need to clean up to simplify first and that is by focusing on the customer experience, and then you see the costs falling. And that's basically what we're doing here. I don't run through all the levers as, for instance, Srini has done if you look at the digitization part. There is one part is zero-defect service. Srini has talked about the data-driven network rollout where we de-average the capacity investment. You don't talk about a network anymore, you talk about a prediction per sell and you put the money at the right place and save CapEx and put it somewhere else where you can have a better return on that one.

So we are very much focused on a simplification of product, processes, organization. That's reflecting what the three operational colleagues already told you. And then, on the other hand, obviously by customer front-end apps; secondly, service; and thirdly, on the network and the CapEx we're spending there.

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So, now, I've talked about the EBITDA. I talked about the CapEx, talked about the costs to support the EBITDA, let me give you one more outlook because I know that one concern is, oh, they don't get the people off the payroll, if the work is going away. The other one is, okay, they spent tons of money to do the restructuring and this restructuring cash is going up.

As I told you last time, we see a continuous decline in the special factors cash. They might be like last three years, a year where you have a bit more and a bit up, but what you see is on a trajectory of three years, you'll see a decline in that one and you'll see on average a decline as well. So, it's not the first and last year, but also if you average that over the complete period of time, you see the decline. Why is that? It's quite simple. A, the mechanism, I told you about the 13,000 people, we're also using for the periods beyond 2021. There's a number you see here as well.

And B, demographics helps. So, natural attrition is very low on our side on the German business. Natural attrition will be still in the beginning of the 20s like 1%, but it will ramp up to 4% just by demographics. So, what we are expecting is while we're given you here also 2025 number is it will not go away completely, but there will be a continuous tailwind by the development of the special factors on the cash side.

And same works true on the pension cash. There is one very specific element in the whole, if you look at the pension cash-outs, which is our civil servants. In case of our civil servants, it's quite simple. It's the gray bar you see on the chart. We have zero volatility on the number because we know how many we have. There are no new ones and we wouldn't know exactly when they get into retirement and the contribution is fixed. So the gray bars have zero volatility. And as you see, the magenta ones, we worked last years a bit to improve that. So there's also tailwind coming from that angle from the pension cash-outs.

And finally, to sum it up on the interest and tax, on the interest side, we expect a stable outlook looking forward. And as you see on the group tax rate, there is that big impact which kicked in actually by the end of last year by the U.S. tax reform which moves down the group tax rate to, as you see here on the chart, from the mid-30s to the 27% level roughly.

So, as a consequence, you will see our adjusted EPS which we have guided three years ago to being around €1 in 2018. And you'll see that it's exactly what we believe still today moving up into the around €1.2 area in 2021.

And just as an additional information, we also expect that the unadjusted will exceed €1 by 2021, and obviously what that reflects in terms of growth rate versus the free cash flow growth rates is obviously that the minorities in the U.S. which are accounting-wise, so to say, in the free cash flow number ignored as it's not proportionate, but EPS properly reflects that. That's, I think, the big difference.

And it was, by the way, also an outcome of listening to you guys during the course of the last 12 months, there were more and more questions and challenges and concerns about. Yeah, you're always looking at the free cash flow but you don't own it by a 100%, it's only proportionate parts you own. So, how to look at that and we decided and we believed that is the right way to look at it because it reflects much better the true economic ownership.

And let me then, before I summarize and sum up, talk a bit also about the debt side. I mentioned that also in review a minute ago. We finished stable rating from 2009 to 2017. And in case of not having a deal in the U.S., we expect that to keep going. I think the rating agencies have been very clear about what their point of view is if the U.S. deal happens on that one, which is there will be a departure from partly at least by some rating agencies from that rating and also from the comfort zones. But we are super confident, Mike and Neville, they have shown you this morning why that case is and it is what it is from my point of view is super – the integration case, once we have the approval, we can go. It's a super low-risk thing because there's a super experienced team, they know how to do it. They've done it already. I don't repeat all that what was said in the morning.

So we are confident that we can comeback fast in case of a deal, but first of all, in case of no deal, we're operating, if you look at the revenue, Tim said yesterday, it's about 90% plus in AAA countries if you look at the revenue side, if you look at EBITDA, it's 85% plus. It doesn't matter, we are operating in a country portfolio profile which is super solid and stable. We still see on the CDS level that the market is reflecting our view that it is important to us, and obviously, perceived in the same way that we are an [ph] anchor of stability (02:38:47) on the debt side and you'll see

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the maturity profile being extremely well balanced. Okay, so that's basically as important to us as all the other parts I mentioned and our job is to get the right balance of all this done.

So the new financial strategy is basically more or less the old one because there are no changes on the debt side. There are no changes in the middle part other than the ones we have – what we have evolved in terms of our strategy and where the colleagues talked you through. And the real relevant change is on the divi side. Again, to reiterate that, we're going to propose €0.70 for 2018 to be paid in 2019, that's the old 2014-2018 timeline.

We remain the flow we have. We don't change that. We have in our old policy with the €0.50 and, thereafter, the divi growth will reflect the growth in the adjusted EPS. And on buybacks, to be considered, I think Mike mentioned that this morning, quite simply, in case we don't have a deal, there is, for instance, a buyback program already decided and we will execute on that one, but I believe that will not take place as the deal will be finally approved.

So that's basically for the financial strategy. And before I summarize all that again in that one pager which we're going to use for the financials, let me talk again about because I mentioned the U.S. share buyback, let me talk about the U.S. and the effects of that amazing opportunity on our [ph] site (02:40:35), especially also on the balance sheet.

First of all, Mike said it, the synergies are amazing and the way to get to them is, from my point of view, low risk profile because proven team, proven way to do it, et cetera. And it's only costs, it's only costs. So, there is further upside if you look at the revenue part. And that is combined with the 5G leadership. So we have an opportunity here to supercharge the Un-Carrier. And I haven't met anyone who was challenging us on that perspective. I never get exactly the stock price reaction, but I never met one challenging those messages.

And obviously as a consequence, you see that for the integration period of time, you have impact on the free cash flow and on the EPS. You'll see that on the right-hand side, EPS, that's what we're saying, accretive from year three onwards. And in the guidance you'll see later on, what we're saying is year three will be slightly dilutive in free cash flow and EPS versus the [ph] non-Dirk (02:41:47) case and it will be obviously an amazing growth opportunity. If you look at the right-hand side, the longer term perspective, be it the free cash flow or be it the EPS.

What's important as well is to reiterate that the non-U.S. business is unaffected and it's not affected by that. So, it's not like we're cutting down on our original plans we had on the European under T-Systems or on the German side. We just keep going like we have planned. And I mentioned that that has impact on our financial framework, especially looking at our comfort zone, which we will depart, as you see here. For a short period of time, we are convinced that we will see us coming back. We decided not to change the comfort zone because we want to keep the discipline. We want to move back to that comfort zone rather than just saying, okay, we go 2.5x to 3x, deal done. No, we said it's 2x and 2.5x, and we go back to that one. And the deal offers the opportunity to go fast and rapidly back to that one.

And maybe a few words also on the parental funding, you can see it on the right-hand side. Currently, we have, in the U.S., a funding by DT of \$14.6 billion. We will – we have agreed that at closing, we will see €8 billion to be repaid. And then we have \$6.6 billion left. The key message here it's not be renewed at maturities. And the maturities are until 2022 or we can market them. So that's basically how we move then later on from the [ph] €6.5 billion (02:43:38) into a zero number. So we have secured here that we don't overstretch the DT balance sheet on our side.

So, let me now then summarize all that to the financial outlook for the next three, four years. The old CAGR is the new CAGR for revenues. One of my team members said the only reason why you're doing it is you're getting older and older, you can't remember new numbers, you need to stay with the old ones. But I think the way I look at it is, as I said, keep investing to make sure that you don't optimize two years, three years, four years, five years, six years, but that whenever you stop counting there's enough substance and enough investments in the company being placed and put to keep the momentum going or even accelerate the momentum.

So the old CAGR is the new CAGR on revenue. The old CAGR is the new CAGR on the EBITDA side. The cash CapEx, as I said, will be stable for the ex-U.S. part, and the special factors, as you see here on the cash side, will see a decline, still on a reasonably high level but see a continuous decline, so create a tailwind. And then obviously the free cash flow will grow with that as well.

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So that's basically the summary for financials and what we have heard. Normally what we would do now is to – oh, no, I forgot the midterm ambition, sorry, that's important. Tim mentioned that yesterday, but I would like to reiterate that. The additional information you have here versus what I have already seen on the last chart is obviously the EPS, which will become more and more important around €1.20. It is the ex-U.S. CapEx being stable. And it is, again, the divi policy, and we will use that chart, as you know, continuously to remind everyone what you should expect and what you can expect and what not.

For the U.S. deal situation, we confirm everything. There is no change with or without a deal, except the profile you see on the free cash flow, obviously and the EPS. And as we said here, it would be slightly dilutive in – and that assumes a positive support by beginning of 2019. If that is later on, obviously those timelines might move a bit. But it assumes year three slightly dilutive year four, already accretive and then significantly positive growth momentum kicking in versus the standalone case. So that's basically the page we continuously will use.

So, normally time now to move to Q&A. What I normally would do is now have Tim here on stage, have Q&A, and answer all your questions. But as very many of you know, I'm going to leave DT by the end of the year. And so, I think and I'm not sure how many of you have that kind of thought in your mind of oh, this guy can talk a lot, but he will not be here in three years anymore. So I think before we have Q&A, it's a very good moment now to ask Christian, my successor, to come on stage, introduce himself, and share a bit of his thoughts on what you have seen during the course of the last 24 hours. Christian?

[Music] (02:47:01-02:47:09)

## Christian P. Illek

So, thanks for the opportunity to review the opportunity to tag a face to my name, which is Christian Illek. Look, let me start with the statement upfront. I have been involved in the preparation of this Capital Markets Day. So, I subscribed to everything which has been said. So, don't expect any surprises if I'm taking over from Thomas because I basically stay with what has been said here.

Let me flesh out, I'm still in my early onboarding phase, so I don't have full visibility on what is ahead of me, but if I would basically cover three things, I will put some special focus on, the first thing would be cost reduction. I think we have promised a net reduction of €1.5 billion. I believe, in contrast to the previous program, this program is more hatched. It's not dependent on blockbuster project results like the IT roadmap, but still it has to be delivered. And, I think, I don't want to see that red marker in three years from now.

The second one is definitely and you said it earlier on is CapEx efficiency, and you heard Dirk talking about the new fiber regime, which we're proposing and that we're asking others to basically co-invest with us. You heard Claudia about the 5G opportunity when it comes to capacity, but also to fixed wireless access opportunities.

I think what we also have to take a look into is what is the spend we are spending on existing platforms and systems and is that well spent and what is the efficiencies? So that's going to be something where I put my fingers when I want to get deeply involved.

And the third one, I know that I'm talking to the equity side is, but somebody has to take care of the debt KPIs [ph] before (02:48:48) which Thomas has presented. And that is obviously the CFO taking care of this as well. So, these are the three things I, at least, will look into what I know from now. So, what do you have to expect from me as a person? So it's hard to talk about yourself but, I would say, very much what you expect from Deutsche Telekom, so disciplined execution, a bit of position and reliability. And to warn you, as that habits by heart, I will use too many analogies related to tennis, so you will get bored over time, but that's something I can't retire.

So finally, for me, this is a new experience. I've always gotten to jobs where the predecessor basically left the office before. Now I have the privilege to have a structured onboard in process. And the way how Thomas and I discussed this is as follows. So, basically starting by finishing this event, we're going to act pretty much as twins. So, you're going to see us in roadshows, we're acting as twins on the planning exercise. Obviously we have presented the frame work for

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the upcoming years in the last two days and also on important projects. So, I'm happy to see you soon, at least part of you, in the upcoming months. And given the interest of time, I would like to leave it as that and hand it over to Hannes.

[Music] (02:50:16-02:50:36)

## Hannes C. Wittig

Yeah. Fantastic. Thank you, Thomas and Tim. Okay. Yeah. Great stuff. So as – I think it was Frederick the Great of Prussia, said that let's have the [ph] toy guys (02:50:46) around me. And with that, we move...

## Unverified Participant

Sorry about that.

## Hannes C. Wittig

That's all right. I'm not always the smallest, but this is – I love your scale and ambition. And I think so, we move on to the final Q&A and wrap up. Let's not forget [indiscernible] (02:51:06) machine wait outside at 1:30 PM, right, and on the way you can pick up your booklet and if you – we'll try to wrap up by that time. Tim will have a few closing words just as we approach the half hour. So, okay, Q&A, please. We start with – yeah, it's the same guys again. So, sorry if I get repetition, Robert.

## Q&A

<Q - Robert Grindle>: Yeah. Thanks. Firstly congratulations, Tim, for introducing the new board, the senior management to us for the first time and very impressive they are, too. If I can pick up a couple of the comments they made over the last day. Adel mentioned when he bids for contract, T-Systems, if it's a high German's component, he does quite well, which presumably means that there isn't a high German component season do quite so well. Claudia and Srinu mentioned the increasing synergies of a pan-European footprint. Three years ago, you said no M&A expanding your existing footprint. Obviously your comfort zone on the net debt provides some, yeah, non-flexibility, but is it time now to think more about a wider spread footprint in Europe? Thanks.

<A - Timotheus Höttges>: Okay. The answer is, first, today all hands on deck. We want to execute on the deals which we have just announced and especially our U.S. transaction is supercritical for the future performance of the group. The second one is it is opening up for us new opportunities. I want to evaluate and to understand how we could closely collaborate with Softbank beyond that because I think this gives us a unique opportunity. I admire what SoftBank is doing on the innovation side. I admire what [indiscernible] (02:52:54) does with his telco in Japan. So, if we come closer to this one and really leverage the skills as a close partner and we promise to each other that we're going to do this when [indiscernible] (02:53:07) accomplished. This is for me a big opportunity going forward.

With regard to Europe, honestly, guys, we have our hedge in the U.S. and in Europe. We do not have to do something in Europe. We do not have to consolidate. And if there is somebody who wants to be partnered with us and want to talk to us, maybe we are open to consider this to scale up and to build a kind of relevant European player and scale it up, but there's no must to do this.

I do not see no urgency to do this. I have no willingness to pay something for this because we have our value on its own and we have so much opportunity within the group that I do not see at that point in time any necessity. And anyhow, why should I fight against the wind of regulation at this point in time in this environment, politically, this should be clear what they want with regard to the digital thing and market first, and then we will react on that one.

<A - Hannes C. Wittig>: Sam, can I have your question?

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<Q - **Sam McHugh**>: [ph] There's a three (02:54:13) questions. First, you just mentioned SoftBank, I was going to ask Thorsten earlier, obviously, DT Capital Partners you've seen SoftBank with Vision Fund pretty aggressive plans and expansion of what are they doing there? Have your discussions with them [ph] intervene (02:54:25) over to DT Capital Partners and Vision Fund, while you've been talking about Sprint and then just what could it do to you longer term? And then...

<A - **Timotheus Höttges**>: Look, no kind of discussions at that point in time. We said the full growth and the big value is coming from the U.S., but I think I hope that at one point in time with this intensive work, which we have in the barge together, we will create something out of it. I think both groups can benefit from it prospectively, but it's too early to say.

Is there a co-investment? Definitely, yes, we have a lot of interest from external partners to go into the next fund with DT Capital Partners. And I haven't done it, but I will even approach SoftBank on this one whether they are interested to co-invest.

<Q - **Sam McHugh**>: [indiscernible] (02:55:20) cash flows all very quickly, sorry. 2021, you gave a slide, €8 billion at least of cash flow. I guess, if we look at TMUS for next year, they are promising €4.5 billion. You can maybe argue with that 2021 target is conservative or are there bigger moving parts that we're not picking up on in the mix?

<A - **Thomas Dannenfeldt**>: I think Mike answered the question already this morning. The simple way to read it is what [ph] the U.S. (02:55:42) has given guidance for 2019 and not on a longer perspective, and we're not willing to preempt now that space, number one. Number two, it says greater €8 billion, but doesn't say its €8 billion, right? And now, it's up to you to make the math whether you believe U.S. will be stable in free cash flow after 2019.

<A - **Timotheus Höttges**>: We just wanted to keep it simple, €1 billion to €2 billion, €2 billion to €4 billion, €10 billion, easy to remember.

Fred?

<Q - **Frederic Boulan**>: Hi. Fred again from Bank of America. One question we get a lot the last few days is you commented on EPS trajectory on a standalone basis. Assuming the deal in the U.S. closes, let's say, 1st of Jan 2019 for simplicity, where can we see this EPS trajectory for the next three years? And also on that, assuming completion, can you explain how the dividend trajectory could look like? Thank you.

<A - **Thomas Dannenfeldt**>: Sorry?

<A - **Timotheus Höttges**>: Yeah.

<A - **Thomas Dannenfeldt**>: Yeah. First of all, I think for the third year, you've seen it on the chart. We said it's roughly, it's not exactly but slightly dilutive to where the standalone case would be. And, obviously, in year one and two, you have impact, more impact than in year three and four onwards positive. So, what I don't give you now is, obviously, a number, Fred, because it doesn't make sense. It depends on conditions of the deal closing timing that you need to make up your mind there on your own. But basically, the two impacts you will see from a abstract point of view is interest cost burdening, that period of time, obviously and then after closure of the deal, obviously, as Sprint doesn't carry the same EPS like T-Mobile U.S., you have kind of dilution in there as well, which holds true for the first two years. Basically, that's the way to think about it and we would give you the right update, meaning the details then at closing, because otherwise, it is speculation. So, the restructuring costs are outside of the adjusted EPS. But the interest costs related to the front-loaded network integration that Neville is going to do, that cost is reflected in adjusted EPS and that's what you are seeing.

Ottavio?

<Q - **Ottavio Adorisio**>: Just a quick follow-up and then a couple of questions. So, the \$15 billion integration costs, none of them will basically find a way into your adjusted EPS, is that correct?

<A - **Thorsten Langheim**>: Correct.



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<Q - **Ottavio Adorisio**>: Right. Cool. So, now, on – moving on the couple of questions. The first one, you reiterated quite a few times that we're talking about one of the payroll reduction is the net on OpEx. [indiscernible] (02:58:22) peers, basically over the last few years, they basically pushed people towards early retirement. They disappeared from the OpEx, but appearing from the CapEx – from – sorry from the cash flow toward working capital, because basically, you book a big provision, to send this early retirement, basically get paid year after year. So effectively, it's a net OpEx reduction, but it's not net cash. Could you reconfirm that for DT will be also net cash reduction or you will not be entirely €1.5 billion [indiscernible] (02:58:51)?

<A - **Thomas Dannenfeldt**>: The short version is yes. The longer version is, I've given you on one slide, you've seen the net – the cash impact of the special factors. And obviously, there is everything baked in. So, the short version, yeah. The long version is you want to look up the numbers, is that €1.1 billion, €1.2 billion range reduced to €0.8 billion, €0.9 billion on the special factors, cash and everything is baked in there.

<A - **Thorsten Langheim**>: Yeah. Last time – last Capital Markets Day, it was the P&L special factors, this time, it's cash special factors. It's actually exactly addressed this question.

<Q - **Ottavio Adorisio**>: Yeah. Right. And the second one is on self-financing for the U.S. That was always the policy until before the spectrum auction. So, you've given up on the – on that particular conditions and you start financing the U.S. through intercompany loans. Now, you're going back and I found that be surprising because the deal goes through, T-Mo U.S. would be a notch downgraded. So, effectively, the access to the capital markets to refinance the debt will be worse than before. So, why you pull the self-financing right now, you don't wait for two or three years because that will increase your interest cost at a group level?

<A - **Thorsten Langheim**>: So, first of all, you said T-Mo U.S. will be downgraded by a notch if the deal go through. That's not my understanding. What I heard from the rating agencies is exactly the opposite. So, they're confirming the rating in case of the deal goes through, so that's number one. Number two, but you're still – in principle, you're still right. What you're basically trading is interest cost optimization versus the risk profile you have at hand.

And that's basically when we did the MetroPCS, the playbook was quite simple. In the early beginning, where you have significantly negative free cash flow, which was the case in the first two years on that journey. You do the self-funding and de-risk. Once you see it's coming up, you have the free cash flow, you optimize your interest costs. That was the playbook on MetroPCS and that is what we copy-paste for the first phase in here for that deal as well.

Okay. So, Steve?

<Q - **Steve Malcolm**>: Yes. Thanks. It's Steve from Arete. First of all, thanks for injecting some optimism into a fairly pessimistic sector, right, and that's hugely appreciated.

<A - **Thorsten Langheim**>: Thanks Steve.

<Q - **Steve Malcolm**>: First off, just two questions, one on free cash flow. Thanks for the sort of honest appraisal of your performance for the last two or three years. You clearly missed in certain areas and you've made up in other areas, but you've landed almost to the euro on your free cash flow guidance. So, can you give us an idea of where you've had flexibility, is it in cash taxes, interest, working capital? Where have you made up the shortfalls, the extra CapEx? Is it just extra EBITDA growth in the U.S. compared with your original plans two or three years ago? And as you look out, where is that flexibility in your guidance? It would be helpful to understand.

And then secondly, just my personal favorite division is GHS. We haven't had a presentation. It consumed €2 billion of cash last year. Is that what it's going to do for the next two or three? Should we – in our modeling? Thank you.

<A - **Thorsten Langheim**>: Maybe starting with the second question. The biggest chunk in GHS on the cash consumption is the special factors. Because if you do, for instance, early retirement of civil servants from a legal perspective, you show the special factors even if the people are from Germany [ph] as a segment or to (03:02:12) systems, the cost of special factors again that are shown in GHS.

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So, you have that kind of head count reduction, cash impact completely in GHS. So, that's one of the reasons why that bulk is relatively big. But as I've said, we're guiding that to decline – not to disappear, but to decline looking forward, again, like from 2015 to 2018. That's number one.

Number – the first question was on free cash flow. Look, the way we do planning, we've done planning the last years, is quite simple. And I remember well after Capital Market Day at 2015, there was some people coming up and saying, we added up all your guidances of your segments. It's larger than the guidance of the group.

And that's true because our assumption is, you never will see everything kicking in at the same time in a perfect manner. Maybe sometime you see it, but let's be prudent in planning. So what you do is you expect that there are some headwinds you don't have expected and you have to deal with that and keep your commitments. So that's the way we think through our planning and obviously, for instance, one big chunk in reserve for the free cash flow last year's was what we did together with the U.S. guys after we stopped self-funding and we optimized interest cost, to your point, a big, big chunk of that was that, also working capital optimization in various ways. So what basically what I want to tell you is basically what we never do is [ph] put it (03:03:45) planning together, that makes up the number 100 and we go out and guide for that 100 because very often, you have to deal with other additional headwinds you have. And so that's why I think we were able to deliver the four-year guidance and that's how we want to manage the next four years.

[indiscernible] (03:04:01-03:04:03)

**<Q - Steve Malcolm>**: You have that flexibility and interest in tax and working capital for the next three or four years. I mean that's obvious. Could you change your outlook on self-funding of T-Mo U.S. to improve the interest cost?

**<A - Thomas Dannenfeldt>**: Yeah. There are two ways. One way is non-deal, in the non-deal way, we are out of self-funding, right. We are already in that path. So that is why you've seen in the non-deal perspective, you've seen the interest cost being stable. So, for sure in the non-deal case, that option, that upside is gone because we used it already. In the deal case, what will happen is basically we will ramp up significantly interest cost, putting some burden in the first two years on the interest side obviously. And then from year three onwards, once you see it being accretive, we might assess the situation again, but for – to be very clear, for the non-case deal, it's not an optionality, [ph] any significant manner (03:04:59), there's still a bit to do. Don't get me wrong. But not in that magnitude and size we've seen.

**<A - Thorsten Langheim>**: And maybe only one thing to add. We have even some flexibility from the EBITDA. Remember, we had a guidance of 2% to 4%. We came up with a CAGR of 6%. It was funded mainly from the U.S. operations on the EBITDA side and that give us some leeway from a free cash flow perspective. So, the operational performance was even supporting the development.

**<A - Thomas Dannenfeldt>**: Okay. [ph] John (03:05:29)?

**<Q>**: Hi there. Two questions, if that's okay. The first one, I think from time to time, there's this idea of a relevant European operator. Who is the group of stakeholders who's sort of pushing behind the scenes for a large European operator? And then secondly on the EPS, could you just help us on the accounting? In the 2017 base, what's the sort of Europe EPS and the U.S. EPS contribution? And then in 2021, what's the expected split U.S. versus Europe on the €1.20?

**<A - Thorsten Langheim>**: Look, if you would ask, Thorsten, if you would ask the team where should we allocate an additional euro, the answer is very simple. We should allocate it to the U.S., and we consequently did that. So, over the past, it was absolutely the right thing to do and there are a lot of reasons for that one. A more liberal market, a market where you own the spectrum, a market where you really have the opportunity to get the money [indiscernible] (03:06:38) predictability for the investments which we're taking.

The environment in Europe is as it is. I think after 20 years of heavy regulation, we have to see a change and I will not get tired to work on this people. I told you I spent 30% of my time with leaders, with regulators, with political guys to convince them. I have a say because we are the most relevant telecom operator by size in Europe, even by size now with our foothold in the U.S., and therefore at least [indiscernible] (03:07:15) talking to me, whether they listen to me is

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another topic. But at least there is something because I think if you look to the development of our markets going forward size matters, matters on the procurement size, it matters on the 5G deployment size, matters on the innovation side. It matters – and even it matters to enable all the adjacent industries, which are dependent on the digitalization of society. And there is reason that we have an under investment of Europe quoted by the European Commission of €700 billion across the 28 countries.

Now, therefore, I'm fighting for that one, but look we have now put our telecom into a position that we are not only dependent on Europe anymore. We have now at least 60% of our profitability EBITDA in the U.S., in U.S. environment, which makes us more independent from the European landscape as we are operating. With regard to, European player, honestly this industry is talking to each other, but I do not see any kind of tenancy that there is consolidation taking place at that point in time.

We still have the DT. As I said, and we thought at one point in time that this could be part of DT and would strengthen our position, but Thorsten was very clear on that one. If not the time, to go out of that assets, now it's the time to step out of this business. It's now the time to see that all the measures of the ideas, of the programs [indiscernible] (03:08:50) and the like and we could implement it and secure the value of this asset and growing it over time, and then we will see what's going on. It's part of our pension fund. It's working for us from a debt perspective here in the company. And it's good where it is today, but nothing additional to say on M&A or steps going forward.

<A - **Timotheus Höttges**>: Okay. On the earnings per share question, we don't provide this, let's say, breakdown. And I would say that probably, it's kind of a 50/50 roughly, but within a fairly wide range. So, Jakob, maybe?

<Q - **Jakob Bluestone**>: Hi. Jakob Bluestone from Credit Suisse. I've got a question on the net debt to EBITDA comfort zone that you mentioned. I mean in your slide, I think you showed it before as well that you'd be outside of your comfort range for, I think, two or three years. Do you feel any sort of pressure or a desire to perhaps look at some asset sales or things like hybrids to get that down quicker? Or do you feel it's okay being above the comfort zone for, call it, three years?

<A - **Thomas Dannenfeldt**>: The latter. We are convinced that the execution after deal is closing, the execution and delivery of the U.S. team is excellent and that will bring us in a very fast manner back to that track been – sorry, [indiscernible] (03:10:19) putting some pressure here. No. But, seriously, you've seen the playbook. But basically, being out of the comfort zone for two or three years doesn't mean that you're not, from second year on, have already positive dynamics towards getting back. And once you see that dynamics, you can stay cool, that's basically where we are.

So, I think, why are you so conservative on this case? I'm more optimistic on this case in the U.S. I can tell you that looking to the MetroPCS experience, looking to – we have done together five of this intermarket consolidation in mobile. And in all of the fives, I was part of it, we achieved the cost savings earlier than projected.

Transaction costs we were conservative because there's a lot of, let's say, things with the refinancing of Sprint debt, which are lying in front of us. So, even from the integration costs, we are on the conservative line. I think it's good to be at that point in time. But my experience tells me that if you focus on cost, if you focus on [indiscernible] (03:11:22), it's coming earlier. It's coming hopefully cheaper and then you get the benefits already earlier on all of the KPI. That's my stomach telling me, but we laid out a conservative plan because we want to deliver or over deliver than rather underperforming. And therefore, I think there is some evidence that we can do it better.

## Hannes C. Wittig

So, I think Tim, we should now maybe conclude with your – a bunch of final words of wisdom from you, so that everybody could...

## Timotheus Höttges

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Okay. There is not so much to say with regard – after 24 hours with us here and with Hannes. You might ask why has Hannes changed the side and moved out from your community into our community. The answer is not because of the team. The answer is because of this. These are the ladies around Hannes. He's surrounded by beautiful, very smart, intelligent ladies. And I can tell you, these ladies were not only here for creating a huge hospitality for all of us and for you specially. They were even working very hard over the last months on this Capital Markets Day.

I'd like to thank the team around Hannes very, very much for this intensive work. We would see whether it's worth it. We are convinced it's worth it. And I'd like to even thank Hannes. I know you had a tough time, especially with me. So...

[indiscernible] (03:13:02)

### **Timotheus Höttges**

Quality come from [indiscernible] (03:13:05), it's impossible to translate that.

### **Hannes C. Wittig**

Quality comes from [indiscernible] (03:13:08).

### **Timotheus Höttges**

But that said, thank you to all the people making this event happening here at Bonn during this event. Thank you.

### **Hannes C. Wittig**

Thank you.

### **Timotheus Höttges**

Look, leading comes from leading. If you want to be the leading telco, you have to do things, which others don't do. And by the way, it is very easy to manage this company without any risks. Just move on. Don't do things differently. There is no need to do different. We have a great asset in the U.S., [indiscernible] (03:13:46) on at least until the end of my tenure.

So, I can be easily bureaucratically administering this business here. There is no need to do this. But if you want to create value beyond what everybody else is doing, you have to take risks. You have to behave entrepreneurial, and you have to do things differently. You have to lead things. And this is the aspiration of this team. This is what we're trying to do. And sometimes, yes, we might be sound a little bit, let's say, too bullish. But at least, we believe in growth.

In this industry, nobody's talking about growth anymore. Why? Is it a given that this industry has no growth? We always have this bias and this confirmation bias that this industry is a disaster. We don't have that. Everybody told me, sell the U.S. And then, we found this guys like Mike, like John, like Neville, who said, who says that? And now, this business is growing with a CAGR of 11% year-over-year. And every quarter, you're coming, growth is over. Growth is over. Confirmation bias. We don't have this confirmation bias. And by the way, you can believe what you believe. We believe in our growth. That's what we're doing.

And we were able, since 2015, to deliver this growth: First, in the U.S.; then, in Germany; now, in Europe. 95% of our business is growing. And I can tell you, the trajectory for this year is even stronger on the growth. So, therefore, here you have a team that's believing in growth of telco industries wherever we are operating.

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Second, we are now in the phase monetizing what we have invested. So, we are not going beyond what [indiscernible] (03:16:03). So, you can tell me, Tim, you have to invest more. By the way, who can tell us that we have to invest more? Who? There is no king or this is no somebody who can say you have to invest into Bavaria or wherever. It's a commercial decision, which we are taking.

And by the way, you would not find entrepreneurs as leaders of this companies if somebody would say us invest more. Investment is a function of customer demand in the combination with commercial monetization possibilities. The capability to make money out of that one. If we are losing money, why should we invest? So therefore, another bias in your industry that we might have to invest more. No. We say this is what we're doing. In some circumstance, we could make more out of it. In some circumstance we can make less out of it. But take the investment level as granted, which we have promised. And frankly, it's all about people.

The only reason for this session is not about this 283 pages. It's about giving you the trust that we have the right people on board. And you should make your judgment whether you think we have an attitude, which is handling your money properly or not. But the only thing I can tell you is this is the best team Deutsche Telekom ever had, from an operational perspective, from an age perspective, from a knowledge perspective, and from an attitude perspective, which is for me the most important thing, both sides of the Atlantic.

Being in the U.S. an experienced team, which is now with Mike and others getting younger and even more agile for the next challenges and being our team with three new heads on the operation side. With a very robust private equity guy who will change transformation, speed [indiscernible] (03:18:12 ) with a very smart guy. I have to challenge him more because he's always so relaxed. Srin Gopalan, who is bringing back this growth engine to Europe and with Dirk who is very experienced, not only in the business, but even in the political arena when it comes to all his experience from wholesale, regulation and politics.

So I think, we have a great team onboard who will manage the expectation going forward. So, therefore, we believe of what we are doing and you can trust us. What we say is what we do. And we will walk the talk. And I'm happy that you have had the time with us and really be curious about what we're doing. Thank you for coming here. And now, nice weekend.

## Hannes C. Wittig

Okay. So goodbye to all of you and thanks again for coming to join the – thanks to Tim. And by the way, we made fun of our people are doing first thing in the morning earlier as some said hello to their wives and others have read some [indiscernible] (03:19:34). So, we listen to all of you. We read all of your stuff. You matter to us, right, very good. We really enjoy the dialogue and thanks for coming. And have a safe trip home. See you later.

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